

PROSPECTUS



5,285,501 Shares of Common Stock

This prospectus relates to the offering and resale by the selling stockholders identified herein of up to 5,285,501 shares of common stock of Transphorm, Inc., par value \$0.0001 per share (the “Common Stock”), which consists of (i) 5,000,000 shares of Common Stock issued to certain selling stockholders in a private placement consummated on December 23, 2020 (the “Private Placement”), (ii) 135,501 shares of Common Stock privately issued to certain selling stockholders pursuant to the terms of consulting agreements with such stockholders, and (iii) 150,000 shares of Common Stock that are issuable upon exercise of warrants issued to designees of the placement agents in the Private Placement as compensation for their services (the “Placement Agent Warrants”).

We will not receive any proceeds from the sale of these shares by the selling stockholders. However, we may receive proceeds of up to \$0.5 million upon the exercise of Placement Agent Warrants in the event they are exercised for cash. The selling stockholders may sell the shares of our common stock offered by this prospectus from time to time through the means described in this prospectus under the section titled “Plan of Distribution.” For a list of the selling stockholders, see the section titled “Selling Stockholders” on page 92. We have borne and will continue to bear the costs relating to the registration of these shares of common stock.

Our common stock is quoted on the OTCQB tier of the OTC Markets Group, Inc. (“OTCQB”) under the symbol “TGAN.” On January 26, 2021, the last reported sale price of our common stock on the OTCQB was \$4.50 per share.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

**We are an “emerging growth company” and “smaller reporting company” as defined under the federal securities laws, and, as such, are eligible for reduced public company reporting requirements. See “Prospectus Summary—Emerging Growth Company and Smaller Reporting Company.”**

**Investing in our common stock involves a high degree of risk. Before making an investment decision, please read “Risk Factors” on page 9 of this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

The date of this prospectus is January 27, 2021.

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## **ABOUT THIS PROSPECTUS**

You should rely only on the information contained in this prospectus or contained in any prospectus supplement or free writing prospectus filed with the Securities and Exchange Commission, or the SEC. Neither we nor the selling stockholders have authorized anyone to provide you with additional information or information different from that contained in this prospectus filed with the SEC. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. You should assume that the information appearing in this prospectus, the applicable prospectus supplement and any related free writing prospectus is accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

For investors outside the United States: Neither we nor the selling stockholders have done anything that would permit this offering or possession or distribution of this prospectus, any prospectus supplement or free writing prospectus filed with the SEC, in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus, any prospectus supplement or free writing prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus, any prospectus supplement or free writing prospectus outside the United States.

## SELECTED DEFINITIONS

The following is a glossary of technical and other terms used in this prospectus:

**AC** – alternating current

**AEC-Q101** – Automotive Electronic Council’s electronic components stress qualification standard

**AFSW** – Aizu Fujitsu Semiconductor Wafer Solutions, our joint venture wafer fabrication facility located in Aizu Wakamatsu, Japan

**BJT** – bipolar junction transistor, a semiconductor device

**Bus voltage** – voltage into, out of or within connections of a power electronic system

**CMOS** – complementary MOS (metal oxide semiconductor), widely used semiconductor transistor architecture

**D2Pak** – a surface mountable version of the TO220 package

**DC** – direct current

**Die/Chip** – an individual semiconductor device on the wafer, prior to packaging

**EAR** – Export Administration Regulation

**Epi/Epiwafer/Epimaterials** – GaN device layers grown on a substrate, from which active GaN-based devices are subsequently manufactured in a wafer fabrication facility

**Fab** – fabrication, generally referring to a semiconductor wafer fabrication facility

**FET** – field effect transistor, a type of switching transistor

**Figure of Merit** - a quantity used to characterize the performance of a device, system or method, relative to its alternatives

**FIT** – failure in time, referring to the expected number of device failures per billion hours of operation

**GaN** – gallium nitride

**HEMT** – high electron mobility transistor, a type of switching transistor with superior electronic properties

**IGBT** – insulated-gate bipolar transistor, a three-terminal power semiconductor device primarily used as an electronic switch

**JEDEC** – Joint Electron Device Engineering Council, an independent semiconductor engineering trade organization and standardization body that represents all areas of the electronics industry

**LIDAR** – light detection and ranging, a remote sensing method that uses light in the form of a pulsed laser to measure distance

**Lossy** – in the context of switching devices, subject to loss of power due to switching inefficiencies and other factors

**MOCVD** – metal organic chemical vapor deposition, a technique for layering GaN layers onto substrates such as a silicon substrate and making the starting GaN semiconductor material (i.e., an epiwafer)

**Moore's law** – the observation that the number of transistors in a dense integrated circuit doubles about every two years

**MOSFET** – metal-oxide-semiconductor field-effect transistor, a type of transistor

**Power converters / Inverters** – electronic systems used to convert electricity from AC to DC (such as a charger), DC-AC (such as an inverter) or in some cases AC-AC or DC-DC within the systems converting from one voltage level to another

**PQFN** – power quad flat no lead package, a compact surface mountable package used in power semiconductors

**RF** – radio frequency

**SCR** – silicon controlled rectifier, an early semiconductor switching device

**Si** – silicon

**SiC** – silicon carbide

**TO** – transistor outline leaded packages commonly used in power semiconductors (such as TO220, TO247)

## PROSPECTUS SUMMARY

*This summary highlights certain information about us, this offering and selected information contained elsewhere in this prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of Transphorm, Inc. and this offering, we encourage you to read this entire prospectus carefully, including the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision.*

*Unless otherwise stated or the context otherwise indicates, references to “Transphorm,” the “Company,” “we,” “our,” “us,” or similar terms refer to Transphorm, Inc. together with its wholly owned subsidiaries.*

### Overview

Transphorm is a global semiconductor company founded in 2007. We are a pioneer, and a market and technology leader, in the wide-bandgap GaN power electronics field for high voltage power conversion applications. We deliver high quality and reliable GaN devices with high performance, while providing application design support to a growing customer base. Our GaN devices allow customers to design smaller, lighter and cooler power systems creating increased functional value in end products including smartphone power adapters/fast-chargers, power supplies for datacenter servers/communication, industrial power converters and chargers/converters/inverters for electric vehicles, among other applications. We deploy our unique vertically integrated innovation model that leverages one of the industry’s most experienced GaN engineering teams (with over 300 years of combined experience) at every development stage: device design, materials growth, device fabrication, packaging, circuits and application support. This approach, backed by one of the GaN power industry’s largest intellectual property portfolios with access to over 1,000 world-wide patents, has yielded the industry’s first automotive-grade AEC-Q101 and JEDEC qualified high voltage GaN FETs. Our innovations are designed to move power electronics beyond the limitations of silicon and provide our customers with the potential to achieve higher efficiency or lower loss (e.g., titanium-class performance in power supplies), higher power density (e.g., compact size or improved form factor) and, in many designs, an overall lower system cost.

### Risk Factors Summary

Investing in our common stock involves a high degree of risk. You should carefully consider the risks highlighted in the section titled “Risk Factors” immediately following this prospectus summary before making an investment decision. We may be unable for many reasons, including those that are beyond our control, to implement our business strategy successfully. Some of these risks are:

- We have a history of losses, anticipate increasing our operating expenses in the future, and may not be able to achieve or maintain profitability.
- Our ability to continue as a going concern will depend on us being able to raise significant additional capital to fund our operations, which may be unavailable on attractive terms, if at all, and could dilute your investment.
- Our quarterly results of operations are likely to vary from period to period, which could cause the market price of our common stock to fluctuate or decline.
- Our business could be adversely affected by the effects of health epidemics or pandemic, including the ongoing COVID-19 global pandemic.

- We may not be able to develop new technologies and products to satisfy changes in customer demand or industry standards, and our competitors could develop products that decrease the demand for our products.
- We must commit resources to development, design and production prior to receipt of purchase commitments and could lose some or all of the associated investment.
- We compete in highly competitive markets, and competitive pressures from existing and new companies may adversely impact our business and operating results.
- We rely on third-party channel partners to sell our products. If our partners fail to perform, our ability to sell our products and services could be limited, and if we fail to optimize our channel partner model going forward, our operating results could be harmed.
- We rely on limited sources of wafer fabrication, packaged products fabrication and product testing, the loss of which could delay and limit our product shipments.
- Because we depend on third-party manufacturers to build portions of our products, we are susceptible to manufacturing delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales, income and customers.
- Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense. As a result, our revenue is difficult to predict and may vary substantially from period to period, which may cause our results of operations to fluctuate significantly.

#### **Emerging Growth Company and Smaller Reporting Company**

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended (“JOBS Act”). We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement; (ii) the end of the first fiscal year in which we are deemed to be a “large accelerated filer,” as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act; (iii) the last day of the fiscal year in which our annual gross revenue is \$1.07 billion or more; and (iv) the date on which we have, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt securities.

As an emerging growth company, we have taken advantage of reduced reporting requirements in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the Securities and Exchange Commission (“SEC”). In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to use the extended transition period under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We are also currently a “smaller reporting company” as defined by SEC rules. In the event that we are still considered a smaller reporting company at such time as we cease being an emerging growth company, we will be required to provide additional disclosure in our SEC filings. However, similar to emerging growth companies,

smaller reporting companies are able to provide simplified executive compensation disclosures in their filings; are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting; and have certain other decreased disclosure obligations in their SEC filings, including, among other things, only being required to provide two years of audited financial statements in annual reports.

### **Corporate Information**

We were originally incorporated as Peninsula Acquisition Corporation in the State of Delaware on May 31, 2017. Prior to the Merger (as defined below), we were a “shell company” registered under the Exchange Act, with no specific business plan or purpose. On February 12, 2020, our wholly owned subsidiary, Peninsula Acquisition Sub, Inc., a corporation incorporated in the State of Delaware on April 22, 2019, merged (the “Merger”) with and into Transphorm, Inc., a corporation incorporated in the State of Delaware on February 22, 2007. Transphorm Technology was the surviving corporation in the Merger and became our wholly owned subsidiary. Immediately following the Merger, the business of Transphorm Technology became our business and we changed our corporate name to Transphorm, Inc. In accordance with “reverse merger” accounting treatment, our historical financial statements as of period ends, and for periods ended, prior to the Merger were replaced with the historical financial statements of Transphorm Technology in our SEC filings made subsequent to the Merger.

Our principal executive offices are located at 75 Castilian Dr., Goleta, California 93117. Our telephone number is (805) 456-1300. Our website address is [www.transphormusa.com](http://www.transphormusa.com). Information contained in our website is not a part of, nor incorporated by reference into, this prospectus or our other filings with the SEC, and should not be relied upon.



## THE OFFERING

Common stock offered by selling stockholders	5,285,501 shares (including 150,000 shares reserved for issuance pursuant to the Placement Agent Warrants)
Common stock outstanding	40,278,496 shares
Use of proceeds	We will not receive any proceeds from the sale of the shares of common stock offered by the selling stockholders. We will receive up to an aggregate of approximately \$0.5 million from the exercise of the Placement Agent Warrants, assuming the exercise in full of all of the Placement Agent Warrants for cash.
Risk factors	You should read the “Risk Factors” section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Market for our shares	Our common stock is quoted on the OTCQB tier of the OTC Markets Group, Inc. (“OTCQB”) under the symbol “TGAN.”

The number of shares of common stock outstanding is based on 40,278,496 shares of our common stock outstanding as of December 31, 2020, and excludes the following:

- 9,415 shares of common stock issuable upon the exercise of warrants outstanding as of December 31, 2020, with a weighted-average exercise price of \$41.78 per share;
- 150,000 shares of common stock issuable upon the exercise of the Placement Agent Warrants outstanding as of December 31, 2020, with a weighted average exercise price of \$3.30 per share;
- up to 3,076,171 shares of common stock issuable at the option of a convertible promissory note holder, upon conversion of a convertible promissory note in the principal amount of \$15.0 million plus accrued interest, with a conversion price of \$5.12 per share;
- 2,320,318 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2020, with a weighted-average exercise price of \$4.67 per share;
- 805,325 shares of common stock issuable upon vesting of restricted stock units (“RSUs”) outstanding as of December 31, 2020; and
- 1,916,882 shares of common stock available for grant under our 2020 Equity Incentive Plan (“2020 Plan”) as of December 31, 2020, as well as any increases in the number of shares of common stock reserved for issuance under the 2020 Plan upon (i) the expiration, forfeiture, cancellation, or reacquisition of any shares of common stock underlying outstanding awards granted under previous equity incentive plans, such number of shares not to exceed 2,461,923 shares or (ii) annual automatic evergreen increases under the 2020 Plan.

Unless otherwise indicated in this prospectus, all share and per share figures assume no exercise of outstanding options and warrants, no conversion of the outstanding convertible promissory note, and no settlement of outstanding RSUs, after December 31, 2020.

## RISK FACTORS

*An investment in our securities is highly speculative and involves a high degree of risk. We face a variety of risks that may affect our operations or financial results and many of those risks are driven by factors that we cannot control or predict. Investors should carefully consider the risks described below and all of the other information set forth in this prospectus and any applicable prospectus supplement, before deciding to invest in our common stock. If any of the risks described below occur, our business, financial condition, results of operations and prospects could be materially adversely affected. In that case, the market price of our common stock would likely decline and investors could lose all or a part of their investment. Only those investors who can bear the risk of loss of their entire investment should consider an investment in our securities. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our operations.*

### **Risks Related to our Business and the Industry in Which We Operate**

***We have a history of losses, anticipate increasing our operating expenses in the future, and may not be able to achieve or maintain profitability. If we cannot achieve or maintain profitability, stockholders could lose all or part of their investment.***

Since our inception in 2007, we have generated minimal revenue and substantial net losses as we have devoted our resources to the development of our technology, and our business model has not been proven. As of September 30, 2020, we had an accumulated deficit of \$157.1 million. For the nine months ended September 30, 2020 and 2019, our net loss was \$13.2 million and \$17.7 million, respectively, and for the years ended December 31, 2019 and 2018, our net loss was \$15.3 million and \$25.8 million, respectively. We expect our operating expenses to increase in the future as we expand our sales and marketing efforts and continue to invest in our infrastructure and research and development of our technologies, and if we are unable to secure a partner or additional business for our joint venture with Fujitsu Semiconductor Limited (“FSL”). These efforts may be more costly than we expect, and we may not be able to increase our revenue to offset our increased operating expenses or obtain additional contracts from the federal government. Our revenue growth may be slower than anticipated or our revenue may decline for a number of other reasons, including slower growth of, or reduced demand for, GaN power management solutions, increased competition, or any failure to capitalize on growth opportunities. If we are unable to generate sufficient revenue, we may never become profitable or be able to maintain any future profitability. If this were to occur, our stockholders could lose all or part of their investment.

***Our ability to continue as a going concern will depend on us being able to raise significant additional capital to fund our operations, which may be unavailable on attractive terms, if at all, and could dilute your investment.***

Our recurring operating losses and our current operating plans raise substantial doubt about our ability to continue as a going concern for the next twelve months. Our independent registered public accounting firm issued their audit report on the years ended December 31, 2019 and 2018, which included an explanatory paragraph as to our ability to continue as a going concern. While we believe that our existing cash and cash equivalents will be sufficient to fund our current operating plans into the fourth quarter of 2021, we have based these estimates on assumptions that may prove to be wrong, and we could spend our available financial resources much faster than we currently expect and need to raise additional funds sooner than we anticipate.

For example, we are party to a joint venture agreement with FSL for the ownership and operations of Aizu Fujitsu Semiconductor Wafer Solutions (“AFSW”), a wafer fabrication facility located in Aizu Wakamatsu, Japan. We currently hold a 49% interest in AFSW. For as long as we have had an ownership interest in AFSW, it has operated at a loss. The unaudited operating losses incurred by AFSW over the 12-month periods ended September 30, 2020 and 2019 were approximately \$12.1 million and \$8.6 million, respectively. On April 1, 2020, FSL exercised its put option under the joint venture agreement and notified us that FSL intended to exit the joint venture by selling its 51% interest in AFSW to us. Under the terms of the joint venture agreement, the aggregate purchase price for FSL’s interest in AFSW is expected to be one Japanese Yen. While the joint venture agreement with FSL provides that completion of the transaction was to take place as soon as 60 days from the date of the exercise notice, such transaction is subject to regulatory and other approvals in Japan that we believe will take up to the second

quarter of 2021 to obtain, assuming such approval is received at all. We have entered into an agreement with a third party to become a partner in AFSW, subject to regulatory and other approvals in Japan that we believe will take up to the second quarter of 2021 to obtain, assuming such approval is received at all. If we were to become the sole owner of AFSW and it continues to operate at a loss at such time (which we currently expect to be the case), our cash flows would be significantly negatively impacted. In addition, for at least one year following the date on which we (alone or with a third party) take over full ownership of AFSW, we have agreed to use our best efforts to maintain and continue the operations of AFSW, which would continue to negatively affect our cash flow. Based on our current and future cash flow requirements and business needs at that time, we expect that, assuming regulatory approvals are received, if we were to become the sole owner of AFSW, we would have to consider other options including but not limited to raising more capital, selling some or all of AFSW to a third party, or moving our GaN production elsewhere and ceasing operations at AFSW. The ongoing COVID-19 pandemic may negatively impact or slow down any efforts by us to secure a partner or additional business for AFSW.

Similarly, we issued a promissory note to Yaskawa Electric Corporation (“Yaskawa”) in the aggregate principal amount of \$15.0 million that is convertible, in whole or in part at Yaskawa’s option, into shares of our common stock (subject to a maximum of 3,076,171 shares) at a conversion price of \$5.12 per share. If Yaskawa does not elect to convert the note into shares of our common stock, we will be required to pay the outstanding principal and interest on the note by the earlier of September 30, 2022 or the occurrence of an event of default or a change of control of us, which will also negatively impact our cash flows and may affect our ability to continue as a going concern if we do not raise significant additional capital before that time.

We are also party to a loan and security agreement (the “LSA”) with Nexperia B.V. (“Nexperia”), pursuant to which we have outstanding term loans in an aggregate principal amount of \$10.0 million, separated into tranches for pre-funded projects, and a \$10.0 million revolving loan which bears 6% annual interest. The term loans mature on March 31, 2021 and the revolving loan matures on April 4, 2021. If we are not able to complete the milestones under the term loans, or extend the maturity dates of or otherwise amend the terms of the term or revolving loans, our cash resources and our ability to continue as a going concern will be significantly affected.

Our ability to continue as a going concern will depend on us being able to raise significant additional capital to fund our operations and achieve our business objectives, as we do not expect to generate material revenue in the short-term. The future impact of the COVID-19 pandemic cannot be predicted with certainty and may make it more difficult or preclude us from raising additional capital, increase our costs of capital and otherwise adversely affect our business, results of operations, financial condition and liquidity. We will be required to engage in equity or debt financings to secure additional funds. If we close one or more additional equity or convertible debt financings, our stockholders may experience significant dilution of their ownership interests, the rights given to new equityholders may be superior to those of our common stockholders and the per share value of our common stock could decline. Furthermore, if we engage in debt financing, the holders of debt would have priority over the holders of our common stock, and we may be required to accept terms that restrict our ability to run our business or incur additional indebtedness. The debt financing could also contain restrictive covenants that may impact how we run our business and could result in the loan being paid back in full immediately if we are in non-compliance. In addition, if we are unable to raise additional capital when needed or on acceptable terms, we may not be able to, among other things:

- continue our business and operations;
- develop or enhance our products;
- continue to expand our sales and marketing and research and development organizations;
- acquire complementary technologies, products or businesses;
- expand operations, in the United States or internationally;
- hire, train and retain employees; or

- respond to competitive pressures or unanticipated working capital requirements.

Our failure to do any of these things could harm our business, financial condition and results of operations or affect our ability to continue as a going concern.

***Our quarterly results of operations are likely to vary from period to period, which could cause the market price of our common stock to fluctuate or decline.***

Our results of operations have varied from period to period, and we expect that our quarterly results of operations will continue to vary as a result of a number of factors, many of which are outside of our control and may be difficult to predict, including:

- our ability to attract new and retain existing customers, including due to our perceived or actual financial condition;
- the budgeting cycles and purchasing practices of customers;
- the timing and length of our sales cycles, including the ability of our customers to design-in successfully with GaN power solutions;
- changes in customer requirements or market needs, including market acceptance of GaN technology;
- the timing and impact of new product introductions by us or our competitors or any other change in the competitive landscape of the semiconductor industry, including consolidation among our customers or competitors;
- deferral of orders from customers in anticipation of new products or product enhancements announced by us or our competitors;
- our ability to execute on our growth strategy and operating plans;
- our ability to successfully expand our business domestically and internationally;
- our ability to successfully compete with other companies in our market;
- changes in our pricing policies or those of our competitors;
- any disruption in, or termination of, our relationship with channel partners;
- insolvency or credit difficulties confronting our customers, affecting their ability to purchase or pay for our products, or confronting our key suppliers, which could disrupt our supply chain;
- the cost and potential outcomes of potential future litigation;
- general economic conditions, both domestic and in our foreign markets; and
- the amount and timing of operating costs and capital expenditures related to the expansion of our business.

Any of the above factors, individually or in the aggregate, may result in significant fluctuations in our quarterly operating results. As a result of this variability, our historical results of operations should not be relied upon as an indication of future performance. Moreover, this variability and unpredictability could result in our failure to follow through on our operating plans or meet the expectations of investors for any period. If we fail to

follow through on our operating plans or meet such expectations for these or other reasons, the market price of our common stock could fall substantially.

***Our business could be adversely affected by the effects of health epidemics or pandemic, including the ongoing COVID-19 global pandemic, in regions where we or third parties on which we rely have manufacturing or other business operations.***

The effects of health epidemics or pandemic could materially affect our operations globally, including at our headquarters in California and at our subsidiaries in Japan. For example, the COVID-19 pandemic has resulted in government authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place or stay-at-home orders, and business shutdowns. The COVID-19 pandemic continues to impact our business and has adversely disrupted and will further disrupt the operations at certain of our customers, partners, suppliers and other third-party providers for an uncertain period of time, including as a result of travel restrictions, adverse effects on budget planning processes, business deterioration, and/or business shutdowns, all of which has impacted our business and results of operations. Some of our customers have experienced delays in their internal development programs and design cycles with our GaN products due to the effects of the COVID-19 pandemic, which have led to postponements of their orders of our products and postponements of determinations that our products will be used in their designs for new products under development with corresponding delays in their market introduction and our achievement of revenues. Our billings under our contract with the U.S. Navy may be lower than originally expected as a result of the pandemic. The pandemic has also led to expected delays for certain milestones in our development projects that are due in 2021.

We have taken precautionary measures intended to minimize the risk of the virus to our employees, our customers, and the communities in which we operate. We are requiring all of our employees to work remotely unless they cannot perform their essential functions remotely, and have also suspended all non-essential travel for our employees. While many of our employees are accustomed to working remotely or working with other remote employees, much of our workforce has not historically been remote. Our employees and consultants typically travel frequently to establish and maintain relationships with one another, our customers and prospective customers, partners, and investors. Although we continue to monitor the situation and may adjust our current policies as more information and public health guidance becomes available, temporarily suspending travel and restricting the ability to do business in person has impacted our customer success efforts, sales and marketing efforts, and may challenge our ability to enter into customer contracts or maintain or enter into new partnerships in a timely manner, slow down our recruiting efforts, or create operational or other challenges, any of which could harm our business, financial condition and results of operations. Furthermore, if a natural disaster, power outage, connectivity issue, or other event occurred that impacted our employees' ability to work remotely, it may be difficult or, in certain cases, not possible, for us to continue our business for a substantial period of time.

There are no comparable recent events which may provide guidance as to the effect of the spread of COVID-19, and, as a result, the ultimate impact of the COVID-19 pandemic or a similar health epidemic is highly uncertain and subject to change. Some of our suppliers of certain materials used in the production of our products are located in areas impacted by the COVID-19 pandemic, which could limit our ability to obtain sufficient materials for our products. Furthermore, the pandemic may negatively impact any efforts by us to secure a partner or additional business for AFSW. The pandemic has and will continue to adversely affect global economies and financial markets, resulting in an economic downturn that could affect demand for our products and impact our operating results. Even after the COVID-19 pandemic has subsided, we may continue to experience an adverse impact to our business as a result of the continued global economic impact of the pandemic. Any of the foregoing could significantly harm our business, and we cannot anticipate all of the ways in which health epidemics such as COVID-19 could adversely impact our business.

***We may not be able to develop new technologies and products to satisfy changes in customer demand or industry standards, and our competitors could develop products that decrease the demand for our products.***

Rapidly changing technologies and industry standards, along with frequent new product introductions, characterize the industries of many of our customers and potential customers. Our financial performance depends, in

part, on our ability to design, develop, manufacture, assemble, test, market and support new products and enhancements on a timely and cost-effective basis.

Our products have not been proven commercially on the scale of conventional power semiconductor products. The principal focus of our research and development activities has been to improve processes and support our ongoing development of GaN power management solutions. These projects are subject to various risks and uncertainties we are not able to control, including changes in customer demand or industry standards and the introduction of new or superior technologies by others. Moreover, any failure by us in the future to develop new technologies or timely react to changes in existing technologies could materially delay our development of new products, which could result in product obsolescence, decreased revenues and a loss of our market share to our competitors. In addition, products or technologies developed by others may render our products or technologies obsolete or non-competitive. Further, if our products are not in compliance with prevailing industry standards, such non-compliance could materially and adversely affect our financial condition, cash flows and results of operations.

***We must commit resources to development, design and production prior to receipt of purchase commitments and could lose some or all of the associated investment.***

Our sales are typically made pursuant to individual purchase orders, rather than pursuant to long-term supply contracts. Many of these purchase orders may be revised or canceled without penalty. As a result, we typically must commit resources to the design, development, and production of products without any advance purchase commitments from customers. Any inability to sell a product after we devote resources to it could materially and adversely affect our financial condition, cash flows and results of operations.

***We compete in highly competitive markets, and competitive pressures from existing and new companies may adversely impact our business and operating results.***

The markets in which we compete are highly competitive. We expect competition to intensify in the future as existing competitors and new market entrants introduce new products into our markets. This competition could result in increased pricing pressure, reduced profit margins, increased sales and marketing expenses, and the loss of market share, any of which could seriously harm our business, financial condition and results of operations. If we do not keep pace with product and technology advances and otherwise keep our product offerings competitive, there could be a material and adverse effect on our competitive position, revenue and prospects for growth. Many of our existing competitors, such as silicon-based product providers (e.g., ST Microelectronics, ON Semiconductor, and Mitsubishi), silicon carbide-based product providers (e.g., Rohm, United Silicon Carbide and Cree) and other high-voltage GaN product providers (e.g., Power Integrations, Infineon, GaN Systems, Navitas and Texas Instruments), have, and some of our potential competitors could have, substantial competitive advantages such as:

- greater name recognition, longer operating histories and larger customer bases;
- larger sales and marketing budgets and resources;
- broader distribution and established relationships with channel partners and customers;
- broader and deeper product lines;
- greater customer support resources;
- greater resources to make acquisitions;
- lower labor and research and development costs;
- substantially greater financial and other resources; and
- larger scale manufacturing operations.

In addition, some of our larger competitors have substantially broader product offerings and may be able to leverage their relationships with channel partners and customers based on other products to gain business in a manner that discourages users from purchasing our products, including by selling at zero or negative margins or product bundling. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier regardless of product performance or features. As a result, even if the features of our products are superior, customers may not purchase our products. In addition, innovative start-up companies, and larger companies that are making significant investments in research and development, may invent similar or superior products and technologies that compete with our products. Our current and potential competitors may also establish cooperative relationships among themselves or with third parties that may further enhance their resources. If we are unable to compete successfully, or if competing successfully requires us to take costly actions in response to the actions of our competitors, our business, financial condition and results of operations could be adversely affected.

***We rely on third-party channel partners to sell our products. If our partners fail to perform, our ability to sell our products and services could be limited, and if we fail to optimize our channel partner model going forward, our operating results could be harmed.***

A substantial portion of our revenue is generated through sales by our channel partners, which include distributors and resellers. To the extent our channel partners are unsuccessful in selling our products, we are unable to enter into arrangements with, and retain, a sufficient number of effective channel partners in each of the regions in which we sell products or we are unable to keep our channel partners motivated to sell our products, our ability to sell our products and our operating results could be harmed. The termination of our relationship with any significant channel partner may adversely impact our sales and operating results.

***We rely on limited sources of wafer fabrication, packaged products fabrication and product testing, the loss of which could delay and limit our product shipments.***

Our partly-owned fabrication facility through AFSW currently satisfies all of our GaN fab-wafer requirements (i.e., when a GaN epiwafer undergoes various processes at a wafer fabrication facility). While we believe AFSW has sufficient capacity for our near-term business needs and is reasonably scalable as our demand for throughput increases, any disruption in the AFSW fabrication facilities may severely impact our supply. On April 1, 2020, FSL exercised its put option under the joint venture agreement and notified us that FSL intended to exit the joint venture by selling its 51% interest in AFSW to us. Based on our current and future cash flow requirements and business needs at the time that we take over full ownership of AFSW, the timing of which is uncertain, we may be unable to sustain or continue to operate the AFSW facility. In the event that we are unable to continuously sustain the AFSW fabrication facility, securing supply from another source and adapting our process at such source would lead to a significant set of challenges, additional costs and delays.

We also utilize relatively standard back-side wafer processing services such as wafer-thinning and wafer back-side metalization from foundries in Asia. These suppliers also offer such services to other companies, which may lead to us not having access to adequate capacity for our needs and our customers' needs. We may have less control over delivery schedules and overall support versus other customers and users of those facilities. If the wafer foundries we use are unable or unwilling to manufacture our products in our required volumes, or at specified times, we may have to identify and qualify acceptable additional or alternative foundries. This qualification process could typically take three to six months and we may not find sufficient capacity in a timely manner or at an acceptable cost to satisfy our production requirements.

We additionally use outsourced assembly and test providers ("OSATs") for packaging and testing of our products. We utilize multiple OSATs for various package types and a single OSAT for each type of package. These OSATs may take time, or may be unable, to respond if our throughput demands increase, particularly if we expect a rapid increase in production and could harm our ability to meet unexpected rises in demand in an acceptable time frame. If the OSATs we use are unable or unwilling to package and test our products in our required volumes, or at specified times, we may have to identify and qualify acceptable additional or alternative OSATs. This qualification



process would typically take three to nine months and we may not find sufficient capacity in a timely manner or at an acceptable cost to satisfy our production requirements.

Some companies that supply products to our customers are similarly dependent on a limited number of suppliers. These other companies' products may represent important components of power adapters, inverters and other products into which our products are designed. If these companies are unable to produce the volumes demanded by our customers, our customers may be forced to slow down or halt production on the equipment for which our products are designed, which could materially impact our order levels.

***Because we depend on third-party manufacturers to build portions of our products, we are susceptible to manufacturing delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales, income and customers.***

We depend on third-party manufacturers to build several stages of our products. Our reliance on these third-party manufacturers reduces our control over the manufacturing process and exposes us to risks, including reduced control over quality assurance, product costs, and product supply and timing. Any manufacturing disruption by these third-party manufacturers could severely impair our ability to fulfill orders. Our reliance on third-party manufacturers also creates the potential for infringement or misappropriation of our intellectual property. If we are unable to manage our relationships with third-party manufacturers effectively, or if our third-party manufacturers experience delays or disruptions for any reason, increased manufacturing lead-times, capacity constraints or quality control problems in their manufacturing operations, or if they otherwise fail to meet our future requirements for timely delivery, our ability to ship products to our customers would be severely impaired, and our business and results of operations would be seriously harmed.

***Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense. As a result, our revenue is difficult to predict and may vary substantially from period to period, which may cause our results of operations to fluctuate significantly.***

Our results of operations may fluctuate, in part, because of the resource intensive nature of our sales efforts, the length and variability of our sales cycle and the short-term difficulty in adjusting our operating expenses. To the extent our competitors develop products that our prospective customers view as equivalent or superior to ours, the average duration of our sales cycles may increase, and our sales efforts may be less successful. Because the length of time required to close a sale varies substantially from customer to customer, it is difficult to predict exactly when, or even if, we will make a sale with a potential customer. As a result, individual sales have, in some cases, occurred in quarters subsequent to or in advance of those we anticipated, or have not occurred at all, which makes it difficult for us to forecast our revenue accurately in any quarter. Because a substantial portion of our expenses are relatively fixed in the short term, our results of operations will suffer if our revenue falls below expectations in a particular quarter, which could cause the market price of our common stock to decline.

***Our current operations are concentrated in one location and in the event of an earthquake, terrorist attack or other disaster affecting this location or those of our major suppliers, our operations may be interrupted and our business may be harmed.***

Our principal executive offices and primary epiwafer operating facilities are situated near Santa Barbara, California, and most of our major suppliers, which are wafer foundries and assembly houses, are located in areas that have been subject to severe earthquakes and are susceptible to other disasters such as tropical storms, typhoons or tsunamis. In the event of a disaster, such as an earthquake and tsunami in Japan, we or one or more of our major suppliers may be temporarily unable to continue operations and may suffer significant property damage. Any interruption in our ability, or that of our major suppliers, to continue operations could delay the development and shipment of our products and have a substantial negative impact on our financial results. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts or coverage of insurance will be sufficient to satisfy any damages and losses.

***We rely on our management team and other key employees and will need additional personnel to grow our business. The loss of one or more key employees or our inability to attract and retain qualified personnel could harm our business.***

Our future success is substantially dependent on our ability to attract, retain and motivate the members of our management team and other key employees throughout our organization. The loss of one or more members of our management team or other key employees could materially impact our sales or our research and development programs and materially harm our business, financial condition, results of operations and prospects. We do not maintain key person life insurance policies on any of our management team members or key employees. Competition for highly skilled personnel is intense. We may not be successful in attracting or retaining qualified personnel to fulfill our current or future needs. For positions in our offices near Santa Barbara, California in particular, we may experience challenges hiring new and mid-level employees in part due to the high local housing costs. Our competitors may be successful in recruiting and hiring members of our management team or other key employees, and it may be difficult for us to find suitable replacements on a timely basis, on competitive terms, or at all.

***If we fail to effectively manage our growth, our business, financial condition and results of operations would be harmed.***

We are a development stage company with fewer than 100 employees and are subject to the strains of ongoing development and growth, which has placed significant demands on our management and our operational and financial infrastructure. To manage any growth effectively, we must continue to improve our operational, financial and management systems and controls by, among other things:

- effectively attracting, training and integrating new employees, particularly members of our sales, applications and research and development teams;
- further improving our key business applications, processes and IT infrastructure to support our business needs;
- enhancing our information and communication systems to ensure that our employees and offices around the world are well coordinated and can effectively communicate with each other and our channel partners and customers; and
- appropriately documenting and testing our IT systems and business processes.

These and other improvements in our systems and controls will require significant capital expenditures and the allocation of valuable management and employee resources. If we fail to implement these improvements effectively, our ability to manage growth and ensure ongoing operation of key business systems would be impaired, and our business, financial condition and results of operations would be harmed.

***We are subject to a number of risks associated with international sales and operations.***

We have small teams that are engaged in marketing, selling and supporting our products internationally. As a result, we must hire and train experienced personnel to staff and manage our foreign operations. To the extent that we experience difficulties in recruiting, training, managing and retaining international employees, particularly managers and other members of our international sales team, we may experience difficulties in sales productivity in, or market penetration of, foreign markets. We also enter into strategic distributor and reseller relationships with companies in certain international markets where we do not have a local presence. If we are not able to maintain successful strategic distributor and reseller relationships with our international channel partners or recruit additional channel partners, our future success in these international markets could be limited.

***We are subject to government regulation, including import, export and economic sanctions laws and regulations that may expose us to liability and increase our costs.***

Our products and technology are subject to U.S. export controls, including the U.S. Department of Commerce's Export Administration Regulations and economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. These regulations may limit the export of our products and technology, and provision of our services outside of the United States, or may require export authorizations, including by license, a license exception, or other appropriate government authorizations and conditions, including annual or semi-annual reporting. Export control and economic sanctions laws may also include prohibitions on the sale or supply of certain of our products to embargoed or sanctioned countries, regions, governments, persons, and entities. In addition, various countries regulate the importation of certain products, through import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our products. The exportation, re-exportation, and importation of our products and technology and the provision of services, including by our partners, must comply with these laws or else we may be adversely affected, through reputational harm, government investigations, penalties, and a denial or curtailment of our ability to export our products and technology. Complying with export control and sanctions laws may be time-consuming and may result in the delay or loss of sales opportunities. Although we take precautions to prevent our products and technology from being provided in violation of such laws, our products and technology may have previously been, and could in the future be, provided inadvertently in violation of such laws, despite the precautions we take. If we are found to be in violation of U.S. sanctions or export control laws, it could result in substantial fines and penalties for us and for the individuals working for us. Export or import laws or sanctions policies are subject to rapid change and have been the subject of recent U.S. and non-U.S. government actions. Changes in export or import laws or sanctions policies, may adversely impact our operations, delay the introduction and sale of our products in international markets, or, in some cases, prevent the export or import of our products and technology to certain countries, regions, governments, persons, or entities altogether, which could adversely affect our business, financial condition and results of operations.

***Our sales to government customers subject us to uncertainties regarding fiscal funding approvals, renegotiations or terminations at the discretion of the government, as well as audits and investigations, which could result in litigation, penalties and sanctions including early termination, suspension and debarment.***

Our multi-year contracts signed with agencies and departments of the U.S. government are generally subject to annual fiscal funding approval and may be renegotiated or terminated at the discretion of the government. Termination, renegotiation or the lack of funding approval for a contract could adversely affect our sales, revenue and reputation. Additionally, our government contracts are generally subject to requirements that are not typically present in commercial contracts, such as various Federal Acquisition Regulation or Defense Federal Acquisition Regulation clauses. These clauses place certain requirements upon us such as compliance with equal opportunity employment, safeguarding of contractor information systems, executive compensation restrictions and reporting of certain lobbying activities. Government contracts are also subject to audits and investigations. Failure to meet contractual requirements could result in various civil and criminal actions and penalties, and administrative sanctions, including termination of contracts, refund of a portion of fees received, forfeiture of profits, suspension of payments, fines and suspensions or debarment from doing business with the government, any of which could materially adversely affect our business, financial condition and results of operations.

***Failure to comply with anti-bribery, anti-corruption and anti-money laundering laws could subject us to penalties and other adverse consequences.***

We are subject to the U.S. Foreign Corrupt Practices Act ("FCPA") and other anti-corruption, anti-bribery, and anti-money laundering laws in the jurisdictions in which we do business, both domestic and abroad. These laws generally prohibit us and our employees from improperly influencing government officials or commercial parties in order to obtain or retain business, direct business to any person or gain any improper advantage. The FCPA and similar applicable anti-bribery and anti-corruption laws also prohibit our third-party business partners, representatives and agents from engaging in corruption and bribery. We and our third-party business partners, representatives and agents may have direct or indirect interactions with officials and employees of government

agencies or state-owned or affiliated entities. We may be held liable for the corrupt or other illegal activities of these third-party business partners and intermediaries, our employees, representatives, contractors, channel partners and agents, even if we do not explicitly authorize such activities. These laws also require that we keep accurate books and records and maintain internal controls and compliance procedures designed to prevent any such actions. Any violation of the FCPA or other applicable anti-bribery, anti-corruption laws and anti-money laundering laws could result in whistleblower complaints, adverse media coverage, investigations, imposition of significant legal fees, loss of export privileges, severe criminal or civil sanctions or suspension or debarment from U.S. government contracts, substantial diversion of management's attention, drop in stock price or overall adverse consequences to our business, all of which may have an adverse effect on our reputation, business, financial condition, and results of operations.

***Our business may be affected by litigation and government investigations.***

We may from time to time receive inquiries and subpoenas and other types of information requests from government authorities and others and we may become subject to claims and other actions related to our business activities. While the ultimate outcome of investigations, inquiries, information requests and legal proceedings is difficult to predict, defense of litigation claims can be expensive, time-consuming and distracting, and adverse resolutions or settlements of those matters may result in, among other things, modification of our business practices, costs and significant payments, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

**Risks Related to our Intellectual Property**

***Any failure by us to protect our proprietary technologies or maintain the right to use certain technologies may negatively affect our ability to compete.***

To compete effectively, we must protect our intellectual property. We rely on a combination of patents, trademarks, copyrights, trade secret laws, confidentiality procedures and licensing arrangements to protect our intellectual property rights. We hold numerous patents and have a number of pending patent applications. However, our portfolio of patents evolves as new patents are issued and older patents expire and the expiration of patents could have a negative effect on our ability to prevent competitors from duplicating certain or all of our products.

We might not succeed in obtaining patents from any of our pending applications. Even if we are awarded patents, they may not provide any meaningful protection or commercial advantage to us, as they may not be of sufficient scope or strength, or may not be issued in all countries where our products can be sold. In addition, our competitors may be able to design around our patents.

There can be no assurance that an issued patent will remain valid and enforceable in a court of law through the entire patent term. Should the validity of a patent be challenged, the legal process associated with defending the patent can be costly and time consuming. Issued patents can be subject to oppositions, interferences and other third party challenges that can result in the revocation of the patent or limit patent claims such that patent coverage lacks sufficient breadth to protect subject matter that is commercially relevant. Competitors may be able to circumvent our patents. In cases where market ramp of our products may encounter delays it is possible that some patents or licensed patents covering the product has expired or will be in force for only a short period of time following such market ramp. We cannot predict with any certainty if any third party U.S. or foreign patent rights, or other proprietary rights, will be deemed infringed by the use of our technology. Nor can we predict with certainty which, if any, of these rights will or may be asserted against us by third parties.

To protect our product technology, documentation and other proprietary information, we enter into confidentiality agreements with our employees, customers, consultants and strategic partners. We require our employees to acknowledge their obligation to maintain confidentiality with respect to our products. Despite these efforts, we cannot guarantee that these parties will maintain the confidentiality of our proprietary information in the course of future employment or working with other business partners. We develop, manufacture and sell our products in Asia and other countries that may not protect our intellectual property rights to the same extent as the laws of the United States. This makes piracy of our technology and products more likely. Steps we take to protect

our proprietary information may not be adequate to prevent theft of our technology. We may not be able to prevent our competitors from independently developing technologies and products that are similar to or better than ours.

Vigorous protection and pursuit of intellectual property rights or positions characterize the semiconductor industry. This often results in expensive and lengthy litigation. We, and our customers or suppliers, may be accused of infringing patents or other intellectual property rights owned by third parties in the future. An adverse result in any litigation against us or a customer or supplier could force us to pay substantial damages, stop manufacturing, using and selling the infringing products, spend significant resources to develop non-infringing technology, discontinue using certain processes or obtain licenses to use the infringing technology. In addition, we may not be able to develop non-infringing technology or find appropriate licenses on reasonable terms or at all.

Patent disputes in the semiconductor industry between industry participants are often settled through cross-licensing arrangements. Our portfolio of patents may not have the breadth to enable us to settle an alleged patent infringement claim through a cross-licensing arrangement, especially for patent disputes brought by non-practicing entities (patent holders who do not manufacture products but only seek to monetize patent rights) that cannot be settled through cross-licensing and cannot be avoided through cross-licensing with industry practitioners. We may therefore be more exposed to third-party claims than some of our larger competitors and customers.

Customers may make claims against us in connection with infringement claims made against them that are alleged to relate to our products or components included in our products, even where we obtain the components from a supplier. In such cases, we may incur monetary losses due to cost of defense, settlement or damage award and non-monetary losses as a result of diverting valuable internal resources to litigation support. To the extent that claims against us or our customers relate to third-party intellectual property integrated into our products, there is no assurance that we will be fully or even partially indemnified by our suppliers against any losses.

Furthermore, we may initiate claims or litigation against third parties for infringing our proprietary rights or to establish the validity of our proprietary rights. This could consume significant resources and divert the efforts of our technical and management personnel, regardless of the litigation's outcome.

***If we fail to comply with our obligations under any license, collaboration or other agreements, we may be required to pay damages and could lose certain intellectual property rights.***

Our current licenses impose, and any future licenses we enter into are likely to impose, various development, commercialization, funding, milestone, royalty, diligence, sublicensing, insurance, patent prosecution and enforcement and other obligations on us. If we breach any of these obligations, or use the intellectual property licensed to us in an unauthorized manner, we may be required to pay damages and the licensor may have the right to terminate the license, which could result in us being unable to develop, manufacture and sell products that are covered by the licensed technology or could enable a competitor to gain access to the licensed technology. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights in such unlicensed intellectual property. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop, manufacture and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

For example, our cooperation agreement with Nexperia, which is key to our business, contains certain terms that, if triggered, could have a material adverse effect on our business, financial condition, results of operations and prospects. For instance, the LSA contains customary events of default including, among others, payment defaults, breaches of covenants defaults, the occurrence of a material adverse change, bankruptcy and insolvency defaults, cross defaults with certain material indebtedness, judgment defaults, and the occurrence of a change of control. In addition, an event of default will occur if the Development and Loan Agreement ("DLA") is terminated under certain circumstances or we fail to timely deliver reports related to statements of work under the DLA. Upon the occurrence and during the continuance an event of default, Nexperia may declare all or a portion of our outstanding obligations to be immediately due and payable and exercise other rights and remedies provided for

under the LSA. If specified events of default occur and remain continuing for more than 30 consecutive days, we are required to assign a portion of our patent portfolio constituting collateral to Nexperia in satisfaction of our obligations under the LSA. During the existence of an event of default, interest on the obligations could be increased to 3.0% above the otherwise applicable interest rate. Additionally, pursuant to an intracompany license agreement with our wholly owned subsidiary, Transphorm Japan Epi (“TJE”), if certain events (some of which may be beyond our control) occur, we could be forced to sell TJE at fair market value to a third party that is approved by us and Nexperia. While TJE’s epiwafer capacity currently is not required for production of our products, if such a “forced-sale” event were to happen in the future, we could be required to purchase a portion of our epiwafer requirements from the third party that purchases TJE. This could impact our epiwafer costs, reduce any overall profits, or cause us to lose a portion of our capacity, requiring us to generate more epiwafer capacity earlier than planned. This would result in greater capital expenditure than anticipated, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

### **Risks Related to our Financial Control Environment**

***Being a public company can be administratively burdensome and will significantly increase our legal and financial compliance costs.***

As a public reporting company, we are subject to the information and reporting requirements of the Securities Act, the Exchange Act and other federal securities laws, rules and regulations related thereto, including compliance with the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”), and the Dodd-Frank Wall Street Reform and Consumer Protection Act. In addition, the listing requirements of any national securities exchange or other exchange and other applicable securities rules and regulations impose various requirements on public companies. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will significantly increase our legal and financial compliance costs and will make some activities more time-consuming and costly. Among other things, we are required to:

- maintain and evaluate a system of internal controls over financial reporting in compliance with the requirements of Section 404 of the Sarbanes-Oxley Act and the related rules and regulations of the SEC and the Public Company Accounting Oversight Board;
- maintain policies relating to disclosure controls and procedures;
- prepare and distribute periodic reports in compliance with our obligations under federal securities laws;
- institute a more comprehensive compliance function, including with respect to corporate governance; and
- involve, to a greater degree, our outside legal counsel and accountants in the above activities.

The costs of preparing and filing annual and quarterly reports, proxy statements and other information with the SEC and furnishing audited reports to stockholders is expensive and compliance with these rules and regulations will require us to hire additional financial reporting, internal controls and other finance personnel, and will involve a material increase in regulatory, legal and accounting expenses and the attention of our board of directors and management. In addition, being a public company makes it more expensive for us to obtain director and officer liability insurance. In the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain this coverage. These factors could also make it more difficult for us to attract and retain qualified executives and members of our board of directors.

***Any failure to maintain effective internal controls over our financial reporting could materially and adversely affect us.***

Section 404 of the Sarbanes-Oxley Act requires us to include in our annual reports on Form 10-K an assessment by management of the effectiveness of our internal controls over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented, and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed time frame or at all, that our internal control over financial reporting is effective as required by Section 404. For example, in connection with the audit of our consolidated financial statements for the years ended December 31, 2019 and 2018, we identified certain deficiencies relating to our internal control over financial reporting that constitute material weaknesses under standards established by the Public Company Accounting Oversight Board (the “PCAOB”), and we cannot predict the outcome of our testing in future periods. If we identify additional material weaknesses in the future or are unable to remediate the material weaknesses we currently have, our financial statements may be inaccurate and investors could lose confidence in the reliability of our financial statements, which in turn could negatively affect the market price of our common stock. In addition, if we are not able to continue to meet these requirements, we may not be able to become or remain listed on any national securities exchange or other exchange or quoted on an over-the-counter market.

***We have identified material weaknesses in our internal control over financial reporting that, if not properly remediated, could result in material misstatements in our consolidated financial statements in future periods.***

We have limited accounting and financial reporting personnel and other resources with which to address our internal controls and related procedures. In connection with the audit of our consolidated financial statements for the year ended December 31, 2018, we identified certain deficiencies relating to our internal control over financial reporting that constitute material weaknesses under standards established by the PCAOB. As of December 31, 2019 and September 30, 2020, these material weaknesses continued to exist. Accordingly, we were not able to assert that our internal control over financial reporting was effective as of December 31, 2019. The PCAOB defines a material weakness as a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the company’s annual or interim financial statements will not be prevented or detected on a timely basis. A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. We identified a material weakness related to the fact that certain members of our finance team and personnel are able to operate across a number of different functions and have user access that gives rise to segregation of duties risks in connection with our information technology infrastructure. Access to systems has subsequently been restricted and access will be managed by independent personnel. The other material weakness relates to a lack of evidence to support review work and oversight procedures. Formal review processes and meetings are being introduced in addition to the creation of a specific role in the finance team to review documentation and prepare evidence of such review. These material weaknesses have a pervasive impact on various activity level and financial reporting cycles. We will need to take additional measures to fully remediate these deficiencies. The measures we have taken, and expect to take, to improve our internal controls may not be sufficient to (1) address the issue identified, (2) ensure that our internal controls are effective, or (3) ensure that the identified material weaknesses or other material weaknesses will not result in a material misstatement of our annual or interim financial statements. In addition, other material weaknesses may be identified in the future. If we are unable to correct deficiencies in internal controls in a timely manner, our ability to record, process, summarize and report financial information accurately and within the time periods specified in SEC rules and forms will be adversely affected. This failure could negatively affect the market price and trading liquidity of our common stock, cause investors to lose confidence in our reported financial information, subject us to civil and criminal investigations and penalties, and generally materially and adversely impact our business and financial condition.

***If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operations could fall below the expectations of investors, resulting in a decline in the market price of our common stock.***

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect the amounts reported in our financial statements. Significant assumptions and estimates used in preparing our financial statements include those related to assets, liabilities, revenue, expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of investors, resulting in a decline in the market price of our common stock.

***Changes in accounting rules and regulations, or interpretations thereof, could result in unfavorable accounting charges or require us to change our compensation policies.***

Accounting methods and policies for companies such as ours, including policies governing revenue recognition, leases, research and development and related expenses, and accounting for stock-based compensation, are subject to review, interpretation and guidance from our auditors and relevant accounting authorities, including the SEC. Changes to accounting methods or policies, or interpretations thereof, may require us to reclassify, restate or otherwise change or revise our historical financial statements, including those contained in this prospectus.

***Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.***

We have incurred substantial losses during our history, do not expect to become profitable in the near future and may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change,” generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation’s ability to use its pre-change net operating loss carryforwards (“NOLs”), and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. The Merger, our prior equity offerings and other changes in our stock ownership may have resulted in ownership changes. In addition, we may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which are outside of our control. As a result, if we earn net taxable income, our ability to use our pre-change NOLs to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. For example, California recently passed the 2020 Budget Act, which temporarily suspends the use of NOLs and limits the utilization of the research credit to \$5 million annually for 2020, 2021 and 2022.

## **Risks Related to Our Common Stock**

***We are an “emerging growth company” and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.***

We are an “emerging growth company” as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including (1) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, (2) reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and (3) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. In addition, as an emerging growth company, we are only required to provide two years of audited financial statements in this prospectus. We could be an emerging growth



company for up to five years, although circumstances could cause us to lose that status earlier, including if the market value of our common stock held by non-affiliates exceeds \$700.0 million as of June 30 of any year or if we have total annual gross revenue of \$1.07 billion or more during any fiscal year, in which cases we would no longer be an emerging growth company as of the following December 31, or if we issue more than \$1.0 billion in non-convertible debt during any three-year period, in which case we would no longer be an emerging growth company immediately. Even after we no longer qualify as an emerging growth company, we may still qualify as a “smaller reporting company” which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. If we rely on these exemptions, investors may find our common stock less attractive, which could result in a less active trading market, if any, for our common stock and more volatility or a decline in our stock price.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use the extended transition period under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

***We are a smaller reporting company, and we cannot be certain if the reduced disclosure requirements applicable to smaller reporting companies will make our common stock less attractive to investors.***

We are currently a “smaller reporting company,” meaning that we are not an investment company, an asset-backed issuer, or a majority-owned subsidiary of a parent company that is not a smaller reporting company and the market value of our stock held by non-affiliates, or our public float, is less than \$250 million. In the event our public float increases, we will remain a smaller reporting company if we continue to have annual revenues of less than \$100 million during our most recently completed fiscal year and our public float is less than \$700 million. If we are still considered a smaller reporting company at such time as we cease being an “emerging growth company,” we will be required to provide additional disclosure in our SEC filings. However, similar to emerging growth companies, smaller reporting companies are able to provide simplified executive compensation disclosures in their filings; are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting; and have certain other decreased disclosure obligations in their SEC filings, including, among other things, only being required to provide two years of audited financial statements in annual reports. Decreased disclosures in our SEC filings due to our status as a smaller reporting company may make it harder for investors to analyze our results of operations and financial prospects, and may cause some investors not to invest in or hold our stock.

***We are not currently subject to compliance with rules requiring the adoption of certain corporate governance measures and, as a result, our stockholders have limited protections against interested director transactions, conflicts of interest and similar matters.***

The Sarbanes-Oxley Act, as well as resulting rule changes enacted by the SEC, the New York Stock Exchange and the Nasdaq Stock Market, require the implementation of various measures relating to corporate governance. These measures are designed to enhance the integrity of corporate management and the securities markets and apply to securities which are listed on those exchanges. Because our common stock is not currently listed on a national securities exchange, we are not required to comply with many of the corporate governance provisions and we have not yet adopted certain of these measures. Until we comply with such corporate governance measures, regardless of whether such compliance is required, the absence of such standards of corporate governance may leave our stockholders without protections against interested director transactions, conflicts of interest and similar matters.

***We may be a controlled company within the meaning of the Nasdaq and NYSE rules if we eventually list on such exchange, and, as a result, may qualify for and intend to rely on exemptions from certain corporate governance requirements.***

As of December 31, 2020, KKR Phorm Investors L.P. (“Phorm”), an entity owned by investment funds advised by Kohlberg Kravis Roberts & Co. L.P., beneficially owned approximately 52.6% of our outstanding common stock. As a result, we may be a controlled company within the meaning of the Nasdaq or NYSE corporate governance standards, if we eventually list on the applicable exchange. Under Nasdaq rules, for example, a controlled company may elect not to comply with certain corporate governance requirements of the Nasdaq, including the requirements that:

- a majority of the board of directors consist of independent directors;
- the nominating and corporate governance committee be composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities;
- compensation committee be composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities; and
- there be an annual performance evaluation of the nominating and corporate governance and compensation committees.

If we were to list on Nasdaq in the future and are a controlled company at such time, we intend to utilize these exemptions (or similar exemptions if we were to list on NYSE), including the exemption for a board of directors composed of a majority of independent directors. In addition, to the extent we create committees, these committees may not be composed entirely of independent directors immediately following such creation. We may rely on the phase-in rules of the SEC, Nasdaq or NYSE if we are no longer a controlled company under the applicable listing standard. For example, the phase-in rules for Nasdaq permit us to have a compensation committee that has one member that is independent at the time that we cease to be a controlled company, a majority of members that are independent within 90 days thereafter and all members that are independent within one year thereafter. Accordingly, you may not have the same protections afforded to shareholders of companies that are subject to all of the corporate governance requirements of Nasdaq or NYSE.

In addition, pursuant to the terms of a stockholders agreement with Phorm (the “Phorm Stockholders Agreement”), Phorm has the right to appoint a member to each committee that may be established by our board of directors, appoint the chair of our board of directors, and nominate a majority of our board of directors, in each case subject to a phase-out period based on Phorm’s future share ownership. Phorm may assign these and other governance rights to certain transferees. See the section of this prospectus captioned “Certain Relationships and Related Transactions—Stockholders Agreement.” Accordingly, even if we are no longer a controlled company, holders of our common stock may not have the same protections afforded to stockholders of companies that do not have a stockholders agreement similar to ours.

***Our common stock trades on the OTCQB instead of a national securities exchange, which may make it more difficult for stockholders to sell their shares.***

Our common stock is currently quoted on the OTC Market Group’s OTCQB Market quotation system under the ticker symbol “TGAN.” The OTCQB are regulated quotation services that display real-time quotes, last sale prices and volume limitations in over-the-counter securities. Trading in shares quoted on the OTCQB is often thin, meaning that the number of persons interested in purchasing stock at or near bid prices at any given time may be relatively small or non-existent, and characterized by volatility in trading prices. This volatility may be caused by a variety of factors, including the lack of readily available price quotations, the absence of consistent administrative supervision of bid and ask quotations, lower trading volume and market conditions. As a result, there may be wide fluctuations in the market price of the shares of our common stock for reasons unrelated to operating performance, and this volatility, when it occurs, may have a negative effect on the market price of our common stock. Moreover,

the OTCQB is not a stock exchange, and trading of securities on it is often more sporadic than the trading of securities listed on a national quotation system or stock exchange. Accordingly, our stockholders may not be able to realize a fair price for their shares when they determine to sell them or may have to hold them for a substantial period of time until the market for our common stock improves. In addition, the stock markets in general, including in the industry in which we operate, have experienced extreme volatility, particularly due to the COVID-19 pandemic, that has, in some cases, been unrelated to the operating performance of the issuer. Accordingly, these broad market and industry factors may also seriously harm the market price of our common stock, regardless of our operating performance.

***Our common stock may not be eligible for listing or quotation on any securities exchange.***

We do not currently meet the initial quantitative listing standards of any national securities exchange and we may never be able to satisfy the listing requirements for our common stock to be listed on a national securities exchange, which is often a more widely-traded and liquid market. Some, but not all, of the factors which may delay or prevent the listing of our common stock on a more widely-traded and liquid market include the following: our stockholders' equity may be insufficient; the market value of our outstanding securities may be too low; our net income from operations may be too low; our common stock may not be sufficiently widely held; we may not be able to secure market makers for our common stock; and we may fail to meet the rules and requirements mandated by the several exchanges and markets to have our common stock listed. Should we fail to satisfy the initial listing standards of the national exchanges, or our common stock is otherwise rejected for listing, the trading price of our common stock could suffer, the trading market for our common stock may be less liquid and our common stock price may be subject to increased volatility.

***The designation of our common stock as a "penny stock" would limit the liquidity of our common stock.***

Our common stock may be deemed a "penny stock" (as that term is defined under Rule 3a51-1 of the Exchange Act). Generally, "penny stock" is common stock that is not listed on a securities exchange and trades for less than \$5.00 a share. Prices often are not available to buyers and sellers and the market may be very limited. Penny stocks in start-up companies are among the riskiest equity investments. Broker-dealers who sell penny stocks must provide purchasers of these stocks with a standardized risk-disclosure document prepared by the SEC. The document provides information about penny stocks and the nature and level of risks involved in investing in the penny stock market. A broker must also provide purchasers with bid and offer quotations and information regarding broker and salesperson compensation and make a written determination that the penny stock is a suitable investment for the purchaser and obtain the purchaser's written agreement to the purchase. Many brokers and investors choose not to participate in penny stock transactions, which may result in further liquidity constraints and declines in the trading price of our common stock. Because of the penny stock rules, there may be less trading activity in penny stocks in any market that develops for our common stock in the future and stockholders are likely to have difficulty selling their shares.

***Sales of substantial amounts of our common stock in the public markets, or the perception that such sales might occur, could cause the market price of our common stock to decline significantly, even if our business is doing well.***

Sales of a substantial number of shares of our common stock into the public market, particularly sales by our directors, executive officers and principal stockholders, or the perception that these sales might occur in large quantities, could cause the market price of our common stock to decline. Pursuant to a registration statement that was declared effective by the SEC on June 19, 2020, certain of our stockholders are permitted to resell up to 38,227,152 shares of our common stock, which includes shares of common stock reserved for issuance pursuant to certain outstanding warrants and a convertible promissory note. In addition, pursuant to a registration rights agreement we entered into in connection with the Private Placement, we agreed, at our expense, to prepare and file this registration statement with the SEC registering the resale of up to 5,285,501 shares of our common stock, which includes shares of common stock reserved for issuance pursuant to the Placement Agent Warrants.

In connection with the Private Placement, our executive officers, directors and certain beneficial owners of our common stock, holding in the aggregate approximately 66.5% of our common stock (including securities convertible into or exchangeable for our common stock) as of December 31, 2020, entered into market standoff or lock-up agreements under which they cannot offer, sell, contract to sell, pledge, grant any option to purchase or otherwise dispose of shares of our capital stock, or enter into any hedging or similar transaction that is designed to or reasonably expected to lead to or result in a sale or other disposition of any of the economic consequences of ownership of shares of our capital stock, until June 20, 2021, subject to customary exceptions. If our stockholders sell, or the market perceives that our stockholders intend to sell, a substantial amount of our common stock in the public market, the market price of our common stock could decline significantly.

***We may be subject to certain liquidated damages pursuant to the registration rights agreement we entered into with certain of the selling stockholders.***

Pursuant to the registration rights agreement we entered into with certain of the selling stockholders, subject to certain exceptions, if (i) the registration statement of which this prospectus is a part ceases to remain continuously effective or the selling stockholders are otherwise not permitted to utilize this prospectus to resell their registrable securities for a period of more than 15 consecutive trading days, (ii) the registrable securities are not listed or included for quotation on any market operated by the OTC Markets Group, the Nasdaq Stock Market, the New York Stock Exchange or the NYSE American (an “Approved Market”) or (iii) following the listing or inclusion on an Approved Market, trading of our common stock is suspended or halted on such Approved Market for more than three full, consecutive trading days, we may be subject to certain liquidated damages up to a maximum amount equal to the aggregate purchase price paid by the selling stockholders for their registrable securities.

***FINRA sales practice requirements may limit a stockholder’s ability to buy and sell our stock.***

The Financial Industry Regulatory Authority (“FINRA”) has adopted rules requiring that, in recommending an investment to a customer, a broker-dealer must have reasonable grounds for believing that the investment is suitable for that customer. Prior to recommending speculative or low-priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer’s financial status, tax status, investment objectives and other information. Under interpretations of these rules, FINRA has indicated its belief that there is a high probability that speculative or low-priced securities will not be suitable for at least some customers. If these FINRA requirements are applicable to us or our securities, they may make it more difficult for broker-dealers to recommend that at least some of their customers buy our common stock, which may limit the ability of our stockholders to buy and sell our common stock and could have an adverse effect on the market for and price of our common stock. This could also make it more difficult for us to raise capital.

***If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.***

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. In addition, because we did not become a reporting company by conducting an underwritten initial public offering of our common stock, and because we are not currently listed on a national securities exchange, security analysts of brokerage firms may not provide coverage of our company. We cannot assure you that brokerage firms will provide analyst coverage of our company in the future, or continue such coverage if started. In addition, investment banks may be less likely to agree to underwrite secondary offerings on our behalf than they might if we became a public reporting company by means of an underwritten initial public offering, because they may be less familiar with our company as a result of more limited coverage by analysts and the media, which could harm our ability to raise additional funding in the future. The failure to receive research coverage or support in the market for our shares will have an adverse effect on our ability to develop a liquid market for our common stock, which will negatively impact the trading price of our common stock.

In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, or if our operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

***Our principal stockholders and management have substantial control over us and could delay or prevent a change in corporate control.***

As of December 31, 2020, Phorm, our largest stockholder, beneficially owned approximately 52.6% of our common stock, and our executive officers and directors, together with holders of five percent or more of our outstanding common stock and their respective affiliates, beneficially owned approximately 71.3% of our common stock. As a result, these stockholders, acting together, or Phorm individually, have the ability to significantly impact the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation, or sale of all or substantially all of our assets. In addition, these stockholders, acting together or Phorm individually, have the ability to significantly impact the management and affairs of our company. Under the Phorm Stockholders Agreement, Phorm has the right to nominate (i) a majority of the board so long as it beneficially owns at least 40% of our then-outstanding shares of common stock, (ii) 33% of the directors (rounded up to the nearest whole number) so long as it beneficially owns at least 20% but less than 40% of our then-outstanding shares of common stock, and (iii) 10% of the directors (rounded up to the nearest whole number) so long as it beneficially owns at least 10% but less than 20% of our then-outstanding shares of common stock. Further, pursuant to the Phorm Stockholders Agreement, so long as Phorm beneficially owns 20% or more of the outstanding shares of our common stock, we will take all necessary action to cause a director nominated by Phorm to serve as chair of our board of directors.

The interests of these stockholders may not be the same as or may even conflict with your interests. The concentration of ownership and Phorm's rights under the Phorm Stockholders Agreement might decrease the market price of our common stock by:

- delaying, deferring, or preventing a change in control of the company, which could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company or our assets and might affect the prevailing market price of our common stock;
- impeding a merger, consolidation, takeover, or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of the company.

The significant concentration of stock ownership may also adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

***Anti-takeover provisions in our charter documents could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our management.***

Provisions in our amended and restated certificate of incorporation and in our amended and restated bylaws may delay or prevent an acquisition of us or a change in our management. These provisions include a classified board of directors, a prohibition on actions by written consent of our stockholders from and after the date that Phorm beneficially owns less than a majority of our outstanding shares of common stock, supermajority voting requirements to amend certain provisions of our certificate of incorporation and bylaws from and after the date that Phorm beneficially owns less than a majority of our outstanding shares of common stock, and the ability of our board of directors to issue preferred stock without stockholder approval. Although we believe these provisions collectively will provide for an opportunity to receive higher bids by requiring potential acquirers to negotiate with our board of directors, they would apply even if the offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove then-

current management by making it more difficult for stockholders to replace members of the board of directors, which is responsible for appointing the members of management. In addition, we have opted out of the provisions of Section 203 of the Delaware General Corporation Law (“DGCL”), which generally prohibit a Delaware corporation from engaging in any of a broad range of business combinations with any interested stockholder for a period of three years following the date on which the stockholder became an interested stockholder. However, our amended and restated certificate of incorporation provides substantially the same limitations as are set forth in Section 203 but also provides that Phorm and its affiliates and any of their direct or indirect transferees and any group as to which such persons are a party do not constitute interested stockholders for purposes of this provision.

***Our bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, and also provide that the federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, each of which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.***

Our bylaws provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, stockholders, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein and the claim not being one which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery or for which the Court of Chancery does not have subject matter jurisdiction. Furthermore, our bylaws provide that, unless we consent in writing to an alternative forum, the federal district courts of the United States will be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act.

Any person purchasing or otherwise acquiring any interest in any shares of our common stock shall be deemed to have notice of and to have consented to these provisions of our bylaws. These choice of forum provisions may limit our stockholders’ ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. Stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. The Court of Chancery or a federal district court may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. Alternatively, if a court were to find either of these provisions of our bylaws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could have a material adverse effect on our business, financial condition or results of operations.

***We do not intend to pay dividends for the foreseeable future so any returns will be limited to changes in the value of our common stock.***

We have never declared nor paid cash dividends on our capital stock. We currently intend to retain any future earnings to finance the operation and expansion of our business, and we do not expect to declare or pay any dividends in the foreseeable future. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our results of operations, cash flows and financial condition, operating and capital requirements, contractual restrictions, including any loan or debt financing agreements, and such other factors as our board of directors deems relevant. As a result, stockholders must rely on sales of their common stock after price appreciation as the only way to realize any future gains on their investment, which may never occur.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections titled “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains express or implied forward-looking statements that are based on our management’s belief and assumptions and on information currently available to our management. All statements other than statements of historical fact contained in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “could,” “will,” “would,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “intend,” “predict,” “seek,” “contemplate,” “project,” “continue,” “potential,” “ongoing” or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the implementation of our business model and strategic plans for our business, technologies and products;
- our ability to raise additional funds to continue to operate our business, including our joint venture wafer fabrication facility located in Aizu Wakamatsu, Japan, and to satisfy our obligations under our agreements with our lenders;
- our costs in meeting our contractual obligations including the cash flow impact of purchasing the remaining interest in our joint venture wafer fabrication facility and operating such facility, and our ability to maintain our contracts for their expected durations;
- the impact of the ongoing COVID-19 pandemic on our industry and our business, operations and financial condition, as well as on the global economy;
- the rate and degree of market acceptance of any of our products or GaN technology in general, including changes due to the impact of (i) new GaN fabrication sources, (ii) the performance of GaN technology, whether perceived or actual, relative to competing semiconductor materials, and (iii) the performance of our products, whether perceived or actual, compared to competing GaN-based, silicon-based and other products;
- the timing and success of product releases by us and our customers;
- our ability to develop new products and technologies;
- our future financial performance, including our expectations regarding our revenue, expenses, ongoing losses, and capital requirements;
- our needs for additional financing, ability to obtain additional funds for our operations and our intended use of any such funds;
- our receipt and timing of any royalties, milestone payments or payments for products, under any current or future collaboration, license or other agreements or arrangements, including the credit risks of our customers;
- our ability to obtain, maintain, enforce, defend and enhance our intellectual property rights;
- the strength and marketability of our intellectual property portfolio;
- our dependence on current and future collaborators for developing, manufacturing or otherwise bringing our products to market;
- the ability of our third party supply and manufacturing partners to meet our current and future business needs;

- the throughput of our fabrication facilities and third party foundries, as well as the ability of such facilities and foundries to ramp up production;
- our expectations regarding our classification as a “smaller reporting company,” as defined under the Securities Exchange Act of 1934 (the “Exchange Act”) and an “emerging growth company” under the JOBS Act in future periods;
- the total addressable market and growth rates of the markets in which we compete;
- the competitive landscape of our industry;
- the impact of “controlled company” exemptions that may be available to us in the future under Nasdaq or NYSE listing standards and our use of the applicable phase-in periods; and
- the impact of government regulation and developments relating to us, our competitors or our industry.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this prospectus.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations, and prospects. The outcome of the events described in these forward-looking statements is subject to significant risks, uncertainties, and other factors, including those described in the section titled “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. We cannot assure you that the results, events, and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements.

Neither we nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements. Moreover, the forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments we may make.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.



## MARKET, INDUSTRY AND OTHER DATA

This prospectus contains estimates, projections and other information concerning our industry, our business and target markets. We obtained the industry, market and similar data set forth in this prospectus from our own internal estimates and research and from industry research, publications, surveys and studies conducted by third parties. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. While we believe that the data we use from third parties are reliable, we have not separately verified such data. Further, while we believe our internal research is reliable, such research has not been verified by any third party. You are cautioned not to give undue weight to any such information, projections and estimates.

In some cases, we do not expressly refer to the sources from which data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

The sources of industry and market data contained in this prospectus are listed below:

*Semiconductor Today*, “GaN Power Market Growing at CAGR of 55% to 2023, Driven by Power Supply Segment, or 93% if Adopted for Wireless Charging in Consumer Electronics,” Volume 13, Issue 10, December 2018 / January 2019

## SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables summarize our consolidated financial data for the periods and as of the dates indicated. We derived the consolidated statements of operations data for the years ended December 31, 2019 and 2018, and the consolidated balance sheet data as of December 31, 2019 and 2018, from our audited consolidated financial statements included elsewhere in this prospectus. We derived the consolidated statements of operations data for the nine months ended September 30, 2020 and 2019, and the consolidated balance sheet data as of September 30, 2020, from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The unaudited condensed consolidated financial statements have been prepared on the same basis as our annual audited consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal, recurring adjustments that are necessary to present fairly the unaudited condensed consolidated financial statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and our interim results are not necessarily indicative of the results to be expected for the full year or any other period. You should read the following summary consolidated financial data in conjunction with our consolidated financial statements and the related notes appearing elsewhere in this prospectus and the information in the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

<i>(in thousands except share and per share data)</i>	Nine Months Ended September 30,		Year Ended December 31,	
	2020	2019	2019	2018
<b>Consolidated Statements of Operations Data</b>				
Revenue	\$ 9,358	\$ 2,011	\$ 11,934	\$ 1,358
Operating expenses:				
Costs of goods sold	4,746	4,211	6,492	4,601
Research and development	4,131	6,245	8,146	9,351
Sales and marketing	1,593	2,098	2,609	3,626
General and administrative	7,838	4,015	6,606	5,675
Total operating expenses	18,308	16,569	23,853	23,253
Loss from operations	(8,950)	(14,558)	(11,919)	(21,895)
Loss in joint venture	5,218	3,004	3,703	2,404
Other (income) loss, net	(971)	155	(339)	1,499
Net loss	\$ (13,197)	\$ (17,717)	\$ (15,283)	\$ (25,798)
Net loss per share - basic and diluted	\$ (0.39)	\$ (0.63)	\$ (3.62)	\$ (6.11)
Weighted average common shares outstanding - basic and diluted	34,072,176	28,153,555	4,219,656	4,219,606

<i>(in thousands)</i>	<b>September 30, 2020</b>	<b>December 31, 2019</b>	<b>December 31, 2018</b>
	<b>(unaudited)</b>		
<b>Consolidated Balance Sheet Data</b>			
Cash and cash equivalents	\$ 4,369	\$ 2,875	\$ 3,069
Current assets	8,609	5,357	4,825
Total assets	12,866	10,262	10,499
Short-term debts	20,153	15,458	10,346
Current liabilities	26,027	20,688	16,528
Long-term debts	16,327	26,169	15,852
Total liabilities	42,354	46,857	32,380
Convertible preferred stock			
Series 1	—	39,658	39,658
Series 2	—	30,000	30,000
Series 3	—	16,000	16,000
Common stock	4	4	4
Additional paid-in capital	128,385	22,400	21,829
Accumulated deficit	(157,112)	(143,915)	(128,632)
Total stockholders' deficit	(29,488)	(122,253)	(107,539)

## BUSINESS

### Overview

We are a global semiconductor company founded in 2007. We are a pioneer, and a market and technology leader, in the wide-bandgap GaN power electronics field for high voltage power conversion applications. We deliver high quality and reliable GaN devices with high performance, while providing application design support to a growing customer base. Our GaN devices allow customers to design smaller, lighter and cooler power systems creating increased functional value in end products including smartphone power adapters/fast-chargers, power supplies for datacenter servers/communication, industrial power converters and chargers/converters/inverters for electric vehicles, among other applications. We deploy our unique vertically integrated innovation model that leverages one of the industry's most experienced GaN engineering teams (with over 300 years of combined experience) at every development stage: device design, materials growth, device fabrication, packaging, circuits and application support. This approach, backed by one of the GaN power industry's largest intellectual property portfolios with access to over 1,000 world-wide patents, has yielded the industry's first automotive-grade AEC-Q101 and JEDEC qualified high voltage GaN FETs. Our innovations are designed to move power electronics beyond the limitations of silicon and provide our customers with the potential to achieve higher efficiency or lower loss (e.g., titanium-class performance in power supplies), higher power density (e.g., compact size or improved form factor) and, in many designs, an overall lower system cost.

### Our Technology

**Driving "Moore's law of Power" with GaN:** At the core of any power converter or inverter widely utilized in converting electrical energy from one form to another (for example, AC to DC), are semiconductor-based electronic switches, traditionally made with silicon-based devices. While silicon and silicon-based switching transistors like MOSFETs and IGBTs are reaching their technological limits, GaN FETs have significant potential for performance to further the roadmap for power conversion systems that require ever increasing power density (ability to pack power in a small volume), analogous to Moore's law for digital semiconductors. In this case, the "Moore's law" analogy is the increasing power density over time, which has been achieved via improvements in switching devices, starting with SCRs, then BJTs, followed by IGBTs and MOSFETs, all of which are silicon-based devices. Relative to silicon-based devices, GaN devices offer advantages including higher switching speeds, higher breakdown voltages and lower resistance. Today, wide-bandgap semiconductors like SiC and GaN are driving the innovation in power electronics.

**Our GaN FETs:** Our proprietary GaN on silicon material growth (or epiwafer technology) knowhow via MOCVD allows us to build our GaN devices on inexpensive silicon substrates, thereby leveraging the cost structure of well-established silicon-based manufacturing. Our proprietary GaN epiwafer designs also allow us to achieve devices capable of sustaining high voltages well in excess of the 650 Volts required for typical power switching applications, with ultra-low losses. At the core of our GaN FET device is a two-chip, normally-off 650 Volt GaN platform, integrating a low voltage Si FET input/drive stage with a high voltage GaN output stage to deliver a normally-off, packaged power device to the end user. Compared to other approaches by which a normally-off, high voltage GaN switching device can be made, our approach is more robust than other alternatives (so-called junction gated or p-GaN type devices) that typically offer low safety margins. A typical standard Si-MOSFET consists of a normally-off input portion (gate control) with a normally-on output portion (high voltage drift region), that are integrated in one device. We have integrated two separate die in one package in a chip-on-chip configuration to achieve the best of both worlds - high robustness and high performance. The result is a normally-off power device package with a combination of reliability, robustness, design margin and performance. This approach is now being adopted by other GaN manufacturers, which we believe validates our approach and makes our strong intellectual property even more important going forward. Our GaN FETs stand out in the industry due to their capability to withstand much higher voltages than those required for device ratings (for instance, our standard 650 Volt products have a destructive breakdown voltage in excess of 1,000 Volts, which is high in comparison to the typical range for our competitors' GaN devices of 650 Volts to 1,000 Volts), contributing to our safety margins in operation.

**Continued Innovation:** We have a strong innovation track record as evidenced by a series of firsts in the GaN high voltage arena, including the first automotive-grade AEC-Q101 and JEDEC qualified high voltage GaN FETs. We have also released multiple generations of products beginning with Gen-1 and Gen-2 prior to 2016, to Gen-3 in 2018, Gen-4 in 2020 and now our Gen-5 offerings under development. Each product platform seeks to improve key industry metrics (or figures of merit) designed to result in both improved performance (lower losses in power converters/inverters for our customers) and lower cost by enabling lower die size and simpler packages.

**Epiwafer Products:** Recently, we also started to monetize our strong core expertise in GaN epiwafer technology by providing GaN epiwafer products for the RF/microwave/millimeter wave market, as well as for certain strategic customers in the power device market. In 2018 and 2019, we were awarded the base portion and option portion, respectively, of an \$18.5 million contract by the U.S. Navy, which we believe is validation of our technology, intellectual property and capability in this area. We aim to establish ourselves as a U.S.-based supplier for advanced GaN epiwafer products for both the U.S. Department of Defense and commercial applications.

## **Our Solution and Business Model**

Our GaN product offerings are based on innovation across the value chain, starting from GaN material and epiwafers to GaN device design, and from wafer fabrication to packaging, as well as application-based reference designs that help our customers extract the most value from GaN. This vertically integrated control of the value chain has resulted in rapid innovation, manufacturing control, and the high quality, high reliability (Q+R™) brand of high voltage GaN offerings that we offer.

**Target Power Market Focus:** Our GaN on silicon FET products start with a 650 Volt rating and currently go up to 900 Volts, and we are developing products that we believe will go up to 1,200 Volts. 650 Volt products represent a large portion of the power conversion market because the world-wide line voltage into which these converters have to plug in ranges from 110 Volts to 240 Volts, resulting in in-system voltages of 400 Volts to 500 Volts that necessitate a 650 Volt power device. Similarly, higher bus voltage applications such as those running off an 800 Volt battery for an inverter require higher voltage ratings from power devices. As the voltage requirement gets higher, a silicon-based power device switch becomes increasingly lossy and the differentiation in performance offered by a GaN device increases.

**Products:** Our products currently address power conversion applications ranging from approximately 30 watts to approximately 10 kilowatts. Our GaN FETs are offered in various packages, addressing our customers' needs from very robust to compact packages. In addition to the appropriate device, a robust and easy-to-use package is key for a power product because the heat dissipated in the device ultimately is removed via the package and then the system heat sink. TO packages have historically served a significant role in the power semiconductor industry. We have designed our GaN products in these TO packages to deliver kilowatt class power that takes advantage of GaN's high efficiency and low loss switching capability along with a solid thermal interface offered by the TO package. We also offer surface mount equivalents of the TO packages such as the D2Pak, where surface mount capability is a must. On the other hand, for fast switching compact power adapters (typically sub-300 watt), the compact PQFN package is our standard offering. Our packaged products also incorporate simple but powerful high frequency and high speed switching design philosophies, resulting in GaN solutions with stable operation at multi kilowatts, at high-speed and high frequency (multi-100 kHz to MHz), all while maintaining high quality and reliability.

**Markets:** Our GaN products switch much faster than equivalent silicon products and increase a system's power density, producing greater efficiency while enabling system size reduction. With their proven reliability and ability to reduce size and save energy, 650 Volt GaN FETs have now been adopted in the market. GaN provides cost-competitive, easy-to-embed solutions that reduce energy loss and system size by as much as 40 percent, while enabling system cost reduction, to simplify converter and inverter design and manufacturing.

Our products today address power conversion applications including:

- low power applications (30 watt to 300 watt) such as smartphone power adapters/fast chargers and laptop and appliance power supplies;
- medium power applications (several hundred watts to sub 5-kilowatts) such as power supplies for datacenter servers, communications infrastructure, and industrial servo drives for motors and robotics; and
- high power applications (greater than 5 kilowatts) such as onboard chargers, converters and inverters for electric vehicles and power supplies for industrial applications.

We believe power conversion with high voltage semiconductor devices (e.g., 650 Volt devices) is a large market opportunity. Based on reports from various third party research firms, we estimate the total addressable market for GaN to be approximately \$1.6 billion. Market research firm Yole Développement predicts growth for the GaN power device market with GaN power semiconductor-related revenues as high as \$400 million by 2023.

In addition to the power semiconductor market, we have started supplying GaN epiwafers on various substrates, including silicon carbide, sapphire and silicon, ranging from 4 to 6 inches in diameter, for RF/microwave/millimeter wave device markets, and we believe we are in a position to target the growing 5G RF market in the future. We believe the existing market for GaN RF transistors for wireless infrastructure and 5G exceeds \$500 million, and we can service a portion of this market attributed to epiwafers. For these areas, we also have the advantage of being a pure-play epiwafer foundry as we do not make RF device products.

## Our History

**Overview:** Our company was launched in 2007 by experienced founders Professor Umesh Mishra and Dr. Primit Parikh, with more than 30 years of GaN technology and business experience between them at the time, with the goal of commercializing GaN technology for the large power semiconductor market while making a global impact on electrical energy savings and simplifying power conversion for end users. We have been a key player in the area of high voltage GaN power devices from our early days with several industry firsts, including the first GaN on silicon device to the first 600 Volt GaN device JEDEC qualification, the first high voltage GaN automotive qualified product under the stringent AEC-Q101 standard, the first high temperature (175C) rated GaN offering, and the first field reliability data including over 7 billion hours of operation with a statistical failure rate of <1 FIT (1 per billion hours of operation).

**Blue Chip Partnerships:** Throughout our history, we have established blue chip partnerships with strong investors, manufacturing and channel partners, key customers, and strategic investors and partners. In 2019, Nexperia and the U.S. government each accounted for more than ten percent of our revenues. In 2018, Avnet Technology Hong Kong Ltd., Fujitsu Electronics Pacific Asia Ltd and Digikey Corporation each accounted for more than ten percent of our revenues.

In 2014, we established a business integration, IP acquisition/licensing and channel partnership agreement with Fujitsu Limited (“Fujitsu”) and FSL, pursuant to which we established Transphorm Japan as a wholly owned subsidiary, with a leading manufacturing and quality team from FSL. In connection with this agreement, we entered into a manufacturing partnership for FSL’s high quality 6-inch silicon wafer fabrication plant in Aizu Wakamatsu, Japan that allowed us to bring silicon-like manufacturing excellence to GaN products. We also acquired a patent portfolio from FSL and a license to a separate portfolio from Fujitsu. This relationship further led to the establishment in 2017 of a joint venture with FSL for the 6-inch Aizu facility, in which we are currently a noncontrolling, minority partner. In April 2020, FSL exercised its put option and notified us that it intended to exit the joint venture by selling its 51% interest in the Aizu facility to us. While the joint venture agreement with FSL provides that completion of the transaction was to take place as soon as 60 days from the date of the exercise notice, such transaction is subject to regulatory and other approvals in Japan that we believe will take up to the second quarter of 2021 to obtain, assuming such approval is received at all. For more information, see the section below titled “—Manufacturing and Supply—Wafer Fabrication and Joint Venture with Fujitsu.”

In 2015, Phorm made an investment of \$70 million in us with the goal of enabling us to get our GaN products that had completed concept, engineering, manufacturing, reliability and quality testing to mass market. Upon completion of this offering, Phorm will remain our largest stockholder.

In 2017, we entered into a partnership with Yaskawa, a global leader in motion control and a pioneer in the adoption of new semiconductor technology for the field of servo motors, robotics and renewables. In October 2017, Yaskawa loaned us \$15.0 million pursuant to a convertible promissory note that is convertible, in whole or in part and at Yaskawa's option, into our common stock (subject to a maximum of 3,076,171 shares). Yaskawa seeks to enable smaller, faster and more efficient power electronics servo drives in applications such as robotics, which use servo motors to enable movement along various axes of motion in a robot, to improve robot functions. We are developing customized versions of our GaN devices for Yaskawa and for other motor drive use.

In December 2020, as an expansion of our partnership with Yaskawa, we entered into a cooperation and development agreement with Yaskawa, pursuant to which Yaskawa agreed to provide \$4.0 million over three years to fund our development activities related to industrial power conversion applications, with an initial focus on servo motor drive applications. Yaskawa provided \$1.0 million of this \$4.0 million commitment in December 2020.

In 2018, we established a five-year cooperation agreement with Nexperia, a leader in silicon-based power semiconductors for automotive products, with the goal of establishing a second source of our GaN products and better positioning to penetrate the automotive market with our GaN products in the long term. Through a combination of equity ownership, a loan agreement, technology development projects, and licensing of our wafer-fabrication process and certain products, we secured significant funding from Nexperia. We believe this agreement is further indicative of our strong intellectual property portfolio as well as our ability to create revenue streams by monetizing our intellectual property.

In 2020, we established a relationship with Marelli, a leading automotive Tier-1 supplier (headquartered in Japan and with a world-wide footprint) for long term development of our automotive converter and inverter products. Marelli also made an equity investment of \$4.0 million in our February 2020 private placement and committed to invest an additional \$1 million by March 31, 2021, subject to there being no material adverse change to our financial condition.

**Customer Partnerships:** Beginning in 2018, we have empowered our customers' success and have seen several customers introduce their end power conversion products such as power supplies, battery chargers and fast charging adapters into the market. For example, Corsair, a leading supplier of high performance gaming equipment, successfully introduced its AX1600i series of GaN-based power supplies. This success has served a significant role in allowing us to ship more than half a million GaN products to market. We estimate that the half million GaN products estimated to be operating now for two years have resulted in at least five billion hours of combined field operation - a first for high voltage GaN. As mentioned above, Yaskawa has partnered with us with a view of enabling GaN devices for servo drives in robotics applications. We have also developed a partnership with a company based in Asia with key design expertise for GaN-based adapter products, including certain non-recurring engineering payment-based development by us for our partner entailing limited time exclusivity for specific products developed pursuant to the partnership, subject to meeting minimum quarterly sales. We own a minority 1% share in this partner company, headquartered in Hong Kong. Lastly, in 2018 and 2019, the U.S. Navy awarded us the base portion and option portion, respectively, of an \$18.5 million three-year contract to create a U.S.-based source of advanced GaN epiwafer materials for the U.S. Department of Defense, which we believe exemplifies the recognition of our strong GaN MOCVD epiwafer platform, intellectual property and manufacturing scale and creates an opportunity for us to sell into the broader GaN RF epiwafer market. This has helped us in developing a second vertical - our GaN epiwafer business - to supplement our primary business of GaN power products. In this area, we have started to sell epiwafers, targeting both customers within the U.S. Department of Defense (including those resulting from the impact of the U.S. Navy program as well as others) and commercial RF and power device customers.

We are dependent on revenues from certain key customers such as Nexperia and the U.S. government, and distributors who sell to Corsair, Bel Power Systems, Common Power and Xentris, as well as on revenues from sales

of our epiwafer products to various customers engaged in research and development for the U.S. Department of Defense utilizing our GaN epiwafer products. In particular, for the nine months ended September 30, 2020 and the year ended December 31, 2019, Nexperia and the U.S. government each accounted for more than ten percent of our revenues.

## Commercialization

**Current GaN Power Products:** We have qualified and released to manufacturing a number of products based on our 650 Volt GaN FET technology. Our current product portfolio in the market is based on our 650 Volt Gen-1 to Gen-4 GaN FET platforms. Our products are offered in the industry standard TO packages (TO247 and TO220) or the 8x8 PQFN surface mount packages. The TO packages offer the most robust thermal performance and result in higher power per device, ranging from 1 kilowatt to over 5 kilowatt, and the PQFN packages offer the most compact and higher speed switching performance, typically for sub 2-kilowatt applications, including adapter applications. We also have a 900 Volt GaN FET product in the market, and believe that we are the only company to have qualified a 900 Volt GaN device to date. The key markets that are currently addressed by our products include:

- Power adapters and chargers and gaming power supplies
- Data center and infrastructure power supplies
- Industrial applications - Power Supplies, UPS/battery chargers, servo drives

Additionally, we hope to enter the automotive products market in the mid-term, via DC-DC converters, on board chargers, and AC inverters for off-grid power, for which we are actively working with customers, and in the longer term, via EV power-train and high speed chargers after our development of larger current, higher power GaN devices. In the fourth quarter of 2020, we announced sampling our Gen-5 devices addressed at EV applications and other market areas.

**Application Resources:** We develop reference designs and evaluation boards that help our customers incorporate our GaN devices into the design of their power conversion products. We also make our applications kits available on distribution sites such as Digikey and Mouser.

**Gen-4 Products:** Our Gen-4 platform, which saw the introduction of two products in the market in 2020, further improves the industry metric of resistance per unit die area and enables simpler packaging. Our next priority is to complete AEC Q1010 (automotive) qualification and release more products incorporating our 650 Volt Gen-4 platform in the market. A summary of our Gen-4 products is below:

- 650 Volt/Gen-4/250-300 mohm class GaN FET for 45 watt to 100 watt class adapters (released in the second quarter of 2020);
- 650 Volt/Gen-4/450-500 mohm class GaN FET for 24 watt to 50 watt class adapters (released in the fourth quarter of 2020); and
- 650 Volt/Gen-4/35 mohm class GaN FET for kilowatt class general power conversion applications including data-centers, industrial (released in the second quarter of 2020).

One of our near-term focus areas is to commercialize Gen-4 products in 30 watt to 150 watt adapters. We are working with a design partner in Asia and have the capability to provide a reference design-based solution for these power adapters. As anticipated, in the second quarter of 2020 one of our customers launched a 65 watt slim-adapter that incorporated our GaN products. The continued relationship with our Asia design partner, as well as expanding our own application engineering team, is important for our success in the adapter market. Further, the success of our design-in with end customers is critical to us securing an early ramp in adapter revenues.



**Higher Voltage, 900 Volt FETs:** We believe we are the only company to have qualified 900 Volt GaN FETs. These products are used for power conversion applications that involve higher in-circuit voltages in excess of 600 Volts to 700 Volts or applications that run off a higher voltage battery. We released our Gen-3 JEDEC qualified commercial 900 Volt product in August 2020.

**Automotive Products and Partners:** Our GaN products are capable of being qualified for automotive applications following the AEC-Q101 standard. We have already AEC-Q101-qualified our Gen-2 and Gen-3 based products and we are targeting AEC-Q101 qualification of our Gen-4 based 650 Volt/35 mohm product in the first quarter of 2021. The first revenues from automotive applications are not expected until 2022. With the establishment of our product development relationship with Marelli, we met our target of adding one automotive customer in 2020. Our revenues from automotive applications are dependent on our activities with certain Japanese automotive partners as well as our relationship with Nexperia, which plans to offer their automotive products both through licensing our technology and relying, in part, on us for epiwafer procurement. Success with Japanese automotive partners and Nexperia's success in their automotive outreach would influence both the timing and ramp-up of our automotive revenues.

**Epiwafer Business:** We view our epiwafer business as a vertical that supplements our primary GaN power device business. In 2018 and 2019, we secured the base portion and option portion, respectively, of an \$18.5 million three-year contract from the U.S. Navy for commercialization of GaN-based epifwafers on various substrates including silicon carbide, silicon and sapphire. This is a cost plus fee type contract with various milestones to be achieved by us. We began generating revenues from the sale of GaN epifwafers for the RF GaN market to the U.S. Department of Defense in 2020, and we expect our revenues from this vertical to increase in 2021 as compared to 2020. We believe this contract with the U.S. Navy provides a strong base for our epiwafer business, though such business is not limited to defense customers as we will also be targeting commercial RF GaN epiwafer sales for the RF GaN market.

## **Research and Development (“R&D”)**

Our innovation is targeted at maintaining a leadership position in the GaN power device market. We completed development of our first Gen-4 products in 2020 and will continue development of more Gen-4 products based on customer needs. Further, we have also started working on our next improvement in figure of merit (a quality of semiconductor devices impacting performance limits) through our Gen-5 based platform. The Gen-5 platform also includes products with higher current and power than our Gen-3 and Gen-4 products, and it will help address 5 kilowatt to 10 kilowatt applications more easily. In addition to the commercialization plan for our Gen-4 products discussed above, we are currently targeting the release of our first Gen-5 based device in 2021.

We are also in the initial stages of exploring 1,200 Volt GaN devices, which are partly funded by a research sub-contract from the U.S. Department of Energy ARPA-E (Advanced Research Project Agency-Energy) agency. Based upon progress and competitive positioning, we are targeting a potential release of a 1,200 Volt GaN device after 2021.

## **Intellectual Property**

**Proprietary Protection:** Our commercial success depends in part on our ability to continuously obtain and maintain proprietary protection for our GaN products, associated solutions and other know-how, to operate without infringing the proprietary rights of others, and to prevent others from infringing on our proprietary rights. We have been building and are continuing to build our intellectual property portfolio relating to our GaN products, including GaN products that can be used in the power conversion industry. Our policy is to seek to protect our proprietary position by, among other methods, filing and licensing U.S. and certain foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development and implementation of our business. We also rely on trade secrets, know-how, and technological innovation to develop and maintain our proprietary position. We cannot be sure that patents will be granted with respect to any of our owned or licensed pending patent applications or with respect to any patent applications filed or licensed by us in the future, nor can we

be sure that any of our existing owned or licensed patents or any patents that may be granted or licensed to us in the future will be commercially useful in protecting our technology.

**IP Leadership:** We are a world leader in GaN power semiconductor based intellectual property, with a patent portfolio that has access to over 1,000 patents comprising our directly owned patents, exclusive, sole or nonexclusive licenses of key portfolios from The University of California, Santa Barbara (“UCSB”), Furukawa Electric Co., Ltd. (“Furukawa”) and Fujitsu, as well as a nonexclusive license from Cree, Inc. (“Cree”) for the field of GaN power devices. The strength of our portfolio lies in the fact that our intellectual property covers all aspects of the GaN value chain, ranging from GaN epitaxial materials to device design to wafer fabrication processes to packages as well as GaN-based circuits and applications.

**Portfolio:** Our patent portfolio includes pending patent applications and issued patents in the United States and in foreign countries. As of December 31, 2020, our owned and licensed patent portfolio consisted of over 850 issued patents and over 200 pending patent applications around the world. Our over 330 directly owned patents are complemented by 150 patents from Furukawa’s sole licensed intellectual property and over 170 patents from Fujitsu’s nonexclusively licensed intellectual property in the power semiconductor area. The approximately 25 patents exclusively licensed from UCSB include some fundamental early intellectual property on growth of GaN on silicon substrates and unique intellectual property on nitrogen polar GaN, which was pivotal to us being awarded the contract from the U.S. Navy. Additionally, we hold a nonexclusive license from Cree to over 300 GaN material/device patents. Our licenses for the UCSB, Furukawa and Cree patents are royalty-bearing, and we pay royalties based on total revenues. The license for the Fujitsu patents is not royalty-bearing. We have also sub-licensed the UCSB and Furukawa patents to Nexperia on a royalty-bearing basis, which helps us defray the cost of maintaining these intellectual property portfolios.

Patent life determination depends on the date of filing of the application and other factors under the patent laws. In most countries, including the United States, the patent term is generally 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country.

#### ***UCSB license agreement***

We entered into a license agreement with UCSB in 2007. As of December 31, 2020, we had in-licensed 29 patents or patent applications under this agreement. The UCSB license agreement requires us to use commercially reasonable efforts, consistent with demand in the marketplace and industry conditions and development timelines, to research, develop, market and manufacture products that are licensed under the agreement. We have the right to sublicense these rights to third parties. The UCSB license is subject to the rights of the U.S. government under any and all applicable laws including substantially manufacturing all licensed products in the United States, unless such requirement is waived by the U.S. government. In addition, we have the obligation to pay UCSB’s patent prosecution and maintenance costs, as well as royalties at a low single-digit percentage of any net revenue generated by our sale of any licensed product. In the event we grant a sublicense under the licensed patent rights, we also have the obligation to pay UCSB a certain portion of the sublicense royalties equal to at least as much as would have been due from us to UCSB under the parent license. We have one sublicense in place for which we receive a certain portion of our maintenance fees and certain royalties, which will be passed on to UCSB. We may terminate this license agreement at any time by providing 90 days’ written notice to UCSB.

#### ***Furukawa license agreement***

We entered into a license agreement with Furukawa in 2014. As of December 31, 2020, we had in-licensed 150 issued patents in the U.S. and foreign countries under this agreement. We have the right to sublicense these rights to third parties. We share in the maintenance costs for the licensed patents by paying a fixed annual maintenance fee of \$200,000, as well as royalties at a low single-digit percentage of any net revenue generated by our sale of any licensed product. In the event we grant a sublicense under the licensed patent rights, we also have the obligation to pay Furukawa a certain portion of the sublicense royalties. We have one sublicense in place for which we receive a certain portion of our maintenance fees and certain royalties, which will be passed on to Furukawa. Either party may terminate or renew this license agreement after ten years from entry into the agreement.

### ***Fujitsu license agreement***

We entered into a license agreement with Fujitsu in 2013. As of December 31, 2020, we had in-licensed 163 issued and pending patents in the U.S. and foreign countries under this agreement. We do not have the right to sublicense these rights to third parties. Under the terms of this license agreement, Fujitsu has no obligation to sue or enforce the patent rights against third party infringers. Our license from Fujitsu is fully paid up and royalty free worldwide, with nonexclusive rights for power electronics. This agreement is non-terminable.

### ***Cree license agreement***

We entered into a license agreement with Cree in 2013. As of December 31, 2020, we had in-licensed over 420 issued and pending patents in the U.S. and foreign countries under this agreement. We do not have the right to sublicense these rights to third parties. Under the terms of this license agreement, Cree has no obligation to sue or enforce the patent rights against third party infringers. We have the obligation to pay royalties at a low single-digit percentage of any net revenue generated by our sale of any licensed product. Either party may terminate or review this license agreement every three years.

### **Our Technology Licenses and Assignments**

Our strategy for the protection of our proprietary technology is to seek worldwide patent protection with a focus on jurisdictions that represent significant global power semiconductor markets. However, we assess on a case-by-case basis whether it is strategically more favorable to maintain trade secret protection for our inventions and “know-how” rather than pursue patent protection. Generally, patents have a term of twenty years from the earliest priority date, assuming that all maintenance fees are paid, no portion of the patent has been terminally disclaimed and the patent has not been invalidated. In certain jurisdictions, and in certain circumstances, patent terms can be extended or shortened.

Although our current GaN products are based on the 2-chip, normally-off configuration, our intellectual property also includes patents on multiple approaches for the 1-chip, normally-off or the e-mode GaN device technology, including patents on the so called “p type” gated GaN device approaches.

As the GaN power semiconductor business grows, we expect to be in a strong position to demonstrate the strength of our intellectual property position to customers and to continue to monetize our intellectual property.

**Trademarks and Trade Secrets:** Trademarks form an important part of branding our products, the philosophy behind those products and the Company itself. Some of our key trademarks are the Transphorm logo (with the globe), Q+R (our Quality and Reliability brand), SuperGaN (our highest performance new generation of GaN products), and EZ GaN. We also rely on trade-secret protection for our confidential and proprietary information, and we typically use non-disclosure agreements when commencing a relationship with a customer or partner, particularly when we believe we will share proprietary information. We have an internal program to document our trade-secrets for each major area of our technology and operations. We cannot be sure that we can meaningfully protect our trade secrets on a continuing basis. Others may independently develop substantially equivalent confidential and proprietary information or otherwise gain access to our trade secrets.

**Licensing to Nexperia:** As part of our long-term cooperation agreement with Nexperia and in exchange for Nexperia’s original investment in us, we agreed to transfer certain technologies to Nexperia, and have provided Nexperia with licenses to manufacture and sell products using such technologies (in each case, excluding our epi process technology) as follows:

- Exclusive license (i.e., exclusive of us) for the automotive field in all regions except Japan, with the exception that we may develop, manufacture or directly sell any products in the automotive field to certain specified customers anywhere in the world (including Japan).

- “Sole” license for all other areas of application (i.e., we may not grant similar licenses to any other parties but we are not restricted from using or exploiting our technology in such other areas of application).
- The above licenses become nonexclusive on the earliest to occur of (i) April 4, 2023 and (ii) one year after a change of control of us.
- These licenses are ultimately contingent upon Nexperia fulfilling the appropriate licensing payment requirement, which in turn are contingent upon the execution of certain milestones by us.

## Competition

**Overview:** Our solutions compete with other power semiconductor solutions for power conversion including other GaN products, SiC products and silicon super-junction and IGBT products. Both GaN and SiC belong to the wide-bandgap semiconductor materials category, which offer high power switching performance due to their inherent capability to switch with lower losses at high voltages. Our GaN products are targeted at the 600 Volt to 650 Volt and the 900 Volt markets today, addressing power levels from 30 watts to over 5 kilowatts.

Competition in our markets is based on a variety of factors, including cost, size, power consumption, performance, reliability, product line depth and breadth, and ability to supply in sufficient quantities. We believe we can, or will be able to, compete effectively based on these factors.

Our GaN solutions compete with silicon-based products from companies such as Infineon, ST Microelectronics, Toshiba, ON Semiconductor, Mitsubishi and others, as well as with SiC based offerings from Rohm, United Silicon Carbide, Cree, Infineon and others. SiC devices benefit from the fact that they are vertical devices while today’s high performance GaN devices are lateral devices. Vertical devices tend to offer smaller total chip area for similarly rated devices. However, GaN devices can make up for this size difference, at least in part, by being manufactured on a very low cost silicon substrate. We also compete with other high-voltage GaN product providers including Infineon, Power Integrations, Panasonic, GaN Systems, Navitas, Texas Instruments and others.

Many of our existing competitors have, and some of our potential competitors could have, substantial competitive advantages such as greater name recognition, longer operating histories, broader and deeper product portfolios, larger customer bases, substantially greater financial and other resources, and larger scale manufacturing operations. However, we believe our products have the potential to compete, and do compete, with many of our competitors’ offerings through product quality, product reliability and satisfaction of customer qualifications and standards.

Some companies as well as academic institutions are engaged in research and development of vertical GaN devices fabricated on bulk GaN substrates. While these could be promising in the future, much remains to be proven as to the ultimate quality and cost of these GaN substrates as well as the actual performance benefit of a vertical GaN device on a GaN substrate vs. high performance GaN HEMT-based products made on silicon substrates.

**Competition With Silicon:** We aim to capture applications that are traditionally addressed by silicon but for which silicon no longer offers sufficient performance. However, although the overall system cost may be lower with GaN due to compact size and reduction of other components in the system, the cost of certain GaN devices is higher than the cost of the comparable silicon devices at present (approximately twice the cost as such silicon devices). Therefore, in applications where silicon performance is acceptable, it may be difficult to compete with GaN products until the cost of the GaN devices is reasonably close (we estimate within a 20-30% range) to comparable silicon devices at a per device level. Typically, GaN devices face competition from silicon superjunction devices or silicon IGBT devices in such scenarios.

**Competition With Silicon Carbide:** Although SiC products have been around for a much longer time than GaN devices, we believe that GaN has better figures of merit with respect to certain power switching applications

and the potential to deliver lower losses for such power switching applications. GaN is also made on standard silicon wafer substrates, lending it the cost structure of silicon-based wafer fabrication versus the more expensive SiC substrates on which SiC devices are manufactured. However, although the performance of SiC devices today at 600 Volts to 650 Volts is distinctly lower than GaN, SiC devices are more competitive at higher voltages such as 1,200 Volt nodes, where SiC is currently growing in use. This is due, at least in part, to SiC devices such as MOSFETs typically having a low mobility of electron charge under the gate region (such as approximately 50 cm<sup>2</sup>/Volt-second), versus GaN HEMTs which have much higher electron mobility in the gate region as well as the total conducting (or drift) region. For example, our GaN HEMTs have typical channel mobility of approximately 2,000 cm<sup>2</sup>/Volt-second. The lower gate mobility of the SiC MOSFET results in higher resistance (and thus higher loss) under the gate region. At lower voltages, the overall conduction (or drift) region is smaller and the gate region represents a higher portion of the total device. At higher voltages, such as 1,200 Volts, the gate region represents a smaller portion of the overall device and thus is not too detrimental for overall device loss. Thus, as the voltage requirement of a device is lowered, SiC devices generally tend to fall in relative performance versus GaN devices.

**Competition With Other GaN Offerings:** Finally, our GaN devices compete with offerings from other GaN manufacturers. While the presence of multiple GaN manufacturers is required for the overall acceptance of GaN technology, we strive to differentiate ourselves through quality, reliability, and easy to use GaN devices in thermally robust packages, while still offering a high level of performance (low loss and high efficiency) at reasonable price points.

## **Our Growth Strategy**

Our growth strategies include (i) addressing growth in the power conversion markets through innovative GaN products with high quality and reliability that are easy to use, (ii) establishing an aggressive product and technology roadmap to improve product performance and decrease our costs, (iii) maintaining strong customer partnerships in what we believe are important product areas, and (iv) maintaining strong connections with suppliers, manufacturing partners and distribution partners.

In the near term, we aim to incorporate our products into power supplies by supporting product opportunities ranging from sub-100 watt compact smartphone fast-charging adapters to 3 kilowatt power supplies for datacenter servers with our GaN products. We continue to develop reference designs for various adapter solutions such as 65 watt USB Type-C fast chargers to provide customers a complete solution with our easy-to-use, high reliability GaN products. Adapters for fast chargers, which are becoming more prevalent with the increased power consumption of 5G mobile phones, represents a strong opportunity to market our GaN solutions. We aim to continue our partnerships with customers who have already introduced high-efficiency, compact, GaN-based power supplies in the market recently and to expand with more customers in this area.

In addition, we aim to address industrial markets such as industrial power supplies, servo motor drives for robotics, uninterruptible power supplies, and inverters and chargers for off-grid and backup power solutions, among other products. Our products come in standard packages that are thermally robust and capable of efficiently delivering 1 kilowatt to 5 kilowatts of power in a single package, which we believe are well suited for these types of products. We also develop reference designs for the applicable subsystems of power converters and inverters to ease product integration and help our customers derive additional benefit with GaN solutions. We have developed significant partnerships in this area, such as with Yaskawa in the area of servo motor drives.

The number of electric vehicles worldwide is expected to continue to grow from just over 3 million to over 30 million over the next decade. We believe that power conversion opportunities on board the automobile, such as on board battery charger and DC-DC converters for powering auxiliary systems, as well as the powertrain inverters, represent a strong market opportunity for GaN solutions. GaN-based devices can provide improvements in efficiency over traditional silicon devices, enabling compact systems for efficient charging and ultimately enabling higher driving range. In the mid term, our focus will be having customers design around our products in the areas of DC-DC converters (e.g., 3 kilowatt power) and onboard chargers (e.g., 6.6 kilowatt to 11 kilowatt power); we currently have products available to address these product areas. In the long term, we aim to address powertrain inverters with higher power ratings (e.g., 50 kilowatts to over 200 kilowatts) using innovative solutions such as

combining multiple GaN devices and developing devices rated for higher power output. For example, to our knowledge, we are the only company to date to qualify and release a 900 Volt-rated GaN power device. We also have 1200 Volt rated devices in early development.

We intend to continue to innovate in the GaN technology space to maintain our reputation in product quality, reliability and performance and to continue to improve the costs of our GaN products over time. Our new generations of products, such as our Gen-4 and Gen-5 products, target smaller GaN die sizes while improving the figures of merit for power switching. We plan to offer these products in both robust, industry-standard packages as well as compact, surface-mount packages based on the power level and customer requirements. Through this roadmap, we plan to additionally develop devices with greater power and current ratings, including our Gen-5 devices, which we expect to release in 2021.

As a result of our contract with the U.S. Navy, we are also positioning ourselves to be a supplier for high quality GaN epiwafers on various substrates such as silicon, silicon carbide and sapphire, in wafer diameters ranging from 4-inch and 6-inch now to 8-inch in the next few years. We aim to become a strong U.S.-based epiwafer supplier for GaN RF electronics for both the U.S. Department of Defense and commercial RF applications such as GaN RF transistors for wireless infrastructure and 5G. For these areas, we also have the advantage of being a pure-play epiwafer foundry as we do not make RF device products. We will also target providing GaN epiwafers for power semiconductor applications to select strategic partners and for select development opportunities.

### **Government Regulation and Product Approval**

Our primary set of products that include GaN power semiconductor FETs fall into the ECCN EAR-99 category of the export regulations from the U.S. Department of Commerce and as such are not currently subject to restrictions. We are required to conform to other guidelines and restrictions of the Department of Commerce and other government regulations that may be in place from time to time concerning shipping products to specific companies or countries. Our GaN epiwafers are classified under the ECCN 3C001 (GaN on silicon) and ECCN 3C006 (GaN on silicon carbide) category of export regulations, while our GaN on silicon epiwafer production and development technology falls under ECCN 3E001 of the regulations, and may require a license for export, re-export or transfer to a number of countries pursuant to EAR. We have systems in place to ensure our compliance with these guidelines and procedures and U.S. laws and regulations. Any exports of our technology for development or production of our epiwafers (under ECCN 3E001) to our own subsidiary in Japan and our joint venture with Fujitsu Semiconductor in Japan is under the license exception TSR (technology and software under restriction).

To the extent our products are or become subject to U.S. export controls and regulations, these regulations may limit the export of our products and technology, and provision of our services outside of the United States, or may require export authorizations, including by license, a license exception, or other appropriate government authorizations and conditions, including annual or semi-annual reporting. Export control and economic sanctions laws may also include prohibitions on the sale or supply of certain of our products to embargoed or sanctioned countries, regions, governments, persons, and entities. In addition, various countries regulate the importation of certain products, through import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our products. The exportation, re-exportation, and importation of our products and technology and the provision of services, including by our partners, must comply with these laws or else we may be adversely affected, through reputational harm, government investigations, penalties, and a denial or curtailment of our ability to export our products and technology. Complying with export control and sanctions laws may be time-consuming and may result in the delay or loss of sales opportunities. Although we take precautions to prevent our products and technology from being provided in violation of such laws, our products and technology may have previously been, and could in the future be, provided inadvertently in violation of such laws, despite the precautions we take. If we are found to be in violation of U.S. sanctions or export control laws, it could result in substantial fines and penalties for us and for the individuals working for us. Export or import laws or sanctions policies are subject to rapid change and have been the subject of recent U.S. and non-U.S. government actions. Changes in export or import laws or sanctions policies, may adversely impact our operations, delay the introduction and sale of our products in international markets, or, in some cases, prevent the export or import of our products and technology to certain

countries, regions, governments, persons, or entities altogether, which could adversely affect our business, financial condition and results of operations.

Our subsidiary in Japan, Transphorm Japan, also adheres to export control regulations under Japanese law, which generally mirror U.S. export control laws. Transphorm Japan has obtained licenses for the export of epiwafer materials to the extent required.

We are also generally subject to other industry and environmental regulations for electronic and semiconductor products such as the Restriction of Hazardous Substances Directive 2002/95/EC.

## **Manufacturing and Supply**

**Supply Chain and Epi Materials:** We believe we have strong manufacturing and supply chain operations in comparison to our competitors, from GaN epiwafers to wafer fabrication to packaging and testing. We control our core MOCVD GaN epiwafer manufacturing and development, with multiple MOCVD reactors at both our Goleta, California headquarters and our joint venture wafer fab in Aizu Wakamatsu, Japan. Each location has multiple 6-inch production scale reactors, including some with 8-inch capability that we may require in the future. We believe these reactors, with the ability to grow high quality, high uniformity GaN epi materials on silicon, silicon carbide and sapphire substrates, provide sufficient capacity for epitaxial wafers both for our GaN power device business as well as our epiwafer sales vertical.

**Wafer Fabrication and Joint Venture with Fujitsu:** Our wafer manufacturing as well as most of our engineering development is accomplished in our joint venture wafer fab in Aizu Wakamatsu, Japan. AFSW has a fully depreciated 6-inch production fabrication facility, originally running silicon CMOS and bipolar processes and, since 2012, also running GaN processes while continuing some silicon-based wafer foundry activity. On November 28, 2013, we entered into a process technology and development and services agreement with FSL to integrate our GaN power device manufacturing processes with FSL's manufacturing processes to enable our GaN wafer manufacturing at what is now the AFSW fabrication facility. Since that time, we have gained full access to the facility for development and manufacturing of various generations of our GaN products. For example, we worked with FSL to qualify a complete manufacturing process for GaN wafers in the AFSW fabrication facility, which resulted in our products being commercially released in 2015 under our Gen-2 platform. Subsequently all our production supply of fabrication wafers was sourced from the AFSW fabrication facility.

In 2017, we entered into a joint venture agreement with FSL to gain further control of our GaN manufacturing, share ownership and operating costs of the AFSW entity, and refine certain other aspects of our commercial relationship. Currently, we hold a 49% interest, and FSL holds a 51% interest, in this joint venture. On April 1, 2020, FSL exercised its put option under the joint venture agreement and notified us that FSL intended to exit the joint venture by selling its 51% interest in AFSW to us. Under the terms of the joint venture agreement, the aggregate purchase price for FSL's interest in AFSW is expected to be one Japanese Yen. While the agreement provides that completion of the transaction was to take place as soon as 60 days from the date of the exercise notice, such transaction is subject to regulatory and other approvals in Japan, which we believe will take up to the second quarter of 2021 to obtain, assuming such approval is received at all. We have entered into an agreement with a third party to become a partner in AFSW, subject to regulatory and other approvals in Japan that we believe will take up to the second quarter of 2021 to obtain, assuming such approval is received at all. For at least one year following the date on which we (alone or with a third party) take over full ownership of AFSW, we have agreed to use our best efforts to maintain and continue the operations of AFSW, which we believe is synergistic with our own business for securing wafers for our products. If we were to become the sole owner of AFSW and it continues to operate at a loss at such time (which we currently expect to be the case), our cash flows would be significantly negatively impacted. Based on our current and future cash flow requirements and business needs at that time, we expect that, assuming regulatory approvals are received, if we were to become the sole owner of AFSW, we would have to consider other options including but not limited to raising more capital, selling some or all of AFSW to a third party, or moving our GaN production elsewhere and ceasing operations at AFSW. See "*Risk Factors—Our ability to continue as a going concern will depend on us being able to raise additional capital*" for a description of risks associated with operating AFSW and the impact to us of FSL exercising its put option.

The AFSW facility, which has a capacity of 14,000 CMOS process equivalent wafers per month, is capable of producing sufficient GaN wafers for our needs in 2020 and 2021. We believe the AFSW facility can be scaled on demand in the mid-term, and is scalable to address our demand in the long-term over 5 years with increased investment in various standard semiconductor wafer fab equipment, typically acquired from used markets.

**Backside Wafer Processing, Packaging and Testing:** We contract with two third-party vendors to perform standard functions of back-side grinding and metallization in external facilities in Asia to complete the full wafer process. After these processes, the finished GaN wafers are transported to one of our packaging sub-contracting partners depending on the type of final package, where they are diced and finished into the final product. We have multiple sites for our TO220, TO247, PQFN packages and at present one site for our D2Pak package. The final test portion of the supply chain is also in Asia, in many cases residing within our packaging sub-contractors.

**Production Control:** Our production planning and control process is centralized from our headquarters and integrated with our enterprise resource planning tools including NetSuite and manufacturing execution systems including WIPtrac. The entire process from forecasting and planning to order entry, then to build execution and inventory management, and finally to shipping, resides in the production control function.

## Sales

Our revenue consists of (1) licensing revenue, (2) government revenue from our contract with the U.S. Navy and (3) revenue from product sales. Products are sold to distributors and end-users in various sectors such as, but not limited to, the automotive, gaming, industrial, IT, consumer and RF (for our epiwafer products) industries.

**GaN Products - Sales Process and Distributors:** Our sales activity is primarily carried out in four broad based geographical regions (with significant focus in Asia) including key focus areas of (i) Mainland China, Hong Kong and Taiwan, (ii) the United States, (iii) Japan and, to a lesser extent, (iv) South Korea and Europe. We have offices in Hong Kong, China, Taiwan, Japan and the United States that include both sales and application engineering/customer support personnel. The field sales and applications effort is also supported by our senior factory applications engineering team from our California headquarters.

We partner with several regional distributors and sales representatives. In Asia, Avnet, Fujitsu Electronics (now part of Kaga Electronics) and Common Power are our current distributors. In Japan, IIDA Electronics and Asahi Tech are our current distributors. In the North America, Fujitsu Electronics is our current distributor, and in Europe, we have partnered with Hyline. Additionally, our products are available worldwide through Digkey and Mouser. We employ regional representatives, primarily in the United States, on an as-needed basis. We also work with select design and development partners who make reference designs and system level solutions with our GaN products and are a part of our extended applications-oriented effort.

In December 2020, we formed a joint venture in Singapore that will focus on addressing the rapidly growing fast-charger market in the Greater China region. This joint venture, in which we hold less than a 50% share, will also have certain exclusive distribution rights for new design wins in Greater China.

**Markets and Design Cycles:** For the nine months ended September 30, 2020 and the year ended December 31, 2019, our product revenue of approximately \$1.9 million and \$1.4 million, respectively, was comprised of sales into gaming power supplies, data center power supplies and infrastructure, power adapters, miscellaneous industrial applications and sampling revenue to automotive customers, including through our partner Nexperia, and epiwafer sales. While we are targeting an increase in GaN product revenue in 2021, we expect 2021 revenue to continue to be comprised primarily of licensing and government contract revenue.

Design cycles for our products can be long and range from 9 to 18 months for the adapter/consumer market to 18 to 30 months for the datacenter and communication infrastructure market as well as industrial markets, to 3 to 5 years for the automotive market. Our sales funnel also classifies various opportunities in stages in the lifecycle at



our customers including the stages of investigation, evaluation, dedicated board design, design-in, prototype and pilot production, before commencing full production.

**Epiwafer Sales:** Epiwafer sales are to U.S. Department of Defense customers for GaN on 4-inch and 6-inch wafers, for RF GaN on silicon carbide and sapphire substrates. Sales for GaN on silicon epiwafers for power devices to Nexperia under our long-term cooperation agreement are also included in this vertical. The epiwafer sales are carried out directly by us from our GaN MOCVD epiwafer department.

## **Marketing**

Our target application markets for our GaN power products are power adapters and computing, datacenters and infrastructure, industrial and automotive. Our worldwide marketing efforts are coordinated out of our headquarters in Goleta, California and our office in San Jose, California. Key elements of our marketing efforts include:

- Participation and promotion in major power electronic tradeshows, conferences and events such as the Applied Power Electronics Conference in North America, PCIM Europe and PCIM Asia;
- Our website, which contains our product information, application notes and resources, evaluation boards, publications, events and various technical papers/white papers on wide-ranging topics such as quality and reliability, conferences, and presentations or papers;
- Electronic and print trade media and outlet advertising;
- Advertising on Digikey and Mouser, with analytical monitoring and search analytics; and
- Regular press releases and announcements.

## **Nexperia Cooperation Agreement**

In 2018, we entered into a five-year cooperation agreement with Nexperia, a stand-alone power semiconductor business spun out from NXP Semiconductors N.V., to secure funding for us and create a second source of supply for our GaN products or equivalent products, which certain customers may require to be available in the market for broader adoption of our products, and to enable a stronger long term outreach for the automotive market than possible with our own resources. Nexperia has begun promotion of their GaN products in the market, which is positive for the overall adoption of GaN solutions as well as for our business in particular, as Nexperia currently purchases epiwafers from us and has contracted to purchase epi material from us in the future when they produce their own epiwafers, as further described below. In connection with purchasing approximately \$16.0 million of our Series 3 convertible preferred stock in April 2018, Nexperia entered into a set of cooperation agreements with us including a development and license agreement, loan and security agreement and supply agreement. Key components include:

1. Development and License Agreement, as subsequently amended: On April 4, 2018, we entered into the DLA with Nexperia, pursuant to which we agreed to develop and transfer to Nexperia certain manufacturing process technologies to enable Nexperia to manufacture GaN-based products at Nexperia's facilities. These technologies to be transferred included our Gen-3, Gen-4 (Tranche A), Gen-5 (Tranche B) and 1,200 Volt (Tranche B-1) process technologies but do not include our Epi Process Technology (as defined in the DLA). Nexperia also agreed to provide funding for the development of such technologies in return for limited exclusivities in automotive and other fields. Nexperia's exclusive rights expressly exclude development and sale of products in the automotive field in Japan. On March 21, 2019, the parties entered into an amendment to add our 1,200 Volt manufacturing technology to the agreement. Key components of the DLA include:

- Foundry Transfer: The DLA requires transfer of our existing Gen-3 wafer fabrication process (currently running in our AFSW foundry) to Nexperia’s wafer fabrication facility in Hamburg, Germany. Such transfer is targeted to be completed in the first half of 2021, but now largely depends on Nexperia’s ability to complete such transfer. We received \$9.0 million of funds from Nexperia in relation to the transfer activity, associated intellectual property and projects completed to date. This transfer also creates a second source for GaN wafer fabrication, which we expect will facilitate broader adoption of GaN technology, as certain customers require multiple sources for risk mitigation. No technology transfer or license related to the GaN epiwafer technology is contemplated.
  - Technology Projects for “Pre-funded” Technology Loans and Licensing: Additionally, technology projects pertaining to our Gen-4, Gen-5 and 900 Volt products and related activities were pre-funded by loans from Nexperia after we demonstrated that we had reached certain milestones (which have been completed). Such loans would be considered to be paid off when the target milestones as identified in the Statement of Work (SoW) of the DLA are complete. In the event the we are not able to meet the milestones, such loans would start accruing interest at 6% annum from such determination date. At such time when the milestones are completed and the loan is considered to be paid off, Nexperia would secure a license to the technology developed pursuant to the DLA.
2. Loan and Security Agreement, as subsequently amended: The LSA, entered into on April 4, 2018, comprises term loans in an aggregate principal amount of \$15.0 million, separated into tranches for pre-funded projects and subject to the satisfaction of specified conditions, and a \$10.0 million revolving loan, each of which bears 6% annual interest.
    - The term loans under the LSA include a \$5.0 million Tranche A loan intended to pre-fund our Gen-4 technology development and a \$10.0 million development loan intended to pre-fund our Super Junction technology development. On March 31, 2019, we executed Amendment No. 1 to the LSA, pursuant to which the \$10.0 million development loan was bifurcated into two separate sub-tranches comprising an \$8.0 million Tranche B Loan intended to pre-fund our Gen-5 technology development and a \$2.0 million Tranche B-1 Loan intended to pre-fund our 1,200 Volt technology development. The Tranche A Loan was scheduled to mature on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2020, which was subsequently extended to June 30, 2020. In June 2020, the Tranche A Loan was satisfied in full upon our transfer of our Gen-4 technology development to Nexperia, at which point we recognized \$5.0 million as licensing revenue. The Tranche B Loan and Tranche B-1 Loan mature on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2021, subject to extension as provided in the LSA.
    - The \$10.0 million revolving loan under the LSA, all of which was outstanding as of December 31, 2020, is secured against our U.S. non-MOCVD patents and matures at the earlier of (i) April 4, 2021 and (ii) the date a Change of Control (as defined in the LSA) occurs. Interest on the outstanding principal amount of the loans accrues at a rate of 6% per annum.
  3. Supply Agreement, as subsequently amended: Simultaneously with the DLA and LSA, we entered into a Supply Agreement with Nexperia that sets forth the terms under which Nexperia may purchase epiwafers, processed wafers and packaged products from us, and we may purchase processed wafers and packaged products from Nexperia. Nexperia agreed to purchase all its requirements of epiwafers and products based on epiwafers from us until June 30, 2020, subject to certain exceptions relating to our inability to meet Nexperia’s requirements.

## Employees

As of December 31, 2020, we had a total of 91 employees, of which approximately 66 are U.S.-based. We value and support hiring exceptional talent to develop our core technology and drive our business growth. None of our U.S. employees is represented by a labor union or covered by a collective bargaining agreement with respect to their employment with us. We have not experienced any work stoppages and we consider our relations with our employees to be good.

### **Properties**

Our headquarters are located in Goleta, California, where we lease approximately 27,800 square feet of commercial space for research and development, engineering, testing and corporate offices. We also lease additional offices in the United States and internationally in Japan, Hong Kong, China and the Philippines. We believe that our facilities are suitable to meet our current needs.

### **Legal Proceedings**

From time to time, we may become involved in litigation or other legal proceedings. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our historical financial statements and the related notes thereto contained in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the sections titled "Special Note Regarding Forward-Looking Statements" and "Risk Factors" for a discussion of forward-looking statements and important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.*

### Overview

We are a pioneer, and a market and technology leader, in the wide-bandgap GaN power electronics field for high voltage power conversion applications. We deliver high quality and reliable GaN devices with high performance, while providing application design support to a growing customer base. Our GaN devices allow customers to design smaller, lighter and cooler power systems that create increased functional value in end products including smartphone power adapters, smartphone chargers, power supplies for datacenter servers and automotive electric vehicles, among other applications. We deploy our unique vertically integrated innovation model that leverages one of the industry's most experienced GaN engineering teams (with over 300 years of combined experience) at every development stage: device design, materials growth, device fabrication, packaging, circuits and application support. This approach, backed by one of the GaN power industry's largest IP portfolios with access to over 1,000 world-wide patents, has yielded the industry's first automotive-grade AEC-Q101 and JEDEC qualified high voltage GaN FETs. Our innovations are designed to move power electronics beyond the limitations of silicon and provide our customers with the potential to achieve higher efficiency (e.g., titanium-class performance in power supplies), higher power density and, in some designs, an overall lower system cost.

We received our first product order "in volume" (e.g., greater than ten thousand units) for our Gen-2-based TO247 products in January 2018. We introduced our Gen-3 products in June 2018. Also in 2018, we were awarded a contract from the U.S. Navy to become a supplier for GaN epiwafer products for use by the U.S. Department of Defense. In the fourth quarter of 2019, we recognized \$9.0 million of licensing revenue through our first outbound licensing deal with Nexperia. In the second quarter of 2020, we recognized \$5.0 million of licensing revenue from Nexperia related to funding Gen-4 technology development.

Since our inception we have devoted substantial resources to the research and development of GaN power devices and the protection and enhancement of our intellectual property and have incurred significant operating losses. Our net loss was \$13.2 million and \$17.7 million for the nine months ended September 30, 2020 and 2019, respectively, and \$15.3 million and \$25.8 million for the years ended December 31, 2019 and 2018, respectively. As of September 30, 2020, our accumulated deficit was \$157.1 million. Substantially all of our operating losses have resulted from expenses incurred in connection research and development activities and from general and administrative costs associated with our operations.

To date, our revenue has been significantly lower than our expenses. Our revenue was \$9.4 million, of which \$6.4 million was from related parties and \$505 thousand was retroactive application since inception due to new government authorized rates, and \$2.0 million, of which \$509 thousand was from related parties, for the nine months ended September 30, 2020 and 2019, respectively, and \$11.9 million and \$1.4 million for the years ended December 31, 2019 and 2018, respectively. For the nine months ended September 30, 2020 and the year ended December 31, 2019, Nexperia and the U.S. government each accounted for more than ten percent of our revenues.

We expect to continue to incur significant expenses and operating losses for the foreseeable future. We expect our expenses will increase in connection with our ongoing activities as we:

- add sales and field applications personnel and incur related expenses to support operational growth;

- increase activity directly related to promoting our products to increase revenue; and
- add financial accounting and management systems and select personnel and incur additional legal and accounting expense as we operate as a public company.

## Recent Developments

### *Reverse Merger*

On February 12, 2020, our wholly-owned subsidiary, Peninsula Acquisition Sub, Inc., a corporation formed in the State of Delaware (“Acquisition Sub”), merged with and into Transphorm Technology (formerly known as Transphorm, Inc.), the corporate existence of Acquisition Sub ceased, and Transphorm Technology became our wholly-owned subsidiary (such transaction, the “Merger”). As a result of the Merger, we acquired the business of Transphorm Technology. The Merger was effective as of February 12, 2020, upon the filing of a certificate of merger with the Secretary of State of the State of Delaware. Immediately after completion of the Merger, we adopted Transphorm Technology’s former company name, “Transphorm, Inc.,” as our company name.

The Merger was treated as a recapitalization and reverse acquisition for us for financial reporting purposes, and Transphorm Technology is considered the acquirer for accounting purposes.

As a result of the Merger and the change in our business and operations, a discussion of the past financial results of Peninsula Acquisition Corporation is not pertinent, and under applicable accounting principles, the historical financial results of Transphorm Technology, the accounting acquirer, prior to the Merger are considered our historical financial results.

At the effective time of the Merger, (i) each share of Transphorm Technology’s common stock issued and outstanding immediately prior to the closing of the Merger was converted into the right to receive (a) 0.08289152527 shares of our common stock (in the case of shares held by accredited investors) or (b) \$4.00 multiplied by 0.08289152527 (in the case of shares held by unaccredited investors), with the actual number of shares of our common stock issued to the former holders of Transphorm Technology’s common stock equal to 4,171,571, (ii) 51,680,254 shares of Transphorm Technology’s Series 1 preferred stock issued and outstanding immediately prior to the closing of the Merger were converted into 12,433,953 shares of our common stock, (iii) 38,760,190 shares of Transphorm Technology’s Series 2 preferred stock issued and outstanding immediately prior to the closing of the Merger were converted into 7,499,996 shares of our common stock, and (iv) 31,850,304 shares of Transphorm Technology’s Series 3 preferred stock issued and outstanding immediately prior to the closing of the Merger were converted into 4,000,000 shares of our common stock. As a result, 28,105,520 shares of our common stock were issued to the former holders of Transphorm Technology’s issued and outstanding capital stock after adjustments due to rounding for fractional shares. Immediately prior to the effective time of the Merger, an aggregate of 682,699 shares of our common stock, owned by the stockholders of Peninsula Acquisition Corporation prior to the Merger, were forfeited and cancelled.

In addition, (i) options to purchase 29,703,285 shares of Transphorm Technology’s common stock issued and outstanding immediately prior to the closing of the Merger under Transphorm Technology’s 2007 Stock Plan and 2015 Equity Incentive Plan were assumed and converted into options to purchase 2,461,923 shares of our common stock, (ii) warrants to purchase 186,535 shares of Transphorm Technology’s common stock issued and outstanding immediately prior to the closing of the Merger were assumed, amended and converted into warrants to purchase 15,461 shares of our common stock, and (iii) Transphorm Technology’s outstanding convertible promissory note was amended to be convertible, at the option of the holder, into shares of our common stock at a conversion price of \$5.12 per share, with 3,076,171 being the maximum number of shares of our common stock issuable upon conversion of the convertible promissory note. As of September 30, 2020, there was \$15.0 million of principal and \$448 thousand of accrued and unpaid interest outstanding on the convertible promissory note.

As discussed in Note 9 - Stockholders' Equity to the unaudited condensed consolidated financial statements, all per share and share amounts for the three and nine months ended September 30, 2020 and year ended December 31, 2019 have been retroactively adjusted to reflect the effect of the Merger.

### ***Private Placements***

In February 2020, we sold an aggregate of 5,380,000 shares of common stock in a private placement offering at a purchase price of \$4.00 per share, with aggregate gross proceeds of \$21.5 million (before deducting placement agent fees and other offering expenses, which were an aggregate of \$1.8 million). Offering cost of \$177 thousand is included in other assets on the consolidated balance sheet as of December 31, 2019.

In December 2020, we sold an aggregate of 5,000,000 shares of common stock in the Private Placement at a purchase price of \$3.00 per share, with aggregate gross proceeds \$15.0 million (before deducting placement agent fees, financial advisor fees and other offering expenses, which were an aggregate of \$1.4 million).

### **Key Factors Affecting Our Performance**

There are a number of industry factors that affect our business which include, among others:

**Overall Demand for Products and Applications Using GaN Devices.** Our potential for growth depends significantly on the adoption of GaN materials and devices in the power markets and GaN epiwafer material products in the RF markets, the expansion of the use of GaN devices in infrastructure, IT, datacenter, industrial, automotive and consumer applications such as fast charger/adaptor and gaming power supplies, and our ability to win new designs for these applications. Demand also fluctuates based on various market cycles, continuously evolving industry supply chains, trade and tariff terms, as well as evolving competitive dynamics in each of the respective markets. These uncertainties make demand difficult to forecast for us and our customers. The COVID-19 pandemic has adversely disrupted and will further disrupt the operations at certain of our customers, partners, suppliers and other third-party providers for an uncertain period of time, including as a result of travel restrictions, adverse effects on budget planning processes, business deterioration, and/or business shutdowns, all of which has impacted our business and results of operations. Some of our customers have experienced delays in their internal development programs and design cycles with our GaN products due to the effects of the COVID-19 pandemic, which have led to postponements of their orders of our products and postponements of determinations that our products will be used in their designs for new products under development with corresponding delays in their market introduction and our revenues. Our billings under our contract with the U.S. Navy may be lower than originally expected as a result of the pandemic.

**Intense and Constantly Evolving Competitive Environment.** Competition in the industries we serve is intense. Many companies have made significant investments in product development and production equipment. To remain competitive, market participants must continuously increase product performance, reduce costs and develop improved ways to serve their customers. To address these competitive pressures, we have invested in research and development activities to support new product development, lower product costs and deliver higher levels of performance to differentiate our products in the market.

**Governmental Trade and Regulatory Conditions.** Our potential for growth, as with most multinational companies, depends on a balanced and stable trade, political, economic and regulatory environment among the countries where we do business. Changes in trade policy such as the imposition of tariffs or export bans to specific customers or countries could reduce or limit demand for our products in certain markets.

**Technological Innovation and Advancement.** Innovations and advancements in materials and power technologies continue to expand the potential commercial application for our products. However, new technologies or standards could emerge or improvements could be made in existing technologies that could reduce or limit the demand for our products in certain markets.

**Intellectual Property Issues.** We rely on patented and non-patented proprietary information relating to product development, manufacturing capabilities and other core competencies of our business. Protection of intellectual property is critical. Therefore, steps such as additional patent applications, confidentiality and non-disclosure agreements, as well as other security measures are important. While we have a strong patent portfolio comprising access to over 1,000 worldwide patents (directly owned or licensed) and there is no actual or, to our knowledge, threatened litigation against us for patent-related matters, litigation or threatened litigation is a common method to effectively enforce or protect intellectual property rights. Such action may be initiated by or against us and would require significant management time and expenses.

## **Components of Results of Operations**

### **Revenue**

Our revenue currently consists of (1) licensing revenue, (2) revenue from our contract with the U.S. Navy and (3) revenue from product sales. Products are sold to distributors and end-users in various sectors such as, but not limited to, the automotive, gaming, industrial, IT, and consumer products industries.

### **Operating Expenses**

*Cost of Goods Sold.* Cost of goods sold consists of (1) direct product costs incurred for the raw materials and manufacturing services for our products, (2) fixed product costs primarily relating to production, manufacturing and personnel and (3) depreciation and amortization expenses consisting primarily of expenses related to our fixed assets together with amortization of our intangible assets. We expect our cost of goods sold attributable to direct product costs to increase proportionately with increases in revenue, and our cost of goods sold attributable to fixed product costs to remain substantially flat or moderately increase in connection with increases in revenue.

*Research and Development.* Research and development expenses consist primarily of compensation and related costs for personnel, including stock-based compensation and employee benefits as well as costs associated with design, fabrication, packaging and testing of GaN devices. In addition, research and development expenses include depreciation expenses related to our fixed assets. We expense research and development expenses as incurred. As we continue to invest in developing our technology for new products, we expect research and development expenses to remain flat or moderately increase in absolute dollars but to decline as a percentage of revenue.

*Sales and Marketing.* Sales and marketing expenses consist primarily of compensation and related costs for personnel, including stock-based compensation and employee benefits, and associated travel costs. Sales and marketing expenses also include costs associated with our support of business development efforts with distributors in Europe and Asia, and costs related to trade shows and marketing programs. We expense sales and marketing expenses as incurred. We expect sales and marketing expenses to increase in absolute dollars in future periods as we increase our sales and expand our sales force and our marketing organization.

*General and Administrative.* General and administrative expenses consist primarily of compensation and related costs for personnel, including stock-based compensation, employee benefits and travel. In addition, general and administrative expenses include third-party consulting, legal, audit, accounting services, allocations of overhead costs, such as rent, facilities and information technology, and amortization of our intangible assets. We expect general and administrative expenses to increase in absolute dollars in future periods due to additional legal, accounting, insurance, investor relations and other costs associated with being a public company, as well as other costs associated with growing our business.

### **Interest Expense**

Interest expense consists primarily of interest and amortization of related costs associated with our debts with Nexperia and Yaskawa, respectively.

## Equity Loss in Joint Venture

Equity loss in joint venture consists of expenditures to cover the losses associated with our 49% share ownership of AFSW. The potential magnitude of this loss may increase or decrease in the future based upon changes in our shareholding percentage in AFSW and the level of operating expenses incurred by AFSW.

## Changes in Fair Value of Promissory Note

Changes in the fair value of promissory note reflect valuation changes in the notes held by the Company. Offering costs are expensed as incurred.

## Other Income, Net

Other income, net of other expenses, consists primarily of income generated from subleasing a portion of our research and development facility located in California.

## Tax Expense

Tax expense consists primarily of income taxes in certain foreign and state jurisdictions in which we conduct business.

## Results of Operations

### Comparison of the Nine Months Ended September 30, 2020 and 2019

The following table sets forth our historical condensed consolidated statements of operations data for the periods indicated (*in thousands, except percentages*):

	Nine Months Ended September 30,		Change	
	2020	2019	Amount	Percentage
Revenue, net	\$ 9,358	\$ 2,011	\$ 7,347	365.3 %
Operating expenses:				
Cost of goods sold	4,746	4,211	535	12.7 %
Research and development	4,131	6,245	(2,114)	(33.9)%
Sales and marketing	1,593	2,098	(505)	(24.1)%
General and administrative	7,838	4,015	3,823	95.2 %
Total operating expenses	18,308	16,569	1,739	10.5 %
Loss from operations	(8,950)	(14,558)	5,608	(38.5)%
Interest expense	569	567	2	0.4 %
Loss in joint venture	5,218	3,004	2,214	73.7 %
Changes in fair value of promissory note	46	101	(55)	(54.5)%
Other income, net	(1,586)	(513)	(1,073)	209.2 %
Loss before tax expense	(13,197)	(17,717)	4,520	(25.5)%
Tax expense	—	—	—	— %
<b>Net loss</b>	<b>\$ (13,197)</b>	<b>\$ (17,717)</b>	<b>\$ 4,520</b>	<b>(25.5)%</b>

Revenue increased \$7.3 million, or 365.3 percent, to \$9.4 million for the nine months ended September 30, 2020 from \$2.0 million for the same period in 2019. The increase is due primarily to \$5.1 million of licensing



revenue from Nexperia related to funding Gen-4 technology development and a \$1.4 million increase in revenue from our contract with the U.S. Navy, of which \$505 thousand was due to government authorized favorable rate changes, for the nine months ended September 30, 2020.

Operating expenses increased \$1.7 million, or 10.5 percent, to \$18.3 million for the nine months ended September 30, 2020 from \$16.6 million for the same period in 2019, due primarily to a \$3.8 million increase in general and administrative expense, offset by a \$2.1 million decrease in research and development expense.

Cost of goods sold increased \$535 thousand, or 12.7 percent, to \$4.7 million for the nine months ended September 30, 2020 compared with \$4.2 million for the same period in 2019 due primarily to an increase in revenue.

Research and development expense decreased \$2.1 million, or 33.9 percent, to \$4.1 million for the nine months ended September 30, 2020 from \$6.2 million for the same period in 2019, due primarily to an increase in government contract revenue for which certain expenses otherwise classified as research and development expense were instead recognized in cost of goods sold and general and administrative expense.

Sales and marketing expense decreased \$505 thousand, or 24.1 percent, to \$1.6 million for the nine months ended September 30, 2020 from \$2.1 million for the same period in 2019, due primarily to a decrease in costs related to salaries and employee benefits resulting from a reduced number of employees and a decrease in travel costs due to COVID-19 related travel restrictions.

General and administrative expense increased \$3.8 million, or 95.2 percent, to \$7.8 million for the nine months ended September 30, 2020 from \$4.0 million for the same period in 2019, due primarily to an increase in legal and compliance costs related to the Merger and our February 2020 private placement and an increase in legal, compliance and insurance costs related to the requirements of being a public company.

Interest expense of \$569 thousand for the nine months ended September 30, 2020 consists of \$457 thousand for our revolving credit facility with Nexperia and \$112 thousand for our note payable to Yaskawa. Interest expense of \$567 thousand for the nine months ended September 30, 2019 consists of \$455 thousand for our revolving credit facility and \$112 thousand for our note payable to Yaskawa.

Loss in joint venture increased \$2.2 million, or 73.7 percent, to \$5.2 million for the nine months ended September 30, 2020 from \$3.0 million for the same period in 2019, due primarily to an increased loss resulting from the decreased utilization of the AFSW fabrication facility.

Changes in fair value of promissory note were a \$46 thousand loss and a \$101 thousand loss for the nine months ended September 30, 2020 and 2019, respectively.

Other income, net of other expenses, increased \$1.1 million, or 209.2 percent, to \$1.6 million for the nine months ended September 30, 2020 from \$513 thousand for the same period in 2019, due primarily to a \$928 thousand increase in renting a component of our research and development facility.

Net loss decreased \$4.5 million, or 25.5 percent, to \$13.2 million for the nine months ended September 30, 2020 from \$17.7 million for the same period in 2019. The decrease was attributable primarily to a \$7.3 million increase in revenue, a \$2.1 million decrease in research and development expense and a \$1.1 million increase in other income, net, offset primarily by a \$3.8 million increase in general and administrative expense and a \$2.2 million increase in loss in joint venture.

### Comparison of the Years Ended December 31, 2019 and 2018

The following table sets forth our historical consolidated statements of operations data for the periods indicated (*in thousands*):

	Year Ended December 31,		Change	
	2019	2018	Amount	Percentage
Revenue, net	\$ 11,934	\$ 1,358	\$ 10,576	778.8 %
Operating expenses:				
Cost of goods sold	6,492	4,601	1,891	41.1 %
Research and development	8,146	9,351	(1,205)	(12.9)%
Sales and marketing	2,609	3,626	(1,017)	(28.0)%
General and administrative	6,606	5,675	931	16.4 %
Total operating expenses	23,853	23,253	600	2.6 %
Loss from operations	(11,919)	(21,895)	9,976	(45.6)%
Interest expense	758	710	48	6.8 %
Loss in joint venture	3,703	2,404	1,299	54.0 %
Changes in fair value of promissory notes	167	1,060	(893)	(84.2)%
Other income, net	(1,264)	(271)	(993)	366.4 %
Loss before tax expense	(15,283)	(25,798)	10,515	(40.8)%
Tax expense	—	—	—	— %
<b>Net loss</b>	<b>\$ (15,283)</b>	<b>\$ (25,798)</b>	<b>\$ 10,515</b>	<b>(40.8)%</b>

Revenue increased \$10.6 million, or 778.8 percent, to \$11.9 million for the year ended December 31, 2019 from \$1.4 million for the same period in 2018. The increase is due primarily to \$9.0 million of licensing revenue from Nexperia related to our Gen3 manufacturing process and \$1.5 million in sales to the U.S. Navy. In 2018 and 2019, we secured the base portion and the option portion of a contract, respectively, with the U.S. Navy, contemplating a three-year term and an expected total value of \$18.5 million.

Operating expenses increased \$600 thousand, or 2.6 percent, to \$23.9 million for the year ended December 31, 2019 from \$23.3 million for the same period in 2018.

Cost of goods sold increased \$1.9 million, or 41.1 percent, to \$6.5 million for the year ended December 31, 2019, compared with \$4.6 million for the same period in 2018, due primarily to costs associated with the government contract revenue, product costs and inventory write-offs, and costs of license and technology transfer costs.

Research and development expense, which represented 34.2 percent and 40.2 percent of total operating expenses for the years ended December 31, 2019 and 2018, respectively, decreased \$1.2 million, or 12.9 percent, to \$8.1 million for the year ended December 31, 2019 from \$9.4 million for the same period in 2018, due primarily to the application of resources to support our contract with the U.S. Navy.

Sales and marketing expense decreased \$1.0 million, or 28.0 percent, to \$2.6 million for the year ended December 31, 2019 from \$3.6 million for the same period in 2018, due primarily to a decrease in salaries, employee benefits and travel costs resulting from a reduced number of employees.

General and administrative expense increased \$931 thousand, or 16.4 percent, to \$6.6 million for the year ended December 31, 2019 from \$5.7 million for the same period in 2018, due primarily to an increase in legal and compliance costs.

Interest expense of \$758 thousand consists of \$608 thousand for revolving credit facility to Nexperia and \$150 thousand for note payable to Yaskawa for the year ended December 31, 2019. Interest expense of \$710 thousand consists of \$346 thousand for revolving credit facility and \$364 thousand for notes payable to Yaskawa, Semiconductor Components Industries, LLC (“SCI”) and IIDA Electronics Co. Ltd. (“IIDA”), for the year ended December 31, 2018. The promissory notes to SCI and IIDA were both paid off in 2018.

Equity loss in joint venture increased \$1.3 million, or 54.0 percent, to \$3.7 million for the year ended December 31, 2019 from \$2.4 million for the same period in 2018, due primarily to an increased loss resulting from the decreased utilization of the AFSW fabrication facility.

The change in fair value of promissory notes decreased \$893 thousand, or 84.2 percent, to \$167 thousand for the year ended December 31, 2019, compared to \$1.1 million for the same period in 2018.

Other income, net of other expenses, increased \$993 thousand, or 366.4 percent, to \$1.3 million for the year ended December 31, 2019 from \$271 thousand for the same period, due primarily to \$1.2 million income generated from renting a component of the research and development facility.

Net loss decreased \$10.5 million, or 40.8 percent, to \$15.3 million for the year ended December 31, 2019 from \$25.8 million for the same period in 2018. The decrease was attributable primarily to a \$10.6 million increase in revenue, a \$893 thousand positive change in fair value of promissory notes and a \$993 thousand increase in other income, offset primarily by a \$1.3 million increase in equity loss in joint venture and an increase in operating expenses of \$600 thousand.

### **Liquidity and Capital Resources**

As of September 30, 2020, we had cash on hand of \$4.4 million, other current assets of \$4.2 million and current liabilities of \$26.0 million, resulting in negative working capital of \$17.4 million. As of September 30, 2020, the negative working capital included development loans of \$10.0 million and an outstanding balance under our revolving credit facility, including accrued interest, of \$10.2 million.

The accompanying unaudited condensed consolidated financial statements have been prepared assuming that we will continue as a going concern. As included in the accompanying unaudited condensed consolidated financial statements, we have generated recurring losses from operations and have an accumulated deficit and a working capital deficiency. These factors raise substantial doubt about the Company’s ability to continue as a going concern for the next twelve months from the issuance of the unaudited condensed consolidated financial statements.

### **Future Funding Requirements**

We plan to raise additional working capital to fund operations through the issuance of stock to investors, license of intellectual property and/or issuance of notes payable. In February 2020, we sold an aggregate of 5,380,000 shares of our common stock at a purchase price of \$4.00 per share in a private placement. In December 2020, we sold an aggregate of 5,000,000 shares of our common stock at a purchase price of \$3.00 per share in the Private Placement. We believe that our existing cash and cash equivalents will be sufficient to fund our current operating plans into the fourth quarter of 2021.

Our ability to continue as a going concern is dependent on our ability to raise significant additional capital to fund operating losses until we are able to generate liquidity from our business operations, as well as other factors such as developments regarding AFSW. To the extent sufficient financing is not available, we may not be able to develop, or may be delayed in developing, our offerings and meeting our obligations, and we may not be able to continue our operations. We will continue to evaluate our projected expenditures relative to our available cash and evaluate financing alternatives in order to satisfy our working capital and other cash requirements.

Our principal sources of liquidity have been cash generated by issuing new shares and promissory notes and, more recently, cash generated from operations.

On April 4, 2018, we entered into a multi-element commercial arrangement with Nexperia in order to raise an aggregate of \$50.0 million in financing with approximately 9.9% equity dilution (on a fully diluted basis) in exchange for performing certain technology and product development activities for Nexperia. The commercial arrangement includes the LSA with Nexperia, which provides for term loans in an aggregate principal amount of up to \$15.0 million and an additional \$9.0 million loan commitment. During 2018, as a result of the arrangement with Nexperia, we received \$29.0 million, consisting of \$16.0 million, \$10.0 million and \$3.0 million from issuing convertible preferred stock, borrowings under a revolving credit facility and recording deferred revenue of license fee, respectively. During 2019, we received the remaining \$21.0 million, consisting of \$15.0 million from borrowings under the LSA and \$6.0 million in licensing revenue. See Note 2 - Nexperia Arrangement to our condensed consolidated financial statements for more information.

Our future capital requirements will depend on many factors including our revenue growth rate, billing frequency, the impact of the COVID-19 pandemic, the timing and extent of spending to support further sales and marketing and research and development efforts, whether we are able to extend the maturity date of loans under the LSA with Nexperia, whether Yaskawa will elect to convert its convertible promissory note into our common stock in lieu of repayment and our obligations in connection with AFSW. If we were to become the sole owner of AFSW (assuming regulatory approvals are obtained) our operating expenses and cash requirements would substantially increase, including as a result of our agreement to use our best efforts to maintain and continue the operations of AFSW for at least one year following the date on which we (alone or with a third party) take over full ownership of AFSW. In addition, the future impact of the COVID-19 pandemic cannot be predicted with certainty and may make it more difficult or preclude us from raising additional capital, increase our costs of capital and otherwise adversely affect our business, results of operations, financial condition and liquidity. We may in the future enter into arrangements to acquire or invest in complementary businesses, services and technologies, including intellectual property rights. We will require additional equity or debt financing, which we may not be able to raise on terms acceptable to us or at all. If we are unable to raise additional capital when required, our business, results of operations and financial condition would be materially and adversely affected, or we may need to cease operations altogether.

### Cash Flows

As of September, 2020, our cash and cash equivalents were \$4.4 million. The following table shows a summary of our cash flows for the periods presented (*in thousands*):

	Nine Months Ended September 30,		Year Ended December 31,	
	2020	2019	2019	2018
Net cash (used in) provided by:				
Operating activities	\$ (12,693)	\$ (11,324)	\$ (12,290)	\$ (17,685)
Investing activities	(5,373)	(1,851)	(2,901)	(2,184)
Financing activities	19,512	13,000	15,000	13,000
<b>Decrease in cash and cash equivalents excluding effect of foreign exchange rate changes</b>	<b>\$ 1,446</b>	<b>\$ (175)</b>	<b>\$ (191)</b>	<b>\$ (6,869)</b>

### Operating Activities

Net cash used in operating activities was \$12.7 million and \$11.3 million for the nine months ended September 30, 2020 and 2019, respectively. The decrease of \$1.4 million was attributable primarily to a \$5.0 million decrease in non-cash licensing revenue from a related party and a \$2.8 million decrease in deferred revenue, offset primarily by a \$5.6 million decrease in net loss and a \$1.1 million increase in accounts payable and accrued expenses for the nine months ended September 30, 2020.

Net cash used in operating activities was \$12.3 million and \$17.7 million for the years ended December 31, 2019 and 2018, respectively. The decrease of \$5.4 million was attributable primarily to the receipt of \$6.0 million in license fees from Nexperia.

#### *Investing Activities*

Net cash used in investing activities was \$5.4 million and \$1.9 million for the nine months ended September 30, 2020 and 2019, respectively. The decrease of \$3.5 million was attributable primarily to a \$3.6 million decrease in investment in joint venture.

Net cash used in investing activities was \$2.9 million and \$2.2 million for the years ended December 31, 2019 and 2018, respectively. Cash used in investing activities was attributable primarily to investment in joint venture of \$2.7 million and \$1.9 million for the years ended December 31, 2019 and 2018, respectively.

#### *Financing Activities*

Net cash provided by financing activities was \$19.5 million and \$13.0 million for the nine months ended September 30, 2020 and 2019, respectively. Net cash provided by financing activities during the nine months ended September 30, 2020 relates to aggregate net proceeds of \$19.7 million from the closings of our February 2020 private placement. Net cash provided by financing activities during the nine months ended September 30, 2019 relates to net proceeds of \$13.0 million from our development loan with Nexperia.

Net cash provided by financing activities was \$15.0 million and \$13.0 million for the years ended December 31, 2019 and 2018, respectively. Net cash provided by financing activities during the year ended December 31, 2019 relates to net proceeds of \$15.0 million from our development loan with Nexperia. Net cash provided by financing activities during the year ended December 31, 2018 relates to net proceeds of \$10.0 million from our secured revolving credit facility with Nexperia and \$16.0 million from our Series 3 convertible preferred stock offering to Nexperia, offset by principal payments of \$13.0 million against promissory notes to SCI and IIDA.

#### ***Nexperia Loan and Security Agreement***

On April 4, 2018, we entered into the LSA with Nexperia. The LSA provides for term loans in an aggregate principal amount of up to \$15.0 million, which term loans are available in tranches (Tranche A, Tranche B and Tranche B-1) and subject to the satisfaction of specified conditions. As of December 31, 2019, \$15.0 million aggregate principal amount of term loans were outstanding under the LSA. The LSA also provides for a \$10.0 million Tranche C Loan commitment, which Tranche C Loans may be borrowed, repaid and reborrowed subject to the terms and conditions of the LSA. As of December 31, 2019, \$10.0 million aggregate principal amount of Tranche C Loans were outstanding under the LSA. The proceeds of the loans under the LSA may be used as set forth therein for development work related to the DLA, the repayment of specified debt and for general corporate purposes.

The Tranche A Loan was scheduled to mature on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2020, which was subsequently extended to June 30, 2020. In June 2020, the \$5.0 million Tranche A Loan was satisfied in full upon transfer of our Gen-4 technology development to Nexperia, at which point we recognized \$5.0 million as licensing revenue. The Tranche B Loan and Tranche B-1 Loan mature on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2021, subject to extension as provided in the LSA. The Tranche C commitments terminate, and the Tranche C Loans mature, on April 4, 2021.

Loans under the LSA bear interest at the rate of 6.0% per annum. Interest is payable quarterly, on the date of any prepayment or repayment and on each maturity date for the loans then maturing. A commitment fee on the unused portion of the Tranche C loan commitment accrues at the rate of 0.7% per annum and is payable quarterly.

Our obligations under the LSA are secured by a security interest on certain U.S. patents, which patents do not relate to our MOCVD or epiwafer technology.

The LSA contains customary affirmative covenants, including delivery of financial statements, compliance with laws, and maintenance of insurance and properties, and certain negative covenants, including restrictions on liens on the collateral and restrictions on the disposition and licensing of any patent constituting collateral under the LSA. We obtained a waiver for a non-financial covenant violation in June 2019 in connection with the delivery of our 2018 audited financial statements. The LSA also contains customary events of default including, among others, payment defaults, breaches of covenants defaults, the occurrence of a material adverse change, bankruptcy and insolvency defaults, cross defaults with certain material indebtedness, judgment defaults, and the occurrence of a change of control. In addition, an event of default will occur if the DLA is terminated under certain circumstances or we fail to timely deliver reports related to statements of work under the DLA. Upon the occurrence and during the continuance an event of default, Nexperia may declare all or a portion of our outstanding obligations to be immediately due and payable and exercise other rights and remedies provided for under the LSA. If specified events of default occur and remain continuing for more than 30 consecutive days, we are required to assign the patents constituting collateral to Nexperia in satisfaction of our obligations under the LSA. During the existence of an event of default, interest on the obligations could be increased to 3.0% above the otherwise applicable interest rate.

### Contractual Obligations and Commitments

The following is a summary of our significant contractual obligations as of December 31, 2019 (*in thousands*):

	Payments Due by Period				Total
	Less than One Year	One to Three Years	Three to Five Years	More than Five Years	
Operating lease obligation	\$ 705	\$ 652	\$ —	\$ —	\$ 1,357
Development loans	5,000	10,000	—	—	15,000
Revolving credit facility	10,458	—	—	—	10,458
Promissory note (1)	—	15,748	—	—	15,748
<b>Total</b>	<b>\$ 16,163</b>	<b>\$ 26,400</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 42,563</b>

(1) Consists of aggregate principal amount of \$15.0 million of the convertible promissory note issued to Yaskawa.

As of September 30, 2020, there were no material changes to our contractual obligations and commitments, except for a reduction of \$5.0 million in our development loans due within one year of December 31, 2019.

### Off-Balance Sheet Transactions

We have not entered into any off-balance sheet arrangements and do not have any holdings in variable interest entities.

### Critical Accounting Policies and Estimates

Our consolidated financial statements and the related notes thereto included in this prospectus were prepared in accordance with Accounting Principles Generally Accepted in the United States (“GAAP”). The preparation of consolidated financial statements also requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. These estimates are developed based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Actual results could differ significantly from the estimates made by management. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial

condition, results of operation, and cash flows will be affected. We believe that the accounting policies described below involve a greater degree of judgment and complexity. Accordingly, these are the policies we believe are most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

### ***Principles of Consolidation***

The consolidated financial statements include the accounts of Transphorm, Inc. and its direct and indirect wholly owned subsidiaries, Transphorm Technology, Inc., Transphorm Japan, Inc., Transphorm Japan Epi, Inc. and Transphorm Aizu, Inc. Upon consolidation, all significant intercompany accounts and transactions have been eliminated.

### ***Use of Estimates***

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Management bases its estimates and assumptions on historical experience, knowledge of current conditions, and its belief of what could occur in the future, given available information. Actual results could differ from those estimates, and such differences could be material to the consolidated financial statements. Estimates are used for, but not limited to, the determinations of fair value of stock awards and promissory notes, accrual of liabilities, revenue recognition, inventory reserve, and useful lives for property and equipment.

### ***Comprehensive Loss***

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Other comprehensive income (loss) includes the impact of foreign currency translation adjustments.

### ***Accounts Receivable***

Accounts receivable are analyzed and allowances for uncollectible accounts are recorded, as required. Provisions for uncollectible accounts, if any, are recorded as bad debt expense and included in general and administrative expenses in the accompanying consolidated statements of operations. The process for determining the appropriate level of allowances for doubtful accounts involves judgment, and considers such factors as the age of the underlying receivables, historical and projected collection trends, the composition of outstanding receivables, current economic conditions and regulatory changes. An account is fully reserved when reasonable collection efforts have been unsuccessful and it is probable that the receivable will not be recovered.

### ***Inventory***

Inventories are stated at the lower of cost (first-in, first-out method) or net realizable value. We periodically review the value of items in inventory and records write-downs or write-offs based on its assessment of slow moving or obsolete inventory. We maintain an inventory reserve for obsolete inventory and generally makes inventory value adjustments against the inventory reserve.

### ***Property and Equipment***

Property and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation is determined using the straight-line method over the estimated useful lives of the respective assets, generally ranging from three to seven years. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the related lease term. Depreciation for equipment commences once it is placed in service, and depreciation for buildings and leasehold improvements commences once they are ready for their intended use. We expense maintenance and repair costs that do not extend the life of the asset as they are incurred.

We evaluate the carrying amount of our property and equipment whenever events or changes in circumstances indicate that the assets may not be recoverable. An impairment loss would be recognized when estimated future cash flows expected to result from the use of an asset or asset group and its eventual disposition is less than the carrying amount of the asset or asset group. To date, there have been no such impairment losses.

### ***Goodwill***

Goodwill arose for the acquisition of a business in February 2014 based in Japan and was accounted for as the purchase of a business. Goodwill generated from business combinations and deemed to have indefinite lives are not subject to amortization and instead are tested for impairment at least annually in December unless certain events occur or circumstances change. Goodwill represents the excess of the purchase price over the fair value of the net assets and other identifiable intangible assets acquired. We test for goodwill impairment annually or earlier if events or changes in circumstances indicate goodwill might possibly be impaired. Impairment exists when the carrying value of the goodwill exceeds its implied fair value. An impairment loss would be recognized in an amount equal to that excess as a charge to operations in the consolidated statements of operations.

### ***Intangible Assets***

Intangible assets that are not considered to have an indefinite useful life are amortized over their estimated useful lives, which generally range from three to ten years. Each reporting period, we evaluate the estimated remaining useful lives of intangible assets and whether events or changes in circumstances warrant a revision to the remaining periods of amortization.

If we determine that the carrying values might not be recoverable based upon the existence of one or more indicators of impairment, we perform a test for recoverability using various methodologies, such as the income approach or cost approach, to determine the fair value of intangible assets depending upon the nature of the assets. If assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds their respective fair values.

### ***Revenue Recognition***

#### ***Revenue Recognition Policy***

We derive our revenues from sales of high-powered GaN-based products manufactured utilizing our proprietary and patented epiwafer technology and wafer fabrication and other assembly processes, and sales of GaN epiwafers for the RF and power markets, as well as sales of licenses to use such patented proprietary technology. We recognize revenues when control of these products or licenses are transferred to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those products and licenses. Sales and other taxes we collect concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense. We do not have any significant financing components associated with our revenue contracts, as payment is received at or shortly after the point of sale.

#### ***Disaggregation of Revenue from Contracts with Customers***

Revenue for the years ended December 31, 2019 and 2018 consists of licensing revenue, government contract revenue from our contract with the U.S. Navy and product sales, with such performance obligation satisfied at a point in time. Products are sold to distributors and end-users in various sectors such as, but not limited to, the automotive, gaming, industrial, IT, and consumer products industries.

As part of the Collaboration Arrangement executed with Nexperia on April 4, 2018, we agreed to grant Nexperia the perpetual exclusive right to use our existing Gen 3 manufacturing process technology. License fees are received upon satisfaction of contractual milestones and recognized upon delivery of the perpetual license or transferred technology without any remaining performance obligations. For the year ended December 31, 2019, we received the remaining \$6.0 million and recognized a total of \$9.0 million, including \$3.0 million received in 2018,



as licensing revenue upon satisfaction of contractual milestones and delivery of the perpetual license and transferred technology without any remaining performance obligations. For the year ended December 31, 2018, we did not recognize any revenue related to the process transfer or technology development performance obligations. The \$3.0 million contract liability related to cash received in 2018 from Nexperia was included in deferred revenue.

Government contract revenues are principally generated under research and development contracts. Contract revenues are derived primarily from research contracts with agencies of the United States Government. We believe credit risk related to accounts receivable arising from such contracts is minimal. These contracts may include cost-plus fixed fee and fixed price terms. All payments to us for work performed on contracts with agencies of the U.S. Government are subject to adjustment upon audit by the Defense Contract Audit Agency.

#### *Performance Obligations*

For performance obligations related to the sale of products, control transfers to the customer at a point in time. Our principal terms of sale are free on board shipping or destination and we transfer control and records revenue for product sales upon shipment or delivery to the customer, respectively. For performance obligations related to the licensing for the use of patented technology in perpetuity, control also transfers to the customer at a point in time. We transfer control and record revenue for licensing fees once we have (i) provided or otherwise made available the patented technology to the customer and (ii) the customer is able to use and benefit from the patented technology.

#### *Variable Consideration*

The nature of our arrangement with Nexperia gives rise to variable consideration in the form of milestone and royalty payments. The royalties qualify for the sales and usage-based royalty exception, as the license of intellectual property is the predominant item to which the royalty relates and are recognized upon the subsequent sale occurring. The variable amounts are received upon satisfaction of contractually agreed upon development targets and sales volume.

#### **Research and Development**

We are a party to research grant contracts with the U.S. federal government for which we are reimbursed for specified costs incurred for our research projects. These projects include energy saving initiatives for which the U.S. federal government offers reimbursement funds. Such reimbursements are recorded as an offset to research and development expenses when the related qualified research and development expenses are incurred. Reimbursable costs are recognized in the same period the costs are incurred up to the limit of approved funding amounts on qualified expenses. There were no material reimbursements during the years ended December 31, 2019 and 2018 related to cost reimbursement contracts.

#### **Stock-Based Compensation**

All share-based payments, including grants of stock options, are measured based on the fair value of the share-based awards at the grant date and recognized over their respective vesting periods, which is generally four years. The estimated fair value of stock options at the grant date is determined using the Black-Scholes-Merton pricing model. We recognize the fair value of share-based payments as compensation expense for all expected-to-vest stock-based awards over the vesting period of the award using the straight-line attribution method provided that the amount of compensation cost recognized at any date is no less than the portion of the grant-date fair value of the award that is vested at that date.

The Black-Scholes-Merton option pricing model requires inputs such as the fair value of common stock on date of grant, expected term, expected volatility, dividend yield, and risk-free interest rate. Further, the forfeiture rate also affects the amount of aggregate compensation expense. These inputs are subjective and generally require significant analysis and judgment to develop. Volatility data is obtained from a study of publicly traded industry peer companies. The forfeiture rate is derived primarily from our historical data, and the risk-free interest rate is

based on the yield available on U.S. Treasury zero-coupon issues commensurate with the expected term. Management generally uses the simplified method to calculate the expected term for employee grants as we have limited historical exercise data or alternative information to reasonably estimate an expected term assumption. The simplified method assumes that all options will be exercised midway between the weighted average vesting date and the contractual term of the option.

Stock-based compensation expense recognized in our consolidated financial statements is based on awards that are expected to vest. These expense amounts have been reduced by using an estimated forfeiture rate. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. We evaluate the assumptions used to estimate forfeitures annually in connection with recognition of stock-based compensation expense.

### ***Loss Per Share***

Basic loss per share is calculated by dividing net loss applicable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted earnings per share is calculated by dividing the net income attributable to common stockholders by the sum of the weighted average number of common shares outstanding plus potential dilutive common shares outstanding during the period. Potential dilutive securities, comprised of the convertible preferred stock, stock warrants and stock options, are not reflected in diluted net loss per share because such shares are anti-dilutive. Dilutive impact of potential common shares resulting from common stock equivalents is determined by applying the treasury stock method.

### ***Fair Value Measurement***

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The carrying values of our financial instruments such as cash equivalents, accounts receivable, revolving credit facility, accounts payable and accrued liabilities approximate fair values due to the short-term nature of these items. We have elected the fair value option for our promissory notes. See Note 4 - Fair Value Measurements for more information.

### ***Income Taxes***

We account for income taxes in accordance with Accounting Standards Codification (“ASC”) 740, *Income Taxes* (“ASC 740”). ASC 740 prescribes the use of the liability method. Deferred tax assets and liabilities are determined based on the difference between the financial statement carrying amounts and the tax basis of assets and liabilities and are measured using the enacted statutory tax rates in effect at the balance sheet date. We record a valuation allowance to reduce our deferred tax assets when uncertainty regarding their realizability exists.

### ***Equity Method Investments***

We use the equity method to account for investments in entities that we do not control, but in which we have the ability to exercise significant influence over operating and financial policies. Our proportionate share of the net income or loss of these companies is included in consolidated net earnings. Judgments regarding the level of influence over each equity method investment include consideration of key factors such as our ownership interest, representation on the board of directors or other management body and participation in policy-making decisions.

### ***Segment Reporting***

Our operations and financial performance is evaluated on a consolidated basis by our chief operating decision maker. Accordingly, we consider all of our operations to be aggregated in one reportable operating segment. For the year ended December 31, 2019, total revenue was \$11.9 million, of which \$11.9 million was from U.S. operations and \$28 thousand was from Japan operations. For the year ended December 31, 2018, total revenue was \$1.4 million, of which \$1.3 million was from U.S. operations and \$49 thousand was from Japan operations.

**JOBS Act Accounting Election**

We are an emerging growth company, as defined in the JOBS Act. The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to either early adopt or delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

## DIRECTORS AND EXECUTIVE OFFICERS

The following table sets forth the names, positions and ages of our executive officers and directors as of December 31, 2020:

Name	Position	Age
<b>Executive Officers:</b>		
Mario Rivas	Chief Executive Officer, Director	65
Cameron McAulay	Chief Financial Officer	45
Umesh Mishra	Chief Technology Officer, Director	63
Primit Parikh	Chief Operating Officer	49
<b>Non-Employee Directors:</b>		
Brittany Bagley	Director	37
Julian Humphreys	Director	58
David Kerko	Director	47
Eiji Yatagawa	Director	42

### Executive Officers

**Mario Rivas** has served as our Chief Executive Officer and as a member of our board of directors since February 2020. He has also served as Chief Executive Officer of Transphorm Technology since October 2015 and as a member of Transphorm Technology's board of directors since June 2015. Previously, Mr. Rivas was Vice President of Strategy and Business Development of Digital Heat Corporation, a manufacturer of electric eyelid heaters, from July 2013 to September 2015, President and Chief Executive Officer of ANADIGICS, Inc., a semiconductor company, from January 2009 to April 2011, and Chief Executive Officer of Quartics, Inc., a fabless semiconductor and software company, from September 2008 to January 2009. Prior to that, Mr. Rivas held executive positions at Advanced Micro Devices, Inc., Philips Semiconductors and Motorola Semiconductor. He holds a B.S. in Electrical Engineering from the Universidad Centroamericana José Simeón Cañas and an M.S. in Semiconductor Physics and an M.S. in Management from Rensselaer Polytechnic Institute.

Mr. Rivas was selected to serve on our board of directors due to his significant management experience and experience in the technology industry.

**Cameron McAulay** has served as our Chief Financial Officer since February 2020. He has also served as Transphorm Technology's Chief Financial Officer since November 2015. Previously, Mr. McAulay served as Finance Director, Global Customer Organization and Director of Internal Audit with KLA-Tencor Corporation from December 2012 to November 2015. Prior to that, Mr. McAulay served as Finance Director and Group Financial Controller at Atmel Corporation from November 2011 to December 2012 and had a 7-year tenure at National Semiconductor Corporation in a variety of Operational and Corporate leadership positions including Chief Audit Executive. He holds a BSc. Mathematics, Statistics and Accountancy from Strathclyde University and is a member of the Chartered Accountants of Scotland.

**Umesh Mishra** has served as our Chief Technology Officer and as a member of our board of directors since February 2020. Dr. Mishra is a co-founder of Transphorm Technology and has served as a Transphorm Technology's Chief Technology Officer and as a member of Transphorm Technology's board of directors since March 2007. Previously, Dr. Mishra was Chief Executive Officer of Transphorm Technology from 2007 to 2013. Prior to co-founding Transphorm Technology, Dr. Mishra co-founded Nitres Inc. in 1996. Nitres, the first company to develop GaN LEDs and transistors, was acquired by Cree, Inc. in 2000. Dr. Mishra has also been a Professor of Electrical and Computer Engineering at the University of California, Santa Barbara since 1990. He holds a B.S. Tech from the Indian Institute of Technology, an M.S. from Lehigh University and a Ph.D. from Cornell University.

Dr. Mishra was selected to serve on our board of directors due to his deep knowledge of Transphorm Technology, his significant experience in the technology industry and his technical expertise.

**Primit Parikh** has served as our Chief Operating Officer since February 2020. Dr. Parikh is a co-founder of Transphorm Technology and has served as Transphorm Technology's Chief Operating Officer since 2007, as well as a member of the board of directors of Transphorm Japan, Inc. since 2014. With over 20 years of semiconductor and entrepreneurial experience, his background includes experience with capital raises, international markets and strategic partnerships, products and manufacturing, intellectual property, GaN and semiconductor technology, and government contracting. Dr. Parikh co-leads overall strategy for us and is an executive champion for key customer and partner relationships. Prior to Transphorm Technology, Dr. Parikh led GaN electronics at Nitres Inc. until its acquisition in 2000 by Cree, where he was responsible for RF GaN electronics, as well as cross functional programs in LED technology. Dr. Parikh has co-authored more than 75 publications and holds more than 40 patents. He holds a B.Tech. in Electrical Engineering from IIT, Mumbai and a Ph.D. in Electrical and Computer Engineering from the University of California, Santa Barbara.

#### **Non-Employee Directors**

**Brittany Bagley** has served as a member of our board of directors since February 2020 and as a member of Transphorm Technology's board of directors since June 2015. Ms. Bagley has been the Chief Financial Officer of Sonos, Inc., a leading sound experience system provider, since April 2019, and served on Sonos's board of directors from September 2017 to April 2019. From December 2017 to April 2019, Ms. Bagley served as a Managing Director of Kohlberg Kravis Roberts & Co. L.P. ("KKR"), a leading global investment firm, and previously served in other roles at KKR from July 2007 to December 2017. Prior to joining KKR, Ms. Bagley was an analyst at The Goldman Sachs Group, Inc., an investment banking firm. She holds a B.A. from Brown University.

Ms. Bagley was selected to serve as a member of our board of directors due to her depth of experience in financial and investment matters and experience with a broad range of technology companies.

**Julian Humphreys** has served as a member of our board of directors since October 2020. Dr. Humphreys has over 30 years of experience in the semiconductor industry, including 20 years specifically with power semiconductors. From February 2017 to April 2019, Dr. Humphreys was a senior vice president and general manager at Nexperia B.V. From June 2010 to January 2017, Dr. Humphreys was a vice president and general manager with Nexperia's predecessor, the NXP Semiconductors Standard Products Division of NXP Semiconductors N.V. Dr. Humphreys was also the managing director of Nexperia UK Ltd., and its predecessor entity NXP Semiconductors UK Ltd., from September 2011 to March 2019. He holds a B.Eng. degree in electronics and a Ph.D. in semiconductor physics, both from the University of Liverpool.

**David Kerko** has served as a member of our board of directors since February 2020 and as a member of Transphorm Technology's board of directors since June 2015. Mr. Kerko was a Member at KKR from 2010 to 2015, including serving as Co-head of KKR's Technology Group from 2013 to 2015, and has been an advisor to KKR since 2015. Mr. Kerko joined KKR in 1998 and is a former member of the Technology industry team within KKR's private equity platform. He was actively involved in KKR's investments in Borden, Toys 'R' Us, The Analytic Sciences Corporation ("TASC"), NXP (formerly Philips Semiconductors), Savant Systems and Sonos. Prior to joining KKR, Mr. Kerko was with Gleacher NatWest Inc. where he was involved in a broad range of merger and acquisition transactions and financing work. Mr. Kerko has served as a director and member of the audit and compensation committees of Science Applications International Corporation (NYSE: SAIC) since January 2019, as a director of TE Connectivity Ltd. (NYSE: TEL) since March 2019, and as a director and member of the audit and compensation committees of Nebula Acquisition Corporation (Nasdaq: NEBU) since January 2018. Mr. Kerko is also currently a director of Savant Systems, LLC, a privately-held, smart home technology company and a director and chairman of the compensation committee of GlobalFoundries, a privately-held, semiconductor manufacturing company. Mr. Kerko was a director of Engility Holdings, Inc. from 2015 until its acquisition by SAIC in January 2019, and a director of TASC, a privately-held, engineering services company, from 2009 to 2015. He holds a B.S.

from The Wharton School at the University of Pennsylvania and a B.S.E., summa cum laude, from the School of Engineering and Applied Science at the University of Pennsylvania.

Mr. Kerko was selected to serve on our board of directors due to his significant experience advising emerging and established companies with respect to strategic planning, corporate finance, manufacturing and operations, global business management and public markets strategy, particularly in the technology industry, as well as his service on the boards of directors of several public and private companies.

**Eiji Yatagawa** has served as a member of our board of directors since February 2020 and as a member of Transphorm Technology's board of directors since June 2015. Mr. Yatagawa joined KKR in 2006 and is a Member on the Private Equity team. Prior to joining KKR, Mr. Yatagawa was an associate in Goldman Sachs & Co.'s investment banking team from 2002 to 2006. Mr. Yatagawa currently serves on the board of directors of several privately-held companies. He holds a B.S. in Mathematical Engineering and an M.S. in Mathematical Engineering from the University of Tokyo.

Mr. Yatagawa was selected to serve as a member of our board of directors due to his significant experience in financial and investment matters and experience within the technology sector.

### **Non-Employee Director Compensation**

During the year ended December 31, 2020, we did not compensate our non-employee directors for being members of our board of directors. In addition, we have not established a policy to provide compensation to our non-employee directors for their services in such capacity. However, in connection with Dr. Humphreys' joining our board of directors, we agreed that we will grant him, subject to board approval, an award of 30,000 restricted stock units and a stock option to purchase 30,000 shares of our common stock as compensation for his services on our board of directors.

### **Family Relationships**

There are no family relationships among any of our executive officers or directors.

### **Code of Business Conduct and Ethics**

Our board of directors has adopted a code of business conduct and ethics that applies to all of our employees, officers and directors, including our Chief Executive Officer, Chief Financial Officer, and other executive and senior financial officers. The full text of our code of business conduct and ethics is available on our website at [www.transphormusa.com](http://www.transphormusa.com). We intend to disclose any amendments to our code of business conduct and ethics, or waivers of its requirements, on our website or in filings under the Exchange Act.

### **Board Size and Composition**

Our business and affairs are managed under the direction of our board of directors. Our board of directors currently consists of six members. Our amended and restated certificate of incorporation provides that the number of directors may be changed by resolution of the board of directors. In addition, under the Phorm Stockholders Agreement, Phorm has the right to nominate (i) a majority of the board so long as it beneficially owns at least 40% of our then-outstanding shares of common stock, (ii) 33% of the directors (rounded up to the nearest whole number) so long as it beneficially owns at least 20% but less than 40% of our then-outstanding shares of common stock, and (iii) 10% of the directors (rounded up to the nearest whole number) so long as it beneficially owns at least 10% but less than 20% of our then-outstanding shares of common stock. Further, pursuant to the Phorm Stockholders Agreement, so long as Phorm beneficially owns 20% or more of the outstanding shares of our common stock, we will take all necessary action to cause a director nominated by Phorm to serve as chair of our board of directors. All directors will hold office until their successors have been elected and qualified or appointed or the earlier of their death, resignation or removal.

Our amended and restated certificate of incorporation provides that our board of directors is divided into three classes, designated Class I, Class II and Class III, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective three-year terms. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the total number of our directors. Our current directors are divided among the three classes as follows:

- the Class I directors Brittany Bagley and Julian Humphreys, and their terms will expire at our annual meeting of stockholders to be held in 2021;
- the Class II directors are Umesh Mishra and Eiji Yatagawa, and their terms will expire at our annual meeting of stockholders to be held in 2022; and
- the Class III directors are David Kerko and Mario Rivas, and their terms will expire at our annual meeting of stockholders to be held in 2023.

The classification of our board of directors may have the effect of delaying or preventing changes in control of our company.

### **Director Independence**

Our securities are not listed on a national securities exchange or on any inter-dealer quotation system that has a requirement that a majority of directors be independent. Nevertheless, our board of directors has undertaken a review of the independence of each director using the standards for director independence set forth in the Nasdaq Listing Rules and has determined that Brittany Bagley, Julian Humphreys and David Kerko are independent directors. The Nasdaq independence definition includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of the director's family members has engaged in various types of business dealings with us. In addition, our board of directors has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our board of directors reviewed and discussed information provided by the directors with regard to each director's business and personal activities and relationships as they may relate to us and our management. In considering the independence of the directors listed above, our board of directors considered the relationship of our directors with the holders of more than 5% of our common stock.

### **Controlled Company Exception**

As of December 31, 2020, Phorm beneficially owned more than 50% of our common stock and voting power. As a result, if we list on Nasdaq or NYSE in the future, we may be a "controlled company" as that term is set forth in Section 5615(c)(1) of the Nasdaq Marketplace Rules, for example. Under the Nasdaq corporate governance standards, a company of which more than 50% of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance standards, including (1) the requirement that a majority of the board of directors consist of independent directors, (2) the requirement that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities and (3) the requirement that our director nominations be made, or recommended to our full board of directors, by our independent directors or by a nominations committee that consists entirely of independent directors and that we adopt a written charter or board resolution addressing the nominations process. Following such listing, should the listing occur, and if we are a controlled company at such time, we intend to use these exemptions in the future, and you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements established by Nasdaq or NYSE. In the event that we cease to be a "controlled company" or are not a controlled company at the time of any future listing, we will be required to comply with these provisions within the periods specified in the Nasdaq or NYSE corporate governance rules, as applicable. Pursuant to the Phorm Stockholders

Agreement, Phorm has the right (subject to phase-out provisions related to stock ownership) to nominate a majority of our board of directors and appoint the chair of our board of directors, among other rights.

## **Board Committees**

Our board of directors has established an audit committee, a compensation committee, and a nominating & corporate governance committee, each of which has the composition and responsibilities described below. Members serve on these committees until their resignations or until otherwise determined by our board of directors. Pursuant to the Phorm Stockholders Agreement, Phorm has the right (subject to phase-out provisions related to stock ownership) to appoint a member to each committee established by our board of directors.

### ***Audit Committee***

Our audit committee is currently comprised of Brittany Bagley, Julian Humphreys and David Kerko. Mr. Kerko is the chair of our audit committee. Each of the members of our audit committee satisfies the SEC and Nasdaq standards applicable to service on our audit committee and is financially literate, and Ms. Bagley and Mr. Kerko additionally qualify as an audit committee financial expert, as those terms are defined under SEC rules. Designation as an audit committee financial expert does not impose on a director any duties, obligations, or liabilities that are greater than are generally imposed on members of our audit committee and our board of directors.

As more fully described in its charter, our audit committee is directly responsible for, among other things:

- selecting, retaining, compensating, evaluating, overseeing and, where appropriate, terminating our independent registered public accounting firm;
- reviewing and approving the scope and plans for audits and the audit fees and approving all non-audit and tax services to be performed by the independent auditor;
- evaluating the independence and qualification of our independent registered public accounting firm;
- reviewing our internal controls and the integrity of our financial statements;
- reviewing the presentation of our financial information, as well as our earnings press releases and guidance;
- setting hiring policies with regard to the hiring of employees and former employees of our independent auditor and overseeing compliance with such policies;
- reviewing, approving and monitoring related party transactions;
- adopting and overseeing procedures to address complaints regarding accounting, internal accounting controls or auditing matters;
- reviewing and discussing with management and the independent auditor our compliance with various laws; and
- overseeing our major risk exposures and the steps management has taken to monitor and control such exposures.

### ***Compensation Committee***

Our compensation committee is currently comprised of Brittany Bagley and David Kerko. Mr. Kerko is the chair of our compensation committee. Our board of directors has determined that each member of our compensation



committee is independent under Nasdaq standards applicable to service on our compensation committee and a “non-employee director” as defined in Rule 16b-3 promulgated under the Exchange Act.

As more fully described in its charter, our compensation committee is directly responsible for, among other things:

- reviewing and approving, and determining, or making recommendations to our board of directors regarding, the compensation of our executive officers;
- administering our employee benefit and equity incentive plans;
- advising our board of directors on proposals to stockholders on executive compensation matters;
- establishing and reviewing general policies relating to compensation and benefits of our employees;
- reviewing and discussing our compensation policies and practices and the risks related thereto;
- approving, or making recommendations to our board of directors regarding, the creation or revision of any clawback policy allowing us to recoup compensation paid to employees;
- reviewing and recommending to our board of directors the form and amount of compensation to be paid for service on our board of directors and its committees; and
- overseeing regulatory compliance with respect to compensation matters.

#### ***Nominating & Corporate Governance Committee***

Our nominating & corporate governance committee is currently comprised of Julian Humphreys and David Kerko. Dr. Humphreys is the chair of our nominating & corporate governance committee. Our board of directors has determined that each member of our nominating & corporate governance committee is independent under Nasdaq standards.

As more fully described in its charter, our nominating & corporate governance committee is directly responsible for, among other things:

- reviewing and assessing and making recommendations to our board of directors regarding desired qualifications, expertise and characteristics sought of board members;
- establishing procedures for the submission of candidates for election to our board of directors;
- conducting a periodic review of our succession planning process for our executive management team and assisting in evaluating successors;
- reviewing the structure and composition of each committee of our board of directors and making recommendations, if any, for changes to the committees;
- developing and recommending to our board of directors corporate governance guidelines and periodically reviewing the corporate governance guidelines and their application;
- overseeing our governance practices;
- overseeing the evaluation of our board of directors and its committees; and

- administering policies and procedures for various constituencies that are involved with us to communicate with the non-management members of our board of directors.

### **Compensation Committee Interlocks and Insider Participation**

None of the members of the compensation committee is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

### **Limitation of Liability and Indemnification**

Our certificate of incorporation and bylaws provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by Delaware law. Generally, Delaware law provides a favorable forum for the indemnification of corporate officers and directors and the resulting limitation of their respective personal liabilities for acts and omissions. Delaware law prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or to our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our certificate of incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our bylaws, we are also empowered to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required by our certificate of incorporation and bylaws, we have entered into an indemnification agreement with each member of our board of directors and each of our officers. These agreements provide for the indemnification of our directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party, or are threatened to be made a party, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of our company, or any of our subsidiaries, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at our request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of our company or any of our subsidiaries, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. Moreover, a stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our

directors, officers, and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

As a condition to the Merger, we also entered into an indemnity agreement with our former officer and directors, pursuant to which we agreed to indemnify such former officer and directors for actions taken by them in their official capacities relating to the consideration, approval and consummation of the Merger and certain related transactions.

In connection with the consummation of the Merger, we entered into a separate indemnification agreement (the “Phorm Indemnification Agreement”) with Phorm, pursuant to which we will indemnify Phorm and its affiliates (including their respective directors, officers, managers, controlling persons and employees) and the members of our board of directors designated by Phorm (each, a “Phorm Designee”) against liabilities arising in connection with, among other things, (i) Phorm’s acquisition and ownership of our common stock and involvement in the Merger, (ii) Phorm and its affiliates’ provision of financial advisory, investment banking, syndication, monitoring and management consulting services to us and/or our subsidiaries (including in connection with any future offer or sale of securities of us or any of our subsidiaries), and (iii) any Phorm Designee’s service on our board of directors or the board of directors of any of our subsidiaries.

At present, there is no pending litigation or proceeding involving any of our directors or officers where indemnification will be required or permitted. We are not aware of any threatened litigation or proceedings that might result in a claim for such indemnification.

## EXECUTIVE COMPENSATION

As an “emerging growth company” as defined in the JOBS Act and a smaller reporting company we are not required to include a Compensation Discussion and Analysis section and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies and smaller reporting companies.

### Summary Compensation Table

The following table presents information regarding the total compensation of our named executive officers, who consist of our principal executive officer and the next two most highly compensated individuals who were serving as our executive officers as of December 31, 2020.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards \$(1)	Option Awards (\$) (1)	All Other Compensation \$(2)	Total (\$)
Mario Rivas	2020	363,438	—	327,480	—	47,400	738,318
<i>Chief Executive Officer</i>	2019	350,000	—	—	—	47,400	397,400
Umesh Mishra	2020	170,769	—	498,240	—	—	669,009
<i>Chief Technology Officer</i>							—
Primit Parikh	2020	284,764	—	498,240	—	—	783,004
<i>Chief Operating Officer &amp; Co-Founder</i>	2019	250,000	—	—	19,894	—	269,894

(1) The amounts reported represent the aggregate grant-date fair value of the restricted stock units and/or stock options awarded to the named executive officer, calculated in accordance with ASC Topic 718. Such grant-date fair value does not take into account any estimated forfeitures related to service-based vesting conditions.

(2) Represents lease payments for the rental of a house for Mr. Rivas near our headquarters.

### Employment and Change in Control Agreements

We generally enter into offer letters of employment before an executive joins the company. This offer letter describes the basic terms of the executive’s employment, including the executive’s start date, starting salary and initial equity awards. None of the offer letters with our executive officers contains any change in control or severance benefits.

### Outstanding Equity Awards at December 31, 2020

The following tables present information regarding the outstanding restricted stock units and options held by each of our named executive officers as of December 31, 2020.

<b>Stock Awards</b>			
<b>Name</b>	<b>Grant Date (1)</b>	<b>Number of Shares or Units of Stock That Have Not Vested (#)(2)</b>	<b>Market Value of Shares or Units of Stock That Have Not Vested (#)(3)</b>
Mr. Rivas	08/27/2020	93,120	381,792
Dr. Mishra	08/27/2020	124,560	510,696
Dr. Parikh	08/27/2020	124,560	510,696

(1) Unless otherwise noted, each outstanding award of restricted stock units was granted pursuant to our 2020 Equity Incentive Plan.

(2) Consists of unvested restricted stock units, which are scheduled to vest as follows: one-third on each of January 1, 2022, January 1, 2023 and July 1, 2023, in each case subject to continued service with us through the applicable vesting date.

(3) Values reported were determined by multiplying the number of unvested restricted stock units by \$4.10, the closing price of our common stock on the OTCQB on December 31, 2020.

<b>Option Awards</b>						
<b>Name</b>	<b>Grant Date (1)</b>	<b>Number of Securities Underlying Unexercised Options (#)</b>		<b>Option Exercise Price (\$)</b>	<b>Option Expiration Date (2)</b>	
		<b>Exercisable</b>	<b>Unexercisable</b>			
Mr. Rivas	11/30/2016 (3)	66,313	—	\$ 4.34	11/29/2026	
	11/30/2016 (3)	292,192	—	\$ 4.34	11/29/2026	
Dr. Mishra	6/6/2019 (4)	2,861	4,009	\$ 3.14	6/5/2029	
	11/30/2016 (3)	127,238	—	\$ 4.34	11/29/2026	
	11/30/2016 (3)	272,298	—	\$ 4.34	11/29/2026	
	01/25/2012 (5)	24,867	—	\$ 12.43	01/24/2022	
Dr. Parikh	6/6/2019 (4)	2,861	4,009	\$ 3.14	6/5/2029	
	11/30/2016 (3)	82,891	—	\$ 4.34	11/29/2026	
	11/30/2016 (3)	207,228	—	\$ 4.34	11/29/2026	
	01/25/2012 (5)	24,867	—	\$ 12.43	01/24/2022	

(1) Unless otherwise noted, each outstanding option was granted pursuant to the Transphorm Technology 2015 Equity Incentive Plan.

(2) The expiration date shown is the normal expiration date and the latest date that options may be exercised. Options may terminate earlier in certain circumstances, such as in connection with a termination of employment or change in control.

(3) This option is fully vested and exercisable.

(4) 1/12th of the shares subject to this option will vest each month beginning on August 1, 2020, subject to the executive's continued service through each applicable vesting date.

(5) This option was granted pursuant to the Transphorm Technology 2007 Stock Plan and is fully vested and exercisable.

## Equity Incentive Plans

The principal features of our equity incentive plans are summarized below. These summaries are qualified in their entirety by reference to the text of the plans, which are filed as exhibits to the registration statement of which this prospectus is a part.

### 2020 Equity Incentive Plan

Our 2020 Equity Incentive Plan (the “2020 Plan”) provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the “Code”), to our employees and our parent and subsidiary corporations’ employees, and for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, RSUs, performance units, and performance shares to our employees, directors, and consultants and our parent and subsidiary corporations’ employees and consultants. As of December 31, 2020, there were 1,916,882 shares available for grant and 805,325 restricted stock units outstanding under the 2020 Plan.

#### *Authorized Shares*

Subject to the adjustment provisions of the 2020 Plan, and the automatic increase described in the 2020 Plan, the maximum aggregate number of shares of our common stock that may be issued under the 2020 Plan is (i) 2,588,077 shares, plus (ii) any shares of our common stock subject to issued and outstanding awards under the Transphorm Technology 2007 Stock Plan or Transphorm Technology 2015 Equity Incentive Plan that were assumed by us and that, on or after February 12, 2020, expire or otherwise terminate without having been exercised or issued in full, are tendered to or withheld by us for payment of an exercise price or for tax withholding obligations, or are forfeited to or repurchased by us due to failure to vest, with the maximum number of shares to be added to the 2020 Plan pursuant to this clause (ii) equal to 2,461,923 shares. Subject to the adjustment provisions of the 2020 Plan, the number of shares of our common stock available for issuance under the 2020 Plan will also include an annual increase on the first day of each fiscal year beginning with our 2022 fiscal year and ending on (and including) our 2030 fiscal year, in an amount equal to the least of:

- 5,000,000 shares of our common stock;
- five percent (5%) of the outstanding shares of our common stock (or the outstanding shares of common stock of any successor) on the last day of the immediately preceding fiscal year; or
- such number of shares of our common stock as the administrator may determine.

If an award granted under the 2020 Plan expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an exchange program or, with respect to restricted stock, RSUs, performance units, or performance shares, is forfeited to, or repurchased by, us due to failure to vest, then the unpurchased shares (or for awards other than stock options or stock appreciation rights, the forfeited or repurchased shares) which were subject thereto will become available for future grant or sale under the 2020 Plan (unless the 2020 Plan has terminated). With respect to stock appreciation rights, only the net shares actually issued will cease to be available under the 2020 Plan and all remaining shares under stock appreciation rights will remain available for future grant or sale under the 2020 Plan (unless the 2020 Plan has terminated). Shares that actually have been issued under the 2020 Plan under any award will not be returned to the 2020 Plan; provided, however, that if shares issued pursuant to awards of restricted stock, RSUs, performance shares, or performance units are repurchased or forfeited to us due to failure to vest, such shares will become available for future grant under the 2020 Plan. Shares used to pay the exercise price of an award or to satisfy the tax withholding obligations related to an award will become available for future grant or sale under the 2020 Plan. To the extent an award is paid out in cash rather than shares, the cash payment will not result in a reduction in the number of shares available for issuance under the 2020 Plan.

### *Plan Administration*

Our board of directors or one or more committees appointed by our board of directors will administer the 2020 Plan. In addition, if we determine it is desirable to qualify transactions under the 2020 Plan as exempt under Rule 16b-3, such transactions will be structured with the intent that they satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of the 2020 Plan, the administrator has the power to administer the 2020 Plan and make all determinations deemed necessary or advisable for administering the 2020 Plan, including the power to determine the fair market value of our common stock, select the service providers to whom awards may be granted, determine the number of shares covered by each award, approve forms of award agreement for use under the 2020 Plan, determine the terms and conditions of awards (including the exercise price, the time or times when the awards may be exercised, any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any award or the shares relating thereto), construe and interpret the terms of the 2020 Plan and awards granted under it, prescribe, amend, and rescind rules and regulations relating to the 2020 Plan, including creating sub-plans, and modify or amend each award, including the discretionary authority to extend the post-termination exercisability period of awards (provided that no option or stock appreciation right will be extended past its original maximum term), temporarily suspend the exercisability of an award if the administrator deems such suspension to be necessary or appropriate for administrative purposes, and to allow a participant to defer the receipt of payment of cash or the delivery of shares that would otherwise be due to such participant under an award. The administrator may institute and determine the terms of an exchange program under which (i) outstanding awards are surrendered or cancelled in exchange for awards of the same type (which may have a higher or lower exercise price or different terms), awards of a different type and/or cash, (ii) participants would have the opportunity to transfer any outstanding awards to a financial institution or other person or entity selected by the administrator, and/or (iii) the exercise price of an outstanding award is increased or reduced. The administrator's decisions, determinations, and interpretations are final and binding on all participants.

### *Stock Options*

Stock options may be granted under the 2020 Plan in such amounts as the administrator will determine in accordance with the terms of the 2020 Plan. The exercise price of options granted under the 2020 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an option will be stated in the award agreement, and in the case of an incentive stock option, may not exceed 10 years. With respect to any participant who owns stock representing more than 10% of the voting power of all classes of our outstanding stock, the term of an incentive stock option granted to such participant must not exceed five years and the exercise price must equal at least 110% of the fair market value on the date of grant. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares, or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After a participant ceases to provide service as an employee, director, or consultant, he or she may exercise his or her option for the period of time stated in his or her award agreement. In the absence of a specified time in an award agreement, if the cessation of service is due to death or disability, the option will remain exercisable for 12 months. In all other cases, in the absence of a specified time in an award agreement, the option will remain exercisable for three months following the cessation of service. An option may not be exercised later than the expiration of its term. Subject to the provisions of the 2020 Plan, the administrator determines the other terms of options.

### *Stock Appreciation Rights*

Stock appreciation rights may be granted under the 2020 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Stock appreciation rights will expire upon the date determined by the administrator and set forth in the award agreement. After a participant ceases to provide service as an employee, director, or consultant, he or she may exercise his or her stock appreciation right for the period of time stated in his or her award agreement. In the absence of a specified time in an award agreement, if cessation of service is due to death or disability, the stock appreciation rights will remain exercisable for 12 months. In all other cases, in the absence of a specified time in an award agreement, the stock appreciation rights will remain exercisable for three months following the cessation of service. However, in no event may a stock appreciation right be exercised later than the expiration of its term. Subject to the provisions of the 2020 Plan, the administrator determines the other terms of stock appreciation rights, including

when such rights become exercisable and whether to pay any increased appreciation in cash, shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

#### *Restricted Stock*

Restricted stock may be granted under the 2020 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator (if any). The administrator will determine the number of shares of restricted stock granted to any employee, director, or consultant and, subject to the provisions of the 2020 Plan, will determine any terms and conditions of such awards. The administrator may impose whatever conditions to vesting it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us); provided, however, that the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the administrator provides otherwise. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

#### *Restricted Stock Units*

RSUs may be granted under the 2020 Plan. RSUs are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. Subject to the provisions of the 2020 Plan, the administrator determines the terms and conditions of RSUs, including the vesting criteria, and the form and timing of payment. The administrator may set vesting criteria based upon the achievement of company-wide, divisional, business unit, or individual goals (including continued employment or service), applicable federal or state securities laws, or any other basis determined by the administrator in its discretion. The administrator, in its sole discretion, may pay earned RSUs in the form of cash, in shares, or in some combination thereof. Notwithstanding the foregoing, the administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

#### *Performance Units and Performance Shares*

Performance units and performance shares may be granted under the 2020 Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance goals established by the administrator are achieved or the awards otherwise vest. The administrator will establish performance objectives or other vesting provisions in its discretion, which, depending on the extent to which they are met, will determine the number and/or the value of performance units and performance shares to be paid out to participants. The administrator may set performance objectives based upon the achievement of company-wide, divisional, business unit, or individual goals (including continued employment or service), applicable federal or state securities laws, or any other basis determined by the administrator in its discretion. After the grant of a performance unit or performance share, the administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such performance units or performance shares. Performance units will have an initial dollar value established by the administrator on or prior to the date of grant. Performance shares will have an initial value equal to the fair market value of our common stock on the date of grant. The administrator, in its sole discretion, may pay earned performance units or performance shares in the form of cash, in shares, or in some combination thereof.

#### *Non-Employee Directors*

The 2020 Plan provides that all outside (non-employee) directors will be eligible to receive all types of awards (except for incentive stock options) under the 2020 Plan. In order to provide a maximum limit on the awards that can be made to our non-employee directors, the 2020 Plan provides that in any given fiscal year, a non-employee director may not be paid, issued, or granted equity awards (including awards issued under the 2020 Plan) with an aggregate value (the value of which will be based on their grant date fair value determined in accordance with U.S. generally accepted accounting principles) and any other compensation (including without limitation any



cash retainers or fees) that, in the aggregate, exceed \$500,000 (excluding awards or other compensation paid or provided to him or her as a consultant or employee). The maximum limits do not reflect the intended size of any potential grants or a commitment to make grants to our outside directors under the 2020 Plan in the future.

#### *Non-Transferability of Awards*

Unless the administrator provides otherwise, the 2020 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime. If the administrator makes an award transferable, such award will contain such additional terms and conditions as the administrator deems appropriate.

#### *Certain Adjustments*

In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the 2020 Plan, the administrator will adjust the number and class of shares that may be delivered under the 2020 Plan and/or the number, class, and price of shares covered by each outstanding award, and the numerical share limits set forth in the 2020 Plan.

#### *Dissolution or Liquidation*

In the event of our proposed dissolution or liquidation, the administrator will notify participants as soon as practicable prior to the effective date of such proposed transaction and all awards will terminate immediately prior to the consummation of such proposed transaction.

#### *Merger or Change in Control*

The 2020 Plan provides that in the event of our merger with or into another corporation or entity or a change in control (as defined in the 2020 Plan), each outstanding award will be treated as the administrator determines, including, without limitation, that (i) awards will be assumed, or substantially equivalent awards will be substituted, by the acquiring or succeeding corporation (or an affiliate thereof) with appropriate adjustments as to the number and kind of shares and prices, (ii) upon written notice to a participant, that the participant's awards will terminate upon or immediately prior to the consummation of such merger or change in control, (iii) outstanding awards will vest and become exercisable, realizable, or payable, or restrictions applicable to an award will lapse, in whole or in part, prior to or upon consummation of such merger or change in control and, to the extent the administrator determines, terminate upon or immediately prior to the effectiveness of such merger or change in control, (iv) (A) the termination of an award in exchange for an amount of cash and/or property, if any, equal to the amount that would have been attained upon the exercise of such award or realization of the participant's rights as of the date of the occurrence of the transaction (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the administrator determines in good faith that no amount would have been attained upon the exercise of such award or realization of the participant's rights, then such award may be terminated by us without payment), or (B) the replacement of such award with other rights or property selected by the administrator in its sole discretion, or (v) any combination of the foregoing. The administrator will not be obligated to treat similarly all awards, all awards a participant holds, all awards of the same type, or all portions of awards.

In the event that the successor corporation does not assume or substitute for the award (or portions thereof), the participant will fully vest in and have the right to exercise all of his or her outstanding options and stock appreciation rights (or portions thereof) that is not assumed or substituted for, all restrictions on restricted stock, RSUs, performance shares, and performance units (or portions thereof) not assumed or substituted for will lapse, and, with respect to such awards with performance-based vesting (or portions thereof) not assumed or substituted for, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met, in all cases, unless specifically provided otherwise under the applicable award agreement or other written agreement between the participant and us or any parent or subsidiary. Additionally, in the event an option or stock appreciation right (or portions thereof) is not assumed or substituted for in the event of a merger or change in control, the administrator will notify each participant in writing or electronically that the option or stock

appreciation right (or its applicable portion), as applicable, will be exercisable for a period of time determined by the administrator in its sole discretion, and the option or stock appreciation right (or its applicable portion), as applicable, will terminate upon the expiration of such period.

With respect to awards granted to an outside director, in the event of a change in control, the outside director's options and stock appreciation rights, if any, will vest fully and become immediately exercisable, all restrictions on his or her restricted stock and RSUs will lapse, and, with respect to awards with performance-based vesting, all performance goals or other vesting requirements for his or her performance shares and units will be deemed achieved at 100% of target levels and all other terms and conditions met, in all cases, unless specifically provided otherwise under the applicable award agreement or other written agreement between the participant and us or any parent or subsidiary.

#### *Clawback*

Awards will be subject to any company clawback policy and the administrator also may specify in an award agreement that the participant's rights, payments, and benefits with respect to an award will be subject to reduction, cancellation, forfeiture, recoupment, reimbursement, or reacquisition upon the occurrence of certain specified events. The administrator may require a participant to forfeit, return, or reimburse us all or a portion of the award and any amounts paid under the award pursuant to the terms of the clawback policy or applicable laws.

#### *Amendment; Termination*

The administrator has the authority to amend, alter, suspend, or terminate the 2020 Plan provided such action does not materially impair the existing rights of any participant. The 2020 Plan automatically will terminate in 2030, unless terminated sooner.

#### **2015 Equity Incentive Plan**

The Transphorm Technology 2015 Equity Incentive Plan (the "2015 Plan") permitted the grant of incentive stock options, within the meaning of Section 422 of the Code, to Transphorm Technology's employees and any parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, and RSUs to Transphorm Technology's employees, directors, and consultants and Transphorm Technology's parent and subsidiary corporations' employees and consultants. The only type of awards granted under the 2015 Plan were incentive stock options and nonstatutory stock options. As of December 31, 2020, options to purchase 2,197,079 shares of our common stock at a weighted average exercise price of \$4.24 were outstanding under the 2015 Plan.

#### *Authorized Shares*

The 2015 Plan was terminated in connection with the Merger, and accordingly, no new awards will be granted under the 2015 Plan. The 2015 Plan continues to govern outstanding awards previously granted under it.

#### *Plan Administration*

Our board of directors or one or more committees appointed by our of directors administers the 2015 Plan. Subject to the provisions of the 2015 Plan, the administrator has the power to administer the 2015 Plan, including but not limited to, the power to interpret the terms of the 2015 Plan and awards granted under it and to prescribe, amend, and rescind rules relating to the 2015 Plan. The administrator also has the authority to amend existing awards, including the power to extend the post-termination exercisability period of awards and to extend the maximum term of an option and to allow participants to defer the receipt of the payment of cash or the delivery of shares that otherwise would be due to such participant under an award. The administrator may institute and determine the terms of an exchange program under which (i) outstanding awards are surrendered or cancelled in exchange for awards of the same type (which may have higher or lower exercise prices or different terms), awards of

a different type and/or cash, (ii) participants would have the opportunity to transfer any outstanding awards to a financial institution or other person or entity selected by the administrator, and/or (iii) the exercise price of an outstanding award is reduced or increased. The administrator's decisions, determinations, and interpretations are final and binding on all participants.

#### *Options*

Stock options were granted under the 2015 Plan. The exercise price of options granted under the 2015 Plan must have been equal to at least the fair market value of Transphorm Technology's common stock on the date of grant. The term of an option could not exceed 10 years, except that with respect to any participant who owned more than 10% of the total combined voting power of all classes of Transphorm Technology's outstanding stock on the date of grant, the term could not exceed five years and the exercise price must have been equal to at least 110% of the fair market value on the date of grant. The administrator determined the methods of payment of the exercise price of an option, which may have included cash, shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After termination of an employee, director, or consultant, he or she may exercise his or her option for the period of time as specified in the applicable option agreement. If termination is due to death or disability, the option generally will remain exercisable for at least six months. In all other cases, the option will generally remain exercisable for at least 30 days. However, in no event may an option be exercised later than the expiration of its term. Subject to the provisions of the 2015 Plan, the administrator determined the other terms of options.

#### *Non-Transferability of Awards*

Unless the administrator provides otherwise, the 2015 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

#### *Certain Adjustments*

In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the 2015 Plan, the administrator will adjust the number, class, and price of shares covered by each outstanding award.

#### *Dissolution or Liquidation*

In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable prior to the effective date of the proposed transaction and all awards will terminate immediately prior to the consummation of such proposed transaction.

#### *Merger or Change in Control*

The 2015 Plan provides that in the event of a merger or change in control, as defined under the 2015 Plan, each outstanding award will be treated as the administrator determines, including, without limitation, that (i) awards will be assumed, or substantially equivalent awards will be substituted, by the acquiring or succeeding corporation with appropriate adjustments as to the number and kind of shares and prices; (ii) upon written notice, awards will be terminated upon or immediately prior to the consummation of such merger or change in control; (iii) outstanding awards will vest and become exercisable, realizable, or payable, or restrictions applicable to an award will lapse, in whole or in part prior to or upon consummation of such merger or change in control, and, to the extent the administrator determines, terminate upon or immediately prior to the effectiveness of such merger or change in control; (iv) awards will be terminated in exchange for an amount of cash and/or property or awards will be replaced with other rights or property selected by the administrator in its sole discretion; or (v) any combination of the foregoing. If a successor corporation or its parent or subsidiary does not assume or substitute for the award (or portion thereof), then such award will fully vest, all restrictions on the shares subject to such award will lapse, and all performance goals or other vesting criteria applicable to the shares subject to such award will be deemed achieved at 100% of target levels and all other terms and conditions met. The award will then terminate upon the

expiration of the specified period of time. If an option becomes fully vested and exercisable in connection with a change in control due to the successor corporation's refusal to assume or substitute for the award, the administrator will notify the applicable participant in writing or electronically that the award will be exercisable for a period of time determined by the administrator, and the option will terminate upon the expiration of such period.

#### *Amendment; Termination*

Our board of directors has the authority to amend or alter the 2015 Plan, provided such action will not impair the existing rights of any participant, unless mutually agreed to in writing between the participant and the administrator. As noted above, the 2015 Plan has been terminated and no further awards will be granted thereunder. All outstanding awards will continue to be governed by their existing terms.

#### **2007 Stock Plan**

The Transphorm Technology 2007 Stock Plan (the "2007 Plan") allowed for the grant of incentive stock options, within the meaning of Section 422 of the Code, to Transphorm Technology's employees and Transphorm Technology's parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options and stock purchase rights to Transphorm Technology's employees, directors, and consultants and Transphorm Technology's parent and subsidiary corporations' employees and consultants. The only type of awards granted under the 2007 Plan were incentive stock options and nonstatutory stock options. As of December 31, 2020, options to purchase 123,239 shares of our common stock at a weighted average exercise price of \$12.40 were outstanding under the 2007 Plan.

#### *Authorized Shares*

The 2007 Plan was terminated in connection with the Merger, and accordingly, no new awards will be granted under the 2007 Plan. The 2007 Plan continues to govern outstanding awards previously granted under it.

#### *Plan Administration*

Our board of directors or a committee of our board of directors administers the 2007 Plan. Subject to the provisions of the 2007 Plan, the administrator has the full authority and discretion to take any actions it deems necessary or advisable for the administration of the 2007 Plan. The administrator has the power to construe and interpret the terms of the 2007 Plan and awards granted under it and to prescribe, amend, and rescind rules relating to the 2007 Plan. The administrator may institute and determine the terms of an exchange program pursuant to which outstanding options are surrendered or cancelled in exchange for options of the same type (which may have lower exercise prices and different terms), options of a different type, and/or cash, and/or the exercise price of an outstanding option is reduced. All decisions, interpretations, and other actions of the administrator are final and binding on all participants in the 2007 Plan.

#### *Options*

Stock options were granted under the 2007 Plan. The exercise price per share of all incentive stock options must have been equal to at least 100% of the fair market value per share of Transphorm Technology's common stock on the date of grant, as determined by the administrator. The exercise price per share of nonstatutory stock options must have been equal to at least 85% of the fair market value per share of Transphorm Technology's common stock on the date of grant, as determined by the administrator. The term of a stock option could not exceed 10 years. With respect to any participant who owned 10% of the voting power of all classes of Transphorm Technology's outstanding stock as of the date of grant, the term of an incentive stock option granted to such participant could not exceed five years and the exercise price per share of such incentive stock option or nonstatutory stock option must have been equal to at least 110% of the fair market value per share of Transphorm Technology's common stock on the date of grant, as determined by the administrator. Except in the case of options granted to officers, directors, and consultants, options could become exercisable at a rate of no less than 20% per

year over five years from the date the options were granted. The administrator determined the terms and conditions of options.

After termination of an employee, director, or consultant, he or she may exercise his or her option for the period of time as specified in the applicable option agreement. If termination is due to death or disability, the option generally will remain exercisable for at least six months. In all other cases, the option will generally remain exercisable for at least 30 days. However, an option generally may not be exercised later than the expiration of its term.

#### *Non-Transferability of Awards*

Unless the administrator provides otherwise, the 2007 Plan generally does not allow for the transfer or assignment of options, except by will or by the laws of descent and distribution.

#### *Certain Adjustments*

In the event of certain changes in our capitalization, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the 2007 Plan, the administrator may adjust the number, class, and price of shares covered by each outstanding award.

#### *Dissolution or Liquidation*

In the event of our proposed dissolution or liquidation, the administrator will notify participants as soon as practicable prior to the effective date of such proposed transaction and all outstanding awards will terminate immediately prior to the consummation of such proposed transaction.

#### *Merger or Change in Control*

The 2007 Plan provides that, in the event that we are a party to a merger or change in control, outstanding options may be assumed or substituted by the successor corporation or a parent or subsidiary thereof. In the event the successor corporation refuses to assume or substitute for the option, then the participant will fully vest in and have the right to exercise the option as to all of the shares subject to the award, including shares as to which it would not otherwise be vested or exercisable. If an option becomes fully vested and exercisable, as applicable, in lieu of assumption or substitution in the event of a merger or change in control, the administrator will notify the applicable participant in writing or electronically that the option or stock purchase right will be fully vested and exercisable, as applicable, for a period of time as determined by the administrator, contingent upon the consummation of the change in control, and the award will terminate upon expiration of such period.

#### *Amendment; Termination*

Our board of directors has the authority to amend or alter the 2007 Plan, provided such action will not impair the existing rights of any participant, unless mutually agreed to in writing between the participant and the administrator. As noted above, the 2007 Plan has been terminated and no further awards will be granted thereunder. All outstanding awards will continue to be governed by their existing terms.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The following is a description of transactions since January 1, 2018 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amount involved exceeded or will exceed the lesser of \$120,000 or one percent of our total assets at year-end for our last two completed fiscal years; and
- any of our directors, executive officers or beneficial owners of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described in the section titled “Executive Compensation.”

### Private Placements

In December 2020, Columbia Seligman Communications and Information Fund (“Columbia”) purchased 3,000,000 shares of common stock from us in the Private Placement, for an aggregate purchase price of \$9,000,000.

In February 2020, Phorm purchased 1,250,000 shares of common stock from us in a private placement, for an aggregate purchase price of \$5,000,000.

In February 2020, Mr. Rivas, Dr. Parikh, Dr. Mishra and Mr. McAulay, purchased 12,500 shares, 2,500 shares, 2,500 shares and 2,500 shares, respectively, of common stock from us in a private placement, for an aggregate purchase price of \$50,000, \$10,000, \$10,000 and \$10,000, respectively.

In April 2018, Nexperia purchased 4,000,000 shares of Transphorm Technology’s Series 3 Preferred Stock in a private placement, for an aggregate purchase price of \$16.0 million.

### Stockholders Agreement

In February 2020, we entered into the Phorm Stockholders Agreement with Phorm, pursuant to which we are required to take all necessary action for individuals designated by Phorm to be included in the slate of nominees recommended by the board of directors for election by our stockholders. Under the Phorm Stockholders Agreement, Phorm has the right to nominate (i) a majority of the board so long as it beneficially owns at least 40% of our then-outstanding shares of common stock, (ii) 33% of the directors (rounded up to the nearest whole number) so long as it beneficially owns at least 20% but less than 40% of our then-outstanding shares of common stock, and (iii) 10% of the directors (rounded up to the nearest whole number) so long as it beneficially owns at least 10% but less than 20% of our then-outstanding shares of common stock. The Phorm Stockholders Agreement also provides that so long as Phorm beneficially owns 20% or more of our then-outstanding shares of common stock, we will agree to take all necessary action to cause a Phorm Designee to serve as chair of the board of directors. The Phorm Stockholders Agreement also provides that Phorm may nominate at least one member of each committee that may be established by the board of directors. Phorm may assign these and other governance rights to certain transferees.

### Indemnification Agreement

In February 2020, we entered into the Phorm Indemnification Agreement with Phorm, pursuant to which we will indemnify Phorm and its affiliates (including their respective directors, officers, managers, controlling persons and employees) and each Phorm Designee against liabilities arising in connection with, among other things, (i) Phorm’s acquisition and ownership of our common stock and involvement in the Merger, (ii) Phorm and its affiliates’ provision of financial advisory, investment banking, syndication, monitoring and management consulting services to us and/or our subsidiaries (including in connection with any future offer or sale of securities of us or any

of our subsidiaries), and (iii) any Phorm Designee's service on our board of directors or the board of directors of any of our subsidiaries.

## **Registration Rights Agreements**

### ***February 2020 Registration Rights Agreement***

In February 2020, we entered into a registration rights agreement with certain beneficial owners of our common stock (collectively, the "Initial Holders"), including Phorm, Nexperia, Yaskawa, Mr. Rivas, Dr. Parikh, Dr. Mishra and Mr. McAulay. Pursuant to the registration rights agreement, we filed a registration statement with the SEC covering the resale of shares of our common stock held by the Initial Holders, which was declared effective by the SEC in June 2020. We must use commercially reasonable efforts to keep such registration statement effective for up to three years from the date it was declared effective by the SEC.

Subject to customary exceptions, if we fail to maintain the effectiveness of the registration statement or if trading of our common stock is suspended or halted for more than three full, consecutive trading days, we agreed to make payments to each Initial Holder, as liquidated damages, a cash sum calculated at a rate equal to 12% per annum of the total value of shares held or purchased by such holder and affected during the period, based on the monetary values assigned in the registration rights agreement; provided that the maximum amount of liquidated damages paid by us will not exceed 5% of the aggregate value of such Initial Holder's shares (with such value based on the monetary values assigned in the registration rights agreement) that are affected by our failure to maintain the effectiveness of the registration statement or by the suspension of trading of our common stock.

### ***December 2020 Registration Rights Agreement***

In December 2020, we entered into a registration rights agreement with the investors that purchased our common stock in the Private Placement, including Columbia, as well as the holders of the Placement Agent Warrants, pursuant to which we agreed to file with the SEC, within 30 days of the closing of the Private Placement, the registration statement of which this prospectus is a part. We must use commercially reasonable efforts to keep such registration statement effective for up to three years from the date it is declared effective by the SEC.

Subject to customary exceptions, if we fail to maintain the effectiveness of such registration statement, or trading of our common stock is suspended or halted for more than three full, consecutive trading days, we agreed to make payments to each holder of registrable shares, as liquidated damages, a cash sum calculated at a rate equal to 12% per annum of the total value of registrable shares held or purchased by such holder and affected during the period, based on the monetary values assigned in the registration rights agreement, provided that the maximum amount of liquidated damages paid by us will not exceed the aggregate value of such holder's shares (with such value based on the monetary values assigned in the registration rights agreement) that are affected by our failure to maintain the effectiveness of the registration statement or by the suspension of trading of our common stock.

## **Phorm Lock-Up Agreement**

In July 2020, we entered into a lock-up agreement with Phorm, pursuant to which Phorm agreed that until June 30, 2021, Phorm will not, without our prior written consent, offer, pledge, sell, contract to sell, grant any option, right or warrant to purchase, make any short sale, or otherwise transfer or dispose of or lend, directly or indirectly, any of our shares of common stock, or any securities convertible into, exercisable or exchangeable for or that represent the right to receive shares of our common stock, subject to certain exceptions.

## **Relationship with Nexperia**

The descriptions set forth above under the captions "Business—Nexperia Cooperation Agreement" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Cash Flows—Nexperia Loan and Security Agreement" are incorporated herein by reference.

### **Yaskawa Promissory Note**

In October 2017, we issued an unsecured subordinated convertible promissory note to Yaskawa in the aggregate principal amount of \$15.0 million. The note accrues interest at the rate of 1.0% per annum, and principal plus interest is due on the earlier of September 30, 2022, or the occurrence of an event of default. Any or all of the outstanding principal and accrued interest under the note is convertible at the option of the holder into shares of our common stock at a conversion price of \$5.12 per share, up to a maximum of 3,076,171 shares.

### **Yaskawa Cooperation and Development Agreement**

In December 2020, we entered into a cooperation and development agreement with Yaskawa, pursuant to which Yaskawa agreed to provide \$4.0 million over three years to fund our development activities related to industrial power conversion applications, with an initial focus on servo motor drive applications. Yaskawa provided \$1.0 million of this \$4.0 million commitment in December 2020.

### **Review, Approval and Ratification of Related Party Transactions**

Prior to July 2020, we did not have a formal review and approval policy for related party transactions. However, all of the transactions prior to July 2020 were entered into after presentation, consideration and approval by our board of directors.

In July 2020, we adopted a formal, written policy, providing that management shall review with the audit committee of our board of directors any proposed related party transactions or any related party transactions of which they have become aware and which have not previously been approved by the audit committee. After review, the audit committee shall approve, ratify or disapprove such transactions. For purposes of our policy, a related party means any of our executive officers, directors (including director nominees), holders of more than 5% of any class of our voting securities and any member of the immediate family of or any entities affiliated with any of the foregoing persons, and a related party transaction means a transaction, arrangement or relationship where we were, are or will be involved and in which a related party had, has or will have a direct or indirect material interest and the aggregate amount exceeds \$120,000.

Our policy also provides that the following types of transactions, among others, with related parties are deemed pre-approved, even if the aggregate amount will exceed \$120,000:

- compensation paid to a director or executive officer if such compensation is approved by the compensation committee or our board of directors or is required to be reported in our annual proxy statement;
- any transaction with another company, other than an acquisition by us of that company, if the only relationship that the related party has with such company is as a non-executive employee, director or beneficial owner of less than 10% of such company's equity, provided that the aggregate amount involved in such transaction does not exceed the greater of \$200,000 or 5% of that company's total annual revenues and that the transaction is on terms no less favorable than terms generally available to an unaffiliated third-party under the same or similar circumstances;
- any charitable contribution by us to a charitable organization, if the only relationship the related party has with such organization is as a non-executive employee or director, provided that the aggregate amount involved in such transaction does not exceed the greater of \$200,000 or 5% of such organization's total annual receipts;
- any transaction in which the related person's interest arises solely from beneficially owning our common stock if all of our stockholders receive the same benefit on a pro rata basis; and
- any indemnification or advancement of expenses made pursuant to our certificate of incorporation or bylaws or pursuant to any agreement.



In accordance with our policy, we intend to seek ratification of our cooperation and development agreement with Yaskawa at the next regularly scheduled meeting of the audit committee.

## **USE OF PROCEEDS**

We are filing this registration statement of which this prospectus is a part to permit holders of the shares of our common stock described in the section titled "Selling Stockholders" to resell such shares. We will not receive any proceeds from the resale of any shares offered by this prospectus by the selling stockholders.

## **DIVIDEND POLICY**

We have not declared or paid any cash dividends on our capital stock since our inception. We intend to retain future earnings, if any, to finance the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements and contractual restrictions of then-existing debt instruments, and other factors that our board of directors deems relevant.

## **MARKET INFORMATION FOR OUR COMMON STOCK**

Our common stock is quoted on the OTCQB under the symbol "TGAN."

As of December 31, 2020, we had 40,278,496 shares of common stock outstanding held by 55 stockholders of record.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information with respect to the beneficial ownership of our common stock as of December 31, 2020, for:

- each person (or group of affiliated persons) who is known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our directors and current executive officers as a group.

We have determined beneficial ownership in accordance with SEC rules. Except as indicated in the footnotes below, and subject to applicable community property laws, we believe, based on the information furnished to us, the persons and entities named in the table below have sole voting and investment power with respect to all shares shown as beneficially owned by them.

Percentage of beneficial ownership is based on 40,278,496 shares of our common stock outstanding as of December 31, 2020. In computing the number of shares beneficially owned by a person or entity and the percentage ownership of that person or entity, we deemed to be outstanding all shares of our common stock as to which such person or entity has the right to acquire within 60 days of December 31, 2020, through the exercise of any option or other right. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person or entity. Unless otherwise noted below, the address of each beneficial owner named below is c/o Transphorm, Inc., 75 Castilian Drive, Goleta, CA 93117.

Name of Beneficial Owner	Shares Beneficially Owned (#)	Percentage Beneficially Owned (%)
<b>5% Stockholders:</b>		
KKR Phorm Investors L.P. (1)	21,175,980	52.57%
Nexperia B.V. (2)	4,000,000	9.93%
Columbia Seligman Communications and Information Fund (3)	3,000,000	7.45%
Yaskawa Electric Corporation (4)	3,028,735	6.99%
<b>Named Executive Officers and Directors:</b>		
Mario Rivas (5)	371,005	*
Cameron McAulay (6)	132,390	*
Primit Parikh, Ph.D. (7)	388,961	*
Brittany Bagley	—	*
David Kerko	—	*
Umesh Mishra, Ph.D. (8)	514,373	1.26%
Eiji Yatagawa (9)	—	*
Julian Humphreys	—	*
<b>All directors and current executive officers as a group (8 persons) (10)</b>	<b>1,406,729</b>	<b>3.39%</b>

\* Represents less than 1% of the total.

(1) Represents shares directly owned by KKR Phorm Investors L.P. KKR Phorm Investors GP LLC, as the general partner of KKR Phorm Investors L.P.; KKR Group Partnership L.P., as the sole member of KKR Phorm

Investors GP LLC; KKR Group Holdings Corp., as the general partner of KKR Group Partnership L.P.; KKR & Co. Inc., as the sole shareholder of KKR Group Holdings Corp.; KKR Management LLP, as the Class B shareholder of KKR & Co. Inc.; and Messrs. Henry R. Kravis and George R. Roberts, as founding partners of KKR Management LLP, may be deemed to be the beneficial owners with respect to the shares directly owned by KKR Phorm Investors L.P. The principal business address of each of the entities and persons identified in this paragraph, except Mr. Roberts, is c/o Kohlberg Kravis Roberts & Co. L.P., 9 West 57th Street, Suite 4200, New York, NY 10019. The principal business address for Mr. Roberts is c/o Kohlberg Kravis Roberts & Co. L.P., 2800 Sand Hill Road, Suite 200, Menlo Park, CA 94025. Each of Messrs. Kravis and Roberts disclaims beneficial ownership of the shares held by KKR Phorm Investors L.P.

- (2) Wingtech Technology Co. Ltd. owns 80% of the equity of Nexperia B.V. ("Nexperia") and may be deemed to be the beneficial owner having voting and dispositive power with respect to these shares. The principal business address of Wingtech Technology Co. Ltd. 4F-6F, Building 4 of Juxin Yuan, No. 188, Pingfu Road, Xuhui District, Shanghai, China. The principal business address of Nexperia B.V. is Jonkerbosplein 52, 6534 AB Nijmegen, The Netherlands.
- (3) Columbia Management Investment Advisers, LLC ("CMIA") is the investment adviser for the account that holds these shares. Ameriprise Financial, Inc. ("AFI") is the parent holding company of CMIA. CMIA and AFI do not directly own any shares of our common stock. As the investment adviser to the accounts, CMIA may be deemed to beneficially own these shares. Each of CMIA and AFI disclaims beneficial ownership of these shares. The address for CMIA and Columbia Seligman Communications and Information Fund is 225 Franklin Street, Boston, MA 02110. The address for AFI is 1099 Ameriprise Financial Center, Minneapolis, MN 55474.
- (4) All such shares are issuable upon conversion of a convertible promissory note within 60 days of December 31, 2020. The principal business address of Yaskawa Electric Corporation is 2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu 806-0004, Japan.
- (5) Consists of (i) 12,500 shares of common stock held by Mr. Rivas and (ii) 358,505 shares of common stock issuable pursuant to stock options that are exercisable within 60 days of December 31, 2020.
- (6) Consists of (i) 2,500 shares of common stock held by Mr. McAulay and (ii) 129,890 shares of common stock issuable pursuant to stock options that are exercisable within 60 days of December 31, 2020.
- (7) Consists of (i) 69,396 shares of common stock held by Dr. Parikh and (ii) 319,565 shares of common stock issuable pursuant to stock options that are exercisable within 60 days of December 31, 2020.
- (8) Consists of (i) 85,391 shares of common stock held by Dr. Mishra and (ii) 428,982 shares of common stock issuable pursuant to stock options that are exercisable within 60 days of December 31, 2020.
- (9) Mr. Yatagawa is a member of our board of directors and serves as an executive of Kohlberg Kravis Roberts & Co. L.P. and/or one or more of its affiliates. Mr. Yatagawa disclaims beneficial ownership of the shares held by KKR Phorm Investors L.P. The principal business address of Mr. Yatagawa is c/o Kohlberg Kravis Roberts & Co. L.P., 9 West 57th Street, New York, New York 10019.
- (10) Includes 1,236,942 shares of common stock issuable pursuant to stock options that are exercisable within 60 days of December 31, 2020.

## SELLING STOCKHOLDERS

This prospectus covers the resale by the selling stockholders identified below of up to 5,285,501 shares of our common stock, which consists of (i) 5,000,000 shares issued to certain selling stockholders in the Private Placement, (ii) 135,501 shares privately issued to certain selling stockholders pursuant to the terms of consulting agreements with such stockholders, and (iii) 150,000 shares that are issuable upon exercise of the Placement Agent Warrants. The registration of the common stock of the selling stockholders through this prospectus constitutes a secondary offering and is not an offering by us or on our behalf. We will not receive any proceeds from the resale of the common stock by the selling stockholders.

None of the selling stockholders has been an officer or director of ours or any of our predecessors or affiliates within the last three years.

Loop Capital Markets LLC and Spartan Securities, LLC acted as placement agents for the Private Placement. As compensation for their services, they or their designees received (i) a cash fee equal to 7% of the purchase price of the shares sold in the Private Placement to investors that were not existing investors in the Company, subject to certain exclusions agreed between the placement agents and us, and (ii) the Placement Agent Warrants, which have an exercise price of \$3.30 per share, provide for a cashless exercisable feature, and are exercisable for a period of five years expiring on December 23, 2025. We also reimbursed the placement agents for \$50,000 of expenses. Except with respect to the foregoing or as disclosed in the footnotes below, no selling stockholder had a material relationship with us or any of our affiliates within the last three years.

The following table and the accompanying footnotes are based in part on information supplied to us by the selling stockholders. The table and footnotes assume that the selling stockholders will sell all of the shares listed. However, because the selling stockholders may sell all or some of their shares under this prospectus from time to time, or in another permitted manner, we cannot assure you as to the actual number of shares that will be sold by the selling stockholders or that will be held by the selling stockholders after completion of any sales. We do not know how long the selling stockholders will hold the shares before selling them.

The inclusion of any shares in this table does not constitute an admission of beneficial ownership by the persons named below.

Name of Selling Stockholders	Shares Owned Before the Offering (#)	Maximum Number of Shares to be Sold Pursuant to this Prospectus (#)	Shares Owned After the Offering	
			(#) (1) (2)	(%) (1) (2)
Columbia Seligman Communications and Information Fund	3,000,000	3,000,000	—	—
Jerry Ma	1,333,334	1,333,334	—	—
Boardman Bay	500,000	250,000	250,000	*
Alpha Capital Anstalt	166,666	166,666	—	—
Black Maple Capital Partners LP	251,446	125,000	126,446	*
Intracoastal Capital, LLC (3)	50,000	50,000	—	—
Obsidian Global Partners, LLC	30,000	30,000	—	—
Warberg WF VIII L.P.	30,000	30,000	—	—
Reiss Capital Management LLC	65,000	15,000	50,000	*
The Del Mar Consulting Group	60,975	60,975	—	—
Alex Partners LLC	37,263	37,263	—	—
Robert S. London	37,263	37,263	—	—
Loop Capital Markets LLC	—	82,500 (4)	—	—
Spartan Capital Securities, LLC	—	22,500 (4)	—	—
Jason Diamond	—	34,875 (4)	—	—
Robert L. Malin	—	10,125 (4)	—	—

\*Represents less than 1% of the total.

(1) Applicable percentage ownership is based on 40,278,496 shares of our common stock outstanding as of December 31, 2020.

(2) Assumes the sale of all shares offered in this prospectus.

(3) Mitchell P. Kopin and Daniel B. Asher, each of whom are managers of Intracoastal Capital LLC (“Intracoastal”), have shared voting control and investment discretion over the securities reported herein that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the securities reported herein that are held by Intracoastal.

(4) Represents warrants to purchase shares of our common stock issued as compensation for placement agent services rendered in connection with the Private Placement.

## PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership or other distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through agents;
- through one or more underwriters in a public offering on a firm commitment or best-efforts basis;
- through the settlement of short sales (including short sales “against the box”), in each case subject to compliance with the Securities Act and other applicable laws;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- in other ways not involving market makers or established trading markets;
- by pledge to secure debts and other obligations;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended, or Securities Act, if available, rather than under this prospectus, provided that they meet the criteria and conform to

the requirements of these provisions, including the requirements of Rule 144(i) applicable to former “shell companies.”

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424 or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. However, we will receive proceeds from the exercise of the warrants if they are exercised for cash by a holder thereof.

The selling stockholders and any underwriters, broker-dealers or agents that are involved in selling the common stock or interests therein may be deemed to be “underwriters” within the meaning of Section 2(a)(11) of the Securities Act. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The maximum amount of any compensation to be received by any FINRA member will not be greater than an amount that is considered fair and reasonable for the sale of any securities being registered. Each selling stockholder has informed us that it does not as of the date hereof have any agreement or understanding, directly or indirectly, with any person to distribute the common stock. If a selling stockholder is deemed to be an “underwriter” within the meaning of the Securities Act, it will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement of which this prospectus is a part.

In order to comply with the securities laws of some states, if applicable, the shares of our common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states shares of our common stock may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to



time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including certain liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

In connection with the Private Placement, we agreed with certain of the selling stockholders to keep the registration statement of which this prospectus is a part effective for up to three years from the date it is declared effective by the SEC.

Once sold under the registration statement of which this prospectus is a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

## DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws. Copies of these documents were filed with the SEC and referenced in the exhibits to our registration statement, of which this prospectus forms a part.

We have authorized capital stock consisting of 750,000,000 shares of common stock, par value \$0.0001 per share, and 5,000,000 shares of preferred stock par value \$0.0001 per share. As of December 31, 2020, we had 40,278,496 shares of common stock issued and outstanding, and no shares of preferred stock issued and outstanding.

Unless stated otherwise, the following discussion summarizes the terms and provisions of our amended and restated certificate of incorporation and our amended and restated bylaws. This description is qualified in its entirety by reference to, our amended and restated certificate of incorporation and our amended and restated bylaws, which have been publicly filed with the SEC.

### **Common Stock**

#### ***Voting Rights***

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our certificate of incorporation and bylaws do not provide for cumulative voting rights. Because of this, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

#### ***Dividends***

Subject to preferences that may be applicable to any then-outstanding convertible preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

We have never paid cash dividends on our common stock. Moreover, we do not anticipate paying periodic cash dividends on our common stock for the foreseeable future. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions, contractual restrictions, including any loan or debt financing agreements, and on such other factors as our board of directors deems relevant.

#### ***Liquidation***

In the event of our liquidation, dissolution, or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of convertible preferred stock.

### **Preferred Stock**

The following description of our preferred stock and the description of the terms of any particular series of our preferred stock that we choose to issue are not complete. These descriptions are qualified in their entirety by reference to our certificate of incorporation and the certificate of designation, if and when adopted by our board of directors, relating to that series. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to that series.

We currently have no shares of preferred stock outstanding, and we have no present plan to issue any shares of preferred stock. Our board of directors has the authority, without further action by the stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, redemption rights, liquidation preferences, sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing change in our control or other corporate action.

## Warrants

As of December 31, 2020, we had outstanding warrants to purchase shares of our common stock as set forth below:

Number of Shares	Exercise Price	Expiration Date
6,046	\$ 34.74	5 years after an initial public offering of the Company
3,369	\$ 54.41	5 years after an initial public offering of the Company
150,000	\$ 3.30	December 23, 2025
<u>159,415</u>		

## Options

As of December 31, 2020, we had outstanding options under our equity compensation plans to purchase an aggregate of 2,320,318 shares of our common stock, with a weighted average exercise price of \$4.67 per share.

## Convertible Debt

As of December 31, 2020, we had an outstanding unsecured subordinated convertible promissory note in the aggregate principal amount of \$15.0 million, which bears interest at 1.0% per annum. All outstanding principal plus accrued and unpaid interest is due on the earlier of September 30, 2022, or the occurrence of an event of default, or a change of control of us. Any or all of the outstanding principal and accrued interest under the note is convertible, in whole or in part, at the option of the holder into shares of our common stock at a conversion price of \$5.12 per share, up to a maximum of 3,076,171 shares. As of December 31, 2020, \$15.0 million of principal and \$0.5 million of accrued interest remains outstanding on the note.

## Registration Rights

We are party to registration rights agreements with certain beneficial owners of our common stock. See “Certain Relationships and Related Party Transactions—Registration Rights Agreements” for more information.

## Anti-Takeover Effects of Certain Provisions of Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated Bylaws

Certain provisions of Delaware law and certain provisions included in our certificate of incorporation and bylaws summarized below may be deemed to have an anti-takeover effect and may delay, deter, or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

### ***Preferred Stock***

Our certificate of incorporation contains provisions that permit our board of directors to issue, without any further vote or action by the stockholders, shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series and the powers, preferences, or relative, participation, optional, and other special rights, if any, and any qualifications, limitations, or restrictions, of the shares of such series.

### ***Classified Board***

Our certificate of incorporation provides that our board of directors shall be divided into three classes of directors, with the classes as nearly equal in number as practicable, and with the directors serving three-year terms. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors has the effect of making it more difficult for shareholders to change the composition of our board of directors. Our certificate of incorporation also provides that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors is, and will continue to be, fixed exclusively pursuant to a resolution adopted by our board of directors.

### ***Removal of Directors***

Our certificate of incorporation provides that stockholders may only remove a director for cause by a vote of no less than a majority of the shares present in person or by proxy at the meeting and entitled to vote.

### ***Director Vacancies***

Our certificate of incorporation authorizes only our board of directors to fill vacant directorships.

### ***No Cumulative Voting***

Our certificate of incorporation provides that stockholders do not have the right to cumulate votes in the election of directors.

### ***Special Meetings of Stockholders***

Our certificate of incorporation and bylaws provide that, except as otherwise required by law, special meetings of the stockholders may be called only by the chairperson of our board of directors, the chief executive officer, the president (in the absence of a chief executive officer), or our board of directors acting pursuant to a resolution adopted by board members constituting a majority of the total number of authorized directorships.

### ***Advance Notice Procedures for Director Nominations***

Our bylaws provide that stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders must provide timely notice thereof in writing. To be timely, a stockholder's notice generally will have to be delivered to and received at our principal executive offices before notice of the meeting is issued by the secretary of the Company, with such notice being served not less than 90 nor more than 120 days before the meeting. Although the bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, the bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage

or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.

#### ***Action by Written Consent***

Our certificate of incorporation and bylaws provide that from and after the date that Phorm beneficially owns less than a majority of our outstanding shares of common stock (which will occur upon completion of this offering), any action to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by written consent. Until such time, any action to be taken by the shareholders may be effected by written consent.

#### ***Amending our Certificate of Incorporation and Bylaws***

Our certificate of incorporation provides that, from and after the date that Phorm beneficially owns less than a majority of our outstanding shares of common stock (which will occur upon completion of this offering), the affirmative vote of at least 66 2/3% of the votes entitled to be cast by holders of all outstanding shares then entitled to vote, voting together as a single class, is required to amend certain provisions of our certificate of incorporation.

From and after the date that Phorm beneficially owns less than a majority of our outstanding shares of common stock (which will occur upon completion of this offering), our bylaws may be adopted, amended, altered or repealed by stockholders only upon approval of at least 66 2/3% of the votes entitled to be cast by holders of all outstanding shares then entitled to vote, voting together as a single class. Additionally, our certificate of incorporation provides that our bylaws may be amended, altered or repealed by the board of directors.

#### ***Authorized but Unissued Shares***

Our authorized but unissued shares of common stock and preferred stock will be available for future issuances without stockholder approval, except as required by the listing standards of any exchange upon which our common stock may become listed, and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of the Company by means of a proxy contest, tender offer, merger, or otherwise.

#### ***Exclusive Jurisdiction***

Our bylaws provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware, or if the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware, is the exclusive forum for (i) any derivative action or proceeding brought on behalf of us, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, stockholder, officer, or other employee to us or our stockholders, (iii) any action arising pursuant to any provision of the DGCL or our certificate of incorporation or bylaws (as either may be amended from time to time), or (iv) any action asserting a claim governed by the internal affairs doctrine, except, in each case, (A) any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination), (B) which is vested in the exclusive jurisdiction of a court or forum other than such court, or (C) for which such court does not have subject matter jurisdiction. Our bylaws also provide that unless we consent in writing to the selection of an alternative forum, that the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to actions arising under the Exchange Act or the rules and regulations thereunder. Although our bylaws contain the exclusive forum provisions described above, it is possible that a court could find that such provisions are inapplicable for a particular claim or action or that either such provision is unenforceable, and our stockholders will

not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

### ***Business Combinations with Interested Stockholders***

We have opted out of Section 203 of the DGCL. However, our certificate of incorporation contains similar provisions providing that we may not engage in certain “business combinations” with any “interested stockholder” for a three-year period following the time that the stockholder became an interested stockholder, unless:

- prior to this time, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding certain shares; or
- at or subsequent to such time, the business combination is approved by our board of directors and authorized at an annual or special meeting of stockholders, and by the affirmative vote of holders of at least 66 and 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a “business combination” includes a merger, asset, or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to certain exceptions (including a provision that provides that Phorm and certain of its affiliates and any of their direct or indirect transferees and any group as to which such persons are a party shall not be deemed to be “interested stockholders”), an “interested stockholder” is a person who, together with that person’s affiliates and associates, owns, or within the previous three years owned, 15% or more of our outstanding voting stock. For purposes of this section only, “voting stock” has the meaning given to it in Section 203 of the DGCL.

The provisions of our certificate of incorporation and bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. For example, under certain circumstances, our charter provisions regarding certain “business combinations” will make it more difficult for a person who would be an “interested stockholder” to effect various business combinations with the Company for a three-year period. This provision may encourage companies interested in acquiring us to negotiate in advance with our board of directors because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions may also have the effect of preventing changes in management or in our board of directors. It is possible that these provisions may make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

### **Limitations of Liability and Indemnification Matters**

For a discussion of liability and indemnification, see “Directors and Executive Officers—Limitation of Liability and Indemnification” above.

### **Listing**

Our common stock is quoted on the OTCQB under the symbol “TGAN.”

### **Transfer Agent**

The transfer agent and registrar for our common stock is Philadelphia Stock Transfer, Inc. The transfer agent and registrar’s address is 2320 Haverford Rd., Suite 230, Ardmore, Pennsylvania 19003.

## **LEGAL MATTERS**

The validity of the shares of our common stock being offered by this prospectus will be passed upon for us by Wilson Sonsini Goodrich & Rosati Professional Corporation, Palo Alto, California.

## **EXPERTS**

The consolidated financial statements of Transphorm, Inc., as of December 31, 2019 and 2018 and for each of the two years in the period ended December 31, 2019 have been included herein and in the registration statement in reliance upon the report (which contains an explanatory paragraph that raises substantial doubt about the Company's ability to continue as a going concern) of Marcum LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## **WHERE YOU CAN FIND MORE INFORMATION**

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document is not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The SEC also maintains an Internet website that contains the registration statement of which this prospectus forms a part, as well as the exhibits thereto. These documents, along with future reports, proxy statements, and other information about us, are available at the SEC's website, [www.sec.gov](http://www.sec.gov).

We are subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended, and, in accordance with this law, will file periodic reports, proxy statements, and other information with the SEC. These periodic reports, proxy statements, and other information are available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at [www.transphormusa.com](http://www.transphormusa.com) where these materials are available. You may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on, or that can be accessible through, our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

**Transphorm, Inc.**

**Consolidated Financial Statements**

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of  
Transphorm, Inc.

### Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Transphorm, Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive loss, stockholders' deficit and cash flows for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2019 and 2018, and the consolidated results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

### Explanatory Paragraph – Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 1, the Company has a significant working capital deficiency, has incurred significant losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

### Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Marcum LLP  
Marcum LLP

We have served as the Company's auditor since 2019.  
Chicago, IL  
March 30, 2020

**Transphorm, Inc.**  
**Consolidated Balance Sheets**  
*(in thousands except share and per share data)*

	December 31, 2019	December 31, 2018
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 2,875	\$ 3,069
Accounts receivable, net, including related parties	709	280
Inventory	990	852
Prepaid expenses and other current assets	783	624
<b>Total current assets</b>	<b>5,357</b>	<b>4,825</b>
Property and equipment, net	1,770	2,132
Goodwill	1,325	1,306
Intangible assets, net	1,313	1,958
Other assets	497	278
<b>Total assets</b>	<b>\$ 10,262</b>	<b>\$ 10,499</b>
<b>Liabilities, convertible preferred stock and stockholders' deficit</b>		
Current liabilities:		
Accounts payable and accrued expenses	\$ 2,383	\$ 1,351
Development loan	5,000	—
Revolving credit facility, including accrued interest	10,458	10,346
Deferred revenue	—	3,000
Unfunded commitment to joint venture	1,688	659
Accrued payroll and benefits	1,159	1,172
<b>Total current liabilities</b>	<b>20,688</b>	<b>16,528</b>
Development loans, net of current portion	10,000	—
Promissory note	16,169	15,852
<b>Total liabilities</b>	<b>46,857</b>	<b>32,380</b>
Commitments and contingencies (Note 11)		
Convertible preferred stock (Notes 1 and 12):		
Series 1, \$0.001 par value; 12,438,704 shares authorized and 12,433,953 shares issued and outstanding as of December 31, 2019 and 2018	39,658	39,658
Series 2, \$0.001 par value; 7,507,699 shares authorized and 7,499,996 shares issued and outstanding as of December 31, 2019 and 2018	30,000	30,000
Series 3, \$0.001 par value; 4,000,000 shares authorized, issued and outstanding as of December 31, 2019 and 2018	16,000	16,000
<b>Total convertible preferred stock</b>	<b>85,658</b>	<b>85,658</b>
Stockholders' deficit:		
Common stock, \$0.001 par value; 29,012,034 shares authorized; shares issued and outstanding, 4,220,998 and 4,219,606 as of December 31, 2019 and 2018, respectively	4	4
Additional paid-in capital	22,400	21,829
Accumulated deficit	(143,915)	(128,632)
Accumulated other comprehensive loss	(742)	(740)
<b>Total stockholders' deficit</b>	<b>(122,253)</b>	<b>(107,539)</b>
<b>Total liabilities, convertible preferred stock and stockholders' deficit</b>	<b>\$ 10,262</b>	<b>\$ 10,499</b>

See accompanying notes to consolidated financial statements

**Transphorm, Inc.**  
**Consolidated Statements of Operations**  
*(in thousands except share and per share data)*

	<b>Year Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
Revenue, net	\$ 11,934	\$ 1,358
Operating expenses:		
Cost of goods sold	6,492	4,601
Research and development	8,146	9,351
Sales and marketing	2,609	3,626
General and administrative	6,606	5,675
Total operating expenses	23,853	23,253
Loss from operations	(11,919)	(21,895)
Interest expense	758	710
Loss in joint venture	3,703	2,404
Changes in fair value of promissory notes	167	1,060
Other income, net	(1,264)	(271)
Loss before tax expense	(15,283)	(25,798)
Tax expense	—	—
<b>Net loss</b>	<b>\$ (15,283)</b>	<b>\$ (25,798)</b>
Net loss per share - basic and diluted	\$ (3.62)	\$ (6.11)
Weighted average common shares outstanding - basic and diluted	4,219,656	4,219,606

See accompanying notes to consolidated financial statements

**Transphorm, Inc.**  
**Consolidated Statements of Comprehensive Loss**  
*(in thousands)*

	<b>Year Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
Net loss	\$ (15,283)	\$ (25,798)
Other comprehensive (loss) income, net of tax:		
Foreign currency translation adjustments	(2)	2
Other comprehensive (loss) income, net of tax	(2)	2
<b>Comprehensive loss</b>	<b>\$ (15,285)</b>	<b>\$ (25,796)</b>

See accompanying notes to consolidated financial statements

**Transphorm, Inc.**  
**Consolidated Statements of Changes in Stockholders' Deficit**  
*(in thousands except share data)*

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Stockholders' Deficit
	Number of Shares	Amount				
<b>Balance at January 1, 2018</b>	<b>4,219,606</b>	<b>\$ 4</b>	<b>\$ 21,244</b>	<b>\$ (102,834)</b>	<b>\$ (742)</b>	<b>\$ (82,328)</b>
Stock-based compensation	—	—	585	—	—	585
Other comprehensive income	—	—	—	—	2	2
Net loss	—	—	—	(25,798)	—	(25,798)
<b>Balance at December 31, 2018</b>	<b>4,219,606</b>	<b>4</b>	<b>21,829</b>	<b>(128,632)</b>	<b>(740)</b>	<b>(107,539)</b>
Stock options exercised	1,392	—	5	—	—	5
Stock-based compensation	—	—	566	—	—	566
Other comprehensive loss	—	—	—	—	(2)	(2)
Net loss	—	—	—	(15,283)	—	(15,283)
<b>Balance at December 31, 2019</b>	<b>4,220,998</b>	<b>\$ 4</b>	<b>\$ 22,400</b>	<b>\$ (143,915)</b>	<b>\$ (742)</b>	<b>\$ (122,253)</b>

See accompanying notes to consolidated financial statements

**Transphorm, Inc.**  
**Consolidated Statements of Cash Flows**  
*(in thousands)*

	<b>Year Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>Cash flows from operating activities:</b>		
Net loss	\$ (15,283)	\$ (25,798)
Adjustments to reconcile net loss to net cash used in operating activities:		
Capitalized interest cost	608	496
Depreciation and amortization	1,216	1,374
Inventory write-off	155	—
Stock-based compensation	566	585
Loss on disposal of property and equipment	—	75
Loss in joint venture	3,703	2,404
Changes in fair value of promissory notes	167	1,060
Changes in operating assets and liabilities:		
Accounts receivable	(429)	(280)
Inventory	(293)	(669)
Prepaid expenses and other current assets	(154)	396
Other assets	(42)	16
Accounts payable and accrued expenses	509	(323)
Deferred revenue	(3,000)	3,000
Accrued payroll and benefits	(13)	(21)
<b>Net cash used in operating activities</b>	<b>(12,290)</b>	<b>(17,685)</b>
<b>Cash flows from investing activities:</b>		
Purchases of property and equipment	(203)	(332)
Investment in joint venture	(2,698)	(1,852)
<b>Net cash used in investing activities</b>	<b>(2,901)</b>	<b>(2,184)</b>
<b>Cash flows from financing activities:</b>		
Proceeds from issuance of development loans	15,000	—
Proceeds from issuance of revolving credit facility	—	10,000
Principal payments on promissory notes	—	(13,000)
Proceeds from issuance of Series 3 convertible preferred stock	—	16,000
<b>Net cash provided by financing activities</b>	<b>15,000</b>	<b>13,000</b>
<b>Effect of foreign exchange rate changes on cash and cash equivalents</b>	<b>(3)</b>	<b>(35)</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(194)</b>	<b>(6,904)</b>
Cash and cash equivalents at beginning of year	3,069	9,973
<b>Cash and cash equivalents at end of year</b>	<b>\$ 2,875</b>	<b>\$ 3,069</b>
<b>Supplemental disclosures of cash flow information:</b>		
Interest expense paid	\$ 496	\$ 328
<b>Supplemental non-cash financing activity:</b>		
Private placement offering cost	\$ 177	\$ —

See accompanying notes to consolidated financial statements

**Transphorm, Inc.**  
**Notes to Consolidated Financial Statements for the Years Ended December 31, 2019 and 2018**

**Note 1 - Business**

Transphorm, Inc. develops gallium nitride (“GaN”) semiconductor components used in power conversion. Transphorm was incorporated in the state of Delaware on February 22, 2007. Transphorm, Inc.’s activities to date have been primarily performing research and development, establishing manufacturing infrastructure, market sampling, product launch, hiring personnel, and raising capital to support and expand these activities. Transphorm, Inc. is headquartered in Goleta, California. Transphorm Japan, Inc. was established in February 2014 to secure Transphorm, Inc.’s production capacity and establish a direct presence in Asian markets. Transphorm Aizu was established to manage the financial transactions around the Joint Venture. Transphorm Epi. was established in 2019 to enable the operational capacity of the reactors held in Aizu. Transphorm, Inc., Transphorm Japan, Inc. and Transphorm Japan Epi, Inc. and Transphorm Aizu are collectively referred to “Transphorm,” the “Company” or “our” in these notes.

**Stock Conversion**

On February 12, 2020, the Company entered into an Agreement and Plan of Merger and Reorganization (the “Merger Agreement”). See Note 18 - Subsequent Events for more information. As a result of the Merger, the Company’s stock immediately prior to the closing of the Merger included herein was retroactively restated for the effect of the stock conversion as follows:

- Series 1 convertible preferred stock: 51,700,000 shares authorized and 51,680,254 shares issued and outstanding were converted into 12,438,704 shares authorized and 12,433,953 shares issued and outstanding, respectively, as of December 31, 2019 and 2018;
- Series 2 convertible preferred stock: 38,800,000 shares authorized and 38,760,190 shares issued and outstanding were converted into 7,507,699 shares authorized and 7,499,996 shares issued and outstanding, respectively, as of December 31, 2019 and 2018;
- Series 3 convertible preferred stock: 31,850,304 shares authorized, issued and outstanding were converted into 4,000,000 shares authorized, issued and outstanding as of December 31, 2019 and 2018; and
- Common stock: 350,000,000 shares authorized were converted into 29,012,034 shares authorized as of December 31, 2019 and 2018. 50,921,951 shares issued and outstanding were converted into 4,220,998 shares issued and outstanding as of December 31, 2019 and 50,905,160 shares issued and outstanding were converted into 4,219,606 shares issued and outstanding as of December 31, 2018.

The stock conversion did not change the par value of our stock. Stock price per share was adjusted in proportion to the decrease in shares to maintain equal value. In addition, stock options and stock warrants are reduced at 1 for 12.063959 rate pursuant to the Merger Agreement and the reduced stock options and stock warrants were retroactively restated for the effect of the stock conversion.

**Going Concern**

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As included in the accompanying consolidated financial statements, the Company has generated recurring losses from operations and has an accumulated deficit and has a working capital deficiency. These factors raise substantial doubt about the Company’s ability to continue as a going concern for the next twelve months from the issuance of these consolidated financial statements.

Management plans to raise additional working capital to fund operations through the issuance of stock to investors, license of intellectual property and/or issuance of notes payable. The Company raised \$19.7 million from the sale of common stock in February 2020 as described in Note 18 - Subsequent Events. However, there is no assurance that the Company will be successful in raising additional capital.

The ability of the Company to continue as a going concern is dependent on its ability to raise adequate capital to fund operating losses until it is able to generate liquidity from its business operations. To the extent sufficient financing is not available, the Company may not be able to, or may be delayed in, developing its offerings and meeting its obligations. The Company will continue to evaluate its projected expenditures relative to its available cash and to evaluate financing alternatives in order to satisfy its working capital and other cash requirements. The accompanying consolidated financial statements do not reflect any adjustments that might result from the outcome of these uncertainties.

## **Note 2 - Summary of Significant Accounting Policies**

### **Principles of Consolidation**

The consolidated financial statements include the accounts of the Transphorm, Inc. and its wholly-owned subsidiaries, Transphorm Japan, Inc., Transphorm Japan Epi, Inc. and Transphorm Aizu, Inc. Upon consolidation, all significant intercompany accounts and transactions have been eliminated.

### **Use of Estimates**

The preparation of consolidated financial statements in conformity with Accounting Principles Generally Accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Management bases its estimates and assumptions on historical experience, knowledge of current conditions, and its belief of what could occur in the future, given available information. Actual results could differ from those estimates, and such differences could be material to the consolidated financial statements. Estimates are used for, but not limited to, the determinations of fair value of stock awards and promissory notes, accrual of liabilities, revenue recognition, inventory reserve, and useful lives for property and equipment.

### **Reclassification of Prior Year Presentation**

Certain prior year amounts have been reclassified for consistency with the current year presentation. These reclassifications had no effect on the reported consolidated statements of operations. An adjustment has been made to the consolidated statements of cash flows for the year ended December 31, 2018, to reclass interest expense of \$150 thousand to capitalized interest cost. This change in classification does not affect previously reported net cash used in operating activities in the consolidated statements of cash flows.

### **Cash and Cash Equivalents**

The Company considers all highly-liquid investments with original maturities of 90 days or less at the date of purchase to be cash equivalents. Cash and cash equivalents consist principally of bank deposits and money market funds. Other assets in the consolidated balance sheets as of December 31, 2019 and 2018 include cash of \$75 thousand.

### **Foreign Currency Risk**

The Company is exposed to foreign currency risk due to its operations in Japan. Assets and liabilities of the operations are re-measured into U.S. currency at exchange rates in effect at the balance sheet dates through the consolidated statements of comprehensive income. Gains or losses resulting from foreign currency transactions are re-measured using the rates on the dates on which those elements are recognized during the period and are included



in other income or expense in the consolidated statements of operations. As of December 31, 2019 and 2018, the Company had foreign cash and cash equivalents of \$55 thousand and \$264 thousand, respectively, which represent 1.9 percent and 8.6 percent, respectively, of total cash and cash equivalents.

### **Concentrations of Risk**

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents. The Company is exposed to credit risk in the event of default by the financial institution holding its cash. The Company's investment policy restricts investments to high-quality investments and limits the amounts invested with any one issuer, industry or geographic area. Risks associated with cash holdings in excess of insured limits are mitigated by banking with high-quality institutions. To date, the Company has not experienced any significant losses on its cash and cash equivalents. The Company periodically evaluates the relative credit standing of these financial institutions.

The Company is subject to risks common in the power conversion components industry, including, but not limited to, technological obsolescence, dependence on key personnel, market acceptance of its products, the successful protection of its proprietary technologies, compliance with government regulations, and the possibility of not being able to obtain additional financing when needed.

### **Comprehensive Loss**

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Other comprehensive income (loss) includes the impact of foreign currency translation adjustments.

### **Accounts Receivable**

Accounts receivable are analyzed and allowances for uncollectible accounts are recorded, as required. Provisions for uncollectible accounts, if any, are recorded as bad debt expense and included in general and administrative expenses in the accompanying consolidated statements of operations. The process for determining the appropriate level of allowances for doubtful accounts involves judgment, and considers such factors as the age of the underlying receivables, historical and projected collection trends, the composition of outstanding receivables, current economic conditions and regulatory changes. An account is fully reserved when reasonable collection efforts have been unsuccessful and it is probable that the receivable will not be recovered. No significant losses on accounts receivable have been recorded as of December 31, 2019 and 2018.

### **Inventory**

Inventories are stated at the lower of cost (first-in, first-out method) or net realizable value. The Company periodically reviews the value of items in inventory and records write-downs or write-offs based on its assessment of slow moving or obsolete inventory. The Company maintains an inventory reserve for obsolete inventory and generally makes inventory value adjustments against the inventory reserve.

### **Property and Equipment**

Property and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation is determined using the straight-line method over the estimated useful lives of the respective assets, generally ranging from three to seven years. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the related lease term. Depreciation for equipment commences once it is placed in service, and depreciation for buildings and leasehold improvements commences once they are ready for their intended use. The Company expenses maintenance and repair costs that do not extend the life of the asset as they are incurred.

The Company evaluates the carrying amount of its property and equipment whenever events or changes in circumstances indicate that the assets may not be recoverable. An impairment loss would be recognized when

estimated future cash flows expected to result from the use of an asset or asset group and its eventual disposition is less than the carrying amount of the asset or asset group. To date, there have been no such impairment losses.

## **Goodwill**

Goodwill arose for the acquisition of a business in February 2014 based in Japan and was accounted for as the purchase of a business. Goodwill generated from business combinations and deemed to have indefinite lives are not subject to amortization and instead are tested for impairment at least annually in December unless certain events occur or circumstances change. Goodwill represents the excess of the purchase price over the fair value of the net assets and other identifiable intangible assets acquired. We test for goodwill impairment annually or earlier if events or changes in circumstances indicate goodwill might possibly be impaired. Impairment exists when the carrying value of the goodwill exceeds its implied fair value. An impairment loss would be recognized in an amount equal to that excess as a charge to operations in the consolidated statements of operations. For the years ended December 31, 2019 and 2018, no impairment charge was recorded related to goodwill.

## **Intangible Assets**

Intangible assets that are not considered to have an indefinite useful life are amortized over their estimated useful lives, which generally range from three to ten years. Each reporting period, the Company evaluates the estimated remaining useful lives of intangible assets and whether events or changes in circumstances warrant a revision to the remaining periods of amortization.

If it is determined that the carrying values might not be recoverable based upon the existence of one or more indicators of impairment, the Company performs a test for recoverability using various methodologies, such as the income approach or cost approach, to determine the fair value of intangible assets depending upon the nature of the assets. If assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds their respective fair values. For the years ended December 31, 2019 and 2018, no impairment charges were recorded related to intangible assets.

## **Revenue Recognition**

### *Revenue Recognition Policy*

The Company derives its revenues from sales of high-powered GaN-based products manufactured utilizing their proprietary and patented epiwafer technology and wafer fabrication and other assembly processes, and sales of GaN epiwafers for the RF and power markets, as well as sales of licenses to use such patented proprietary technology. Revenues are recognized when control of these products or licenses are transferred to its customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those products and licenses. Sales and other taxes the Company collects concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense. The Company does not have any significant financing components associated with its revenue contracts, as payment is received at or shortly after the point of sale.

### *Disaggregation of Revenue from Contracts with Customers*

Revenue for the years ended December 31, 2019 and 2018 consists of licensing revenue, government contract revenue from our contract with the U.S. Navy and product sales, with such performance obligation satisfied at a point in time. Products are sold to distributors and end-users in various sectors such as, but not limited to, the automotive, gaming, industrial, IT, and consumer products industries.

As part of the Collaboration Arrangement (Note 3 - Nexperia Arrangement) executed with Nexperia on April 4, 2018, the Company agreed to grant Nexperia the perpetual exclusive right to use the Company's existing Gen 3 manufacturing process technology. License fees are received upon satisfaction of contractual milestones and recognized upon delivery of the perpetual license or transferred technology without any remaining performance

obligations. For the year ended December 31, 2019, the Company received the remaining \$6.0 million and recognized a total of \$9.0 million, including \$3.0 million received in 2018, as licensing revenue upon satisfaction of contractual milestones and delivery of the perpetual license and transferred technology without any remaining performance obligations. For the year ended December 31, 2018, the Company did not recognize any revenue related to the process transfer or technology development performance obligations. The \$3.0 million contract liability related to cash received in 2018 from Nexperia is included in deferred revenue.

Government contract revenues are principally generated under research and development contracts. Contract revenues are derived primarily from research contracts with agencies of the United States Government. We believe credit risk related to accounts receivable arising from such contracts is minimal. These contracts may include cost-plus fixed fee and fixed price terms. All payments to us for work performed on contracts with agencies of the U.S. Government are subject to adjustment upon audit by the Defense Contract Audit Agency.

#### *Performance Obligations*

For performance obligations related to the sale of products, control transfers to the customer at a point in time. The Company's principal terms of sale are free on board shipping or destination and the Company transfers control and records revenue for product sales upon shipment or delivery to the customer, respectively. For performance obligations related to the licensing for the use of patented technology in perpetuity, control also transfers to the customer at a point in time. The Company transfers control and records revenue for licensing fees once the Company has (i) provided or otherwise makes available the patented technology to the customer and (ii) the customer is able to use and benefit from the patented technology.

#### *Variable Consideration*

The nature of the Company's arrangement with Nexperia gives rise to variable consideration in the form of milestone and royalty payments. The royalties qualify for the sales and usage-based royalty exception, as the license of intellectual property is the predominant item to which the royalty relates and are recognized upon the subsequent sale occurring. The variable amounts are received upon satisfaction of contractually agreed upon development targets and sales volume.

#### **Research and Development**

The Company is a party to research grant contracts with the U.S. federal government for which the Company is reimbursed for specified costs incurred for its research projects. These projects include energy saving initiatives for which the U.S. federal government offers reimbursement funds. Such reimbursements are recorded as an offset to research and development expenses when the related qualified research and development expenses are incurred. Reimbursable costs are recognized in the same period the costs are incurred up to the limit of approved funding amounts on qualified expenses. There were no material reimbursements during the years ended December 31, 2019 and 2018 related to cost reimbursement contracts.

#### **Stock-Based Compensation**

All share-based payments, including grants of stock options, are measured based on the fair value of the share-based awards at the grant date and recognized over their respective vesting periods, which is generally four years. The estimated fair value of stock options at the grant date is determined using the Black-Scholes-Merton pricing model. The Company recognizes the fair value of share-based payments as compensation expense for all expected-to-vest stock-based awards over the vesting period of the award using the straight-line attribution method provided that the amount of compensation cost recognized at any date is no less than the portion of the grant-date fair value of the award that is vested at that date.

The Black-Scholes-Merton option pricing model requires inputs such as the fair value of common stock on date of grant, expected term, expected volatility, dividend yield, and risk-free interest rate. Further, the forfeiture rate also affects the amount of aggregate compensation expense. These inputs are subjective and generally require

significant analysis and judgment to develop. Volatility data is obtained from a study of publicly traded industry peer companies. The forfeiture rate is derived primarily from the Company's historical data, and the risk-free interest rate is based on the yield available on U.S. Treasury zero-coupon issues commensurate with the expected term. Management generally uses the simplified method to calculate the expected term for employee grants as the Company has limited historical exercise data or alternative information to reasonably estimate an expected term assumption. The simplified method assumes that all options will be exercised midway between the weighted average vesting date and the contractual term of the option.

Stock-based compensation expense recognized in the Company's consolidated financial statements is based on awards that are expected to vest. These expense amounts have been reduced by using an estimated forfeiture rate. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company evaluates the assumptions used to estimate forfeitures annually in connection of recognition of stock-based compensation expense.

### **Loss Per Share**

Basic loss per share is calculated by dividing net loss applicable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted earnings per share is calculated by dividing the net income attributable to common stockholders by the sum of the weighted average number of common shares outstanding plus potential dilutive common shares outstanding during the period. Potential dilutive securities, comprised of the convertible preferred stock, stock warrants and stock options, are not reflected in diluted net loss per share because such shares are anti-dilutive. Dilutive impact of potential common shares resulting from common stock equivalents is determined by applying the treasury stock method.

For the year ended December 31, 2019, there were 26,422,608 shares, consisting of 23,933,949 convertible preferred stocks, 15,461 stock warrants and 2,473,198 stock options, that were not included in the computation of diluted loss per share because their effect would be anti-dilutive. For the year ended December 31, 2018, there were 26,337,286 shares, consisting of 23,933,949 convertible preferred stocks, 26,157 stock warrants and 2,377,180 stock options, that were not included in the computation of diluted loss per share because their effect would be anti-dilutive.

### **Fair Value Measurement**

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The carrying values of the Company's financial instruments such as cash equivalents, accounts receivable, revolving credit facility, accounts payable and accrued liabilities approximate fair values due to the short-term nature of these items. The Company has elected the fair value option for its promissory notes. See Note 4 - Fair Value Measurements for more information.

### **Income Taxes**

The Company accounts for income taxes in accordance with Accounting Standards Codification ("ASC") 740, *Income Taxes* ("ASC 740"). ASC 740 prescribes the use of the liability method. Deferred tax assets and liabilities are determined based on the difference between the financial statement carrying amounts and the tax basis of assets and liabilities and are measured using the enacted statutory tax rates in effect at the balance sheet date. The Company records a valuation allowance to reduce its deferred tax assets when uncertainty regarding their realizability exists.

### **Equity Method Investments**

The Company uses the equity method to account for investments in entities that it does not control, but in which it has the ability to exercise significant influence over operating and financial policies. The Company's proportionate share of the net income or loss of these companies is included in consolidated net earnings. Judgments regarding the level of influence over each equity method investment include consideration of key factors such as the

Company's ownership interest, representation on the board of directors or other management body and participation in policy-making decisions.

## Segment Reporting

The Company's operations and its financial performance is evaluated on a consolidated basis by the chief operating decision maker. Accordingly, the Company considers all of its operations to be aggregated in one reportable operating segment. For the year ended December 31, 2019, total revenue was \$11.9 million, of which \$11.9 million was from U.S. operations and \$28 thousand was from Japan operations. For the year ended December 31, 2018, total revenue was \$1.4 million, of which \$1.3 million was from U.S. operations and \$49 thousand was from Japan operations.

## Recently Issued Accounting Standards Adopted

In July 2017, the Financial Accounting Standards Boards ("FASB") issued Accounting Standards Update ("ASU") 2017-11, *Earnings Per Shares (Topic 260), Distinguishing Liabilities from Equity (Topic 480) and Derivatives and Hedging (Topic 815)*. ASU 2017-11 changes the classification analysis of certain equity-linked financial instruments, such as warrants and embedded conversion features, such that a down round feature is disregarded when assessing whether the instrument is indexed to an entity's own stock under Subtopic 815-40. As a result, a down round feature no longer requires an instrument to be remeasured at fair value through earnings each period, although all other aspects of the indexation guidance under Subtopic 815-40 continue to apply. ASU 2017-11 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company adopted this standard, which did not have a material effect on the consolidated financial statements.

*Stock Compensation* - In May 2017, the FASB issued ASU 2017-09, *Compensation -Stock Compensation (Topic 718)* ("ASU 2017-09"), which clarifies when changes to the terms or conditions of a share-based payment award must be accounted for as modifications. ASU 2017-09 is effective for the Company's 2018 fiscal year, although early adoption is permitted. The Company adopted this standard, which did not have a material effect on the consolidated financial statement.

## Recently Issued Accounting Standards under Evaluation

*Income Tax* - In December 2019, the FASB issued ASU 2019-12, which modifies ASC 740 to simplify the accounting for income taxes. The ASU's amendments are based on changes that were suggested by stakeholders as part of the FASB's simplification initiative (i.e., the Board's effort to reduce the complexity of accounting standards while maintaining or enhancing the helpfulness of information provided to financial statement users). ASU 2019-12 is effective for the Company's 2021 fiscal year. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

*Fair Value* - In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (ASC 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement*. ASU 2018-13 removes certain disclosures, modifies certain disclosures and adds additional disclosures. ASU 2018-13 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

*Statement of Cash Flows* - In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"). This guidance addresses eight specific cash flow issues with the objective of reducing existing diversity in practice. ASU 2016-15 is effective for the Company's 2020 fiscal year. The guidance is to be adopted retrospectively unless impracticable upon which the guidance is to be adopted prospectively. Early adoption is permitted. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

*Financial Instruments* - In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”). The standard changes the methodology for measuring credit losses on financial instruments and the timing of when such losses are recorded. ASU 2016-13 is effective for the Company’s 2021 fiscal year. Early adoption is permitted. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

*Leases* - In February 2016, the FASB issued ASU 2016-02, *Leases*, which, for operating leases, requires the lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, on its balance sheet. The guidance also requires a lessee to recognize single lease costs, calculated so that the cost of the lease is allocated over the lease term, on a generally straight-line basis. This guidance will be effective for the Company in fiscal year 2021 and must be adopted using a modified retrospective transition approach. Early adoption is permitted. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

### **Note 3 - Nexperia Arrangement**

#### **Nexperia Transaction**

On April 4, 2018, the Company entered into a multi-element commercial arrangement with Nexperia to obtain financing in exchange for sale of equity instruments and performing certain technology and product development activities for Nexperia (collectively, the “Collaboration Arrangement”). Nexperia specializes in designing, manufacturing and selling a broad range of small discrete semiconductor devices that utilize components such as those manufactured by the Company. Financing under the Collaboration Arrangement is comprised of the following elements:

- \$16 million Series 3 preferred stock issuance
- \$9 million license fee for transfer of the Gen 3 manufacturing process
- \$5 million development loan maturing March 31, 2020 intended to pre-fund the Gen 4 (Tranche A) technology development (the “Tranche A Loan”)
- \$8 million development loan maturing March 31, 2021 intended to pre-fund the Gen 5 (Tranche B), 1200V (Tranche B1) technology development (the “Tranche B Loan”)
- \$2 million development loan maturing March 31, 2021 intended to pre-fund the 1200V technology development (the “Tranche B-1 Loan”) (together with the Tranche A and Tranche B Loans, the “Development Loans”)
- \$10 million revolving loan (the “Tranche C Loan”)

The Company has to use the funds to operate the business in a manner consistent with or reasonably related to those business activities as carried out on or prior to the Effective Date. In addition to the multiple elements outlined above, the Company and Nexperia entered into a Supply Agreement requiring that the Company be Nexperia’s primary supplier of specified components until June 30, 2020 on a best efforts basis. By entering into this Collaboration Arrangement, Nexperia will gain access to technology that allows for production of high power semiconductors for use in electric vehicles.

Further, Nexperia will obtain an exclusive license and market access to automotive customers outside of Japan and a sole license (non-exclusive of the Company), as well as market access, to customers in other parts of the power market. Nexperia has a lien on certain US patents not relating to Metal organic chemical vapor deposition (“MOCVD”) or epiwafer technology, per the agreement.

On March 31, 2019, the Company executed Amendment No. 1 to the Loan and Security Agreement (the “First Amendment to the LSA” or the “Amendment”). Under this First Amendment to the LSA, the Tranche B Loan is bifurcated into the following two separate sub-tranches:

- \$8 million development loan intended to pre-fund the Gen 5 (Tranche B), 1200V (Tranche B1) (Ron/2) technology development (the “Tranche B Loan”)
- \$2 million development loan intended to pre-fund the 1200V technology development (the “Tranche B-1 Loan” and, together with the Tranche B Loan, the “Tranche B Loans”)

All other terms set forth under the original agreement remain unchanged and in full effect. The Tranche A and Tranche B Loans represent pre-funding for Gen 4 (Tranche A), Gen 5 (Tranche B), 1200V (Tranche B1) and 1200V technology development for Nexperia. The specific development activities and associated performance milestones are contained within a Statement of Work (“SoW”) between the Company and Nexperia. The SoW may be modified from time to time based upon mutual business interests. This promise to perform the technology development is a good/service provided to a customer in exchange for consideration in the form of the technology development license fees that offset the Tranche A and Tranche B Loans outstanding. The Development Loans are within the scope of ASC 730-20, *Research & Development Arrangements* and are recognized as a liability equal to the cash proceeds received.

In relation to the transfer of Gen 3 manufacturing process, the Company received \$3 million, 1st of the three tranches, in December 2018, \$3 million, 2nd of the three tranches, in April 2019, and \$3 million, 3rd of the three tranches, in October 2019. Deferred revenue of \$3 million was recorded as of December 31, 2018 and the Company recognized this revenue during 2019 upon the completion and mutual sign off between Nexperia and the Company. See Note 17 - Related Party Transactions.

In January 2019, the Company received a \$5 million development loan maturing March 31, 2020 intended to pre-fund the Gen 4 (Tranche A) technology development (the Tranche A Loan). In June and July 2019, the Company received a \$8 million development loan maturing March 31, 2021 intended to pre-fund the Gen 5 (Tranche B), 1200V (Tranche B1) (Ron/2) technology development (the Tranche B Loan). In December 2019, the Company received a \$2 million development loan maturing March 31, 2021 intended to pre-fund the 1200V technology development (the “Tranche B-1 Loan”). The Tranche C revolving loan of the full \$10 million available under this credit facility was received during the year ended December 31, 2018. See Note 9 - Debts for more information.

#### **Note 4 - Fair Value Measurements**

FASB ASC 820, *Fair Value Measurements and Disclosures*, establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

Level 1 - Unadjusted quoted prices in active markets for identical assets and liabilities.

Level 2 - Inputs (other than quoted prices included within Level 1) that are observable, unadjusted quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data of substantially the full term of the related assets or liabilities.

Level 3 - Inputs reflect management’s best estimate of what market participants would use in pricing the asset or liability at the measurement date. Inputs are unobservable for the asset or liability. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The following table summarizes the Company's liabilities measured at fair value as of December 31, 2019 and 2018, by level within the fair value hierarchy (*in thousands*):

	Level 1	Level 2	Level 3
<b>December 31, 2019</b>			
Promissory note	\$ —	\$ —	\$ 16,169
<b>December 31, 2018</b>			
Promissory note	\$ —	\$ —	\$ 15,852

The following table includes the changes in fair value of the promissory notes which are Level 3 on the fair value hierarchy (*in thousands*):

	2019	2018
<b>Fair value at January 1,</b>	<b>\$ 15,852</b>	<b>\$ 27,756</b>
Interest expense accrued	150	364
Principal and interest expense paid	—	(13,328)
Increase in fair value	167	1,060
<b>Fair value at December 31,</b>	<b>\$ 16,169</b>	<b>\$ 15,852</b>

There were no changes to our valuation techniques used to measure assets and liability fair values during the year ended December 31, 2019 and 2018. The valuation techniques for the items in the table above are as follows:

Level 3 borrowings, which consist of promissory notes, are measured and reported at fair value using a Monte Carlo simulation valuation model. The models can include assumptions related to the value of the notes that are based on the estimated timing and amounts of future rounds of financing, including the estimated timing of a change in control of the Company, and estimated market interest rates, which represent significant unobservable inputs. Assumptions used are 1) the Company is worth today what it can generate in future cash to the Company, 2) cash received today is more than an equal amount of cash received in the future; and 3) future cash flows can be reasonably estimated.

#### **Note 5 - Concentration of Credit Risk and Significant Customers**

The Company manages its credit risk associated with exposure to distributors and direct customers on outstanding accounts receivable through the application of credit approvals and other monitoring procedures. Credit sales, which are mainly on credit terms of 30 to 60 days, are only made to customers who meet the Company's credit standards, while sales to new customers or customers with low credit ratings are usually made on an advance payment basis. The Company closely monitors the aging of accounts receivable from its distributors and direct customers, and regularly reviews their financial positions, where available.



Significant customers are those that represent 10% or more of revenue or accounts receivable and are set forth in the following:

	Revenue for the Year Ended December 31,		Accounts Receivable As of December 31,	
	2019	2018	2019	2018
Customer A	*	44.0%	*	22.7%
Customer B	*	17.6%	*	43.7%
Customer C	*	16.0%	*	*
Customer D	79.6%	*	60.0%	19.3%
Customer E	13.3%	*	20.4%	*

\* Less than 10% of total

Customer B and D are related parties and customer E is a government agency. See Note 17 - Related Party Transactions for more information.

#### Note 6 - Inventory

Inventory consists of the following as of December 31, 2019 and 2018 (*in thousands*):

	As of December 31,	
	2019	2018
Raw materials	\$ 412	\$ 258
Work in process	258	270
Finished goods	320	324
<b>Total</b>	<b>\$ 990</b>	<b>\$ 852</b>

For the year ended December 31, 2019 an inventory write-off of \$155 thousand was recorded. For the year ended December 31, 2018, no inventory write-off was recorded.

## Note 7 - Property and Equipment

Property and equipment as of December 31, 2019 and 2018 consists of the following (*in thousands except years*):

	As of December 31,		Estimated Useful Life (in years)
	2019	2018	
Machinery and equipment	\$ 14,892	\$ 14,551	5
Computer equipment and software	876	787	3
Furniture and fixtures	186	185	7
Leasehold improvements (1)	4,954	4,952	7
Construction in progress	6	263	
Property and equipment	20,914	20,738	
Less: accumulated depreciation and amortization	(19,144)	(18,606)	
<b>Property and equipment, net</b>	<b>\$ 1,770</b>	<b>\$ 2,132</b>	

(1) Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the related remaining lease term.

The Company recorded depreciation and amortization expense related to property and equipment of \$563 thousand, and \$728 thousand for the years ended December 31, 2019 and 2018, respectively.

## Note 8 - Intangible Assets

The carrying values of intangible assets as of December 31, 2019 and 2018, respectively, consists of the following (*in thousands except years*):

	December 31, 2019				Estimated Useful Life (in years)
	Gross	Accumulated Amortization	Foreign Exchange Rate Changes	Net	
Patents	\$ 2,963	\$ (1,679)	\$ —	\$ 1,284	10
Developed technology - 150V	560	(519)	(34)	7	6
Developed technology - 600V	1,701	(1,575)	(104)	22	6
<b>Total</b>	<b>\$ 5,224</b>	<b>\$ (3,773)</b>	<b>\$ (138)</b>	<b>\$ 1,313</b>	

  

	December 31, 2018				Estimated Useful Life (in years)
	Gross	Accumulated Amortization	Foreign Exchange Rate Changes	Net	
Patents	\$ 2,963	\$ (1,383)	\$ —	\$ 1,580	10
Developed technology - 150V	560	(425)	(41)	94	6
Developed technology - 600V	1,701	(1,291)	(126)	284	6
<b>Total</b>	<b>\$ 5,224</b>	<b>\$ (3,099)</b>	<b>\$ (167)</b>	<b>\$ 1,958</b>	

The Company recorded amortization expenses related to intangible assets of \$653 thousand and \$646 thousand for the years ended December 31, 2019 and 2018, respectively.

Estimated future amortization expenses related to intangible assets at December 31, 2019 are as follows (*in thousands*):

Year Ending December 31,	Amount
2020	\$ 325
2021	296
2022	296
2023	296
Thereafter	100
<b>Total</b>	<b>\$ 1,313</b>

## Note 9 - Debts

### Development Loans

On April 4, 2018, the Company entered into a Loan and Security Agreement (“LSA”) with Nexperia. The LSA provided for term loans in an aggregate principal amount of up to \$15.0 million, which term loans are available in tranches (Tranche A, Tranche B and Tranche B-1) and subject to the satisfaction of specified conditions. The Tranche A Loan matures on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2020, subject to extension as provided in the LSA. The Tranche B Loan and Tranche B-1 Loan matures on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2021, subject to extension as provided in the LSA. See Note 3 - Nexperia Arrangement for more information.

For the year ended December 31, 2019, the Company had drawn the full \$15.0 million available under the LSA and, as of December 31, 2019, \$15.0 million aggregate principal amount of term loans were outstanding under the LSA.

### Revolving Credit Facility

The LSA provided a \$10.0 million revolving loan (Tranche C Loan) maturing at the earlier of (i) the third anniversary of April 3, 2018, and (ii) the date a Change of Control (as defined in the Loan and Security Agreement) occurs. Interest payable by the Company will accrue on the outstanding principal amount of the loans during such period at a rate of 6% per annum. The credit facility is secured against certain of our US patents not relating to MOCVD or epiwafer technology. See Note 3 - Nexperia Arrangement for more information.

The Nexperia debt is recorded based on principal of \$10.0 million and accrued interest (6% interest per annum). The Company recorded interest expense of \$608 thousand and \$346 thousand for the years ended December 31, 2019 and 2018, respectively. The Company paid interest expense of \$496 thousand and zero for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, total balances of the revolving credit facility were \$10.5 million and \$10.3 million, respectively.

### Promissory Note

The Company’s promissory note obligation at December 31, 2019 and 2018 consists of the following (*in thousands*):

	Interest Rate	Due Date	Stated Value at December 31,	
			2019	2018
Yaskawa Note	1.00%	September 2022	\$ 15,336	\$ 15,186

Pursuant to ASC 825-10-15-4, the Company elected to apply the fair value option for the promissory note. As of December 31, 2019 and 2018, the Company determined the fair value for the note, as compared to the face value, including accrued interest, as follows (*in thousands*):

	<b>Fair Value at December 31,</b>	
	<b>2019</b>	<b>2018</b>
Yaskawa Note	\$ 16,169	\$ 15,852

The changes in fair value of \$167 thousand and \$1.1 million were recorded in changes in fair value of promissory notes in the accompanying consolidated statements of operations for the years ended December 31, 2019 and 2018, respectively.

Prior to January 1, 2016, the Company issued promissory notes to Semiconductor Components Industries, LLC, a semiconductor components manufacturer (the SCI Note), for \$10.0 million and to IIDA Electronics Co, Ltd., a Japanese electronics company (the IIDA Note) for \$3.0 million. The stated interest rate of the SCI Note is 6.0%, and principal plus interest was due on the earlier of October 2, 2017 or the occurrence of an Event of Default or a Change of Control (both terms as defined). The stated interest rate of the IIDA Note is 1.0%, and principal plus interest is due on the earlier of April 1, 2018, or the date of the occurrence of an Event of Default or a Change of Control (both terms as defined). The IIDA Note was convertible at the option of the holder into shares of common shares at an exercise price of \$9.82380 per share. The SCI Note and IIDA Note do not have embedded conversion option as they are accounted for at fair value. In April 2018, both the SCI Note and IIDA Note were paid in full, including accrued interest.

In October 2017, the Company issued an unsecured subordinated convertible promissory note to Yaskawa Electric Corporation, (the Yaskawa Note), for \$15.0 million. The stated interest rate of the Yaskawa Note is 1.0%, and principal plus interest is due on the earlier of September 30, 2022, or the date of the occurrence of an Event of Default, Change of Control or an Initial Public Offering (all terms as defined). The Yaskawa Note is convertible at the option of the holder into shares of preferred stock upon the consummation of a preferred stock financing, whose aggregate gross proceeds are at least \$10.0 million (Qualified Financing), under the terms of such financing, with the following conversion price per share:

- a) upon the first Qualified Financing that occurs and prior to a second Qualified Financing, a price per share equal to the price per share paid by the purchasers of the preferred stock and
- b) each subsequent Qualified Financing, a price per share equal to eighty percent (80%) of the price paid by the purchasers of the preferred stock, subject to an upper and lower limit of \$250.0 million and \$160.0 million estimated enterprise value, each, respectively, divided by the Fully Diluted Capitalization, as defined, of the Company.

In connection with its promissory note obligation, the Company recorded interest expense of \$150 thousand and \$364 thousand for the years ended December 31, 2019 and 2018, respectively. In accordance with the terms of the promissory notes, interest is added to the principal balance and is reflected in the carrying value on the consolidated balance sheet. As of December 31, 2019 and 2018, accrued interest on the promissory notes was \$336 thousand and \$186 thousand.

As of December 31, 2019, the scheduled maturity on the development loans, revolving credit facility and promissory note was as follows (*in thousands*):

Year Ending December 31,	Amount
2020	\$ 15,458
2021	10,000
2022	15,748
<b>Total</b>	<b>\$ 41,206</b>

**Note 10 - Investment in Aizu Fujitsu Semiconductor Wafer Solution Limited (“AFSW”)**

On May 23, 2017, Transphorm acquired a 49% interest in AFSW for 1,000,000 Japanese Yen (\$9,000 USD). In connection with the transaction, Transphorm entered into a Joint Venture Agreement (“JVA”) with the 51% owner, Aizu Fujitsu Semiconductor Limited, a subsidiary of Fujitsu Semiconductor Limited. AFSW manufactures semiconductor products exclusively for its owners under manufacturing agreements at prices estimated to cover the cost of production. In connection with the JVA, the Company seconded certain employees from AFSW and entered into a Manufacturing Agreement with AFSW. The JVA provides for certain put and call rights on February 1, 2020 and continue for 180 days thereafter. The 51% owner has the right to put their interest to the Company and the Company can call the other owners interest in AFSW, in either case, for a price, based upon the greater of a formula based upon the increase in net book value or 1 Yen. The Company expects that if either option were to be exercised the price would be 1 Japanese Yen. The Company has determined that the fair value of the put right is not material. The JVA provided that the Company was responsible for the costs and expenses to procure the equipment for wafer processing if solely required for the Company’s gallium nitride products. The JVA provided for monthly payments during the term of the manufacturing agreement for specified equipment and at the conclusion of the payments ownership will transfer to the Company.

AFSW was determined to be a variable interest entity (“VIE”) as the equity at risk was not believed to be sufficient. AFSW depends on its owners for any additional cash. In 2019 and 2018, the Company extended \$2.7 million and \$1.9 million, respectively, to AFSW to fund their operations. The Company’s known maximum exposure to loss approximated the carrying value of our investment balance, which included the financing. Potential future losses could be higher than the carrying amount of the Company’s investment, as they are liable, along with the other owner, for other future operating costs or obligations of AFSW. In addition, because Transphorm is currently committed to purchasing our GaN wafers and production-related services, at pre-agreed pricing based upon our second generation products, the Company may be required to purchase products at a higher cost for its newer generation products. Unfunded commitment to AFSW was \$1.7 million and \$659 thousand as of December 31, 2019 and 2018, respectively.

The Company has determined that they do not have the characteristics of a primary beneficiary in the VIE, and therefore, account for our interest in AFSW using the equity method of accounting. On a quarterly basis the Company will reassess whether our interest in AFSW gives us a controlling financial interest in AFSW. The purpose of this quarterly reassessment is to identify the primary beneficiary of AFSW. The Company determined that they were not the primary beneficiary of the VIE, by virtue of shared non-controlling power with the other owner within AFSW’s Board of Directors, thereby not having the power to direct the activities of AFSW that most significantly impact its economic performance.

The Company' investment activities in AFSW for the years ended December 31, 2019 and 2018 are summarized below (*in thousands*):

	2019	2018
Beginning balance at January 1,	\$ (659)	\$ (98)
Investment	2,698	1,852
Loss	(3,703)	(2,404)
Effect of exchange rate change	(24)	(9)
<b>Ending balance at December 31,</b>	<b>\$ (1,688)</b>	<b>\$ (659)</b>

Summarized financial information of AFSW as of December 31, 2019 and 2018 and are as follows (*in thousands*) as provided by the controlling owner:

	As of December 31,	
	2019	2018
Current assets	\$ 3,733	\$ 4,096
Long-term assets	\$ 5,101	\$ 4,194
Other current liabilities	\$ 931	\$ 961
Due to controlling owner	\$ 17,913	\$ 12,031
Due to Transphorm	\$ 5,349	\$ 2,960
<b>Net deficit</b>	<b>\$ (15,359)</b>	<b>\$ (7,662)</b>
	Year Ended December 31,	
	2019	2018
Sales	\$ 11,599	\$ 22,283
Gross loss	\$ (4,849)	\$ (2,523)
Net loss	\$ (7,557)	\$ (4,906)

#### Note 11 - Commitments and Contingencies

##### Operating Leases

The Company leases office and fabrication space in Goleta, California, and office spaces in San Jose, California and in Japan under noncancelable operating lease agreements. The terms of certain leases provide for escalating rental payments through the term of the lease. The Company recognizes rent expense on a straight-line basis over the lease term and accrues for rent expense incurred but not paid.

As of December 31, 2019, future minimum operating lease commitments were as follows (*in thousands*):

Year Ending December 31,	Amount
2020	\$ 705
2021	489
2022	163
<b>Total</b>	<b>\$ 1,357</b>

The Company recorded rent expense, net of rental income, which includes common area maintenance fees in addition to the base rent, of \$897 thousand and \$915 thousand for the years ended December 31, 2019 and 2018,

respectively. Rental income from noncancelable sublease was \$182 thousand and \$121 thousand for the years ended December 31, 2019 and 2018. As of December 31, 2019, the future minimum rental payments to be received under the noncancelable sublease is \$217 thousand through February 2021.

## Contingencies

During the ordinary course of business, the Company may become a party to legal proceedings incidental to its business. The Company accrues contingent liabilities when it is probable that future expenditures will be made and such expenditures can be reasonably estimable. Legal cost is expensed as incurred. The company is not aware of any material legal claims or assessments, although the results of litigation and claims are inherently unpredictable, management believes there was not at least a reasonable possibility that the Company had incurred a material loss with respect to such loss contingencies as of December 31, 2019 and through date of this report.

## Indemnification

The Company from time to time enters into types of contracts that contingently require the Company to indemnify parties against third-party claims. These contracts primarily relate to: 1) real estate leases, under which the Company may be required to indemnify property owners for environmental and other liabilities and for other claims arising from the Company's use of the applicable premises; 2) agreements with the Company's officers, directors, and employees, under which the Company may be required to indemnify such persons from liabilities arising out of their relationship; 3) indemnifying customers in the event of product failure; and 4) agreements with outside parties that use the Company's intellectual property, under which the Company may indemnify for copyright or patent infringement related specifically to the use of such intellectual property.

Historically, the Company has not been required to make payments under these obligations, and no liabilities have been recorded for these obligations in the Company's consolidated financial statements.

## Note 12 - Convertible Preferred Stock

As of December 31, 2019 and 2018, the Company's convertible preferred stock consists of the following (*in thousands, except share and per share data on a post conversion basis*):

	<u>Authorized Shares</u>	<u>Outstanding Shares</u>	<u>Carrying Value</u>	<u>Par Value per Share</u>	<u>Preference Value</u>
Series 1	12,438,704	12,433,953	\$ 39,658	\$ 0.001	\$ 40,000
Series 2	7,507,699	7,499,996	30,000	\$ 0.001	30,000
Series 3	4,000,000	4,000,000	16,000	\$ 0.001	16,000
<b>Total</b>	<b>23,946,403</b>	<b>23,933,949</b>	<b>\$ 85,658</b>		<b>\$ 86,000</b>

### Series 1 and 2 Preferred Stock

KKR Phorm Investors L.P. (KKR) purchased 12,433,953 shares of Series 1 preferred stock, par value \$0.001 per share, at a per share price of \$3.217 for an aggregate purchase price of approximately \$40 million. KKR and other investors with a small percentage (~0.02%) purchased 7,499,996 shares of Series 2 preferred stock, par value \$0.001 per share, at a per share price of \$4.00 for an aggregate purchase price of approximately \$30 million.

### Series 3 Preferred Stock

On March 26, 2018, the Company entered into a stock purchase agreement and related contracts in order to effectuate the issuance of its Series 3 preferred stock to Nexperia. Pursuant to the terms of the stock purchase agreement, Nexperia purchased 4,000,000 shares of Series 3 preferred stock, par value \$0.001 per share, at a per share price of \$4.00, for an aggregate purchase price of approximately \$16 million equating to a total ownership

stake of approximately 9.9% on a fully-diluted basis. The Company has reserved shares of common stock, par value \$0.001 per share, for issuance upon conversion of the Series 3 preferred stock (the conversion shares). The Series 3 preferred stock issued is substantially pari passu with the Company's Series 1 and Series 2 preferred stock previously issued to KKR with a small percentage (~0.02%) issued to other investors.

Each share of Series 1, Series 2 and Series 3 preferred stock are convertible at the option of the holder into such number of shares of common stock as is determined by dividing the original issue price (OIP) of the Series 1, Series 2 and Series 3 preferred stock by the conversion price in effect at the time of the conversion. The conversion price of the Series 1, Series 2 and Series 3 preferred stock is subject to adjustment for certain events. Each share of Series 1, Series 2 and Series 3 preferred stock automatically converts into common stock immediately upon the closing of an underwritten public offering of the Company's common stock in which the aggregate net proceeds are at least \$40 million and the offering price per share is not less than 1.5 times the OIP of the Series 1, Series 2 and Series 3 preferred stock (a Qualifying Public Offering).

The rights, privileges, and preferences of the Series 1, Series 2, and Series 3 convertible preferred stock are as follows:

*Liquidation Rights* - In the event of any liquidation, dissolution, or winding up of the Company, either voluntary or involuntary, the holders of convertible preferred stock will be entitled to receive, prior and in preference to any distribution of any assets of the Company to the holders of common stock, an amount per share equal to \$3.217 per share for Series 1, \$4.00 per share for Series 2 and \$4.00 per share for Series 3, plus any declared but unpaid dividends. If, upon the occurrence of such an event, the assets and funds thus distributed among the holders of the convertible preferred stock are insufficient to permit the payment of the preferential amounts, the entire assets and funds legally available for distribution will be distributed ratably among the holders of convertible preferred stock in proportion to the full amount to which they would otherwise be respectively entitled. If, upon satisfaction of the convertible preferred stock preferences, there are any remaining assets and funds available for distribution, they will be ratably distributed among the holders of common stock.

*Conversion* - The convertible preferred stock is convertible at the option of the holder at any time into common stock on a one-for-one basis, subject to certain adjustments for anti-dilution. Each share of convertible preferred stock automatically converts into common stock in the event of an initial public offering (IPO) in which the proceeds are at least \$40 million, net of the underwriting discount and commissions, and the offering price per share is not less than 1.5 times the original issue price of the convertible preferred stock unless otherwise agreed to by the shareholders.

*Dividends* - The holders of convertible preferred stock are entitled to receive, out of funds legally available, cash dividends at the rate of \$0.25736 per annum for Series 1, \$0.32 per annum for Series 2 and \$0.32 per annum for Series 3 on each outstanding share. Such dividends are payable when, as, and if declared by the Board of Directors and are noncumulative. Through December 31, 2019, no such dividends have been declared.

*Voting* - The holders of Series 1 convertible preferred stock shall be entitled to the number of votes equal to ten times the number of shares of common stock into which such shares could be converted, and the holders of Series 2 convertible preferred stock shall be entitled to the number of votes equal to the number of shares of common stock into which such shares could be converted. Each holder of Series 3 preferred stock shall be entitled to the number of votes equal to ten times the number of shares of common stock into which the shares of Series 3 preferred stock held by such holder could be converted as of the record date.

Due to certain provisions in liquidation and conversion rights the company has presented the convertible preferred stock outside of stockholders deficit as mezzanine equity.



## Note 13 - Stockholders' Equity

### Common Stock

In March 2018, the Company amended the Certificate of Incorporation, to increase the number of authorized shares of common stock from 24,867,458 to a new total of 29,012,034 shares of \$0.001 par value common stock. Common stockholders are entitled to dividends, as and when declared by the Board of Directors, subject to the priority dividend rights of the holders of other classes of stock. There have been no dividends declared to date. The holder of each share of common stock is entitled to one vote.

At December 31, 2019, the Company has reserved shares of common stock for future issuance as follows:

Conversion of convertible preferred stock	23,946,403
Stock option plans	4,023,826
Common stock warrants	15,461
<b>Total</b>	<b>27,985,690</b>

### Common Stock Warrants

At December 31, 2019, the following warrants to purchase common stock were outstanding:

Number of Shares	Exercise Price	Expiration Date
6,046	\$34.74	November 2020
6,046	\$34.74	5 years after an initial public offering of the Company
3,369	\$54.41	5 years after an initial public offering of the Company
<b>15,461</b>		

## Note 14 - Stock Option Plans

In 2007, the Board of Directors adopted the 2007 Stock Option Plan (the 2007 Plan). The 2007 Plan provides for the granting of incentive and non-statutory stock options to employees, officers, directors and consultants of the Company. Stock options are generally granted with terms of up to 10 years and with a strike price equal to or greater than the fair value on the date of grant, as determined by the Board of Directors. The 2007 Plan provides for standard vesting of stock options of 25% after 12 months and 1/36th of the remaining balance monthly. Effective June 2015, no additional grants were available under the 2007 Plan. As of December 31, 2019, 165,983 shares were issued and outstanding under the 2007 plan.

In June 2015, the Board of Directors adopted the 2015 Equity Incentive Plan (the 2015 Plan). The 2015 Plan provides for the granting of incentive and nonstatutory stock options to purchase the Company's common stock, stock appreciation rights, restricted stock and restricted stock units to employees, directors and consultants of the Company. Under the terms of the 2015 Plan, stock options and stock appreciation rights may be granted with terms of up to 10 years at exercise prices of no less than 100% of the fair market value of the Company's common stock on the grant date. As of December 31, 2019, 2,307,215 shares were issued and outstanding under the 2015 plan.

The following table summarizes stock option activity under the 2007 Plan and 2015 Plan and related information:

	Number of Shares Available for Grant	Number of Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value
<b>Balance at January 1, 2018</b>	<b>1,589,381</b>	<b>2,435,837</b>	<b>\$ 4.80</b>	<b>8.38</b>	<b>\$ —</b>
Options granted	(46,005)	46,005	\$ 4.34		
Options canceled	104,662	(104,662)	\$ 4.70		
<b>Balance at December 31, 2018</b>	<b>1,648,038</b>	<b>2,377,180</b>	<b>\$ 4.79</b>	<b>7.46</b>	<b>\$ —</b>
Options granted	(209,908)	209,908	\$ 3.14		
Options exercised	—	(1,392)	\$ 3.86		
Options canceled	112,498	(112,498)	\$ 4.34		
<b>Balance at December 31, 2019</b>	<b>1,550,628</b>	<b>2,473,198</b>	<b>\$ 4.67</b>	<b>6.84</b>	<b>\$ —</b>
<b>Exercisable at December 31, 2019</b>		<b>2,079,809</b>	<b>\$ 4.95</b>	<b>6.65</b>	<b>\$ —</b>

Stock-based compensation expense is determined based on the fair value of the Company's common stock as determined by the Board of Directors and assumptions such as volatility, expected term, risk-free interest rates, and other factors. Changes in the deemed fair value of the common stock, the underlying assumptions in the calculations, the number of options granted or the terms of such options, the expected forfeiture rate, the treatment of tax benefits and other changes may result in significant differences in the amounts or timing of the compensation expense recognized. The assumptions and estimates are made as follows:

- **Fair Value of Common Stock** - The fair value of the shares of common stock underlying the stock options has been determined by the Board of Directors, utilizing valuation studies performed by third-party advisors. Because there has been no public market for the Company's common stock, the Board of Directors has determined fair value of the common stock at the time of grant of the options by considering a number of objective and subjective factors, including valuations of comparable companies, sales of convertible preferred stock to unrelated third parties, operating and financial performance, the lack of liquidity of capital stock, and general and industry-specific economic outlook. The Company has not granted stock options with an exercise price that is less than the fair value of the underlying common stock as determined at the time of grant by the Board of Directors.
- **Expected Volatility** - The Company utilizes the historical volatility of representative public companies to determine its expected volatility, as there is no public trading of the Company's common stock.
- **Estimated Forfeitures** - The Company adopted ASU 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting and has elected to account for forfeitures as they occur and therefore, stock-based compensation expense for the year ended December 31, 2019 has been calculated based on actual forfeitures in the statements of operations, rather than our previous approach which was net of estimated forfeitures. The net cumulative effect of this change was not material.
- **Expected Dividend Yield** - The Company has not issued any common stock dividends; therefore, a dividend yield of zero was used.
- **Risk-Free Interest Rate** - The Company bases the risk-free interest rate used in the Black-Scholes-Merton option pricing model on the implied yield currently available on United States Treasury zero-coupon issues with an equivalent expected term.

- Expected Term - The expected term of stock options represents the period that the Company's stock options are expected to be outstanding. The Company generally uses the simplified method to calculate the expected term for employee grants.

The assumptions used to value options granted to employees during the year ended December 31, 2019 and 2018, were as follows:

	Year Ended December 31,	
	2019	2018
Weighted average expected life (in years)	5.46	5.84
Risk-free interest rate	1.34% - 1.94%	2.51% - 2.52%
Expected volatility	39.4% - 39.8%	38.1% - 38.2%
Weighted average grant date fair value	\$1.04	\$0.84
Dividend yield	—%	—%

As of December 31, 2019, there was \$464 thousand of unrecognized stock-based compensation cost related to stock options granted to employees under the 2007 Plan and the 2015 Plan. The unrecognized compensation cost is expected to be recognized over an estimated weighted average amortization period of 1.2 years.

The accompanying consolidated statement of operations includes stock-based compensation expense as follows (*in thousands*):

	Year Ended December 31,	
	2019	2018
Cost of revenue	\$ 60	\$ 41
Research and development	196	186
Sales and marketing	30	45
General and administrative	280	313
<b>Total</b>	<b>\$ 566</b>	<b>\$ 585</b>

#### Note 15 - 401(k) Savings Plan

The Company has a 401(k) savings plan (the 401(k) plan). The 401(k) plan is a defined contribution plan intended to qualify under Section 401(k) of the Internal Revenue Code. All full-time employees of the Company are eligible to participate pursuant to the terms of the 401(k) plan. Contributions by the Company are discretionary, and the Company made no contributions during the years ended December 31, 2019 and 2018.

#### Note 16 - Income Taxes

For the year ended December 31, 2019, the Company reported a worldwide consolidated pre-tax loss of \$15.3 million, which consisted of a pre-tax loss from U.S. operations of approximately \$10.6 million and pre-tax loss from Japan operations of approximately \$4.7 million. The pre-tax loss from Japan operations consists of a \$1.0 million pre-tax loss from Transphorm Japan, Inc., a \$3.7 million pre-tax loss from Transphorm Aizu, Inc. and a \$1 thousand pre-tax income from Transphorm Epi, Inc.

For the year ended December 31, 2018, the Company reported a worldwide consolidated pre-tax loss of \$25.8 million, which consisted of a pre-tax loss from U.S. operations of approximately \$22.1 million, pre-tax loss from Transphorm Japan, Inc. operations of approximately \$1.3 million and a pre-tax loss from Transphorm Aizu, Inc. operations of approximately \$2.4 million.

There is no U.S. federal or foreign provision for income taxes because the Company has incurred operating losses since inception and is in a full valuation allowance position. For the years ended December 31, 2019 and 2018, the Company has recorded a state income tax provision of \$1 thousand which represents minimum taxes. Deferred income taxes reflect the net tax effects of the net operating losses and the temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Significant components of the Company's deferred tax assets and deferred tax liabilities are as follows (*in thousands*):

	As of December 31,	
	2019	2018
<b>Deferred tax assets:</b>		
Net operating loss carryforwards	\$ 43,973	\$ 42,181
Tax credits	4,535	3,808
California capitalized research and development	343	290
Depreciation	—	153
Others, net	602	318
<b>Total deferred tax assets</b>	<b>49,453</b>	<b>46,750</b>
Valuation allowance	(49,403)	(46,749)
<b>Deferred tax asset, net of valuation allowance</b>	<b>50</b>	<b>1</b>
<b>Deferred tax liabilities:</b>		
Others, net	—	(1)
Fixed assets	(50)	—
<b>Total deferred tax liabilities</b>	<b>(50)</b>	<b>(1)</b>
<b>Net deferred tax assets</b>	<b>\$ —</b>	<b>\$ —</b>

As of December 31, 2019 and 2018, the Company had no assurance that future taxable income would be sufficient to fully utilize the net operating loss carryforwards and other deferred tax assets in the future. Consequently, the Company determined that a valuation allowance of approximately \$49.4 million and \$46.7 million as of December 31, 2019 and 2018, respectively, was needed to offset the deferred tax assets resulting mainly from the net operating loss carryforwards. As such, for the years ended December 31, 2019 and 2018, the Company recorded an additional valuation allowance of \$2.7 million and \$6.4 million, respectively.

The Company files income tax returns in the U.S. federal, California, and Oregon jurisdictions and is subject to U.S. federal, state, and local income tax examinations by tax authorities. Generally, the statute of limitations is 3 years for U.S. federal income tax and 4 years for state and local taxes. The statute of limitations may be extended for tax years where a corporation has a net operating loss carryforward or by agreement with the jurisdictional taxing authority. Accordingly, all of the Company's U.S. federal, state and local income tax years since inception remain open to examination by tax authorities. The Company is not currently under audit by any taxing authority.

The Company follows the provisions of uncertain tax positions as addressed in ASC 740-10. The Company recognized no increase or decrease in the liability for unrecognized tax benefits for any period presented. The Company recognizes interest accrued related to unrecognized tax benefits in interest expense and penalties in operating expenses. No such interest or penalties were recognized during the period presented. The Company had no accruals for interest and penalties at December 31, 2019 and 2018.

The utilization of the Company's net operating loss and tax credit carryforwards is dependent on the future profitability of the Company. Further, the Internal Revenue Code imposes substantial restrictions on the utilization of such carryforwards in the event of an ownership change of more than 50%, as defined, during any three-year period (Section 382 and 383 limitations). The Company has determined that several ownership changes have occurred, which have resulted in substantial limitations on the Company's ability to utilize its pre-ownership change net operating loss and tax credit carryforwards. These substantial limitations are expected to result in both a permanent loss of certain tax benefits related to net operating loss carryforwards and federal research and development credits, as well as an annual utilization limitation. The Company performed an analysis through a private placement offering and anticipates no further Section 382 and 383 limitations.

As of December 31, 2019, the Company has federal net operating loss carryforwards of \$234.8 million, of which \$207.5 million will begin to expire in 2027 unless previously utilized, and the Company has state net operating loss carryforwards of \$152.7 million which will begin to expire in 2028 unless previously utilized. The Company also has foreign net operating loss carryforwards of approximately \$4.6 million which will begin to expire in 2024. The federal net operating loss generated for the years ended 2019 of \$8.8 million and 2018 of \$18.5 million can be carried forward indefinitely. However, the federal deduction for net operating losses incurred in tax years beginning after January 1, 2018 is limited to 80% of annual taxable income. The state net operating loss generated for the years ended 2019 of \$5.1 million and 2018 of \$15.3 million can be carried forward 20 years.

As of December 31, 2019, the Company has federal research and development credit carryforwards of \$4.1 million, which will begin to expire in 2032 unless previously utilized, and the Company had California research and development credit carryforwards of \$2.7 million, which do not expire.

Deferred tax assets have not been established for net operating and tax credit carryforwards that are deemed to have no value due to the Section 382 and 383 limitations discussed above and, therefore, are not reflected in the table of deferred tax assets presented above. Future ownership changes, if any, may further limit the Company's ability to utilize its remaining net operating losses and tax credit carryforwards. The Company performed an analysis through a private placement offering and anticipates no further Section 382 and 383 limitations.

Reconciliation between federal statutory tax rate and the effective tax rate is shown in the following table:

	<b>Year Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
Federal statutory income tax rate	21.00%	21.00%
Research and development credit	4.76%	1.61%
Nondeductible expenses	(3.18)%	(1.81)%
Loss in joint venture	(7.44)%	(1.99)%
Foreign income tax rate difference	2.99%	(1.04)%
Others, net	(0.78)%	0.02%
Valuation allowance	(17.35)%	(17.79)%
<b>Effective tax rate</b>	<b>—%</b>	<b>—%</b>

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act", H.R. 748) was signed into law. The CARES Act repealed the 80% taxable income limitation for the 2018–2020 taxable years and reinstated NOL carrybacks for the 2018–2020 taxable years. In addition, the CARES Act temporarily increases the business interest deduction limitations from 30% to 50% of adjusted taxable income for the 2019 and 2020 taxable year. Lastly, a TCJA technical correction that classifies qualified improvement property as 15-year recovery period, allowing the bonus depreciation deduction to be claimed for such property retroactive as if it was included in the TCJA at the time of enactment. The company does not anticipate a material impact to the consolidated financial statements for the year 2019 due to the recent enactment.

## Note 17 - Related Party Transactions

During the year ended December 31, 2019, the Company entered into the following related party transactions:

- Recorded \$211 thousand in cost of goods sold for services, recorded research and development expense of \$695 thousand, of which \$195 thousand was reimbursable, recorded \$444 thousand in other expense for commitment for services, and incurred \$14 thousand for employees and their related benefits seconded from the joint venture with AFSW;
- Sold \$241 thousand of products to non-controlling common stockholders of the Company and incurred \$200 thousand of license maintenance fee from a non-controlling common stockholder of the Company;
- Incurred \$21 thousand for employees and their related benefits seconded from a common stockholder of the Company; and
- Recorded \$9.2 million in license fee income, recorded \$195 thousand reimbursement for research and development, and sold \$504 thousand of products to a convertible preferred stockholder of the Company. See Note 3 - Nexperia Arrangements.

As of December 31, 2019, total accounts receivable from related parties was \$5.8 million, consisting of \$5.3 million from the joint venture with AFSW, \$38 thousand from non-controlling common stockholders of the Company and \$426 thousand from a convertible preferred stockholder and noteholder of the Company. As of December 31, 2019, total accounts payable to related parties was \$272 thousand to non-controlling common stockholders of the Company.

During the year ended December 31, 2018, the Company entered into the following related party transactions:

- Recorded \$751 thousand in cost of goods sold for services, incurred expenses of \$560 thousand for research and development activities, and incurred \$175 thousand for employees and their related benefits seconded from the joint venture with AFSW;
- Sold \$269 thousand of products to non-controlling common stockholders of the Company and incurred \$200 thousand of license maintenance fee from a non-controlling common stockholder of the Company;
- Incurred \$71 thousand for employees and their related benefits seconded from a common stockholder of the Company;
- Sold \$37 thousand of products to common stockholders and former noteholders of the Company; and
- Recorded \$3.0 million in deferred license fee and sold \$166 thousand of products to a convertible preferred stockholder of the Company.

As of December 31, 2018, total accounts receivable from related parties was \$3.1 million, consisting of \$3.0 million from the joint venture with AFSW, \$123 thousand from non-controlling common stockholders of the Company, \$10 thousand from non-controlling common stockholder and noteholder of the Company and \$54 thousand from a convertible preferred stockholder and noteholder of the Company. As of December 31, 2018, total accounts payable to related parties was \$122 thousand to non-controlling common stockholders of the Company.

## **Note 18 - Subsequent Events**

The Company has evaluated subsequent events through the issuance of these financial statements, and determined that there have been no events that have occurred that would require adjustments to our disclosures in the consolidated financial statements except for the following:

### **Merger Agreement**

On February 12, 2020, Peninsula Acquisition Corporation, Acquisition Sub and Transphorm Technology entered into an Agreement and Plan of Merger and Reorganization (the “Merger Agreement”). Pursuant to the terms of the Merger Agreement, on February 12, 2020, Acquisition Sub merged with and into Transphorm Technology, with Transphorm Technology continuing as the surviving corporation and a wholly-owned subsidiary of Peninsula Acquisition Corporation. The Merger was treated as a recapitalization and reverse acquisition for financial reporting purposes. Transphorm Technology is considered the acquirer for accounting purposes. Immediately after completion of the merger, Peninsula Acquisition Corporation adopted Transphorm Technology’s former company name, Transphorm, Inc. as its company name.

### **Private Placement**

Following the Merger, the Company sold 5,365,000 shares of common stock pursuant to an initial closing of a private placement offering (“Offering”) for up to 12,500,000 shares of common stock at a purchase price of \$4.00 per share. The Company held a subsequent closing of the Offering on February 27, 2020, in which it sold an additional 15,000 shares of common stock at a purchase price of \$4.00 per share. The aggregate gross proceeds from the closing of the Offering were \$21.5 million (before deducting placement agent fees and expenses of \$1.8 million of the closing of the Offering). Offering cost of \$177 thousand is included in other assets on the consolidated balance sheets as of December 31, 2019.

### **Yaskawa Letter of Intent**

In February, 2020, the Company entered into a letter of intent with Yaskawa that the Company believes will form the basis for a mutually beneficial cooperation agreement between the Company and Yaskawa to be finalized later this year. This letter of intent contemplates the following:

- Yaskawa intends to enter into a long-term cooperation and development agreement with the Company to use our GaN power device products for a variety of industrial power conversion applications, which will initially focus on servo motor drive applications.
- Yaskawa intends to provide at least \$4.0 million to fund the Company’s development activities, with an expected funding start date of May 2020, from which amount Yaskawa intends to provide \$1.0 million in 2020 in connection with ongoing development activities.

### **Government contract**

A cost reimbursable subaward (the “Subaward”) grant was made on February 18, 2020 to the Company by Illinois Institute of Technology (the “IIT”) with Advanced Research Projects Agency - Energy (the “ARPA-E”) funding up to \$646 thousand for the development of 1200V Gan switches and which term expires on December 17, 2020.

### **2020 Equity Incentive Plan**

The 2020 Equity Incentive Plan (the “2020 Plan”), which provides for the issuance of incentive awards of up to 5,050,000 shares of our common stock, was approved by the board of directors and stockholders in February 2020. The 2020 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation

rights, restricted stock, restricted stock units, performance units, and performance shares to our employees, directors, and consultants and our parent and subsidiary corporations' employees and consultants.

On March 26, 2020, subject to S-8 filing, the board of directors approved the grant of stock option awards of 1,052,017 shares under the 2020 Plan at an exercise price of \$4.00 per share, with a term of ten years, to certain members of management and employees. The stock option awards provide for vesting as follows: 1/3rd after 12 months and 1/36th of the remaining balance monthly or 1/4th after 12 months and 1/48th of the remaining balance monthly.

#### **Commitment with A Government Agency**

In connection with a contract with a government agency, the Company entered into a commitment to acquire equipment and services from vendors totaling \$4.9 million, all of which is reimbursable. During February and March 2020, the Company purchased equipment for approximately \$3.6 million and was reimbursed in full by the government agency. The remaining commitment under the contract to the vendors is approximately \$1.3 million.



**Transphorm, Inc.**  
**Condensed Consolidated Balance Sheets**  
*(in thousands except share and per share data)*

	September 30, 2020 (Unaudited)	December 31, 2019
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 4,369	\$ 2,875
Accounts receivable, net, including related parties	1,125	709
Inventory	1,372	990
Prepaid expenses and other current assets	1,743	783
Total current assets	8,609	5,357
Property and equipment, net	1,432	1,770
Goodwill	1,362	1,325
Intangible assets, net	1,062	1,313
Other assets	401	497
<b>Total assets</b>	<b>\$ 12,866</b>	<b>\$ 10,262</b>
<b>Liabilities, convertible preferred stock and stockholders' deficit</b>		
Current liabilities:		
Accounts payable and accrued expenses	\$ 2,687	\$ 2,383
Deferred revenue	178	—
Development loan	10,000	5,000
Revolving credit facility, including accrued interest	10,153	10,458
Unfunded commitment to joint venture	1,684	1,688
Accrued payroll and benefits	1,325	1,159
Total current liabilities	26,027	20,688
Development loans, net of current portion	—	10,000
Promissory note	16,327	16,169
<b>Total liabilities</b>	<b>42,354</b>	<b>46,857</b>
Commitments and contingencies (Note 8)		
Convertible preferred stock (Notes 1 and 9):		
Series 1, \$0.0001 par value; no shares authorized, issued and outstanding as of September 30, 2020; 12,438,704 shares authorized and 12,433,953 shares issued and outstanding as of December 31, 2019	—	39,658
Series 2, \$0.0001 par value; no shares authorized, issued and outstanding as of September 30, 2020; 7,507,699 shares authorized and 7,499,996 shares issued and outstanding as of December 31, 2019	—	30,000
Series 3, \$0.0001 par value; no shares authorized, issued and outstanding as of September 30, 2020; 4,000,000 shares authorized, issued and outstanding as of December 31, 2019	—	16,000
<b>Total convertible preferred stock</b>	<b>—</b>	<b>85,658</b>
Stockholders' deficit:		
Common stock, \$0.0001 par value; 750,000,000 shares authorized and 35,266,496 shares issued and outstanding as of September 30, 2020; 29,012,034 shares authorized and 4,220,998 shares issued and outstanding as of December 31, 2019	4	—

Additional paid-in capital	128,385	22,404
Accumulated deficit	(157,112)	(143,915)
Accumulated other comprehensive loss	(765)	(742)
<b>Total stockholders' deficit</b>	<b>(29,488)</b>	<b>(122,253)</b>
<b>Total liabilities, convertible preferred stock and stockholders' deficit</b>	<b>\$ 12,866</b>	<b>\$ 10,262</b>

See accompanying notes to unaudited condensed consolidated financial statements

**Transphorm, Inc.**  
**Condensed Consolidated Statements of Operations (unaudited)**  
*(in thousands except share and per share data)*

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue, net, including related parties (Note 11)	\$ 1,929	\$ 994	\$ 9,358	\$ 2,011
Operating expenses:				
Cost of goods sold	2,043	1,625	4,746	4,211
Research and development	1,071	2,041	4,131	6,245
Sales and marketing	547	572	1,593	2,098
General and administrative	2,688	1,270	7,838	4,015
<b>Total operating expenses</b>	<b>6,349</b>	<b>5,508</b>	<b>18,308</b>	<b>16,569</b>
Income (loss) from operations	(4,420)	(4,514)	(8,950)	(14,558)
Interest expense	191	191	569	567
Loss in joint venture	1,943	777	5,218	3,004
Changes in fair value of promissory note	709	17	46	101
Other income, net	(523)	(53)	(1,586)	(513)
Loss before tax expense	(6,740)	(5,446)	(13,197)	(17,717)
Tax expense	—	—	—	—
<b>Net loss</b>	<b>\$ (6,740)</b>	<b>\$ (5,446)</b>	<b>\$ (13,197)</b>	<b>\$ (17,717)</b>
Net loss per share - basic and diluted	\$ (0.19)	\$ (0.19)	\$ (0.39)	\$ (0.63)
Weighted average common shares outstanding - basic and diluted	35,156,918	28,153,555	34,072,176	28,153,555

See accompanying notes to unaudited condensed consolidated financial statements

**Transphorm, Inc.**  
**Condensed Consolidated Statements of Comprehensive Loss (unaudited)**  
*(in thousands)*

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net loss	\$ (6,740)	\$ (5,446)	\$ (13,197)	\$ (17,717)
Other comprehensive loss, net of tax:				
Foreign currency translation adjustments	6	5	(23)	7
Other comprehensive (loss) income, net of tax	6	5	(23)	7
<b>Comprehensive loss</b>	<b>\$ (6,734)</b>	<b>\$ (5,441)</b>	<b>\$ (13,220)</b>	<b>\$ (17,710)</b>

See accompanying notes to unaudited condensed consolidated financial statements

**Transphorm, Inc.**  
**Condensed Consolidated Statements of Changes in Stockholders' Deficit (unaudited)**  
**For the Three Months Ended September 30,**  
*(in thousands except share data)*

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Stockholders' Deficit
	Number of Shares	Amount				
<b>Balance at July 1, 2019</b>	<b>4,219,606</b>	<b>\$ —</b>	<b>\$ 22,109</b>	<b>\$ (140,903)</b>	<b>\$ (738)</b>	<b>\$ (119,532)</b>
Stock-based compensation	—	—	159	—	—	159
Other comprehensive income	—	—	—	—	5	5
Net loss	—	—	—	(5,446)	—	(5,446)
<b>Balance at September 30, 2019</b>	<b>4,219,606</b>	<b>\$ —</b>	<b>\$ 22,268</b>	<b>\$ (146,349)</b>	<b>\$ (733)</b>	<b>\$ (124,814)</b>
<b>Balance at July 1, 2020</b>	<b>35,135,520</b>	<b>\$ 4</b>	<b>\$ 127,787</b>	<b>\$ (150,372)</b>	<b>\$ (771)</b>	<b>\$ (23,352)</b>
Stock options exercised	3,475	—	14	—	—	<b>\$ 14</b>
Restricted stock issued	127,501	—	—	—	—	—
Stock-based compensation	—	—	584	—	—	584
Other comprehensive loss	—	—	—	—	6	6
Net loss	—	—	—	(6,740)	—	(6,740)
<b>Balance at September 30, 2020</b>	<b>35,266,496</b>	<b>\$ 4</b>	<b>\$ 128,385</b>	<b>\$ (157,112)</b>	<b>\$ (765)</b>	<b>\$ (29,488)</b>

See accompanying notes to unaudited condensed consolidated financial statements

**Transphorm, Inc.**  
**Condensed Consolidated Statements of Changes in Stockholders' Deficit (unaudited)**  
**For the Nine Months Ended September 30,**  
*(in thousands except share data)*

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Stockholders' Deficit
	Number of Shares	Amount				
<b>Balance at January 1, 2019</b>	<b>4,219,606</b>	<b>\$ —</b>	<b>\$ 21,833</b>	<b>\$ (128,632)</b>	<b>\$ (740)</b>	<b>\$ (107,539)</b>
Stock-based compensation	—	—	435	—	—	435
Other comprehensive income	—	—	—	—	7	7
Net loss	—	—	—	(17,717)	—	(17,717)
<b>Balance at September 30, 2019</b>	<b>4,219,606</b>	<b>\$ —</b>	<b>\$ 22,268</b>	<b>\$ (146,349)</b>	<b>\$ (733)</b>	<b>\$ (124,814)</b>
<b>Balance at January 1, 2020</b>	<b>4,220,998</b>	<b>\$ —</b>	<b>\$ 22,404</b>	<b>\$ (143,915)</b>	<b>\$ (742)</b>	<b>\$ (122,253)</b>
Stock options exercised	6,821	—	27	—	—	27
Restricted stock issued	127,501	—	—	—	—	—
Stock-based compensation	—	—	820	—	—	820
Conversion of shares in connection with the Reverse Merger	23,933,949	3	85,655	—	—	85,658
Shares redeemed	(52,773)	—	(211)	—	—	(211)
Shares issued in connection with the Reverse Merger	1,650,000	—	(50)	—	—	(50)
Issuance of common stock, net	5,380,000	1	19,740	—	—	19,741
Other comprehensive loss	—	—	—	—	(23)	(23)
Net loss	—	—	—	(13,197)	—	(13,197)
<b>Balance at September 30, 2020</b>	<b>35,266,496</b>	<b>\$ 4</b>	<b>\$ 128,385</b>	<b>\$ (157,112)</b>	<b>\$ (765)</b>	<b>\$ (29,488)</b>

See accompanying notes to unaudited condensed consolidated financial statements

**Transphorm, Inc.**  
**Condensed Consolidated Statements of Cash Flows (unaudited)**  
*(in thousands)*

	Nine Months Ended September 30,	
	2020	2019
<b>Cash flows from operating activities:</b>		
Net loss	\$ (13,197)	\$ (17,717)
Adjustments to reconcile net loss to net cash used in operating activities:		
Inventory write-off	274	—
Depreciation and amortization	632	920
Bad debt expense	146	
Licensing revenue from a related party	(5,000)	
Stock-based compensation	820	435
Interest cost	(193)	455
Loss in joint venture	5,218	3,004
Changes in fair value of promissory note	46	101
Changes in operating assets and liabilities:		
Accounts receivable	(562)	(45)
Inventory	(656)	(288)
Prepaid expenses and other current assets	(965)	(236)
Other assets	96	(51)
Accounts payable and accrued expenses	304	(766)
Deferred revenue	178	3,000
Accrued payroll and benefits	166	(136)
<b>Net cash used in operating activities</b>	<b>(12,693)</b>	<b>(11,324)</b>
<b>Cash flows from investing activities:</b>		
Purchases of property and equipment	(46)	(155)
Investment in joint venture	(5,327)	(1,696)
<b>Net cash used in investing activities</b>	<b>(5,373)</b>	<b>(1,851)</b>
<b>Cash flows from financing activities:</b>		
Proceeds from development loans	—	13,000
Proceeds from stock option exercise	32	—
Payment for repurchase of common stock	(211)	—
Loan repayment	(50)	—
Proceeds from issuance of common stock, net of offering cost	19,741	—
<b>Net cash provided by financing activities</b>	<b>19,512</b>	<b>13,000</b>
<b>Effect of foreign exchange rate changes on cash and cash equivalents</b>	<b>48</b>	<b>17</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>1,494</b>	<b>(158)</b>
Cash and cash equivalents at beginning of period	2,875	3,069
<b>Cash and cash equivalents at end of period</b>	<b>\$ 4,369</b>	<b>\$ 2,911</b>
<b>Supplemental disclosures of cash flow information:</b>		
Interest expense paid	\$ 762	\$ 496
<b>Supplemental non-cash financing activity:</b>		
Development loan reduction related to licensing revenue	\$ 5,000	\$ —

See accompanying notes to unaudited condensed consolidated financial statements



**Transphorm, Inc.**  
**Notes to Unaudited Condensed Consolidated Financial Statements**  
**for the Three and Nine Months Ended September 30, 2020 and 2019**

**Note 1 - Business and Basis of Presentation**

Transphorm, Inc. (“Parent”) develops gallium nitride (“GaN”) semiconductor components used in power conversion and is headquartered in Goleta, California. Parent’s wholly owned-subsiadiary, Transphorm Technology, Inc., was incorporated in the State of Delaware on February 22, 2007. Throughout these notes, “the Company,” “Transphorm,” “we,” “us” and “our” refer to Parent and its direct and indirect wholly-owned subsidiaries. Transphorm Technology and its subsidiaries hold all material assets and conduct all business activities and operations of the Company. Transphorm Technology’s activities to date have been primarily performing research and development, establishing manufacturing infrastructure, market sampling, product launch, hiring personnel, and raising capital to support and expand these activities. Transphorm Japan, Inc. was established in Japan in February 2014 to secure Transphorm’s production capacity and establish a direct presence in Asian markets. Transphorm Aizu, Inc. was established in Japan to manage the financial transactions around Aizu Fujitsu Semiconductor Wafer Solution Limited, Transphorm’s joint venture wafer fabrication facility located in Aizu Wakamatsu, Japan (“Aizu”). Transphorm Japan Epi, Inc. was established in Japan in 2019 to enable the operational capacity of the reactors held in Aizu.

In management’s opinion, the accompanying unaudited condensed consolidated financial statements of Transphorm reflect all adjustments of a normal and recurring nature that are necessary for a fair presentation of the results for the interim period ended September 30, 2020, but are not necessarily indicative of the results that will be reported for the entire year or any other interim period. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with Accounting Principles Generally Accepted in the United States of America (“GAAP”) have been condensed or omitted. The aforementioned unaudited condensed consolidated financial statements are prepared in conformity with GAAP and in accordance with the instructions to Form 10-Q pursuant to the rules and regulations of the Securities and Exchange Commission. The interim information should be read in conjunction with the audited financial statements and notes thereto included in the Company’s Amendment No. 2 to Form 8-K filed on March 31, 2020. The consolidated balance sheet as of December 31, 2019 is derived from those audited financial statements.

The preparation of interim unaudited condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Material estimates subject to change include, among other items, the determination of allowance for loan and lease losses and allowance for off-balance sheet items, other-than-temporary impairment, securities valuations, the fair value of other assets and liabilities acquired in a business combination and income taxes. Actual results could differ from those estimates.

**Reverse Merger**

On February 12, 2020, our wholly-owned subsidiary, Peninsula Acquisition Sub, Inc., a corporation formed in the State of Delaware (“Acquisition Sub”), merged with and into Transphorm Technology (formerly known as Transphorm, Inc.), the corporate existence of Acquisition Sub ceased, and Transphorm Technology became our wholly-owned subsidiary (such transaction, the “Merger”). As a result of the Merger, we acquired the business of Transphorm Technology. The Merger was effective as of February 12, 2020, upon the filing of a certificate of merger with the Secretary of State of the State of Delaware. Immediately after completion of the Merger, we adopted Transphorm Technology’s former company name, “Transphorm, Inc.,” as our company name.

The Merger was treated as a recapitalization and reverse acquisition for financial reporting purposes, and Transphorm Technology is considered the acquirer for accounting purposes.

As a result of the Merger and the change in our business and operations, a discussion of the past financial results of our predecessor, Peninsula Acquisition Corporation, is not pertinent, and under applicable accounting principles, the historical financial results of Transphorm Technology, the accounting acquirer, prior to the Merger are considered our historical financial results.

At the effective time of the Merger, (i) each share of Transphorm Technology's common stock issued and outstanding immediately prior to the closing of the Merger was converted into the right to receive (a) 0.08289152527 shares of our common stock (in the case of shares held by accredited investors) or (b) \$4.00 multiplied by 0.08289152527 (in the case of shares held by unaccredited investors), with the actual number of shares of our common stock issued to the former holders of Transphorm Technology's common stock equal to 4,171,571, (ii) 51,680,254 shares of Transphorm Technology's Series 1 preferred stock issued and outstanding immediately prior to the closing of the Merger were converted into 12,433,953 shares of our common stock, (iii) 38,760,190 shares of Transphorm Technology's Series 2 preferred stock issued and outstanding immediately prior to the closing of the Merger were converted into 7,499,996 shares of our common stock, and (iv) 31,850,304 shares of Transphorm Technology's Series 3 preferred stock issued and outstanding immediately prior to the closing of the Merger were converted into 4,000,000 shares of our common stock. As a result, 28,105,520 shares of our common stock were issued to the former holders of Transphorm Technology's issued and outstanding capital stock after adjustments due to rounding for fractional shares. Immediately prior to the effective time of the Merger, an aggregate of 682,699 shares of our common stock, owned by the stockholders of Peninsula Acquisition Corporation prior to the Merger, were forfeited and cancelled.

In addition, pursuant to the Merger Agreement, (i) options to purchase 29,703,285 shares of Transphorm Technology's common stock issued and outstanding immediately prior to the closing of the Merger under Transphorm Technology's 2007 Stock Plan (the "2007 Plan") and 2015 Equity Incentive Plan (the "2015 Plan") were assumed and converted into options to purchase 2,461,923 shares of our common stock, (ii) warrants to purchase 186,535 shares of Transphorm Technology's common stock issued and outstanding immediately prior to the closing of the Merger were assumed, amended and converted into warrants to purchase 15,461 shares of our common stock, and (iii) Transphorm Technology's outstanding convertible promissory note was amended to be convertible at the option of the holder, into shares of our common stock at a conversion price of \$5.12 per share, with 3,076,171 being the maximum number of shares of our common stock issuable upon conversion of the convertible promissory note. As of September 30, 2020, there was \$15.0 million of principal and \$448 thousand of accrued and unpaid interest outstanding on the convertible promissory note.

All per share and share amounts for the three and nine months ended September 30, 2019 have been retroactively adjusted to reflect the effect of the Merger.

### **Going Concern**

The accompanying unaudited condensed consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As included in the accompanying unaudited condensed consolidated financial statements, the Company has generated recurring losses from operations, sustained negative cash flows from operating activities, and has an accumulated deficit and has a working capital deficiency. These factors raise substantial doubt about the Company's ability to continue as a going concern for the next twelve months from the issuance of these financial statements.

Management plans to raise additional working capital to fund operations through the issuance of stock to investors, license of intellectual property and/or issuance of notes payable. The Company raised \$19.7 million from the sale of common stock in February 2020 as described in Note 9 - Stockholders' Equity. However, there is no assurance that the Company will be successful in raising additional capital.

The ability of the Company to continue as a going concern is dependent on its ability to raise significant additional capital to fund operating losses until it is able to generate liquidity from its business operations. To the extent sufficient financing is not available, the Company may not be able to, or may be delayed in, developing its offerings and meeting its obligations. The Company will continue to evaluate its projected expenditures relative to

its available cash and to evaluate financing alternatives in order to satisfy its working capital and other cash requirements. The accompanying unaudited condensed consolidated financial statements do not reflect any adjustments that might result from the outcome of these uncertainties.

### **Impact of COVID-19 on Our Business**

The COVID-19 pandemic has adversely disrupted and will further disrupt the operations at certain of our customers, partners, suppliers and other third-party providers for an uncertain period of time, including as a result of travel restrictions, adverse effects on budget planning processes, business deterioration, and/or business shutdowns, all of which has impacted our business and results of operations. Some of our customers have experienced delays in their internal development programs and design cycles with our GaN products due to the effects of COVID-19, which have led to postponements of their orders of our products and postponements of determinations that our products will be used in their designs for new products under development with corresponding delays in their market introduction and our revenues. The future impact of COVID-19 cannot be predicted with certainty and may make it more difficult or preclude us from raising additional capital, increase our costs of capital and otherwise adversely affect our business, results of operations, financial condition and liquidity.

### **Significant Accounting Policies**

#### *Principles of Consolidation*

The unaudited condensed consolidated financial statements include the accounts of the Parent and its wholly-owned subsidiaries, Transphorm Technology, Transphorm Japan, Inc., Transphorm Japan Epi, Inc. and Transphorm Aizu, Inc. Upon consolidation, all significant intercompany accounts and transactions have been eliminated.

#### *Use of Estimates*

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Management bases its estimates and assumptions on historical experience, knowledge of current conditions, and its belief of what could occur in the future, given available information. Actual results could differ from those estimates, and such differences could be material to the condensed consolidated financial statements. Estimates are used for, but not limited to, the determinations of fair value of stock awards and promissory notes, accrual of liabilities, revenue recognition, inventory reserve, and useful lives for property and equipment.

#### *Reclassification of Prior Year Presentation*

Certain prior year amounts have been reclassified for consistency with the current year presentation. These reclassifications had no effect on the reported condensed consolidated financial statements.

#### *Cash and Cash Equivalents*

The Company considers all highly-liquid investments with original maturities of 90 days or less at the date of purchase to be cash equivalents. Cash and cash equivalents consist principally of bank deposits and money market funds. Other assets in the condensed consolidated balance sheets as of September 30, 2020 and December 31, 2019 include cash of \$75 thousand.

### *Foreign Currency Risk*

The Company is exposed to foreign currency risk due to its operations in Japan. Assets and liabilities of the operations are re-measured into U.S. currency at exchange rates in effect at the balance sheet dates through the condensed consolidated statements of comprehensive income. Gains or losses resulting from foreign currency transactions are re-measured using the rates on the dates on which those elements are recognized during the period and are included in other income or expense in the unaudited condensed consolidated statements of operations. As of September 30, 2020 and December 31, 2019, the Company had foreign cash and cash equivalents of \$41 thousand and \$55 thousand, respectively, which represented 0.9 percent and 1.9 percent, respectively, of total cash and cash equivalents.

### *Concentrations of Risk*

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents. The Company is exposed to credit risk in the event of default by the financial institution holding its cash. The Company's investment policy restricts investments to high-quality investments and limits the amounts invested with any one issuer, industry or geographic area. Risks associated with cash holdings in excess of insured limits are mitigated by banking with high-quality institutions. To date, the Company has not experienced any significant losses on its cash and cash equivalents. The Company periodically evaluates the relative credit standing of these financial institutions.

The Company is subject to risks common in the power conversion components industry, including, but not limited to, technological obsolescence, dependence on key personnel, market acceptance of its products, the successful protection of its proprietary technologies, compliance with government regulations, and the possibility of not being able to obtain additional financing when needed.

### *Comprehensive Loss*

Comprehensive loss is comprised of net loss and other comprehensive income (loss). Other comprehensive income (loss) includes the impact of foreign currency translation adjustments.

### *Accounts Receivable*

Accounts receivable are analyzed and allowances for uncollectible accounts are recorded, as required. Provisions for uncollectible accounts, if any, are recorded as bad debt expense and included in general and administrative expenses in the accompanying unaudited condensed consolidated statements of operations. The process for determining the appropriate level of allowances for doubtful accounts involves judgment, and the Company considers such factors as the age of the underlying receivables, historical and projected collection trends, the composition of outstanding receivables, current economic conditions and regulatory changes. An account is fully reserved when reasonable collection efforts have been unsuccessful and it is probable that the receivable will not be recovered. No significant losses on accounts receivable have been recorded as of September 30, 2020 and December 31, 2019.

### *Inventory*

Inventory is stated at the lower of cost (first-in, first-out method) or net realizable value. The Company periodically reviews the value of items in inventory and records write-downs or write-offs based on its assessment of slow moving or obsolete inventory. The Company maintains an inventory reserve for obsolete inventory and generally makes inventory value adjustments against the inventory reserve.

### *Property and Equipment*

Property and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation is determined using the straight-line method over the estimated useful lives of the respective assets, generally

ranging from three to seven years. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the related lease term. Depreciation for equipment commences once it is placed in service, and depreciation for buildings and leasehold improvements commences once they are ready for their intended use. The Company expenses maintenance and repair costs that do not extend the life of the asset as they are incurred.

The Company evaluates the carrying amount of its property and equipment whenever events or changes in circumstances indicate that the assets may not be recoverable. An impairment loss would be recognized when estimated future cash flows expected to result from the use of an asset or asset group and its eventual disposition are less than the carrying amount of the asset or asset group. To date, there have been no such impairment losses.

#### *Goodwill*

Goodwill arose for the acquisition of a business in February 2014 based in Japan and was accounted for as the purchase of a business. Goodwill generated from business combinations and deemed to have indefinite lives are not subject to amortization and instead are tested for impairment at least annually in December unless certain events occur or circumstances change. Goodwill represents the excess of the purchase price over the fair value of the net assets and other identifiable intangible assets acquired. We test for goodwill impairment annually or earlier if events or changes in circumstances indicate goodwill might possibly be impaired. Impairment exists when the carrying value of the goodwill exceeds its implied fair value. An impairment loss would be recognized in an amount equal to that excess as a charge to operations in the unaudited condensed consolidated statements of operations. For the three and nine months ended September 30, 2020 and 2019, no impairment charge was recorded related to goodwill.

#### *Intangible Assets*

Intangible assets that are not considered to have an indefinite useful life are amortized over their estimated useful lives, which generally range from three to ten years. Each reporting period, the Company evaluates the estimated remaining useful lives of intangible assets and whether events or changes in circumstances warrant a revision to the remaining periods of amortization.

If it is determined that the carrying values might not be recoverable based upon the existence of one or more indicators of impairment, the Company performs a test for recoverability using various methodologies, such as the income approach or cost approach, to determine the fair value of intangible assets depending upon the nature of the assets. If assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds their respective fair values. For the three and nine months ended September 30, 2020 and 2019, no impairment charges were recorded related to intangible assets.

#### *Revenue Recognition*

##### *Revenue Recognition Policy*

The Company derives its revenues from sales of high-powered GaN-based products manufactured utilizing the Company's proprietary and patented epiwafer technology and wafer fabrication and other assembly processes, sales of GaN epiwafers for the radio frequency ("RF") and power markets, and sales of licenses to use such patented proprietary technology, as well as enabling EPI wafer growth services and products to our strategic partners. Revenues are recognized when control of these products or licenses are transferred to the Company's customers in an amount that reflects the consideration it expects to be entitled to in exchange for those products and licenses. Sales and other taxes the Company collects concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense. The Company does not have any significant financing components associated with its revenue contracts, as payment is received at or shortly after the point of sale.

##### *Disaggregation of Revenue from Contracts with Customers*

Revenue consists of licensing revenue, government contract revenue from our contract with the U.S. Navy and product sales, with applicable performance obligations satisfied at a point in time. Products are sold to distributors and end-users in various sectors such as, but not limited to, the automotive, gaming, industrial, IT, and consumer products industries.

As part of the Collaboration Arrangement (Note 2 - Nexperia Arrangement) executed with Nexperia on April 4, 2018, the Company agreed to grant Nexperia the perpetual exclusive right to use the Company's existing Gen-3 manufacturing process technology. License fees are received upon satisfaction of contractual milestones and recognized upon delivery of the perpetual license or transferred technology without any remaining performance obligations. The Company recognized \$0 and \$5.0 million of licensing revenue for the three and nine months ended September 30, 2020, respectively, and no licensing revenue for each of the three and nine months ended September 30, 2019. Additionally, pursuant to agreements entered into in October 2019, during the three and nine months ended September 30, 2020 and 2019, the Company recognized \$280,000 and \$0 of revenue from the sale of EPI Gen 4 wafer growths.

Government contract revenues are principally generated under research and development contracts. Contract revenues are derived primarily from research contracts with agencies of the U.S. government. We believe credit risk related to accounts receivable arising from such contracts is minimal. These contracts may include cost-plus fixed fee and fixed price terms. All payments to us for work performed on contracts with agencies of the U.S. government are subject to adjustment upon audit by the Defense Contract Audit Agency. The Company received new government authorized rates for billing purposes which allowed for retroactive application since inception. The cumulative impact of this rate change was \$505 thousand in the third quarter of 2020. The Company will use the new approved rates on go-forward basis.

#### Performance Obligations

For performance obligations related to the sale of products, control transfers to the customer at a point in time. The Company's principal terms of sale are free on board shipping or destination and the Company transfers control and records revenue for product sales upon shipment or delivery to the customer, respectively. For performance obligations related to the licensing of patented technology in perpetuity, control also transfers to the customer at a point in time. The Company transfers control and records revenue for licensing fees once the Company has (i) provided or otherwise makes available the patented technology to the customer and (ii) the customer is able to use and benefit from the patented technology.

#### Variable Consideration

The nature of the Company's arrangement with Nexperia gives rise to variable consideration in the form of milestone and royalty payments. The royalties qualify for the sales and usage-based royalty exception, as the license of intellectual property is the predominant item to which the royalty relates and are recognized upon the subsequent sale occurring. The variable amounts are received upon satisfaction of contractually agreed upon development targets and sales volume.

#### Research and Development

The Company is a party to research grant contracts with the U.S. government for which the Company is reimbursed for specified costs incurred for its research projects. These projects include energy saving initiatives for which the U.S. government offers reimbursement funds. Such reimbursements are recorded as an offset to research and development expenses when the related qualified research and development expenses are incurred. Reimbursable costs are recognized in the same period the costs are incurred up to the limit of approved funding amounts on qualified expenses. Grant reimbursement of \$81 thousand and \$0 was recorded as an offset to research and development expense for the three months ended September 30, 2020 and 2019, respectively. Grant reimbursement of \$380 thousand and \$0 was recorded as an offset to research and development expense for the nine months ended September 30, 2020 and 2019, respectively.

### *Stock-Based Compensation*

All share-based payments, including grants of stock options, restricted stock awards (“RSAs”) and restricted stock units (“RSUs”), are measured at the fair value of the share-based awards on the grant date and recognized over their respective vesting periods, which is generally one to four years. The estimated fair value of stock options at the grant date is determined using the Black-Scholes-Merton pricing model. The RSAs and RSUs are measured using the estimated fair value of the stock price, which, due to limited trading history, is based on recent equity sales. The Company recognizes the fair value of share-based payments as compensation expense for all expected-to-vest stock-based awards over the vesting period of the award using the straight-line attribution or graded vesting method provided that the amount of compensation cost recognized at any date is no less than the portion of the grant-date fair value of the award that is vested at that date.

The Black-Scholes-Merton option pricing model requires inputs such as the fair value of common stock on date of grant, expected term, expected volatility, dividend yield, and risk-free interest rate. Further, the forfeiture rate also affects the amount of aggregate compensation expense. These inputs are subjective and generally require significant analysis and judgment to develop. Volatility data is obtained from a study of publicly traded industry peer companies. The forfeiture rate is derived primarily from the Company’s historical data, and the risk-free interest rate is based on the yield available on U.S. Treasury zero-coupon issues commensurate with the expected term. Management generally uses the simplified method to calculate the expected term for employee grants as the Company has limited historical exercise data or alternative information to reasonably estimate an expected term assumption. The simplified method assumes that all options will be exercised midway between the weighted average vesting date and the contractual term of the option.

Stock-based compensation expense recognized in the Company’s condensed consolidated financial statements is based on awards that are expected to vest. These expense amounts have been reduced by using an estimated forfeiture rate. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company evaluates the assumptions used to estimate forfeitures annually in connection with the recognition of stock-based compensation expense.

### *Loss Per Share*

Basic loss per share is calculated by dividing net loss applicable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted loss per share is calculated by dividing the net loss attributable to common stockholders by the sum of the weighted average number of common shares outstanding plus potential dilutive common shares outstanding during the period. Potential dilutive securities, comprised of stock warrants, restricted stock units and stock options, are not reflected in diluted loss per share because such shares are anti-dilutive. Dilutive impact of potential common shares resulting from common stock equivalents is determined by applying the treasury stock method.

For the three and nine months ended September 30, 2020, there were 3,155,064 shares, consisting of 2,327,423 stock options, 812,180 restricted stock units and 15,461 stock warrants, that were not included in the computation of diluted loss per share because their effect would be anti-dilutive. For the three and nine months ended September 30, 2019, there were 2,469,273 shares, consisting of 2,453,812 stock options and 15,461 stock warrants, that were not included in the computation of diluted loss per share because their effect would be anti-dilutive.

### *Fair Value Measurement*

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The carrying values of the Company’s financial instruments such as cash equivalents, accounts receivable, revolving credit facility, accounts payable and accrued liabilities approximate fair values due to the short-term nature of these items. The Company has elected the fair value option for its promissory notes. See Note 3 - Fair Value Measurements.

## *Income Taxes*

The Company accounts for income taxes in accordance with Accounting Standards Codification (“ASC”) 740, *Income Taxes* (“ASC 740”). ASC 740 prescribes the use of the liability method. Deferred tax assets and liabilities are determined based on the difference between the financial statement carrying amounts and the tax basis of assets and liabilities and are measured using the enacted statutory tax rates in effect at the balance sheet date. The Company records a valuation allowance to reduce its deferred tax assets when uncertainty regarding their realizability exists.

## *Equity Method Investments*

The Company uses the equity method to account for investments in entities that it does not control, but in which it has the ability to exercise significant influence over operating and financial policies. The Company’s proportionate share of the net income or loss of these companies is included in consolidated net loss. Judgments regarding the level of influence over each equity method investment include consideration of key factors such as the Company’s ownership interest, representation on the board of directors or other management body and participation in policy-making decisions.

## *Segment Reporting*

The Company’s operations and its financial performance is evaluated on a consolidated basis by the chief operating decision maker. Accordingly, the Company considers all of its operations to be aggregated in one reportable operating segment. For the three months ended September 30, 2020, total revenue was \$1.9 million, of which \$1.6 million was from U.S. operations and \$289 thousand was from Japan operations. For the three months ended September 30, 2019, total revenue was \$994 thousand, of which \$988 thousand was from U.S. operations and \$6 thousand was from Japan operations. For the nine months ended September 30, 2020, total revenue was \$9.4 million, of which \$9.0 million was from U.S. operations and \$321 thousand was from Japan operations. For the nine months ended September 30, 2019, total revenue was \$2.0 million, of which \$2.0 million was from U.S. operations and \$25 thousand was from Japan operations.

## **Recently Issued Accounting Standards Adopted**

*Fair Value* - In August 2018, the Financial Accounting Standard Boards (“FASB”) issued Accounting Standards Update (“ASU”) 2018-13, *Fair Value Measurement* (ASC 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement. ASU 2018-13 removes certain disclosures, modifies certain disclosures and adds additional disclosures. ASU 2018-13 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. The Company adopted this standard effective January 1, 2020. The adoption of ASU 2018-13 did not have a material effect on the condensed consolidated financial statements.

*Statement of Cash Flows* - In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”). This guidance addresses eight specific cash flow issues with the objective of reducing existing diversity in practice. ASU 2016-15 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. The Company adopted this standard effective January 1, 2020, using the modified retrospective approach. The adoption of ASU 2016-15 did not have a material effect on the condensed consolidated financial statements.

## **Recently Issued Accounting Standards under Evaluation**

*Leases* - In June 2020, the FASB issued ASU 2020-05, which amends the effective dates of the FASB’s standards on leasing (ASC 842) to give immediate relief to certain entities as a result of the widespread adverse economic effects and business disruptions caused by the COVID-19 pandemic. In February 2016, the FASB issued ASU 2016-02, *Leases*, which, for operating leases, requires the lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, on its balance sheet. The guidance also



requires a lessee to recognize single lease costs, calculated so that the cost of the lease is allocated over the lease term, on a generally straight-line basis. The leasing standard's effective dates were the fiscal year beginning after December 15, 2019 as originally issued (ASU 2016-02) and the fiscal year beginning after December 15, 2020 as amended by ASU 2019-10. As amended by ASU 2020-05, the leasing standard's effective date is now the fiscal year beginning after December 15, 2021. The Company is currently evaluating the impact of this new standard on its condensed consolidated financial statements.

*Financial Instruments* - FASB ASU 2020-03, *Codification Improvements to Financial Instruments*, makes clear the determination of the contractual life of a net investment in leases in estimating expected credit losses under ASC 326, *Financial Instruments – Credit Losses*. In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”). The standard changes the methodology for measuring credit losses on financial instruments and the timing of when such losses are recorded. ASU 2016-13 is effective for the Company's 2021 fiscal year. Early adoption is permitted. The Company is currently evaluating the impact of this new standard on its condensed consolidated financial statements.

*Income Tax* - In December 2019, the FASB issued ASU 2019-12, which modifies ASC 740 to simplify the accounting for income taxes. The ASU's amendments are based on changes that were suggested by stakeholders as part of the FASB's simplification initiative (i.e., the FASB's effort to reduce the complexity of accounting standards while maintaining or enhancing the helpfulness of information provided to financial statement users). ASU 2019-12 is effective for the Company's 2021 fiscal year. The Company is currently evaluating the impact of this new standard on its condensed consolidated financial statements.

## **Note 2 - Nexperia Arrangement**

### **Nexperia Transaction**

On April 4, 2018, the Company entered into a multi-element commercial arrangement with Nexperia B.V. (“Nexperia”) to obtain financing in exchange for the sale of equity instruments and performing certain technology and product development activities for Nexperia (collectively, the “Collaboration Arrangement”). Nexperia specializes in designing, manufacturing and selling a broad range of small discrete semiconductor devices that utilize components such as those manufactured by the Company. Financing under the Collaboration Arrangement is comprised of the following elements:

- \$16 million Series 3 preferred stock issuance
- \$9 million license fee for transfer of the Gen-3 manufacturing process
- \$5 million development loan, originally maturing March 31, 2020 and subsequently extended to June 30, 2020 intended to pre-fund the Gen-4 (Tranche A) technology development (the “Tranche A Loan”)
- \$10 million development loan maturing March 31, 2021 intended to pre-fund the Gen-5 and 1200V technology development (the “Tranche B Loan”)
- \$10 million revolving loan (the “Tranche C Loan”)

The Company has to use the funds to operate the business in a manner consistent with or reasonably related to those business activities as carried out on or prior to April 4, 2018, the effective date of Collaboration Arrangement. In addition to the multiple elements outlined above, the Company and Nexperia entered into a Supply Agreement requiring that the Company be Nexperia's primary supplier of specified components until September 30, 2020 on a best efforts basis. By entering into this Collaboration Arrangement, Nexperia will gain access to technology that allows for production of high power semiconductors for use in electric vehicles.

Further, Nexperia will obtain an exclusive license and market access to automotive customers outside of Japan and a sole license (non-exclusive of the Company), as well as market access to customers in other parts of the power market. Nexperia has a lien on certain of the Company's U.S. patents not relating to metal organic chemical vapor deposition ("MOCVD") or epiwafer technology, per the agreement.

On March 31, 2019, the Company executed Amendment No. 1 to the Loan and Security Agreement (the "LSA"), pursuant to which the Tranche B Loan was bifurcated into the following two separate sub-tranches:

- \$8 million development loan intended to pre-fund the Gen-5 (Tranche B) technology development (the "Tranche B Loan")
- \$2 million development loan intended to pre-fund the 1200V technology development (the "Tranche B-1 Loan" and, together with the Tranche B Loan, the "Tranche B Loans")

On February 7, 2020, Amendment No. 2 to the LSA was executed to acknowledge the then-pending Merger, reaffirm the terms of the loans and confirm the waiver for the late delivery of the Company's 2018 audited financial statements. On April 8, 2020, Amendment No. 3 to the LSA was executed to extend the maturity of the Tranche A Loan to April 30, 2020. On April 28, 2020, Amendment No. 4 to the LSA was executed to further extend the maturity of the Tranche A Loan to June 30, 2020. All other terms set forth under the original LSA remained unchanged following the amendments.

The Tranche A and Tranche B Loans represent pre-funding for Gen-4 (Tranche A), Gen-5 (Tranche B), and 1200V (Tranche B-1) technology development for Nexperia. The specific development activities and associated performance milestones are contained within a Statement of Work ("SoW") between the Company and Nexperia. The SoW may be modified from time to time based upon mutual business interests. This promise to perform the technology development is a good/service provided to a customer in exchange for consideration in the form of the technology development license fees that offset the Tranche A and Tranche B Loans outstanding. The Development Loans are recognized as a liability equal to the cash proceeds received.

In relation to the license fee for the transfer of the Company's Gen-3 manufacturing process to Nexperia, the Company received \$3 million (the first of three tranches) in October 2018, \$3 million (the second of three tranches) in April 2019, and \$3 million (the third of three tranches) in October 2019. The Company recognized \$9.0 million as licensing revenue during 2019 upon the completion of the transfer of the Company's Gen-3 manufacturing process technology and mutual sign off between Nexperia and the Company.

In January 2019, the Company received the \$5 million Tranche A Loan. In June 2020, Nexperia agreed that the \$5 million Tranche A Loan was permanently satisfied in full in connection with the Company transferring its Gen-4 technology development to Nexperia, at which point the Company recognized \$5 million as licensing revenue. In June and July 2019, the Company received the \$8 million Tranche B Loan. In December 2019, the Company received the \$2 million Tranche B-1 Loan.

The Company received the full \$10 million Tranche C Loan under the credit facility during the year ended December 31, 2018. See Note 6 - Debts.

### **Note 3 - Fair Value Measurements**

FASB ASC 820, *Fair Value Measurements and Disclosures*, establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

Level 1 - Unadjusted quoted prices in active markets for identical assets and liabilities.

Level 2 - Inputs (other than quoted prices included within Level 1) that are observable, unadjusted quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data of substantially the full term of the related assets or liabilities.

Level 3 - Inputs reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Inputs are unobservable for the asset or liability. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The following table summarizes the Company's liabilities measured at fair value as of September 30, 2020 and December 31, 2019, by level within the fair value hierarchy (*in thousands*):

	Level 1	Level 2	Level 3
<b>September 30, 2020</b>			
Promissory note	\$ —	\$ —	\$ 16,327
<b>December 31, 2019</b>			
Promissory note	\$ —	\$ —	\$ 16,169

The following table includes the changes in fair value of the promissory note which are Level 3 on the fair value hierarchy (*in thousands*):

	2020
<b>Fair value at January 1,</b>	<b>\$ 16,169</b>
Interest expense accrued	112
Increase in fair value	46
<b>Fair value at September 30,</b>	<b>\$ 16,327</b>
	2019
<b>Fair value at January 1,</b>	<b>\$ 15,852</b>
Interest expense accrued	150
Increase in fair value	167
<b>Fair value at December 31,</b>	<b>\$ 16,169</b>

The Company recorded interest expense of \$38 thousand for each of the three months ended September 30, 2020 and 2019, and interest expense of \$112 thousand for each of the nine months ended September 30, 2020 and 2019. Fair value of promissory note increased \$709 thousand and \$17 thousand for the three months ended September 30, 2020 and 2019, respectively, and fair value of promissory note increased \$46 thousand and \$101 thousand for the nine months ended September 30, 2020 and 2019, respectively.

There were no changes to our valuation techniques used to measure assets and liability fair values during the nine months ended September 30, 2020 and 2019. The valuation techniques for the items in the table above are as follows:

Level 3 borrowings, which consist of a promissory note, are measured and reported at fair value using a Monte Carlo simulation valuation model. The models can include assumptions related to the value of the notes that are based on the estimated timing and amounts of future rounds of financing, including the estimated timing of a change in control of the Company, and estimated market interest rates, which represent significant unobservable inputs. Assumptions used are (1) the Company is worth today what it can generate in future cash to the Company, (2) cash received today is more than an equal amount of cash received in the future, and (3) future cash flows can be reasonably estimated.

#### Note 4 - Concentration of Credit Risk and Significant Customers

The Company manages its credit risk associated with exposure to distributors and direct customers on outstanding accounts receivable through the application of credit approvals and other monitoring procedures. Credit sales, which are mainly on credit terms of 30 to 60 days, are only made to customers who meet the Company's credit standards, while sales to new customers or customers with low credit ratings are usually made on an advance payment basis. The Company closely monitors the aging of accounts receivable from its distributors and direct customers, and regularly reviews their financial positions, where available.

Significant customers are those that represent 10% or more of revenue or accounts receivable and are set forth in the following table:

	Revenue for the Nine Months Ended September 30,		Accounts Receivable As of	
	2020	2019	September 30, 2020	December 31, 2019
Customer A	67.3%	14.6%	44.0%	60.0%
Customer B	26.0%	51.1%	36.1%	20.4%

Customer A is a related party and Customer B is a government agency. See Note 11 - Related Party Transactions.

#### Note 5 - Inventory

Inventory consists of the following as of September 30, 2020 and December 31, 2019 (*in thousands*):

	As of	
	September 30, 2020	December 31, 2019
Raw materials	\$ 546	\$ 412
Work in process	396	258
Finished goods	430	320
<b>Total</b>	<b>\$ 1,372</b>	<b>\$ 990</b>

An inventory write-off of \$112 thousand and \$274 thousand was recorded for the three and nine months ended September 30, 2020, respectively. For the three and nine months ended September 30, 2019, no inventory write-off was recorded.

#### Note 6 - Debts

##### Development Loans

On April 4, 2018, the Company entered into a Loan and Security Agreement ("LSA") and Development and License Agreement ("DLA") with Nexperia. The LSA provided for term loans in an aggregate principal amount of up to \$15.0 million, which term loans were available in tranches (Tranche A, Tranche B and Tranche B-1) and subject to the satisfaction of specified conditions. The Tranche A Loan of \$5.0 million initially was scheduled to mature on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2020. On April 8, 2020, the maturity of the Tranche A loan was extended to April 30, 2020 and, on April 28, 2020, the maturity of the Tranche A Loan was further extended to June 30, 2020. On June 29, 2020, the Tranche A Loan of \$5.0 million was satisfied in full when the Company transferred its Gen-4 technology development to Nexperia. The Tranche B Loan of \$8.0 million and Tranche B-1 Loan of \$2.0 million mature on the earlier of the date a specified report is required to be delivered under the DLA or March 31, 2021, subject to extension as provided in the LSA. See Note 2 - Nexperia Arrangement.

As of September 30, 2020 and December 31, 2019, \$10.0 million aggregate principal amount of term loans were outstanding under the LSA.

## Revolving Credit Facility

The LSA also provided a \$10.0 million revolving loan (Tranche C Loan) maturing at the earlier of (i) April 3, 2021, and (ii) the date a Change of Control (as defined in the LSA) of the Company occurs. Interest payable by the Company accrues on the outstanding principal amount of the loans during such period at a rate of 6% per annum. The credit facility is secured against certain of our U.S. patents not relating to MOCVD or epiwafer technology. See Note 2 - Nexperia Arrangement.

The Tranche C Loan is recorded based on principal in the amount of \$10.0 million and accrued interest (6% interest per annum). The Company recorded interest expense of \$153 thousand for each of the three months ended September 30, 2020 and 2019, and interest expense of \$457 thousand and \$455 thousand for the nine months ended September 30, 2020 and 2019, respectively. The Company paid interest expense of \$762 thousand during the three months ended September 30, 2020. As of September 30, 2020 and December 31, 2019, the total balance of the revolving credit facility was \$10.2 million and \$10.5 million, respectively.

## Promissory Note

The Company's promissory note obligation at September 30, 2020 and December 31, 2019 consists of the following (*in thousands*):

	Interest Rate	Due Date	Stated Value at	
			September 30, 2020	December 31, 2019
Yaskawa Note	1.00%	September 2022	\$ 15,448	\$ 15,336

Pursuant to ASC 825-10-15-4, the Company elected to apply the fair value option for the promissory note. As of September 30, 2020 and December 31, 2019, the Company determined the fair value for the note, as compared to the face value, including accrued interest, as follows (*in thousands*):

	Fair Value at	
	September 30, 2020	December 31, 2019
Yaskawa Note	\$ 16,327	\$ 16,169

Fair value of promissory note increased \$46 thousand for the nine months ended September 30, 2020 and increased \$167 thousand for the year ended December 31, 2019.

In October 2017, the Company issued an unsecured subordinated convertible promissory note to Yaskawa Electric Corporation (the "Yaskawa Note") for \$15.0 million. The stated interest rate of the Yaskawa Note is 1.0%, and principal plus interest is due on the earlier of September 30, 2022, or the date of the occurrence of an Event of Default, Change of Control or an Initial Public Offering (all terms as defined in the Yaskawa Note). In connection with the Merger, the Yaskawa Note was amended to be convertible at the option of the holder into a maximum of 3,076,171 shares of our common stock at a conversion price of \$5.12 per share.

In connection with its promissory note obligation, the Company recorded interest expense of \$38 thousand for each of the three months ended September 30, 2020 and 2019, and interest expense of \$112 thousand for each of the nine months ended September 30, 2020 and 2019. In accordance with the terms of the promissory note, interest is added to the principal balance and is reflected in the carrying value on the condensed consolidated balance sheet. As of September 30, 2020 and December 31, 2019, accrued interest on the promissory note was \$448 thousand and \$336 thousand, respectively.

In February 2020, the Company entered into a letter of intent ("LOI") with Yaskawa that will form the basis for a mutually beneficial cooperation agreement between the Company and Yaskawa, which is expected to be finalized by the end of 2020. Under the LOI, Yaskawa intends to enter into a long-term cooperation and development agreement with the Company to use the Company's GaN power device products for a variety of

industrial power conversion applications, which will initially focus on servo motor drive applications. Yaskawa also intends to provide at least \$4.0 million to fund the Company's development activities from which amount Yaskawa intends to provide \$1.0 million in 2020 in connection with the ongoing development activities.

As of September 30, 2020, the scheduled maturity on the development loans, revolving credit facility and promissory note was as follows (*in thousands*):

<b>Year Ending December 31,</b>	<b>Amount</b>
2020	\$ 10,153
2021	10,000
2022	15,748
<b>Total</b>	<b>\$ 35,901</b>

#### **Note 7 - Investment in Aizu Fujitsu Semiconductor Wafer Solution Limited ("AFSW")**

The Company has a 49% interest in AFSW and is a party to a joint venture agreement (the "JVA") with Fujitsu Semiconductor Limited ("FSL"), the 51% owner of AFSW. AFSW manufactures semiconductor products exclusively for its owners under manufacturing agreements at prices estimated to cover the cost of production. AFSW was determined to be a variable interest entity ("VIE") as the equity at risk was not believed to be sufficient. AFSW depends on its owners for any additional cash. The Company extended \$5.3 million and \$2.7 million to AFSW to fund AFSW's operations for the nine months ended September 30, 2020 and the year ended December 31, 2019, respectively. The Company's known maximum exposure to loss approximated the carrying value of its investment balance, which included the financing. Potential future losses could be higher than the carrying amount of the Company's investment, as we are liable, along with the other owner, for other future operating costs or obligations of AFSW. In addition, because Transphorm is currently committed to purchasing GaN wafers and production-related services from AFSW at pre-agreed pricing based upon the Company's second generation products, the Company may be required to purchase products at a higher cost for its newer generation products. Unfunded commitment to AFSW was \$1.7 million as of September 30, 2020 and December 31, 2019.

On April 1, 2020, FSL exercised its put option under the JVA and notified us that FSL intended to exit the joint venture by selling its 51% interest in AFSW to us. Under the terms of the JVA, the aggregate purchase price for FSL's interest in AFSW is expected to be one Japanese Yen. While the agreement provides that completion of the transaction was to take place as soon as 60 days from the date of the exercise notice, such transaction will be subject to regulatory and other approvals in Japan, which we believe will take an additional three to six months from the date of issuance of these financial statements to obtain, assuming such approval is received at all. For at least one year following the date on which we take over full ownership of AFSW, we have agreed to use our best efforts to maintain and continue the operations of AFSW, which is also synergistic with our own business for securing wafers for our products.

The Company's investment activities in AFSW for the nine months ended September 30, 2020 and the year ended December 31, 2019 are summarized below (*in thousands*):

	<b>For the Nine Months Ended September 30, 2020</b>	<b>For the Year Ended December 31, 2019</b>
Beginning balance	\$ (1,688)	\$ (659)
Investment	5,327	2,698
Loss	(5,218)	(3,703)
Effect of exchange rate change	(105)	(24)
<b>Ending balance</b>	<b>\$ (1,684)</b>	<b>\$ (1,688)</b>

Summarized financial information (unaudited) of AFSW for the periods indicated, as provided by the controlling owner, are as follows (in thousands):

	As of	
	September 30, 2020	December 31, 2019
Current assets	\$ 1,138	\$ 3,733
Long-term assets	\$ 5,412	\$ 5,101
Other current liabilities	\$ 2,557	\$ 931
Due to controlling owner	\$ 19,633	\$ 17,913
Due to Transphorm	\$ 10,910	\$ 5,349
Net deficit	\$ (26,550)	\$ (15,359)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Sales	\$ 492	\$ 2,613	\$ 2,278	\$ 8,864
Gross loss	\$ (3,170)	\$ (835)	\$ (8,515)	\$ (4,002)
Net loss	\$ (3,965)	\$ (1,585)	\$ (10,649)	\$ (6,130)

## Note 8 - Commitments and Contingencies

### Commitment with a Government Agency

In connection with a contract with a government agency, the Company entered into a commitment to acquire equipment and services from vendors totaling \$6.7 million, all of which is reimbursable. For the three and nine months ended September 30, 2020, the Company received reimbursements of \$1.4 million and \$5.3 million, respectively, from the government agency. As of September 30, 2020, the remaining commitment under the contract was approximately \$1.4 million. For the three and nine months ended September 30, 2020, the Company paid \$616 thousand and \$4.1 million, respectively, for equipment purchases. As of September 30, 2020, the remaining accounts payable to the vendors was approximately \$798 thousand.

### Operating Leases

The Company leases office and fabrication space in Goleta, California, and office spaces in San Jose, California and in Japan under noncancelable operating lease agreements. The terms of certain leases provide for escalating rental payments through the term of the lease. The Company recognizes rent expense on a straight-line basis over the lease term and accrues for rent expense incurred but not paid.

As of September 30, 2020, future minimum operating lease commitments were as follows (in thousands):

Year Ending December 31,	Amount
2020	\$ 180
2021	571
2022	163
<b>Total</b>	<b>\$ 914</b>

The Company recorded rent expense, net of rental income, which includes common area maintenance fees in addition to the base rent, of \$228 thousand and \$233 thousand for the three months ended September 30, 2020 and 2019, respectively, and \$655 thousand and \$672 thousand for the nine months ended September 30, 2020 and 2019, respectively. Rental income from a noncancelable sublease was \$45 thousand for each of the three months ended

September 30, 2020 and 2019, and \$136 thousand for each of the nine months ended September 30, 2020 and 2019. As of September 30, 2020, the future minimum rental payments to be received under the noncancelable sublease are \$78 thousand through February 2021.

### **Contingencies**

During the ordinary course of business, the Company may become a party to legal proceedings incidental to its business. The Company accrues contingent liabilities when it is probable that future expenditures will be made and such expenditures can be reasonably estimated. Legal cost is expensed as incurred. The Company is not aware of any material legal claims or assessments. Although the results of litigation and claims are inherently unpredictable, management believes there was not at least a reasonable possibility that the Company had incurred a material loss with respect to any loss contingencies as of September 30, 2020 and through the issuance of these financial statements.

### **Indemnification**

The Company from time to time enters into types of contracts that contingently require the Company to indemnify parties against third-party claims. These contracts primarily relate to: (1) real estate leases, under which the Company may be required to indemnify property owners for environmental and other liabilities and for other claims arising from the Company's use of the applicable premises; (2) agreements with the Company's officers, directors, and employees, under which the Company may be required to indemnify such persons from liabilities arising out of their relationship; (3) indemnifying customers in the event of product failure; and (4) agreements with outside parties that use the Company's intellectual property, under which the Company may indemnify for copyright or patent infringement related specifically to the use of such intellectual property.

Historically, the Company has not been required to make payments under these obligations, and no liabilities have been recorded for these obligations in the Company's condensed consolidated financial statements.

### **Note 9 - Stockholders' Equity**

On February 12, 2020, in connection with the Merger, shares of Transphorm Technology's convertible preferred stock and common stock issued and outstanding immediately prior to the closing of the Merger were converted into shares of the Company's common stock as follows:

- Series 1 convertible preferred stock: 51,680,254 shares issued and outstanding were converted into 12,433,953 shares issued and outstanding;
- Series 2 convertible preferred stock: 38,760,190 shares issued and outstanding were converted into 7,499,996 shares issued and outstanding;
- Series 3 convertible preferred stock: 31,850,304 issued and outstanding were converted into 4,000,000 shares issued and outstanding; and
- Common stock: 50,325,662 shares issued and outstanding were converted into 4,171,571 shares issued and outstanding.

In addition, on February 12, 2020, the Company issued 1,650,000 shares in connection with the Merger with Peninsula Acquisition Corporation and redeemed 52,773 shares from unaccredited investors.

All per share and share amounts for all periods presented have been retroactively adjusted to reflect the effect of the Merger.

In December 2019, the Company amended its certificate of incorporation to authorize two classes of stock, to be designated, respectively, common stock and preferred stock. The total number of shares of stock that the Company shall have authority to issue is 755,000,000 shares, of which 750,000,000 shares are common stock, \$0.0001 par value per share, and 5,000,000 shares are preferred stock, \$0.0001 par value per share.



As of September 30, 2020, 750,000,000 shares of common stock are authorized, of which 35,266,496 shares of common stock were issued and outstanding, and 5,000,000 shares of preferred stock are authorized, none of which were issued and outstanding. The Company's Board of Directors has the ability to designate the rights, preferences and privileges for the preferred stock.

### Private Placement

On February 12, 2020 and February 27, 2020, we sold an aggregate of 5,380,000 shares of common stock pursuant to closings of a private placement offering (the "Private Placement") at a purchase price of \$4.00 per share. We granted to the investors in the Private Placement registration rights requiring us to register those shares of common stock for public resale. The then existing stockholders of Transphorm Technology also became entitled to such registration rights. The aggregate gross proceeds from the closings of the Private Placement were \$21.5 million (before deducting placement agent fees and expenses of such closings, which were an aggregate of \$1.8 million).

The issuance of common stock in the Private Placement was not registered under the Securities Act, in reliance upon the exemption from registration provided by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated by the SEC. The common stock issued in the Private Placement was sold to "accredited investors," as defined in Regulation D, and was conducted on a "reasonable best efforts" basis.

### Common Stock

Common stockholders are entitled to dividends, as and when declared by the Company's Board of Directors, subject to the priority dividend rights of the holders of other classes of stock. There have been no dividends declared to date. The holder of each share of common stock is entitled to one vote.

At September 30, 2020, the Company has reserved shares of common stock for future issuance as follows:

Equity incentive plans	5,042,525
Common stock warrants	15,461
<b>Total</b>	<b>5,057,986</b>

### Common Stock Warrants

At September 30, 2020, the following warrants to purchase common stock were outstanding:

Number of Shares	Exercise Price	Expiration Date
6,046	\$34.74	November 2020
6,046	\$34.74	5 years after an initial public offering of the Company
3,369	\$54.41	5 years after an initial public offering of the Company
<b>15,461</b>		

### Note 10 - Stock Based Compensation

The 2020 Equity Incentive Plan (the "2020 Plan") was approved by Transphorm Technology's board of directors on February 10, 2020 and Transphorm Technology's stockholders on February 12, 2020, and became effective on the business day immediately prior to the closing of the Merger. Our stockholders approved the 2020 Plan on February 11, 2020. We assumed the 2020 Plan in connection with the Merger. As of September 30, 2020, there were 1,902,922 shares available for grant and 816,180 restricted stock units outstanding under the 2020 Plan. The 2020 Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, stock appreciation rights, restricted stock, restricted stock

units (“RSUs”), performance units, and performance shares to our employees, directors, and consultants and our parent and subsidiary corporations’ employees and consultants.

Subject to the adjustment provisions of the 2020 Plan, and the automatic increase described in the 2020 Plan, the maximum aggregate number of shares of our common stock that may be issued under the 2020 Plan is 5,050,000 shares of our common stock, which includes (i) 2,588,077 shares initially reserved for issuance, plus (ii) any shares of our common stock subject to issued and outstanding awards under the 2007 Plan or 2015 Plan that were assumed in the Merger and that, on or after the closing of the Merger, expire or otherwise terminate without having been exercised or issued in full, are tendered to or withheld by us for payment of an exercise price or for tax withholding obligations, or are forfeited to or repurchased by us due to failure to vest, with the maximum number of shares to be added to the 2020 Plan pursuant to this clause (ii) equal to 2,461,923 shares. Subject to the adjustment provisions of the 2020 Plan, the number of shares of common stock available for issuance under the 2020 Plan will also include an annual increase on the first day of each fiscal year beginning with our 2022 fiscal year and ending on (and including) our 2030 fiscal year, in an amount equal to the least of: 5,000,000 shares of our common stock; five percent (5%) of the outstanding shares of our common stock on the last day of the immediately preceding fiscal year; or such number of shares of our common stock as the administrator of the 2020 Plan may determine.

## Stock Options

The following table summarizes stock option activity and related information for the three months ended September 30, 2020 and 2019:

	Number of Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (1) (in thousands)
<b>Balance at July 1, 2020</b>	2,454,687	\$ 4.74	6.33	\$ —
Options exercised	(3,475)	\$ 3.80		
Options canceled	(123,789)	\$ 5.91		
<b>Balance at September 30, 2020</b>	<u>2,327,423</u>	\$ 4.68	6.16	\$ 167
<b>Exercisable at September 30, 2020</b>	<u>2,211,723</u>	\$ 4.74	6.08	\$ 111
<b>Balance at July 1, 2019</b>	2,342,440	\$ 4.84	7.16	\$ —
Options granted	125,183	\$ 3.14		
Options canceled	(13,811)	\$ 4.58		
<b>Balance at September 30, 2019</b>	<u>2,453,812</u>	\$ 4.69	7.06	\$ —
<b>Exercisable at September 30, 2019</b>	<u>1,984,257</u>	\$ 4.95	6.85	\$ —

(1) Intrinsic value represents the excess of the fair value on the last trading day of the period, which was \$4.00 as of September 30, 2020, over the exercise price, multiplied by the number of options.

The following table summarizes stock option activity and related information for the nine months ended September 30, 2020 and 2019:

	Number of Options Outstanding	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (1) (in thousands)
<b>Balance at January 1, 2020</b>	2,473,130	\$ 4.67	6.84	\$ —
Options authorized	—	\$ —		
Options exercised	(6,821)	\$ 3.78		
Options canceled	(138,886)	\$ 5.72		
<b>Balance at September 30, 2020</b>	<b>2,327,423</b>	<b>\$ 4.68</b>	<b>6.16</b>	<b>\$ 167</b>
<b>Exercisable at September 30, 2020</b>	<b>2,211,723</b>	<b>\$ 4.74</b>	<b>6.08</b>	<b>\$ 111</b>
<b>Balance at January 1, 2019</b>	2,377,180	\$ 4.83	7.46	\$ —
Options granted	183,109	\$ 3.14		
Options canceled	(106,477)	\$ 4.34		
<b>Balance at September 30, 2019</b>	<b>2,453,812</b>	<b>\$ 4.69</b>	<b>7.06</b>	<b>\$ —</b>
<b>Exercisable at September 30, 2019</b>	<b>1,984,257</b>	<b>\$ 4.95</b>	<b>6.85</b>	<b>\$ —</b>

(1) Intrinsic value represents the excess of the fair value on the last trading day of the period, which was \$4.00 as of September 30, 2020, over the exercise price, multiplied by the number of options.

## Restricted Stock

### Restricted Stock Awards

RSAs are grants of shares of our common stock that vest in accordance with terms and conditions established by the Company's Board of Directors. Recipients of RSAs generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the RSA agreement provides otherwise. Shares of restricted stock that do not vest are subject to forfeiture. In September 2020, we granted 123,501 RSAs outside of our 2020 Plan. Seventy percent of these RSAs was vested on the date of grant and the remainder is scheduled to vest 120 days following the grant date. The following table summarizes RSA activity and related information for the three and nine months ended September 30, 2020:

	September 30, 2020			
	Three Months Ended		Nine Months Ended	
	Number of Shares	Weighted-Average Grant Date Fair Value Per Share	Number of Shares	Weighted-Average Grant Date Fair Value Per Share
Balance at beginning of period	—	\$ —	—	\$ —
Granted	123,501	\$ 4.00	123,501	\$ 4.00
Vested	(86,450)	\$ 4.00	(86,450)	\$ 4.00
<b>Balance at end of period</b>	<b>37,051</b>	<b>\$ 4.00</b>	<b>37,051</b>	<b>\$ 4.00</b>

### Restricted Stock Units

RSUs are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator of the 2020 Plan. Subject to the provisions of the 2020 Plan, the administrator

determines the terms and conditions of RSUs, including the vesting criteria. We granted 816,180 RSUs during the third quarter of 2020, 4,000 of which were fully vested on the date of grant. The remainder of the RSUs are scheduled to vest as follows: one third will vest on each of January 1, 2022, January 1, 2023 and July 1, 2023, in each case subject to the RSU holders' continued status as a service provider to the Company through each vesting date. The following table summarizes RSU activity and related information for the three and nine months ended September 30, 2020:

	September 30, 2020			
	Three Months Ended		Nine Months Ended	
	Number of Shares	Weighted-Average Grant Date Fair Value Per Share	Number of Shares	Weighted-Average Grant Date Fair Value Per Share
Balance at beginning of period	—	\$ —	—	\$ —
Granted	816,180	\$ 4.00	816,180	\$ 4.00
Vested	(4,000)	\$ 4.00	(4,000)	\$ 4.00
<b>Balance at end of period</b>	<b>812,180</b>	<b>\$ 4.00</b>	<b>812,180</b>	<b>\$ 4.00</b>

### Stock-Based Compensation

The accompanying condensed consolidated statement of operations and comprehensive loss includes stock-based compensation expense as follows (*in thousands*):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Cost of revenue	\$ 17	\$ 24	\$ 43	\$ 44
Research and development	62	60	148	146
Sales and marketing	11	8	23	24
General and administrative	494	67	606	221
<b>Total</b>	<b>\$ 584</b>	<b>\$ 159</b>	<b>\$ 820</b>	<b>\$ 435</b>

### Unrecognized Stock-Based Compensation

Unrecognized stock-based compensation expense was as follows (*in thousands*):

	As of September 30, 2020		As of September 30, 2019	
	Unrecognized Expense	Average Expected Recognition Period	Unrecognized Expense	Average Expected Recognition Period
Stock options	\$ 113	0.87 years	\$ 573	1.34 years
Restricted stock	\$ 3,297	2.64 years	—	—
<b>Total</b>	<b>\$ 3,410</b>	<b>2.43 years</b>	<b>\$ 573</b>	<b>1.34 years</b>

### Note 11 - Related Party Transactions

During the three months ended September 30, 2020, the Company entered into the following related party transactions:

- Recorded \$60 thousand in cost of goods sold for services, recorded research and development expense of \$418 thousand and recorded \$10 thousand in payroll related cost from the AFSW joint venture;

- Sold \$113 thousand of products to non-controlling stockholders of the Company and incurred \$50 thousand of license maintenance fee from a non-controlling stockholder of the Company; and
- Recorded \$31 thousand in license fee income, recorded \$280 thousand in EPI Gen 4 wafer growth sales, recorded \$38 thousand of reimbursements in license maintenance fee, recorded \$153 thousand in interest expense and sold \$174 thousand of products to a stockholder and noteholder of the Company. See Note 2 - Nexperia Arrangement.

During the nine months ended September 30, 2020, the Company entered into the following related party transactions:

- Recorded \$228 thousand in cost of goods sold for services, recorded research and development expense of \$1.1 million, of which \$408 thousand was reimbursable, recorded \$84 thousand in other expense for commitment for services, and recorded \$11 thousand in payroll related cost from the AFSW joint venture;
- Sold \$153 thousand of products to non-controlling stockholders of the Company and incurred \$150 thousand of license maintenance fee from a non-controlling stockholder of the Company; and
- Recorded \$5.1 million in license fee income, recorded \$280 thousand in EPI Gen 4 wafer growth sales, recorded \$113 thousand of reimbursements in license maintenance fee, recorded \$457 thousand in interest expense, recorded \$408 thousand reimbursement for research and development, and sold \$877 thousand of products to a stockholder and noteholder of the Company. See Note 2 - Nexperia Arrangement.

As of September 30, 2020, total due from related parties was \$12.3 million, consisting of \$11.3 million due from the AFSW joint venture, \$113 thousand accounts receivable from non-controlling stockholders of the Company, and \$532 thousand accounts receivable and \$338 thousand other receivable from a stockholder and noteholder of the Company. As of September 30, 2020, total accounts payable to related parties was \$434 thousand to the AFSW joint venture.

During the three months ended September 30, 2019, the Company entered into the following related party transactions:

- Recorded \$379 thousand in cost of goods sold for services, recorded research and development expense of \$117 thousand, and incurred \$6 thousand for employees and their benefits seconded from the AFSW joint venture;
- Sold \$58 thousand of products to non-controlling stockholders of the Company; and
- Recorded \$16.0 million of reimbursements in license maintenance fee, incurred \$38 thousand of license maintenance fee, recorded \$153 thousand in interest expense and sold \$178 thousand of products to a stockholder and noteholder of the Company. See Note 2- Nexperia Arrangement.

During the nine months ended September 30, 2019, the Company entered into the following related party transactions:

- Recorded \$477 thousand in cost of goods sold for services, recorded research and development expense of \$320 thousand, and incurred \$21 thousand for employees and their benefits seconded from the AFSW joint venture;
- Sold \$216 thousand of products to non-controlling stockholders of the Company, incurred \$100 thousand of license maintenance fee to a non-controlling stockholder, and incurred \$21 thousand

for employees and their related benefits seconded from a non-controlling stockholder of the Company; and

- Recorded \$16.0 million in unearned revenue for sales, recorded \$113 thousand of reimbursements in license maintenance fee, recorded \$455 thousand in interest expense and sold \$293 thousand of products to a stockholder and noteholder of the Company. See Note 2- Nexperia Arrangement.

As of December 31, 2019, total due from related parties was \$5.8 million, consisting of \$5.3 million due from the AFSW joint venture, \$38 thousand accounts receivable from non-controlling stockholders of the Company and \$426 thousand accounts receivable from a stockholder and noteholder of the Company. As of December 31, 2019, total accounts payable due to related parties was \$272 thousand to non-controlling stockholders of the Company.

#### **Note 12 - Subsequent Events**

The Company has evaluated subsequent events through the issuance of these financial statements and is not aware of any material items that would require disclosure in the notes to the financial statements or would be required to be recognized as of September 30, 2020.