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OTCQB: TGAN

Leading the GaN Revolution

Fourth Quarter 2020 Business Update

March 9, 2021

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Highest Performance, Highest Reliability GaN

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Key Investment Highlights

Disruptive Technology
GaN enables next generation power conversion solutions in rapidly growing, significant markets

Commercially Ramping
Technology and product development completed, set up for 50-80% revenue CAGR

Large Market Opportunity: Electric Vehicle and 5G
Transphorm's GaN Solutions will Enable the Future of Electric Vehicles and fast-charging for 5G

Best-In-Class GaN Technology and Industry's Strongest IP Position
IP portfolio recently appraised in excess of $200M

Validation From Blue Chip Partners and Customers
Including Nexperia, Marelli, Yaskawa, Microchip and the U.S. Department of Defense (Navy)

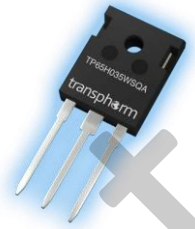
Team Led by World-Renowned GaN Experts
18 PhDs and over 300 Years of GaN Expertise

Mega Market Trends Driving Growth for GaN

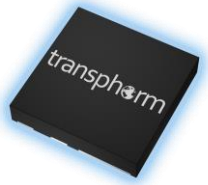
Electric Vehicles
- On-board Chargers
- Power Converters
- Power Inverters

5G – Power Devices
- Smartphones & Tablets
- Laptops & Gaming Consoles
- Crypto-Mining

5G – RF Devices
- Infrastructure
- High-Frequency Broadband
- DoD



GaN Power FETs



Epiwafer

Notes:
1) Department of Industry, Innovation and Science (2019).
2) BofA Global Research.
3) Strategy Analytics: RF GaN Market Forecast: 2018 – 2023.

Targeting $3 Billion Market Opportunity

Upside to TAM Expected From Electric Vehicle Powertrain Starting in 2025

End Market Applications and GaN Benefits

Near Term

Long Term

Power Adapters | Compute

- Fast Charging
- Lower thermals/improved power density/smaller form factor
- Lower system cost

Data Center | Comm Infrastructure | Crypto-Mining

- Ability to double available power in standardized server and 5G telecom form factors
- Enable Ti-class efficiency EU requirement

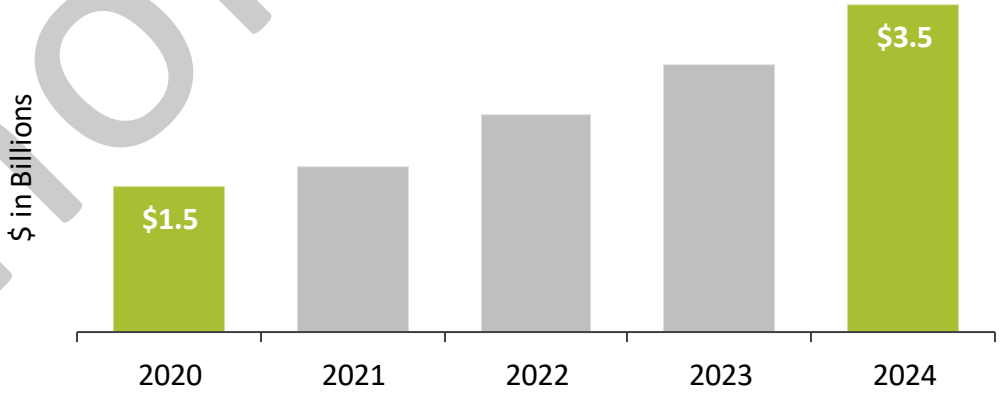
Broad Industrial

- Reduces size/weight of systems
- More efficient charging for battery and/or battery-powered equipment and vehicles

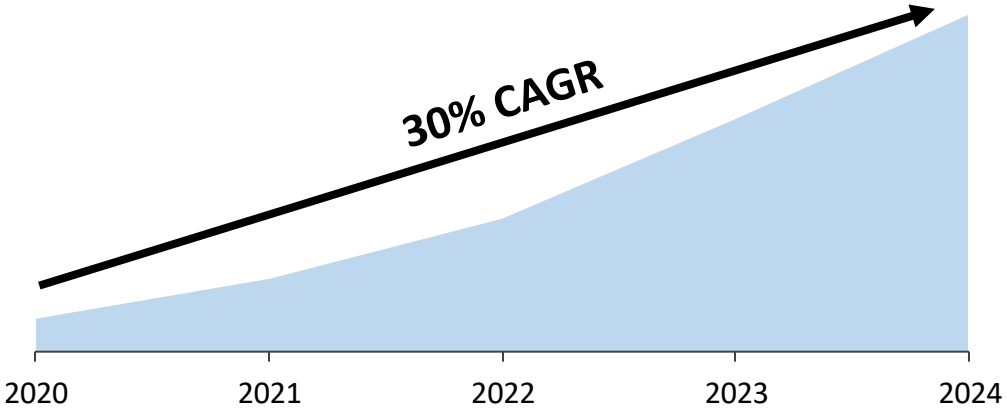
Automotive EV and Charging

- Reduces size/weight of on-board chargers, power converters and power inverters
- Resulting in longer distance per charge

Total Addressable Market for GaN[1]



GaN Adoption Curve[2]



Notes:

1) Sources: IDC (Data Center / Comm Infrastructure); Counterpoint Research, Mordor Intelligence (Power Adapters / Compute); Yole, IHS (Broad Industrial); Department of Industry, Innovation and Science (2019) (Automotive). TAM values are then calculated based on available technology, competition and value add to market.
2) IHS Markit: Power Semiconductor Intelligence Service – PCIM Europe 2019.

Fast Chargers: Changing the Adapter Landscape

One Power Adapter for Multiple Portable Devices, Higher power ⇔ Fast Charging

- Fast Chargers can adapt power level for different products with same charger
- Future phones / 5G smart phones will require and utilize 65 Watts / more for fast charging
- Leading smartphone can rely on aftermarket adapters – accelerating demand → high-volume market

Select Pipeline of Transphorm GaN Based Adapters

(20+ design-ins in progress)

Ultra slim, light weight (65 W)

Compact, high efficiency (68 W)

High-efficiency (65 W)

Wall plug – high efficiency, compact (35 W)

Compact, 65W, Type A

150W, 1.25x power density and high efficiency

	transphorm	vs. Leading Competition[1]
Reliability	Best-in-class, FIT < 1 several firsts for quals/lifetimes	***GaN enables smaller form factor and higher efficiency***
Robustness	Best-in-class	
GaN Technology	2-chip normally off Easy to drive	
Adapter Technology	Discrete / module	
GaN Device Size / Cost	Baseline / Lower	
Operating Speed (freq.) / Adapter Size	Fast / Small solution	
Performance (FOM)	Best-in-class	

Better Quality and Reliability

50% Smaller GaN Die Size

Up to ~3x Higher Frequency

GaN Device FOM ~30% Better

Notes:

1) Based on typical 65W GaN adapter/chargers available in market, not all comparisons are simultaneous.

Kilowatt-class Power Supplies

GaN Power for Data Center | Comms Infrastructure | Crypto-Mining Applications

GaN Offers Substantial Systems Cost Savings within Data Centers

- 40% of total operational costs come from energy to power and cool server racks
- GaN enables **~2x increase in power density, 98%+ efficiency**
- GaN enables 80+ Titanium class efficiency certification in a simpler manner

"Titanium" Server Power Supply Solutions

(1.5 kW to 3.2 kW), **Powered by TGAN**

Smaller

Faster

Cooler

5 MW Data Center Example

AC Line (208 Vac) to 400 Vdc to 48 Vdc

- $103K saved / year[1]
- 397 tons reduced carbon footprint[2]

Regulation: The European Union's Ecodesign Directive[3] on *Jan 1, 2023* increases efficiency and power factor requirements

Near- and Intermediate-Term Market Drivers

Crypto-Mining Demand – building systems requiring Titanium efficiency

- Power hungry process – consumes comparable to Argentina electrical usage [4]
- Power supply – component running 24/7 taking most stress in mining rig [5]
- Transphorm solutions can enable up to 1% higher efficiency at 230V AC

Highly Efficient

Highly Reliable

Notes:
1) Based on company estimates done for a 5MW data center.
2) Based on existing rectifiers with 92% efficiency | Source: EPA estimated one kWh produces 1.52 pounds of carbon dioxide (excl. line-losses).
3) European Union's Ecodesign Directive (Directive 2009/125/EC).
4) Cambridge University research | BBC News, "Bitcoin consumes 'more electricity than Argentina'"
5) tom's Hardware, "Best Power Supply Units for Cryptocurrency Mining"

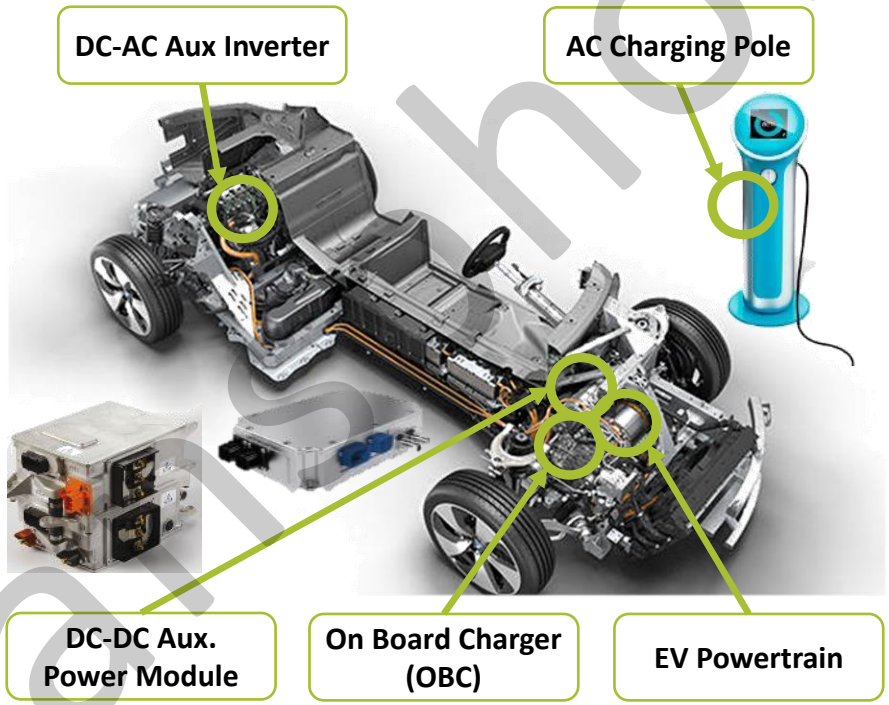
Electric Vehicle GaN Advantage

Transphorm GaN Solutions will Enable the Future of Electric Vehicles

GaN Solutions for Today's EV Challenges

- Cuts total power-stage losses ~ 25% vs. SiC [1]
- ~50% OBC weight/volume savings vs. Si [3]
- Range extension and design freedom
- Applicable to OBC, DC to DC, and DC to AC (non-drive) - Today
- Fast-charging support for AC Charging Pole (Level I & II) and fast DC charging (50+ kW)
- Inverter power density 25kW/L (today) to > 75kW/L (future)[4,5] , 50 => 150 kW Power

EV Applications



Future of Electric Vehicles

Cooler · Greener · Lighter · Efficient

- 300+ mile Battery-Powered Electric Vehicles[2]
- OBC: 80% within 15 mins[2]
- DC to DC 3 kW to 5 kW
- ~$250 savings per inverter[2]
- Life expectancy 150K to 300K miles by 2025[2]
- Cost < 3 years gas savings[2]

Notes:
Calculations are based on a 100 kW peak power drive inverter with supporting power systems.

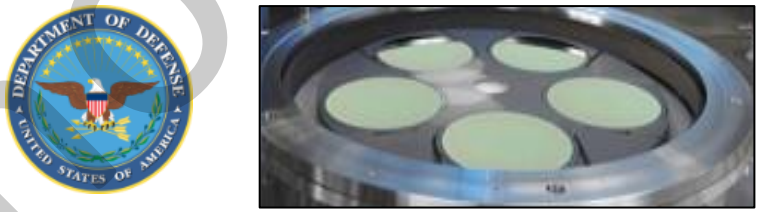
1) A 650V/780A GaN Powered HEMT Enabling 10kW-Class High-efficiency Power Conversion.
2) US DRIVE Driving Research and Innovation for Vehicle Efficiency and Energy Sustainability.
3) High-Efficiency High-Density GaN-Based 6.6kW Bidirectional On-board Charger for PEVs (DOE/TPH/Fiat Chrysler)
4) Nexperia, Breakthrough in powertrain electrification: Nexperia partners with Ricardo to develop GaN based Inverter Design (video) – paragraph below video speaks to future 150 kW in same form factor
5) Company internal discussions with Auto EV customer-partner

Supplying U. S. Department of Defense Ecosystem

Dual Use – Transphorm is Not Restricted to Supply Epi Only to the U.S. DoD

$19 Million Contract With the U.S. Navy (ONR) – New Reactor Operational, Execution on track

- Establishing Transphorm as a **one-stop U.S. based supplier of GaN Epi wafers for DoD / commercial use**
- Develop next gen Nitrogen Polar RF GaN Epi – enabling new RF device roadmap with exclusive IP



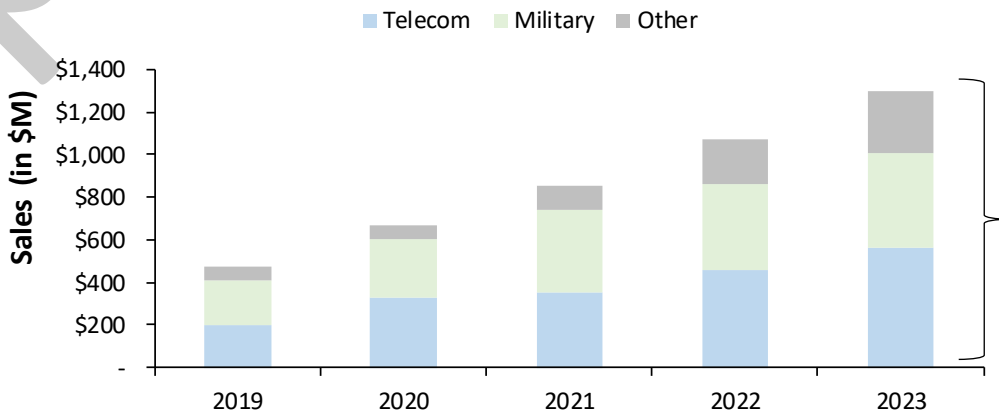
Base Program | **Option Program**

4-inch SiC → 6-inch SiC, Si, Sapphire → 8-inch Si, Sapphire. SiC (when available)

Enables Epi manufacturing and scaling roadmap

- Initial sales for Transphorm in Military/Defense (now)

Forecast of GaN RF Devices Market Size(1)



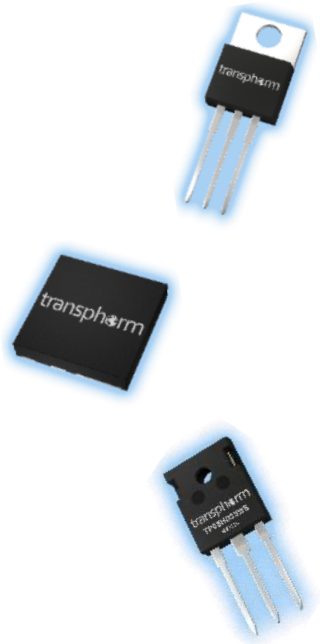
transphorm ***targeting Epi portion of market (~15% - 20%)***

- Broad 5G adoption grows the market, $10M Epi revenue potential in 2022, represents about 5% of market

Notes:
1) RF GaN Market: applications, players, devices, and technologies 2018–2023.

Industry's Strongest GaN IP Position

1,000+ Worldwide Owned and Licensed Patents Valued in Excess of $200 Million(1)



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332 Patents

UCSB

28 Patents

FUJITSU

172 Patents

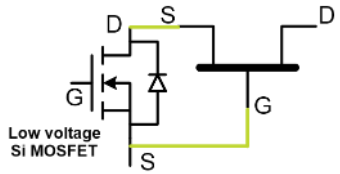
- Materials
- Device
- Fabrication
- Circuit
- Applications
- Package

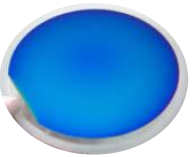
CREE

350+ Patents

FURUKAWA

150 Patents





"**Transphorm** today has the **dream patent portfolio** for all those who want to **benefit** from strategic advantages in **GaN power electronics** market…"(2)

– KnowMade
Patent & Technology Intelligence

Notes:
1) 2021 Analysis done for GaN portfolio using Intracom Group Intellectual Property Solutions' patent valuation models based on 27 independent criteria, value consists of Transphorm's owned or exclusively licensed patents (non-exclusive patents not included)
2) KnowMade Patent and Technology Intelligence report, "Power GaN intellectual property (IP): high-voltage power semiconductor leaders, a core set of strong IP players and numerous newcomers."

Business Update – Execution on Key Priorities

Delivered on 2020 Revenue Despite CV-19 Impacts

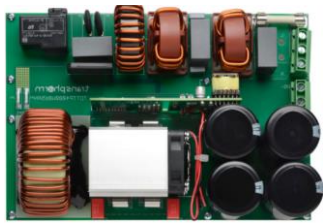
Adapter, Server Products with Transphorm GaN in Market

- Fulfilled high-volume adapter PO in Q4'20, secured new wins with 7 figure+ unit orders
- New order for Gen4 GaN for crypto mining power supply
- Continued orders for datacenter, gaming power supplies – Robust TO247 multi kW class

Product Update in Q4 and early '21 – Adapters to UPS/Power Supplies

- Gen4 product first automotive qualification (TO247)
- Availability of a new power supply simulation design model with Keysight
- Demonstrated 25% lower loss versus silicon carbide (Gen5)

KEYSIGHT TECHNOLOGIES



Execution on Government Programs and Securing RF Epi Sales

- Completed installation of epi reactor (Navy program), now available for qualifications
- Began discussions on prospective supply engagements with multiple new prospective commercial RF epi customers – secured first sample PO

Building on Strategic Customer Relationships

- Signed Yaskawa NRE agreement, and received first $1M funding
- Continued execution on Nexperia and Marelli automotive partnerships

Key Focus Areas and Priorities for 1H 2021

Execute on Revenue Ramp in 2021 – Adapters, Servers, Epi Products

Ramp and Expand Wins in Adapters/Fast Chargers, Server, Gaming, & Mining Power Supplies

- Continue ramp of high-volume shipments in support of multiple new wins: 10+ Adapters with TPH GaN in production and target 20+ design-ins
- Ship production backlog for gaming/servers/mining products (Gen 3 and Gen 4 TO247 high power)
- Manage supply constraints and expand production capability of >1m/month adapter products in 2H'21

New Product Sampling and Qualifications

- Continued sampling of Gen 4 products, expanding for ≥ 100 W adapters
- Secure >3 more reference designs for Adapters with strong industry partners (45W – 150W)
- Gen 5 product on track for commercial qualifications

Secure Government Revenue and Expand RF Epi Sales

- Grow RF epi business vertical, increasing DoD customer revenue and advancing early engagements with commercial customers as well
- Meet Navy program revenue and pilot epiwafer products running on Navy reactor

Milestones with Strategic Partners/Customers

- $1M pre-agreed equity investment from Marelli
- Continued execution on Yaskawa NRE agreement, secure $0.75M
- Continued execution on Nexperia cooperation agreement

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Fourth Quarter 2020 Financial Overview

March 9, 2021

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Highest Performance, Highest Reliability GaN

Income Statement

(numbers in thousands, $k)	Three Mths Ended Dec 31		Twelve Mths Ended Dec 31	
	2020	2019	2020	2019
Revenue, net	**2,013**	**9,923**	**11,371**	**11,934**
Operating expenses:				
Cost of goods sold	1,936	2,140	6,682	6,492
Research and development	1,453	1,901	5,584	8,146
Sales and marketing	581	509	2,174	2,609
General and administrative	2,490	2,497	10,328	6,606
Total operating expenses	**6,460**	**7,047**	**24,768**	**23,853**
Loss from operations	(4,447)	2,876	(13,397)	(11,918)
Other (income)/expenses	265	347	4,512	3,364
Loss before tax expense	**(4,712)**	**2,529**	**(17,910)**	**(15,283)**
Loss per share - basic and diluted	(0.13)	0.09	(0.52)	(0.54)

Revenue

- In range for Q4 and 2020
- Solid execution on licensing and government revenue
- Strong product revenue growth

Operating Expenses

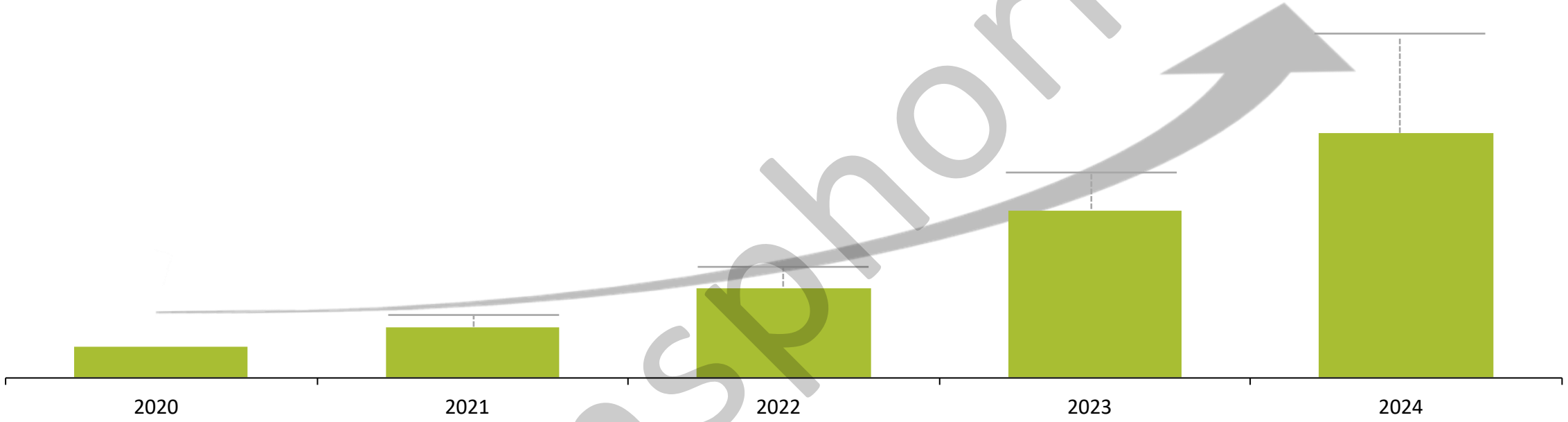
- Modest increase y/y
- G&A increase largely driven by transition to public markets
- Higher proportion of R&D costs absorbed by Government activity

Condensed Balance Sheet

	December 31, 2020	September 30, 2020 *(unaudited)*	June 30, 2020 *(unaudited)*	March 31,2020 *(unaudited)*	December 31, 2019
Cash and cash equivalents	14,694	4,369	9,382	14,648	2,875
Accounts Receivable	844	1,125	769	1,377	709
Other current assets	2,588	3,115	3,170	2,532	1,773
Total current assets	**18,126**	**8,609**	**13,321**	**18,557**	**5,357**
Fixed assets/Intangibles	4,100	4,257	4,422	4,595	4,905
Total assets	**22,226**	**12,866**	**17,743**	**23,152**	**10,262**
Accounts payable and accrued expenses	3,182	2,687	1,664	2,204	2,383
Outstanding loans	20,153	20,153	20,762	25,610	15,458
Other Current Liabilities	3,355	3,187	3,089	2,622	2,847
Total current liabilities	**26,690**	**26,027**	**25,515**	**30,436**	**20,688**
Development loans, net of current portion					10,000
Promissory note	15,392	16,327	15,580	13,885	16,169
Total liabilities	**42,082**	**42,354**	**41,095**	**44,321**	**46,857**
Shareholders' deficit	**(19,856)**	**(29,488)**	**(23,352)**	**(21,169)**	**(36,595)**
Total liabilities, stock & stockholders' deficit	**22,226**	**12,866**	**17,743**	**23,152**	**10,262**

Long-Term Growth

Building a High-Growth, Cash Generating Business



Operating Guidelines

- Accelerating top-line growth and GaN adoption across all target end markets
- OpEx for continued development of best-in-class products and IP portfolio
- CAPEX investment for increased scale

Target Model:

- 5-year CAGR range: **50 – 80%**
- Gross Margin: **40%+**
- Operating Margin: **20%+**
- Free Cash Flow: **10%+**

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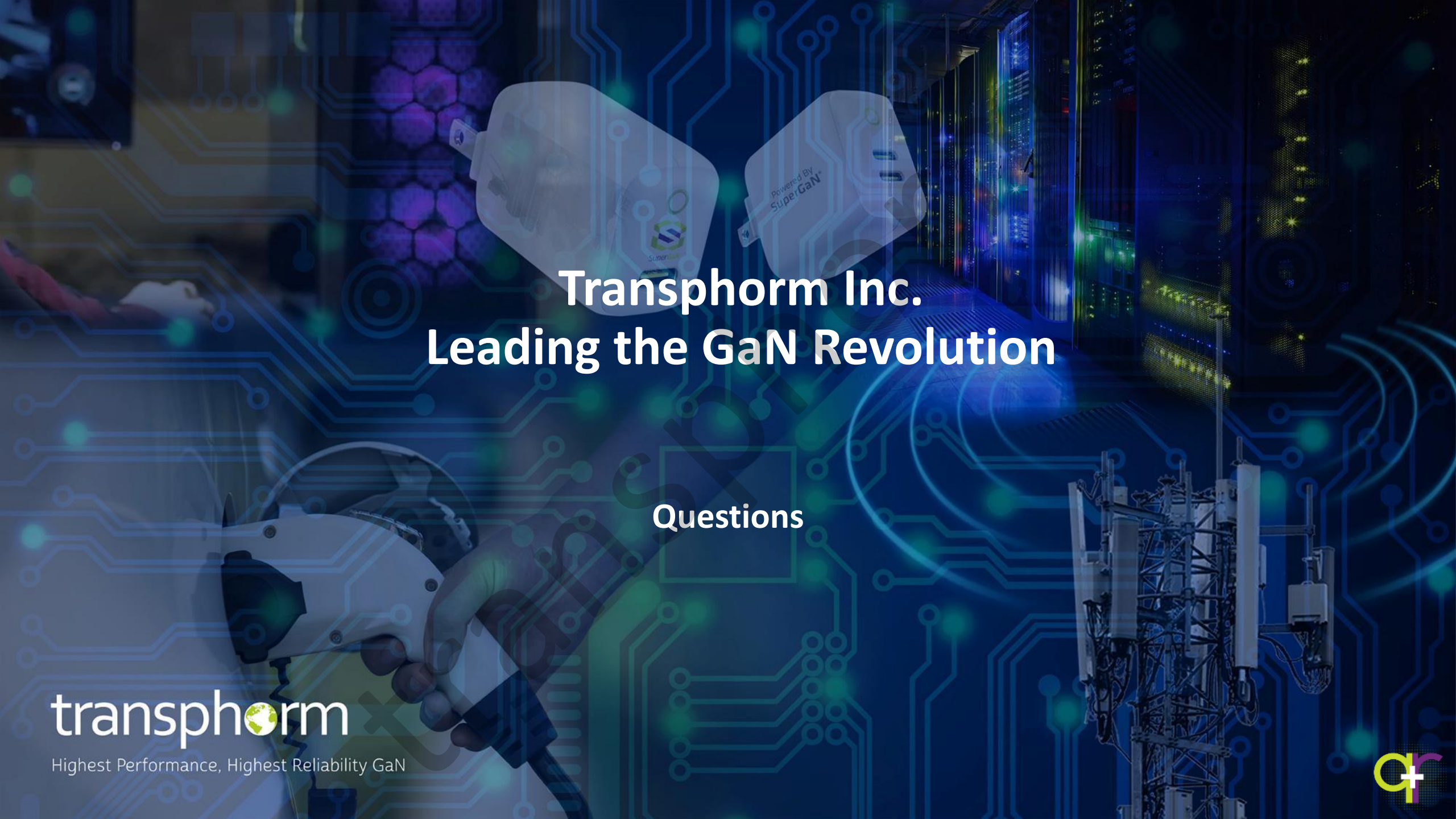

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Questions

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