

The background is a composite image with a warm, orange-brown color palette. It features a car in the foreground, robotic arms in the middle ground, solar panels on the left, and wind turbines on the right. The overall theme is sustainable technology and industry.

Accelerating the Journey Towards a Sustainable Ecosystem

May 16, 2023

Safe Harbor

This presentation contains “forward-looking statements,” as that term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical facts, included or incorporated in this presentation could be deemed forward-looking statements, particularly statements about the future financial performance of onsemi and forward-looking financial guidance. Forward-looking statements are often characterized by the use of words such as “believes,” “estimates,” “expects,” “projects,” “may,” “will,” “intends,” “plans,” “anticipates,” or “Target” or by discussions of strategy, plans, or intentions. All forward-looking statements in this presentation are made based on our current expectations, forecasts, estimates, and assumptions and involve risks, uncertainties, and other factors that could cause results or events to differ materially from those expressed in the forward-looking statements. Investing in our securities involves a high degree of risk and uncertainty, and you should carefully consider the trends, risks, and uncertainties described in this presentation, our 2022 Annual Report on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on February 6, 2023, our Quarterly Report on Form 10-Q for the first quarter of 2023 filed with the SEC on May 1, 2023 and other reports filed with or furnished to the SEC, before making any investment decision with respect to our securities. If any of these trends, risks, or uncertainties actually occurs or continues, our business, financial condition, or operating results could be materially adversely affected, the trading prices of our securities could decline, and you could lose all or part of your investment. We assume no obligation to update such information, which speaks only as of the date made, except as may be required by law. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by this cautionary statement.

This presentation contains historical non-GAAP financial measures, including, among others, free cash flow (FCF) and FCF margin, non-GAAP gross margin and non-GAAP operating margin. See the Appendix for a description of these financial measures and a reconciliation of all such non-GAAP financial measures to GAAP. This presentation also contains forward looking non-GAAP financial measures, some of which are adjusted for certain special items. These special items are out of our control and could change significantly from period to period. As a result, we are not able to reasonably estimate and separately present the individual impact of these special items, and we are similarly unable to provide a reconciliation of the non-GAAP measures. The reconciliation that is unavailable would include a forward looking income statement, balance sheet, and statement of cash flows prepared in accordance with GAAP. We believe these non-GAAP measures provide important supplemental information to investors. We use these measures, together with GAAP measures, for internal managerial purposes and as a means to evaluate period-to-period comparisons. However, we do not, and you should not, rely on non-GAAP financial measures alone as measures of our performance. In addition, because non-GAAP financial measures are not standardized, it may not be possible to compare these financial measures with other companies’ non-GAAP financial measures, even if they have similar names.

Accelerating the Journey Towards a Sustainable Ecosystem

TOPIC

PRESENTER

Welcome to the New World

Hassane El-Khoury
President & CEO

Powder to Power

Simon Keeton
Executive Vice President & General Manager
Power Solutions Group

Accelerating the Flywheel

Sudhir Gopalswamy
Senior Vice President & General Manager
Advanced Solutions Group

**Foundation Set:
Ready to Accelerate**

Thad Trent
Executive Vice President & CFO

Q&A

All

Play to Win

- Focus on high-growth megatrends in Automotive and Industrial and win with **onsemi** intelligent power and sensing
- Double down and don't dabble
- Invest in disruptive innovation to drive higher margin growth

Implement Structural Changes

- Optimize organizational structure to reduce complexities
- Streamline manufacturing to match the strategy and not the other way around
- Attract and retain the best, diverse talent across the board
- Engage and empower employees to make expeditious, data-driven decisions

Capture Value

- Focus on highly differentiated products that enable disruptive innovation
- Optimize manufacturing footprint and leverage expertise
- Eliminate price-to-value discrepancies

Execute

- Leverage new leadership team with history of strong execution
- Drive accountability throughout the organization
- Reward employees for delivering superior results

The onsemi logo is displayed in white text within a large, semi-transparent orange circle. The logo consists of the word "onsemi" in a lowercase, sans-serif font, with a small trademark symbol (TM) to the right.The words "Winning Formula" are written in a large, bold, white sans-serif font, centered within the same orange circle as the logo.

RESILIENCY

B RILEY Securities

Member FINRA/SIPC | a B. Riley Financial company

Solid Revenues and Margins
Strong SiC Auto Demand; PT from
\$80 to \$105, Reiterate Buy

gaining

impressive-execution

value

blowout

BETTER-OUTLOOK

control

RESILIENT

power

STRUCTURAL-IMPROVEMENTS

LEADERSHIP

DE-RISKING

RAISE

PICK

HIGHER-MULTIPLE

STRATEGIC

SCALE

sensing

execution

beat

turnaround
strong-growth

IMPRESSIVE

SiC

STRONG

buy

ramp

growth

auto

transformation

GROSS-MARGIN

300mm
adas

leader industrial

RESTRUCTURING

exceed

record

reiterate

RAISING-PRICE-TARGET ACCELERATING

transformation-execution

BMO

WELLS
FARGO

MIZUHO

J.P.

BofA GLOBAL RESEARCH

L TSA

promising

reiterate-buy

expansion

results

revenue

ramp

STRENGTH

earnings

CLEAN-EXECUTION

solid-results

20
LT

COWEN

300mm
adas

grow

Morgan Stanley

ON strong narrative underlying
tougher revenue trends

grow

leader industrial

impresses
power-drives

record

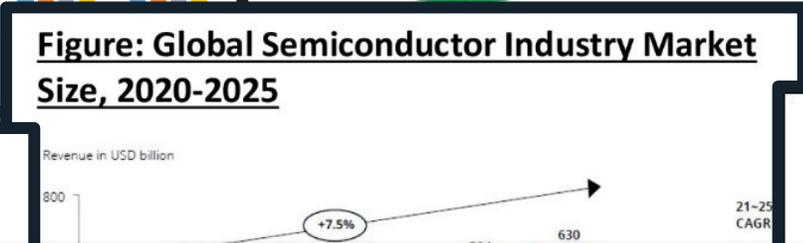
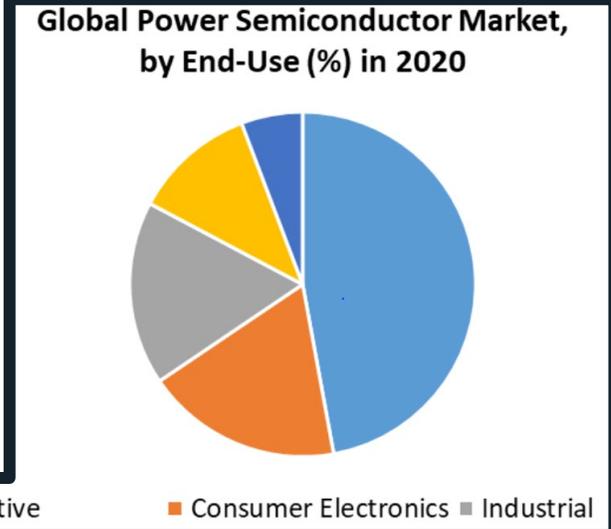
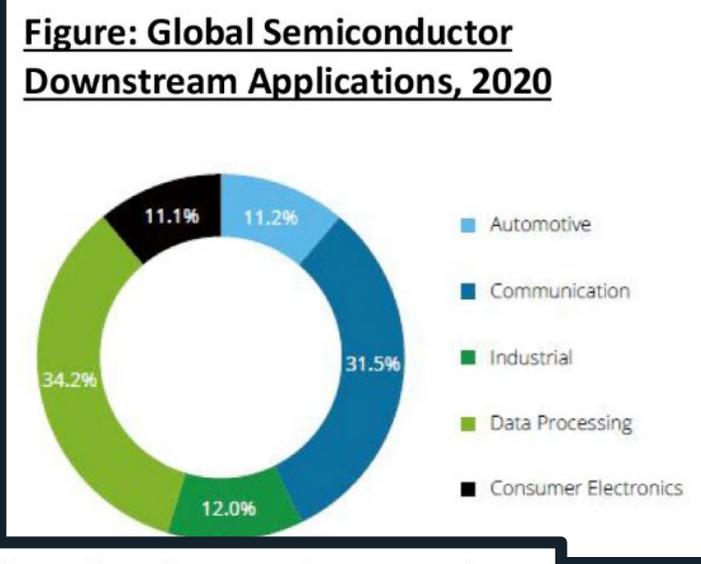
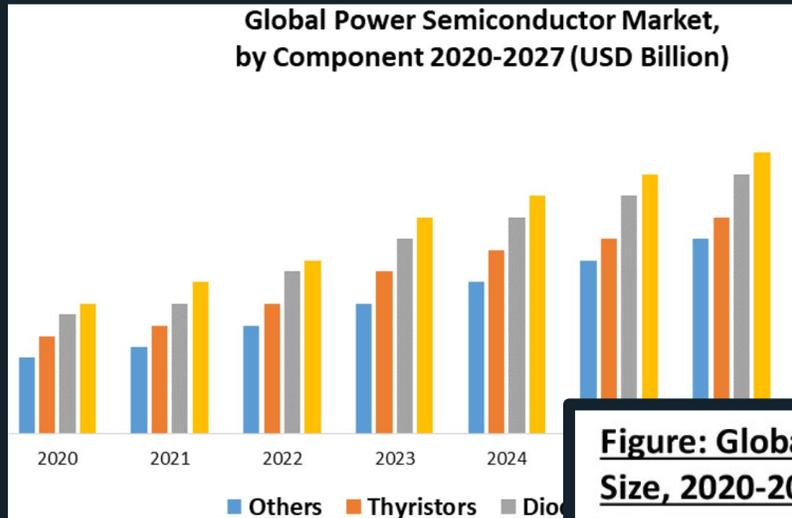
reiterate

RAISING-PRICE-TARGET ACCELERATING

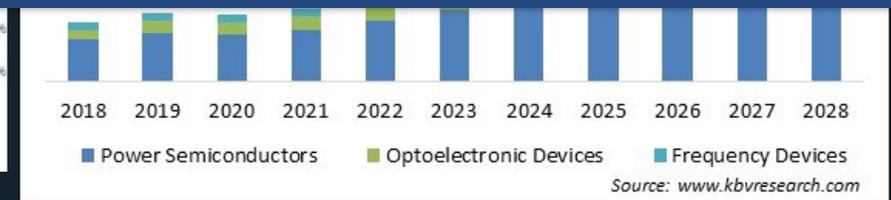
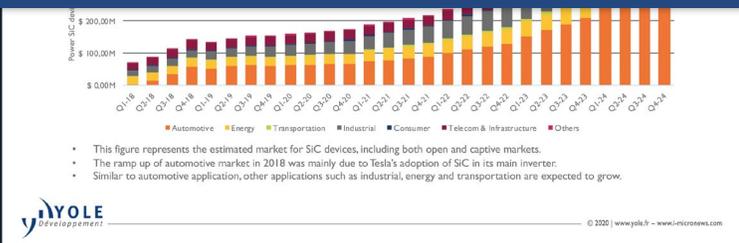
transformation-execution

onsemi

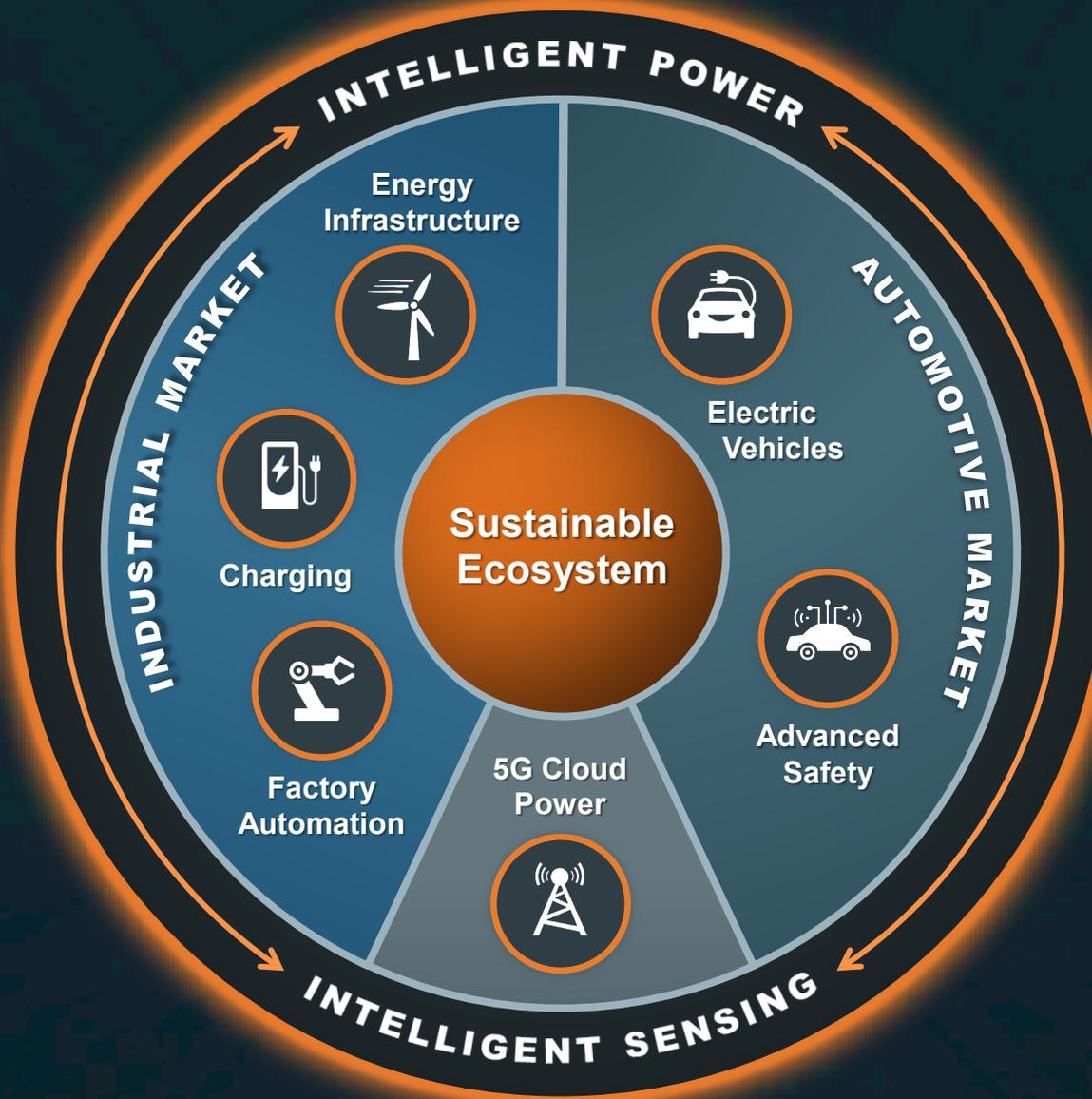
What you are used to seeing...

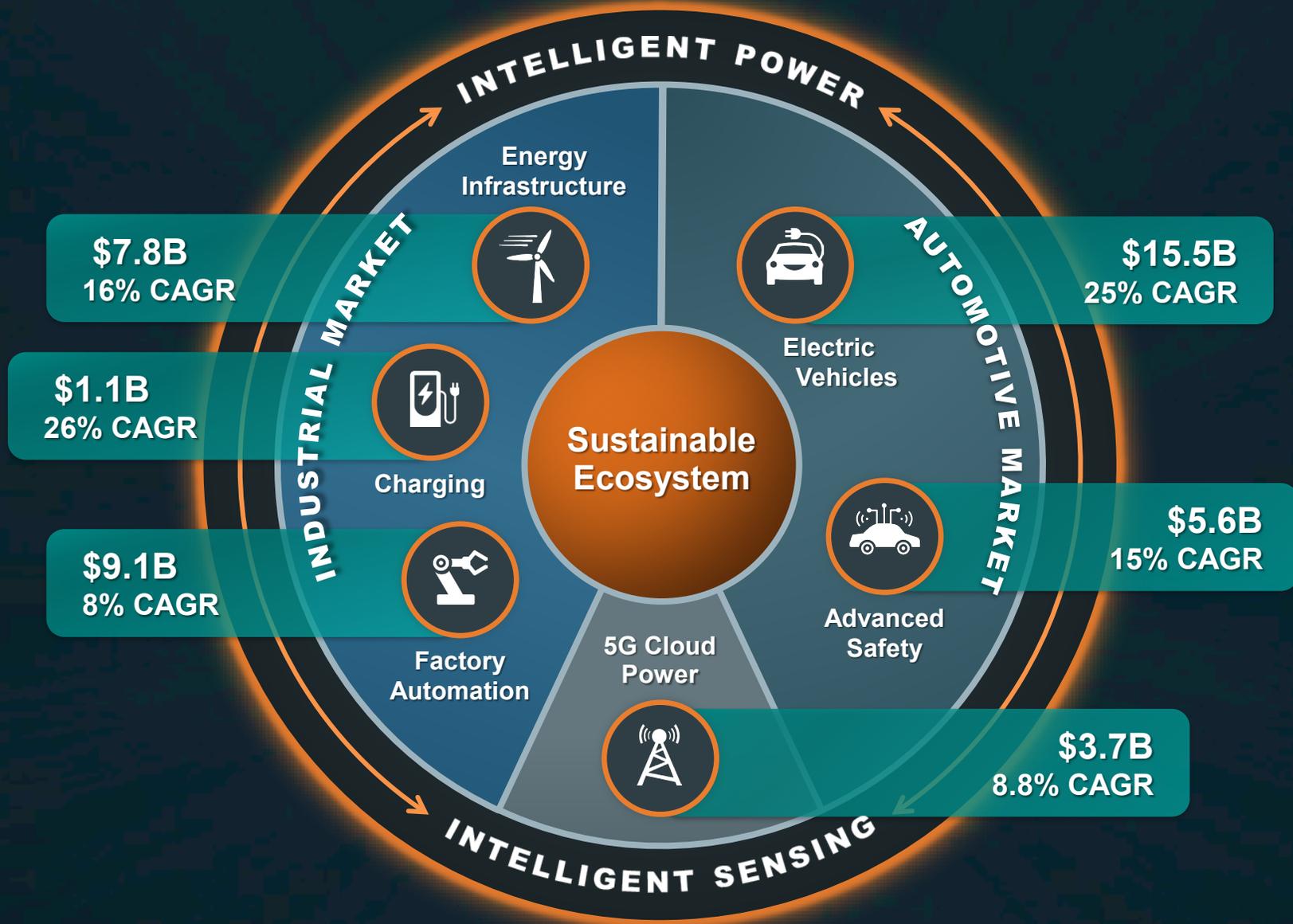


...is a different cut of a market growing at 4%

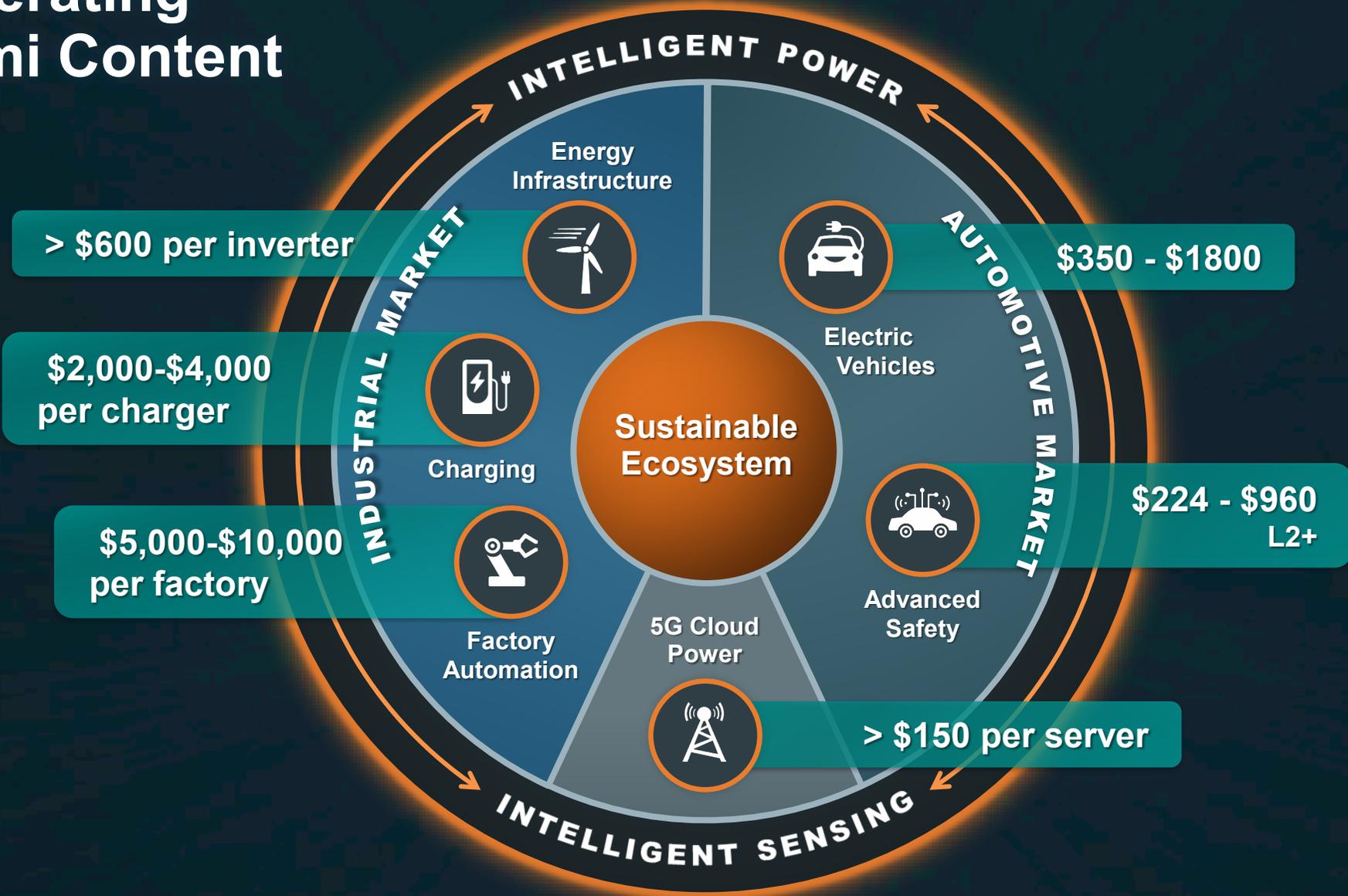


Welcome to the New World





Accelerating onsemi Content





onsemi and VW Group Cement Strategic Collaboration on Silicon Carbide Technology for Next-Generation Electric Vehicles with Strategic Agreement / *Jan 25, 2023*

onsemi Silicon Carbide Power Module for Traction Inverters Selected for Hyundai Motor Group's High-Performance Electric Vehicles / *Jan 04, 2022*



SensiML Teams with onsemi for Industrial Edge AI Sensing Applications / *Nov 4, 2021*

onsemi Imaging Technology Enables Next Era of Digital Cinematography / *Sep 14, 2022*



ZEEKR

onsemi and ZEEKR Sign Long-Term Supply Agreement for Silicon Carbide Power Devices / *Apr 25, 2023*

onsemi and Ride Vision Collaborate on Advanced Safety Solutions for Motorcyclists / *Oct 25, 2022*



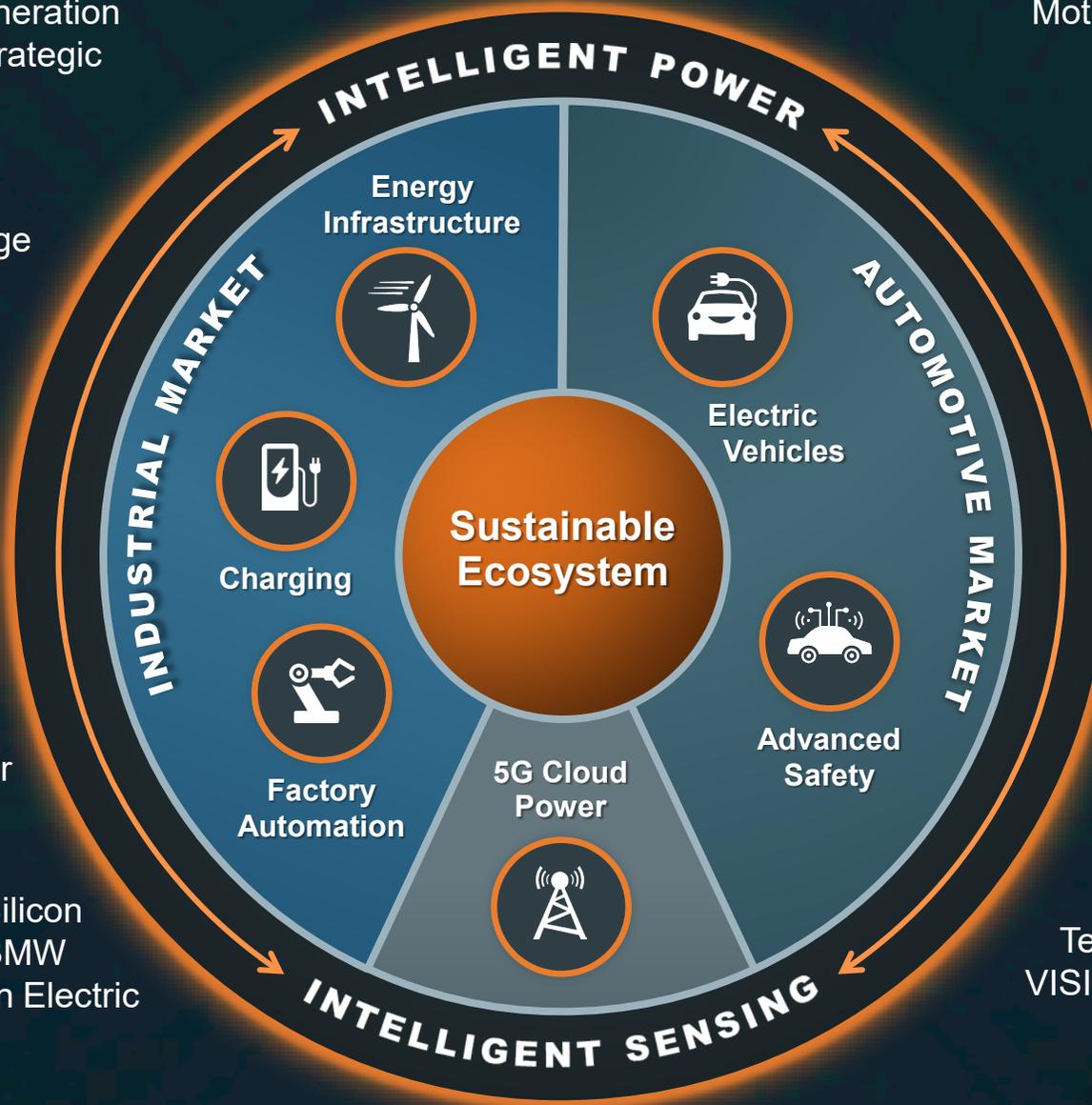
onsemi and Ampt Collaboration Increases Efficiency for Utility Solar Providers / *Jan 05, 2023*

NIO Selects High-Efficiency Silicon Carbide Traction Power Modules from onsemi / *May 11, 2022*



onsemi to Integrate its Silicon Carbide Technology in BMW Group's Next-Generation Electric Vehicles / *Mar 06, 2023*

onsemi Silicon Carbide Technology Enables All-Electric VISION EQXX to Go Further on a Single Charge / *Nov 14, 2022*



Markets that Matter

	Semiconductor	Intelligent Power & Sensing	Sustainable Ecosystem
Industry	TAM \$553B CAGR 4%	\$91B 6%	\$43B 16%
	Revenue CAGR 2022 - 2027		
	10-12%	14%	21%



Electrification, creating a multi-decade opportunity for onsemi SiC growth >2x market at ~70%*



Machine Vision for the future of automation



Power new generation of cloud and 5G infrastructure with onsemi CAGR >20%

onsemi[™]
**Winning
Formula**

Play to Win

...Implement Structural Change...

...Capture Value...

...and Execute...

onsemi.
Winning Formula
Play to Win

- Win the high-growth megatrends of Automotive and Industrial with onsemi's intelligent power and sensing
- Invest in vertical integration and capabilities across all power technologies
- Deliver disruptive innovation across the BOM and drive higher margin growth
- Expand brownfield capacity in SiC and Image Sensors to lead with best-in-class financials
- Create the future with investments in university research and workforce development

...Implement Structural Change...

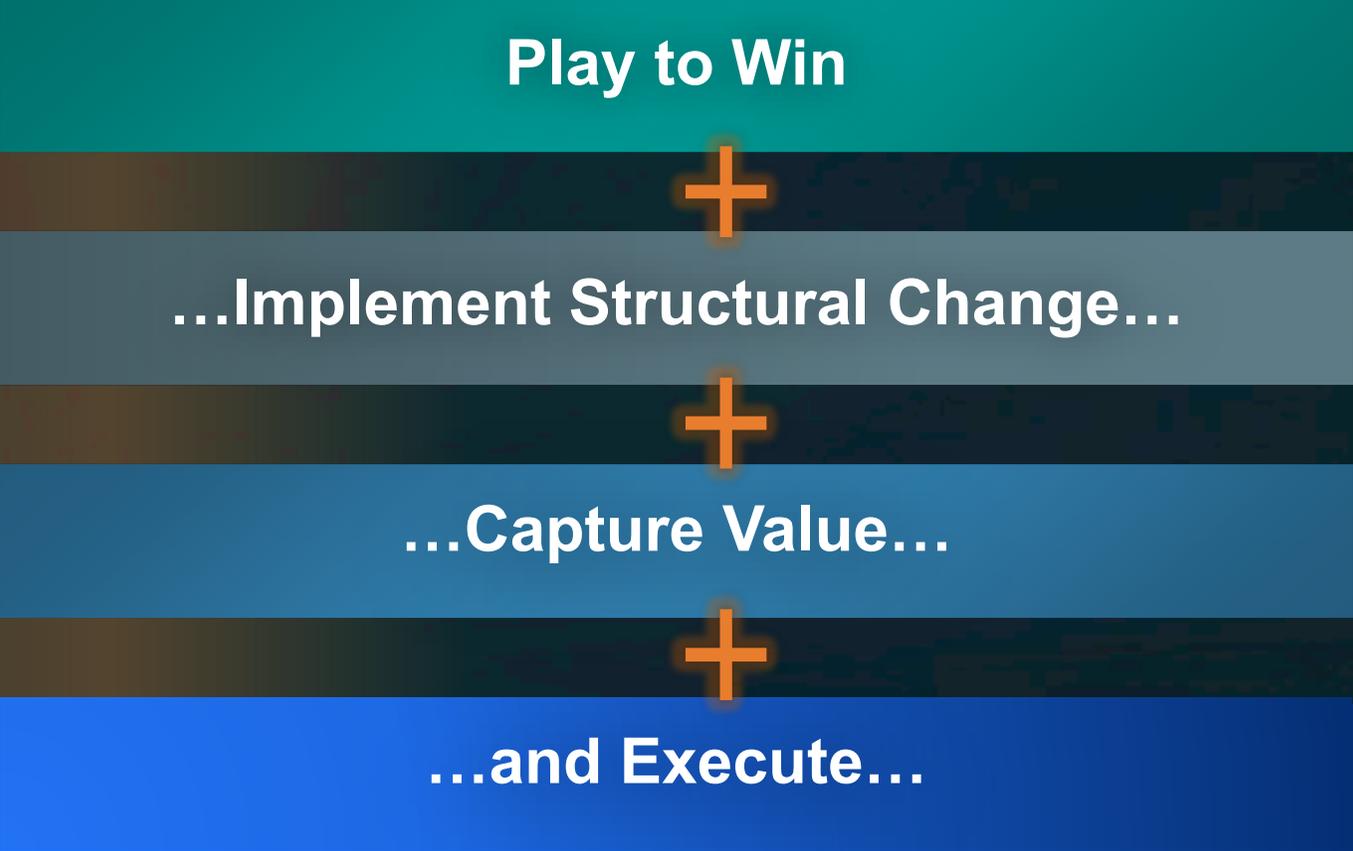
- Expand and scale Go-To-Market to widen reach and accelerate segment penetration
- Lead with Digital First to increase efficiency across all corporate domains
- Invest in new generation of Power ICs to deliver more value with a TAM expansion strategy
- Optimize the manufacturing footprint to support growth and expand margins

onsemi.
Winning Formula
...Capture Value...

- Design in highly differentiated and optimized solutions focused on customer needs
- Go broad with technology and programs for high gross margin market share gain: Elite Power Simulator, DevWare SDK
- Phase-in 200mm SiC substrates for the next wave of EV ramps
- Expand gross margin through efficiencies and new product ramps to accelerate free cash flow
- Deliver best-in-class ROIC across all investment vectors

onsemi.
Winning Formula
...and Execute...

- Drive accountability throughout the organization with strategic alignment but decision autonomy
- And reward employees for delivering on our strategy and commitments
- Deliver on >\$17B of customer LTSAs across all markets
- Maintain stable and predictable financial performance across all market conditions



= The Undisputed Leader of the New World

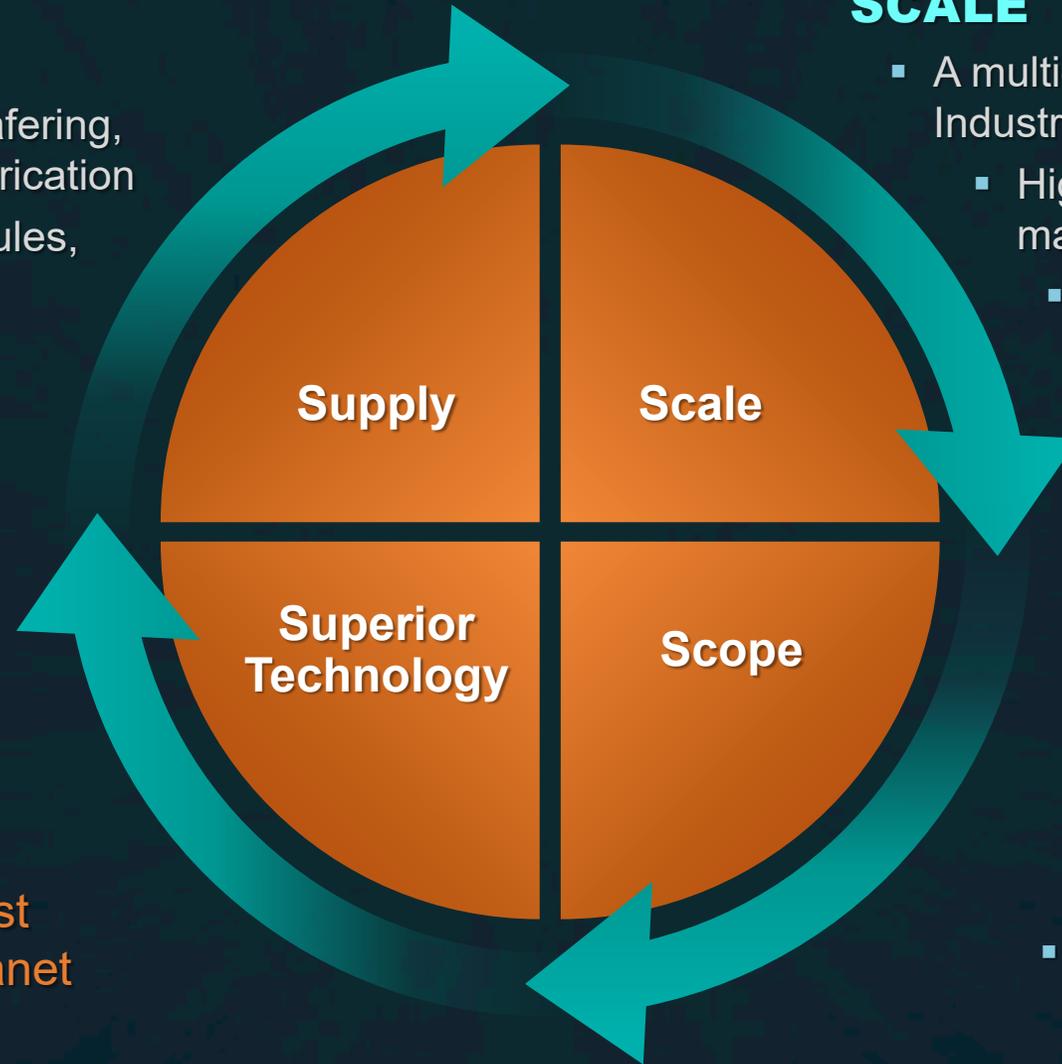
EliteSiC Advantage

SUPPLY

- History of vertical integration
- Volume SiC boule growth, wafering, substrate, epitaxy, device fabrication
- Best-in-class integrated modules, discrete package solutions and known good die

SUPERIOR TECHNOLOGY

- Lead with die performance
- Differentiate with package innovation
- **Die + Package = THE most optimal solution on the planet**



SCALE

- A multi-decade history in Auto and Industrial markets
- High-quality high-volume manufacturing
 - Able to ramp inline with customer expectations

SCOPE

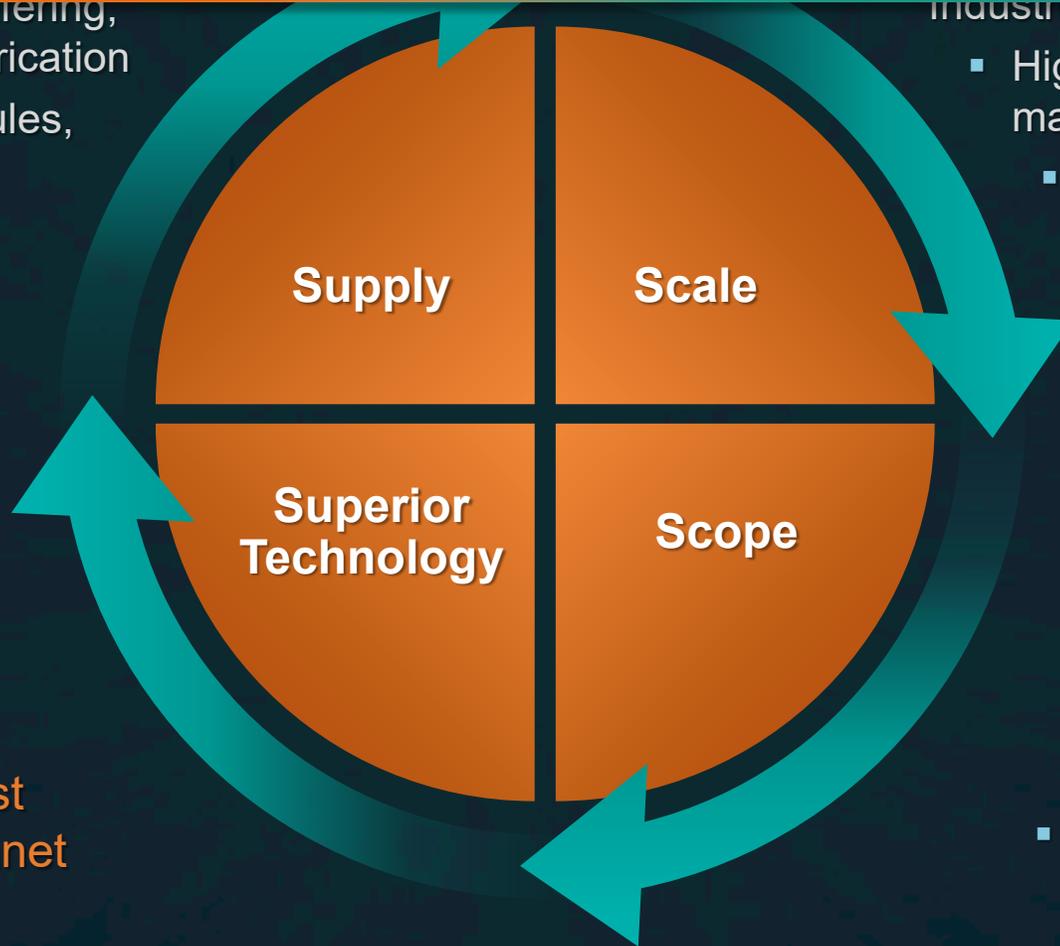
- Suite of sustainable solutions from energy generation to energy consumption
- Depth and breadth of power technologies
- Supporting portfolio for optimized solutions

Superior Technology

- volume SiC boule growth, wafering, substrate, epitaxy, device fabrication
- Best-in-class integrated modules, discrete package solutions and known good die

Industrial markets

- High-quality high-volume manufacturing
 - Able to ramp inline with customer expectations



SUPERIOR TECHNOLOGY

- Lead with die performance
- Differentiate with package innovation
- Die + Package = THE most optimal solution on the planet

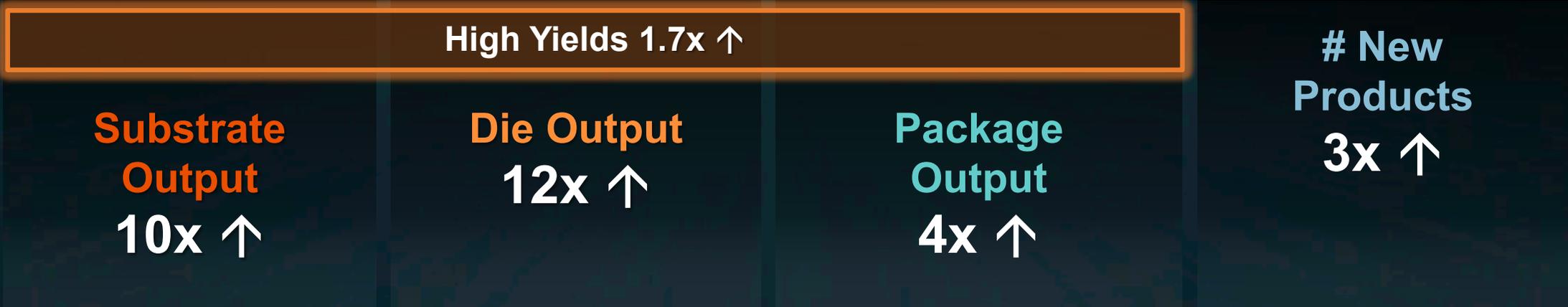
SCOPE

- Suite of sustainable solutions from energy generation to energy consumption
- Depth and breadth of power technologies
- Supporting portfolio for optimized solutions

Superior Technology



The Path to the First \$1B

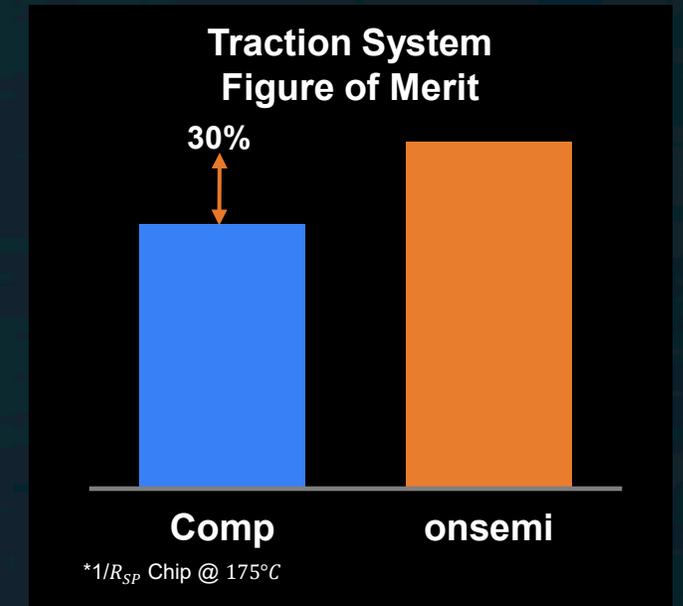


Lead with Die Performance...



onsemi Delivers

- Innovative Cell Structure
- Channel engineering



Lead with Die Performance...

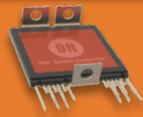
Differentiate with Package Innovation

Customer Needs

- ↑ Range – Heat Extraction
- ↑ Flexibility – Scalability
- ↑ Reliability – Ruggedness

Transfer Molded

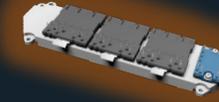
Dual Side Cool



Half Bridge Module



Full Bridge with Cooling Channel

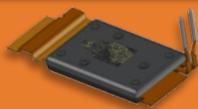


Embedded



Discrete

Single Switch



Next Gen Switch



Gel-filled

Case Module



Case Module+



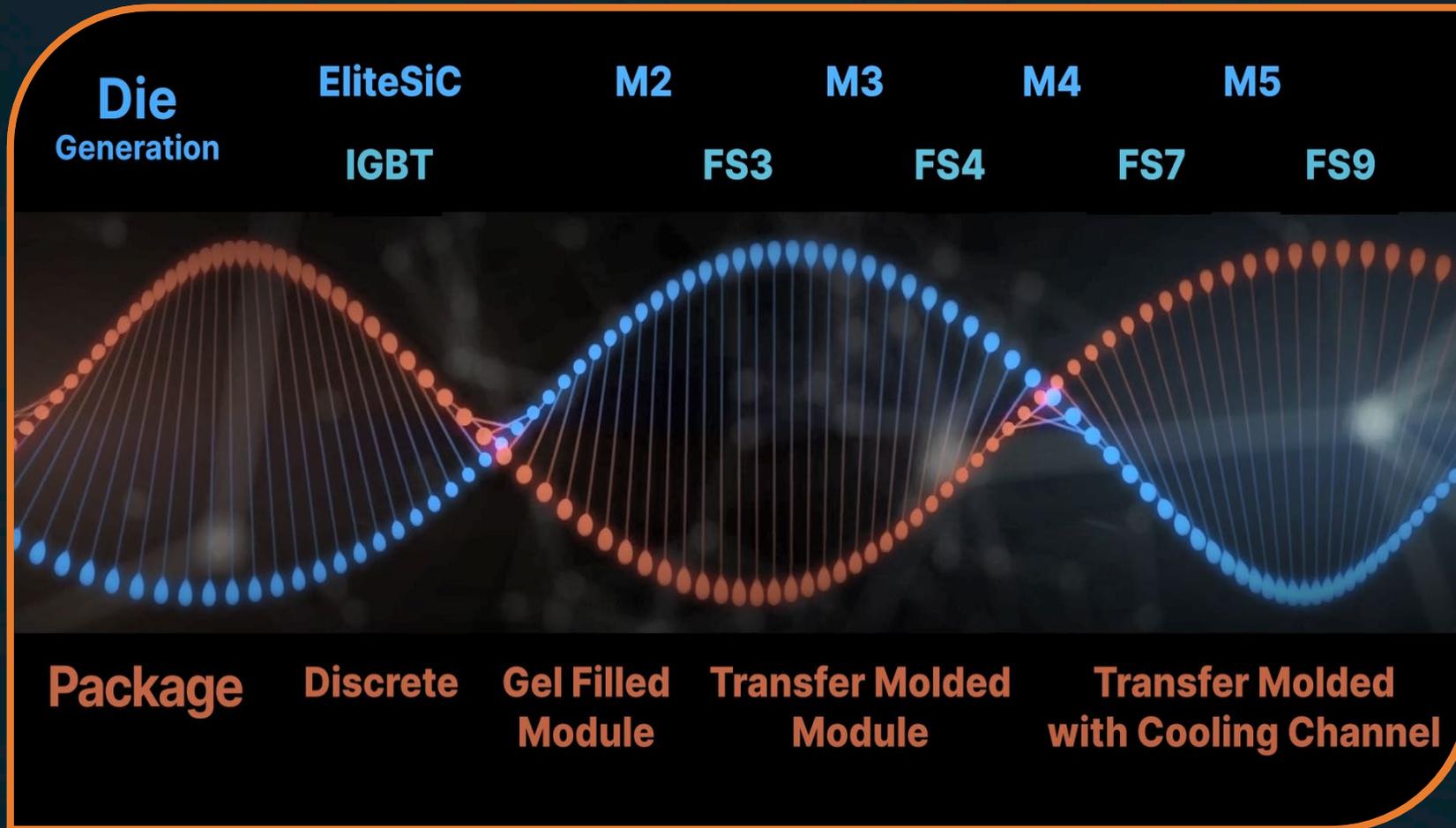
onsemi Delivers

- Advanced packaging materials
- World class thermal performance
- Simulations at Die, Package and System

Innovation



Optimized Solutions are our DNA



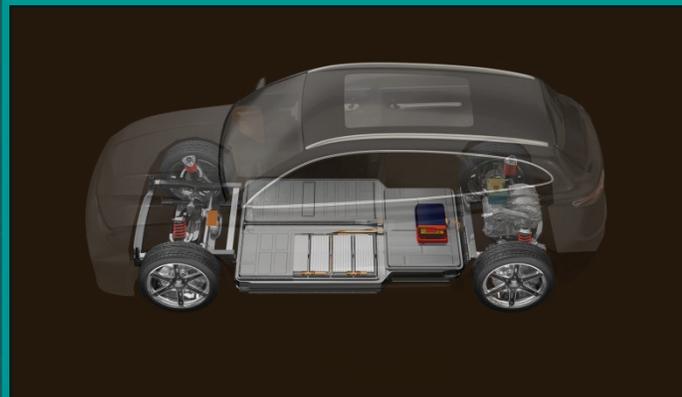
Concurrent development of die and package leads to **optimized** solutions



GENERATION



STORAGE



ELECTRIFICATION



CHARGING

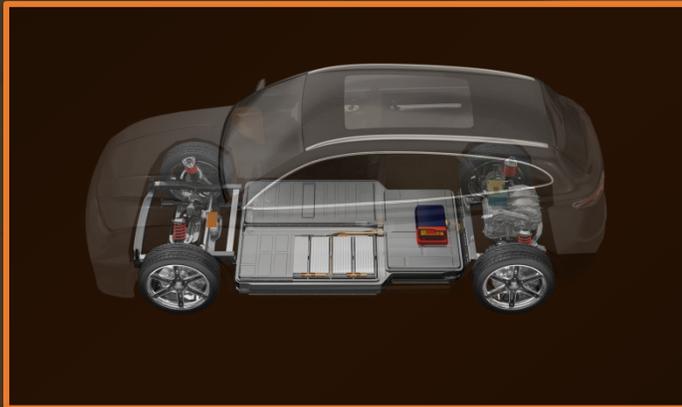




GENERATION



STORAGE



ELECTRIFICATION



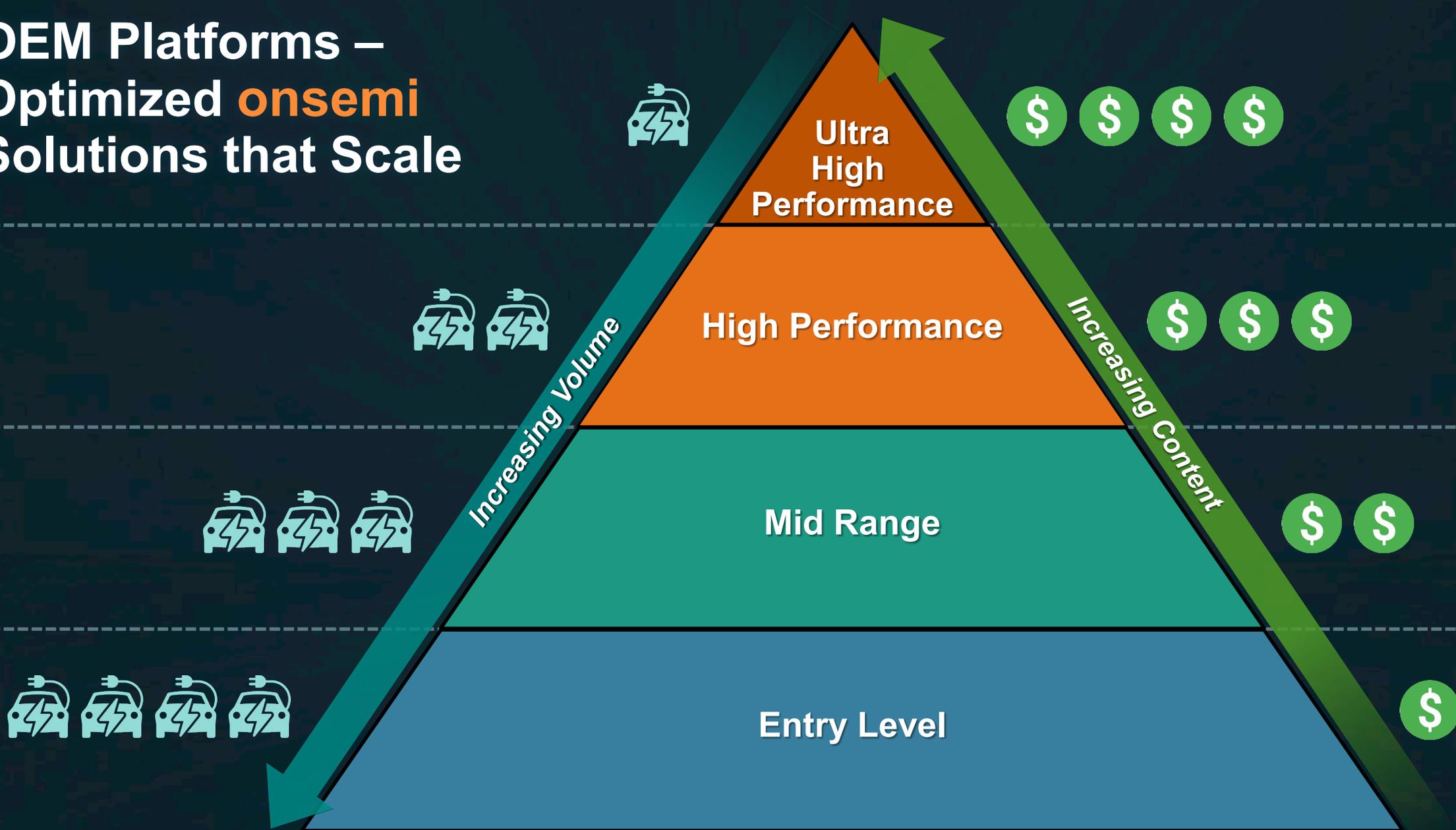
CHARGING

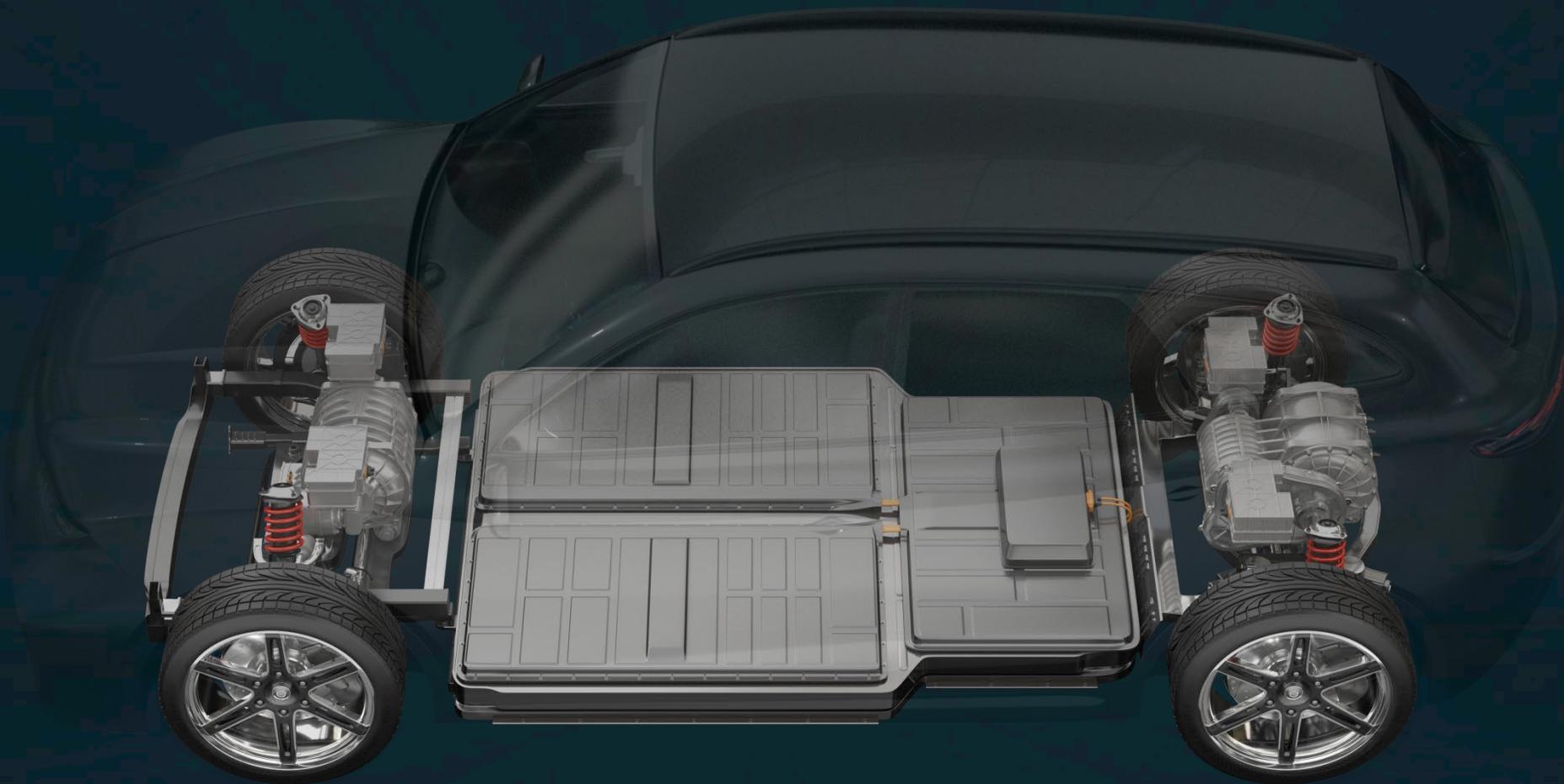


onsemi[™]

**Solutions
for Sustainable
Ecosystems**

OEM Platforms – Optimized **onsemi** Solutions that Scale



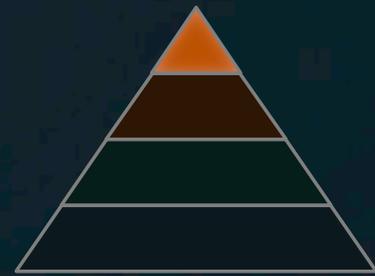


Powering Every Architecture

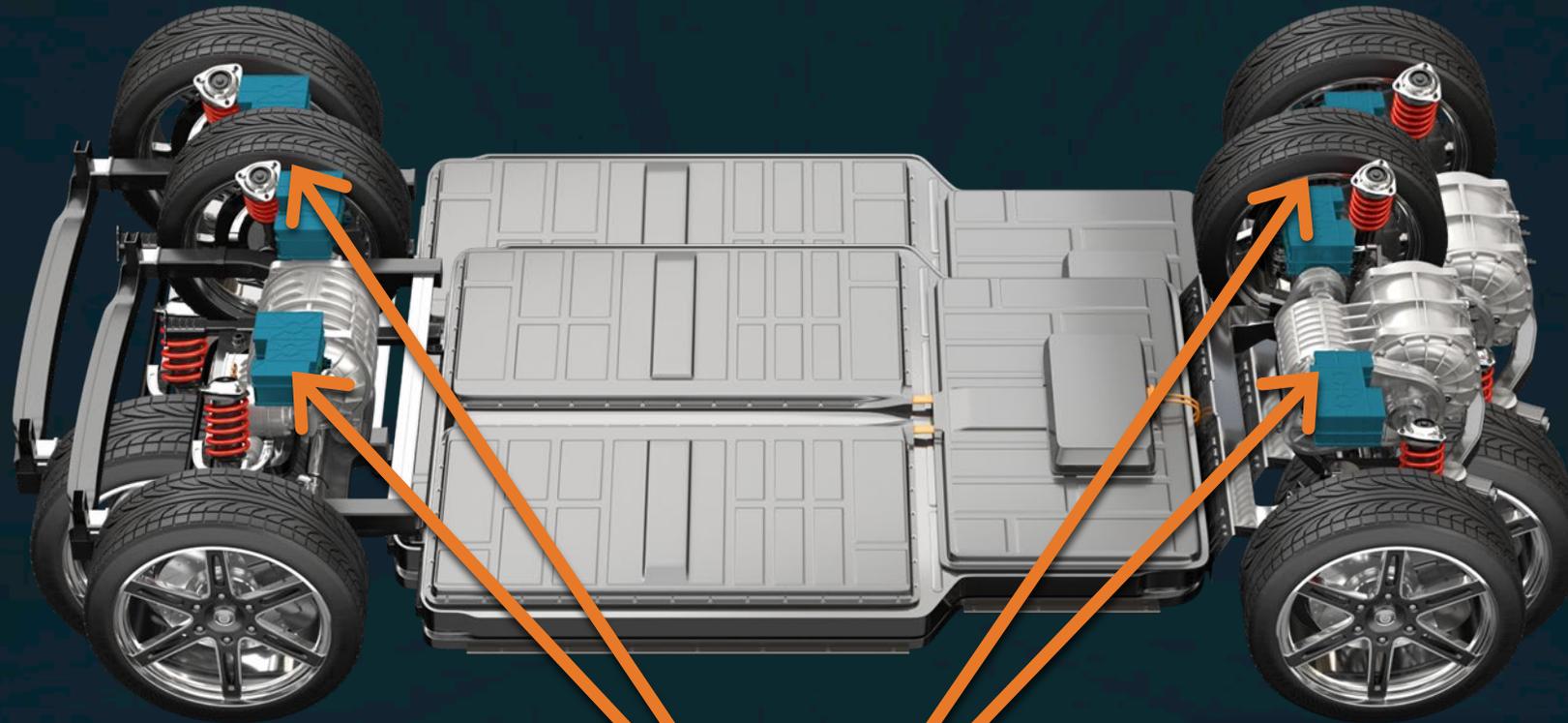
Powering Every Architecture

Customer
Needs

Ultra high
performance



✓ Customer Wins
& LTSAs



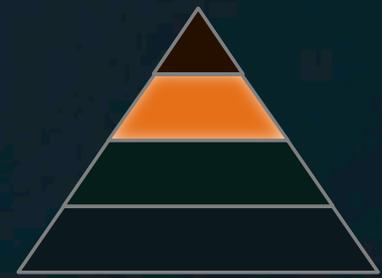
onsemi Delivers

Quad SiC traction

SiC

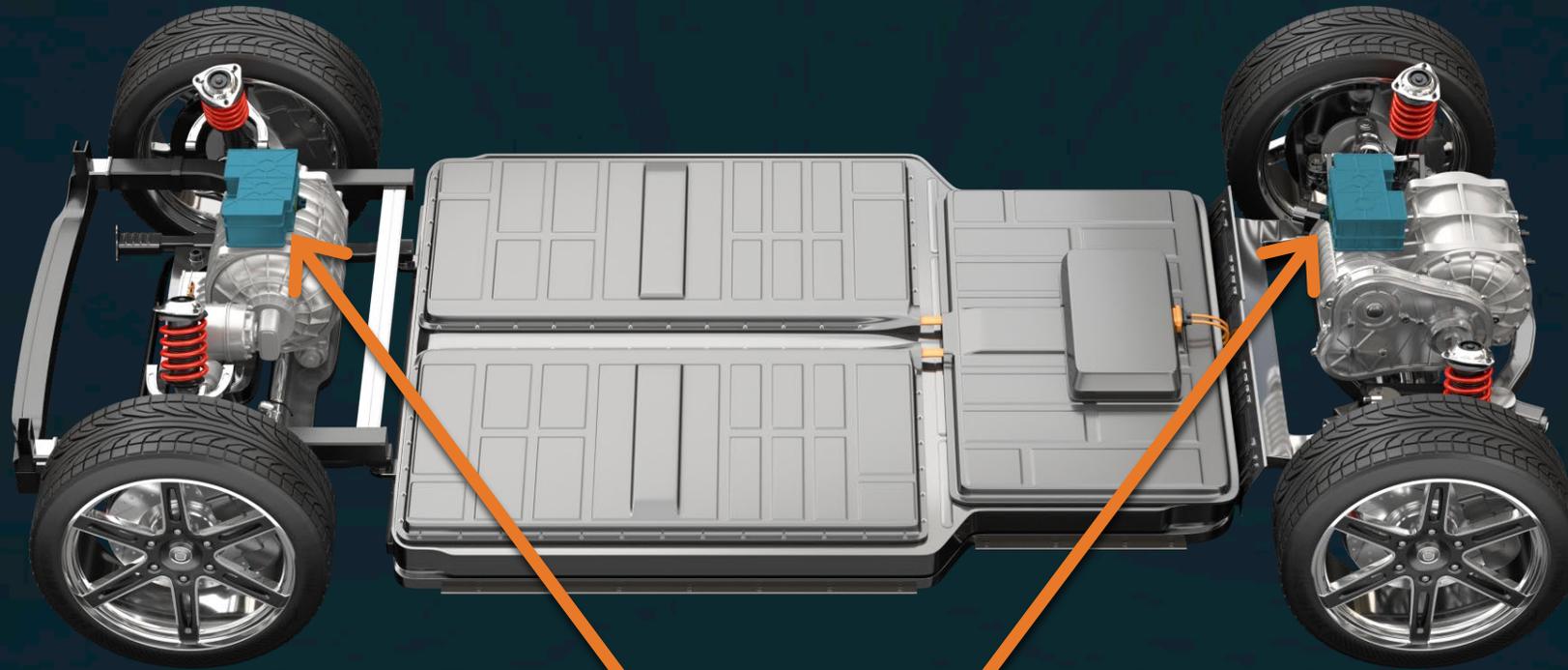
onsemi™

Powering Every Architecture



✓ Customer Wins & LTSAs

Customer Needs High performance with good range & acceleration



onsemi Delivers
Dual SiC traction

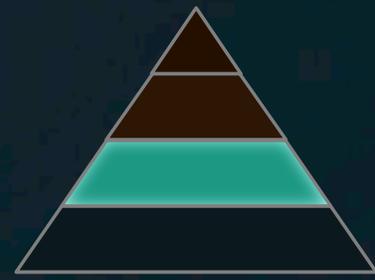
SiC



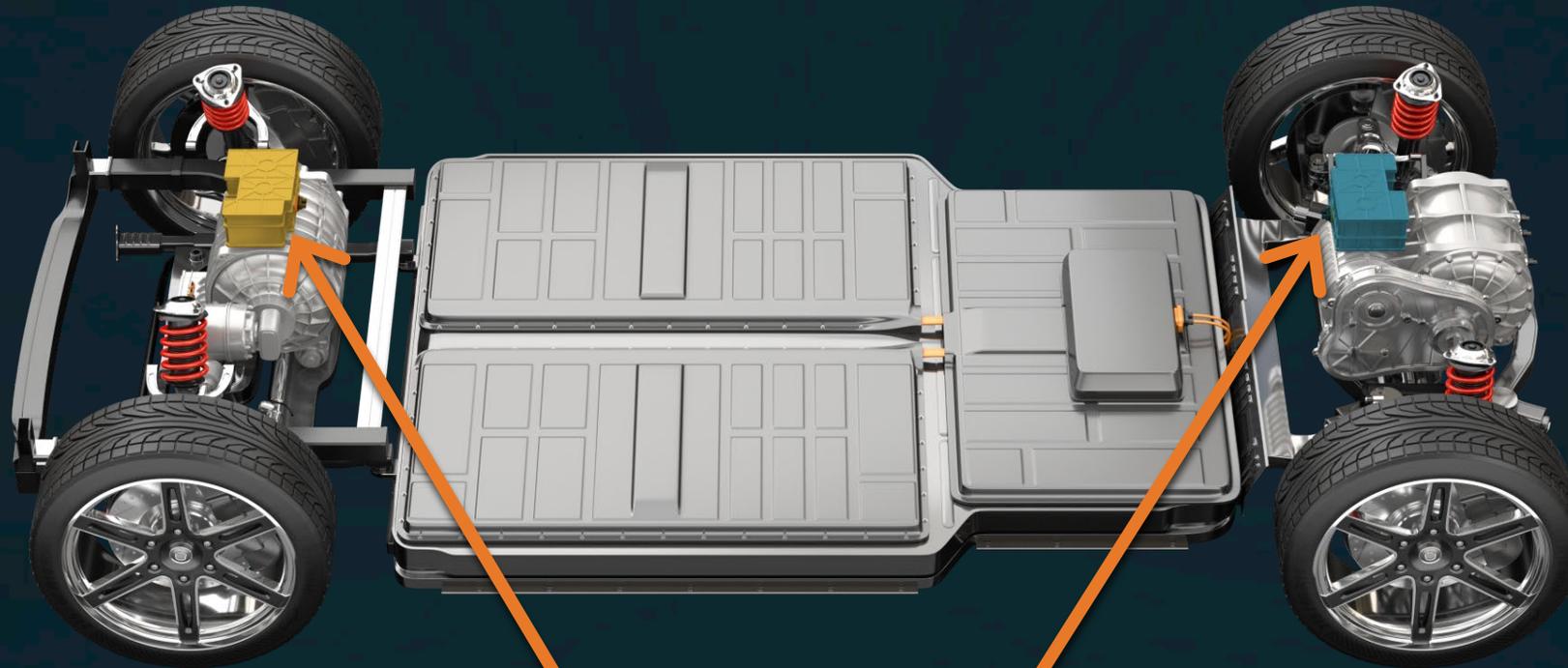
Powering Every Architecture

Customer
Needs

Good mid range
performance with on
demand acceleration



✓ Customer Wins
& LTSAs



IGBT

SiC

onsemi Delivers

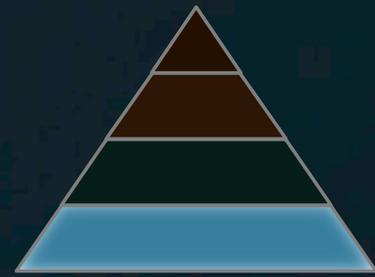
SiC and IGBT solution, optimized
for system cost and performance

onsemi™

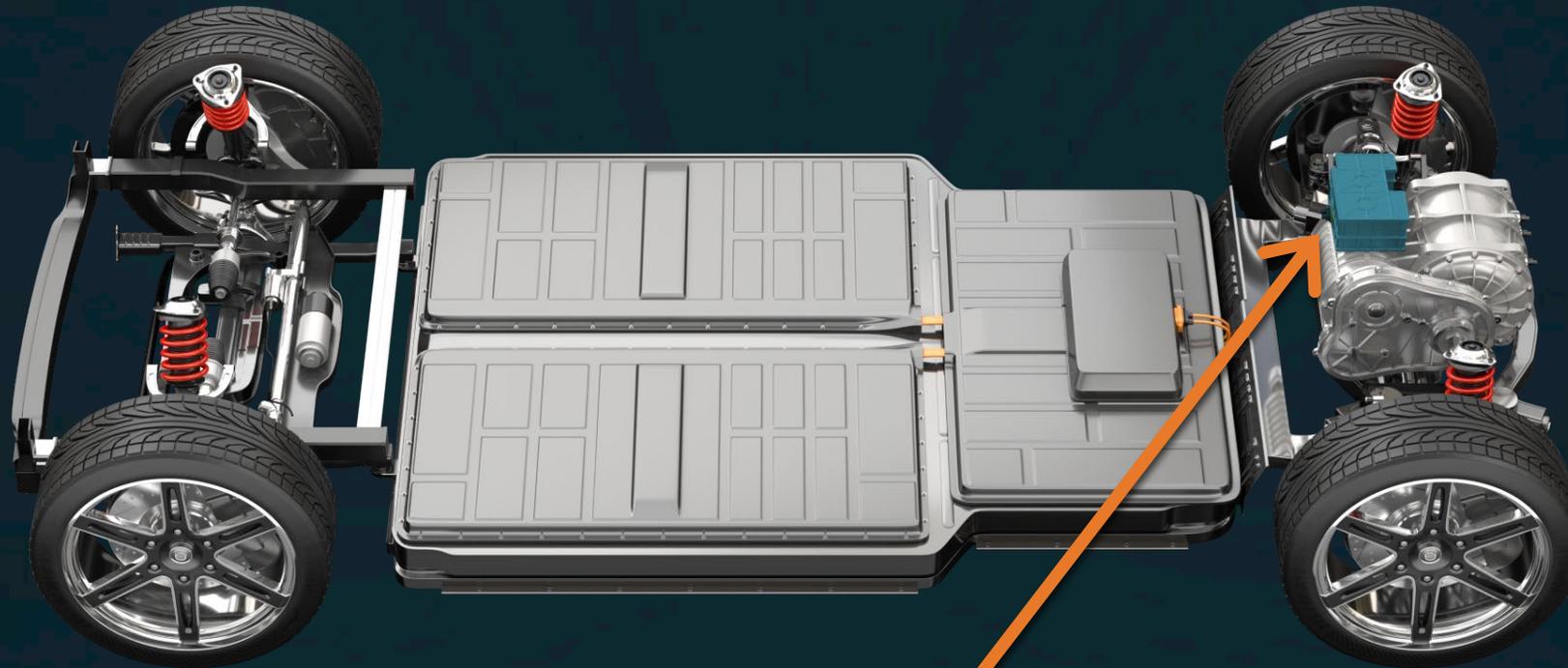
Powering Every Architecture

Customer
Needs

EV entry level vehicle
with extended range



✓ Customer Wins
& LTSAs



onsemi Delivers

Single SiC traction device

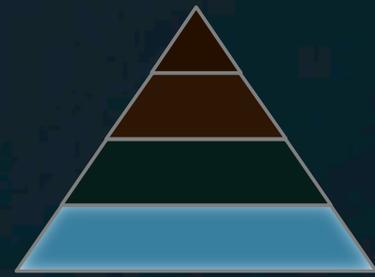
SiC

onsemi

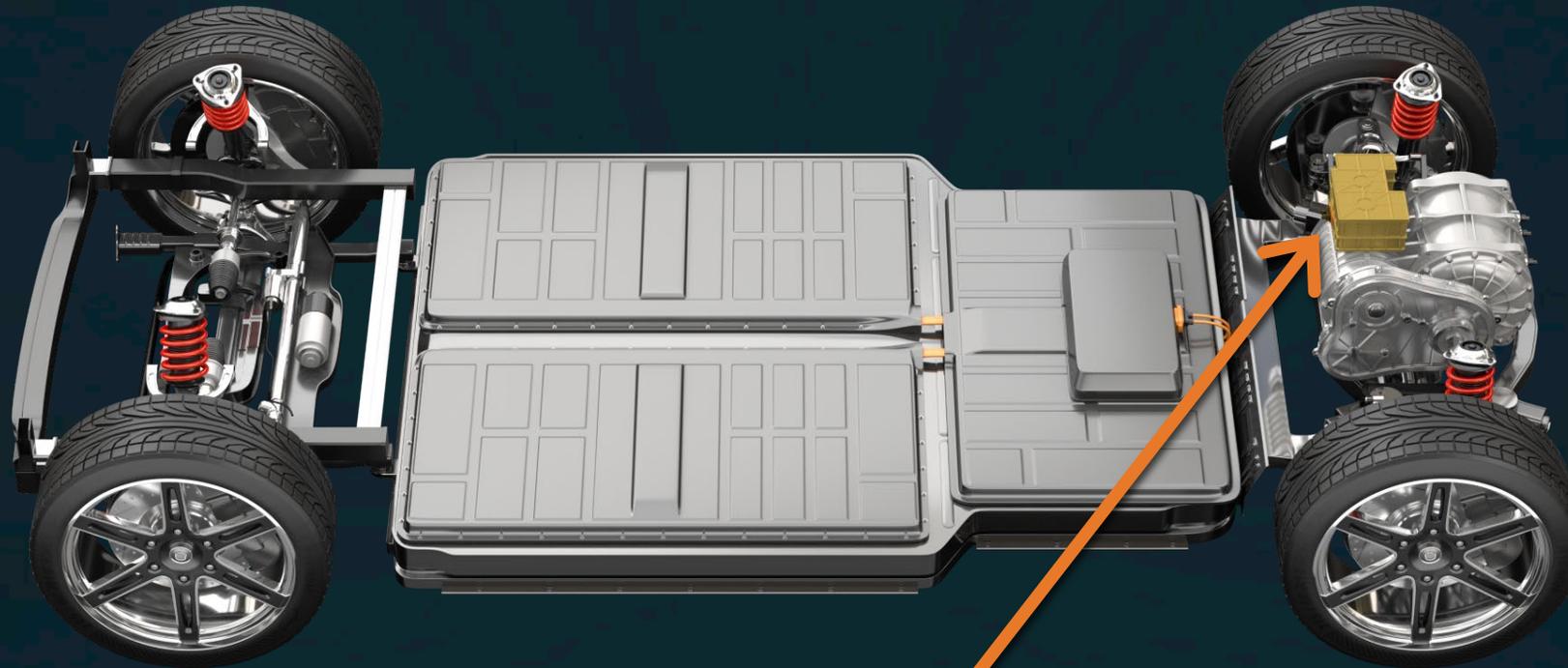
Powering Every Architecture

Customer
Needs

EV entry point vehicle



✓ Customer Wins
& LTSAs



IGBT

onsemi Delivers

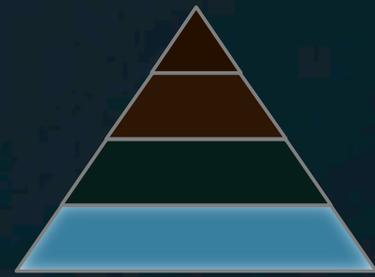
Cost effective IGBT-based
system with upgrade path

onsemi™

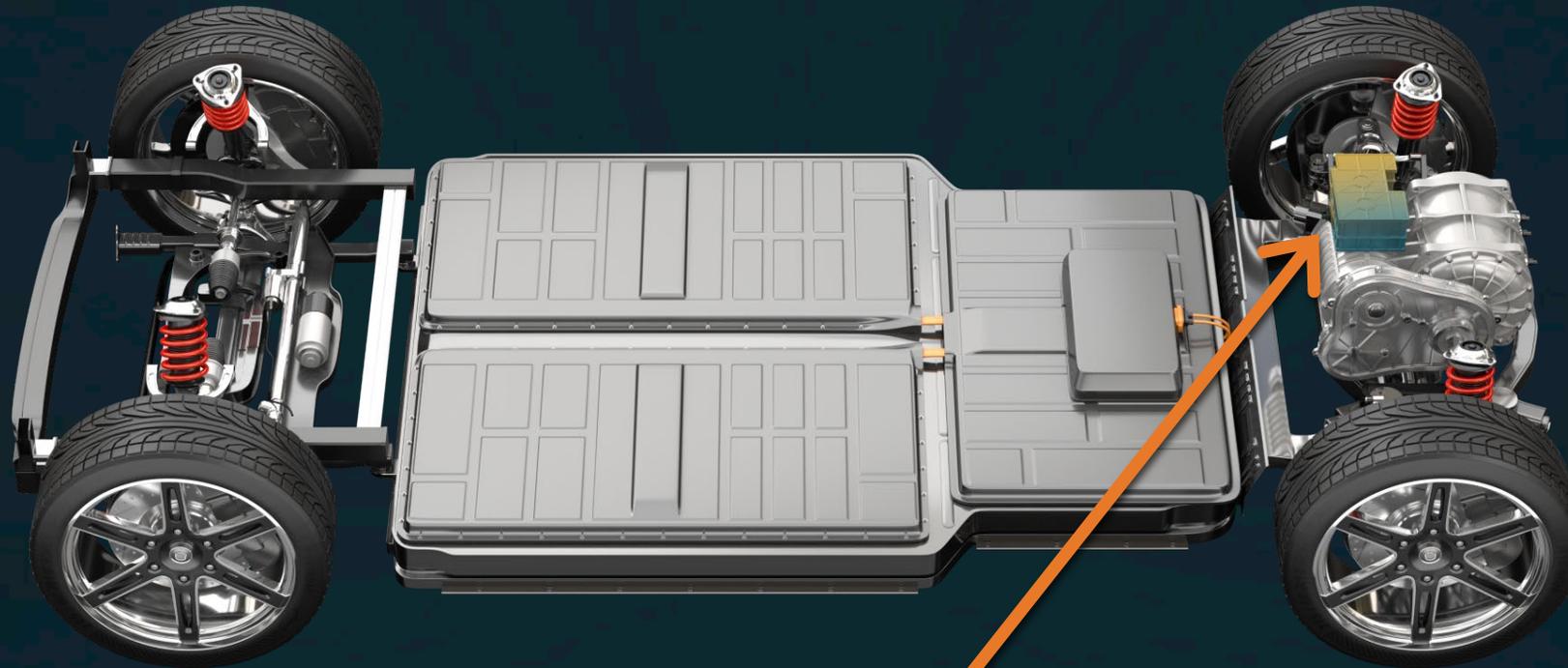
Powering Every Architecture

Customer
Needs

Meet evolving market
demand for increased
performance at entry level



✓ Customer Wins
& LTSAs



SiC & IGBT

onsemi Delivers

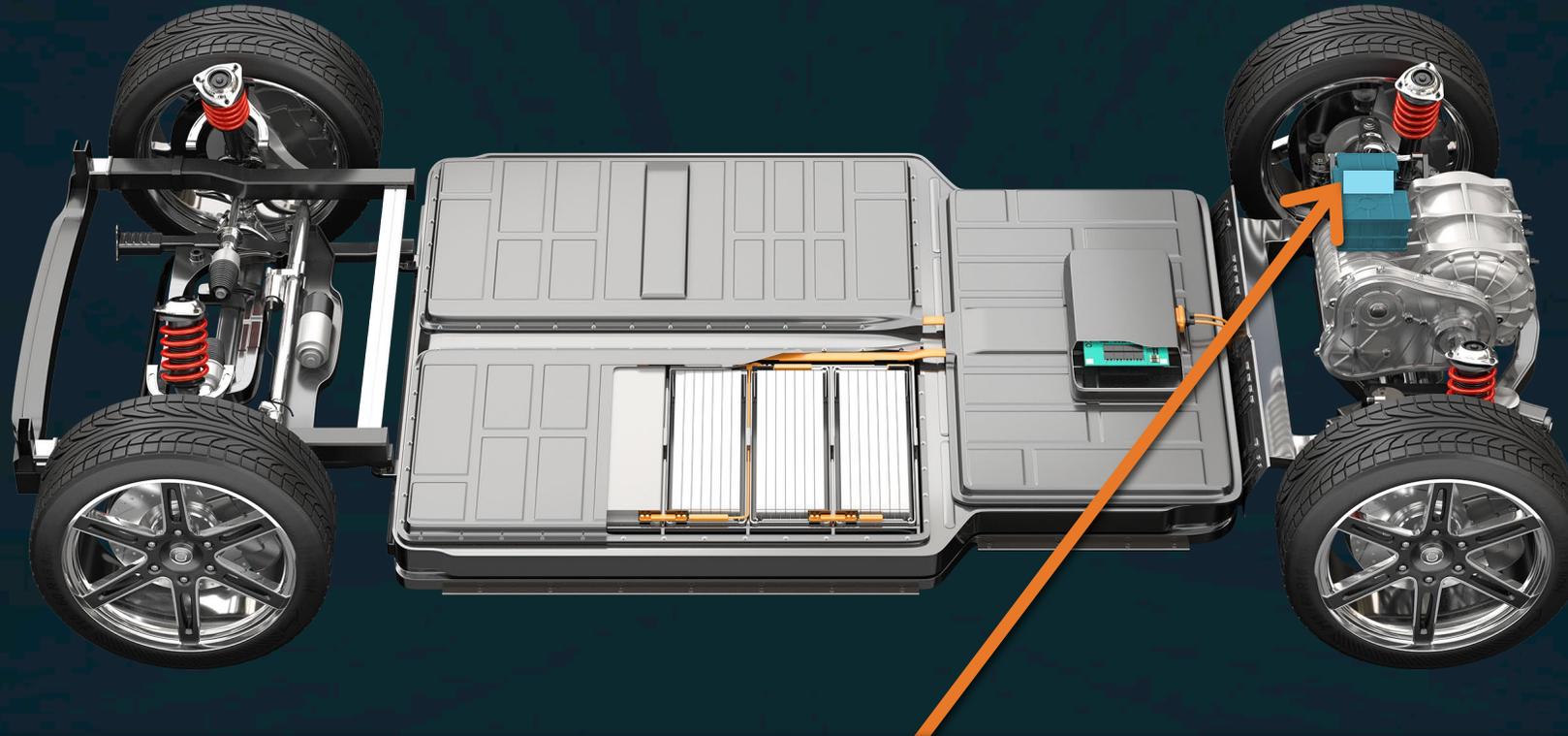
Blended technology solution
combining best of IGBT and SiC

onsemi™

Enabling a Greener Choice

Exciter Module

✓ Customer Wins
& LTSAs



onsemi delivers an exciter module



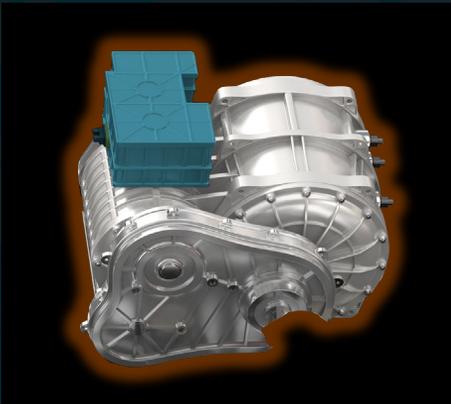
SiC

Enabling a Greener Choice

✓ Customer Wins
& LTSAs

Problem: Rare Earth Metals

- Regional dependency
- Industrial Waste (neodymium)
- Government mandate



SiC

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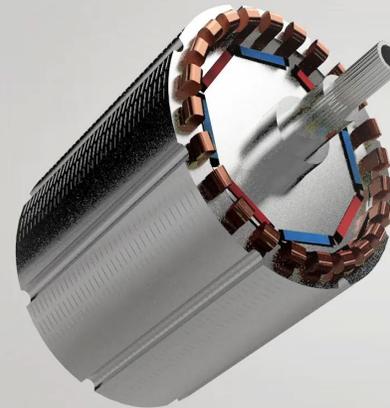
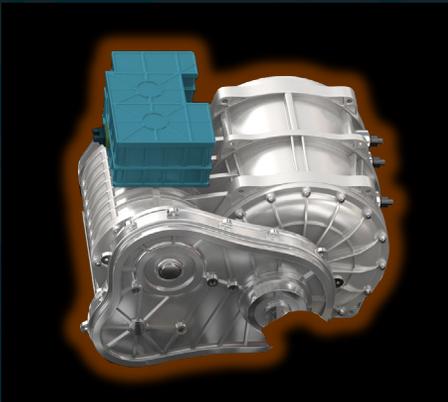
onsemi™

Enabling a Greener Choice

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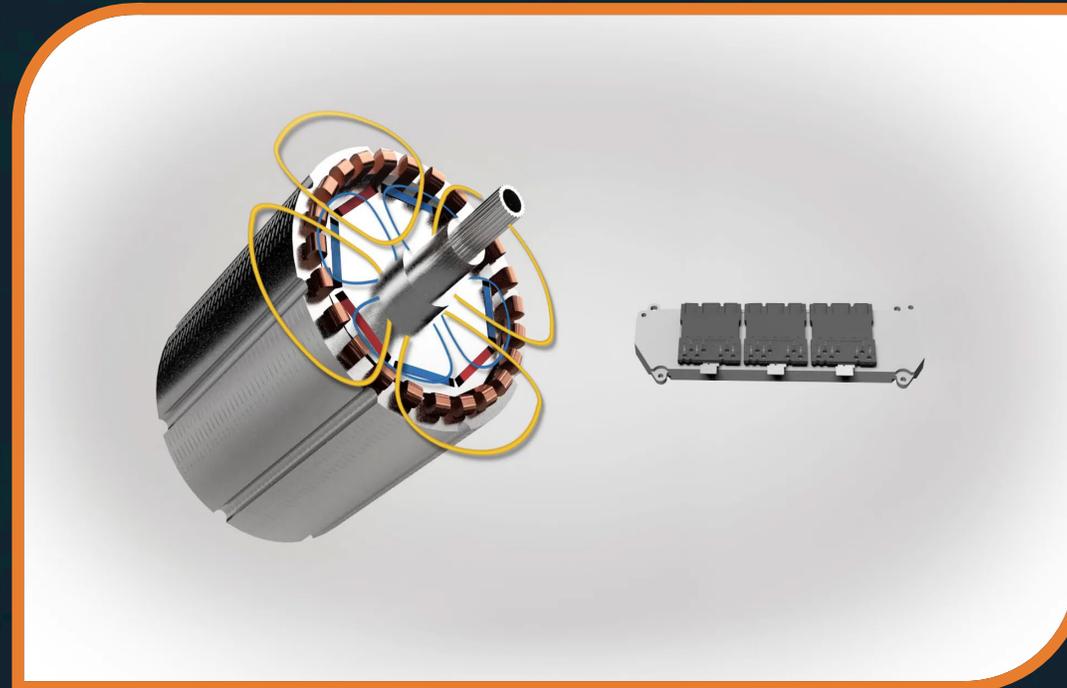
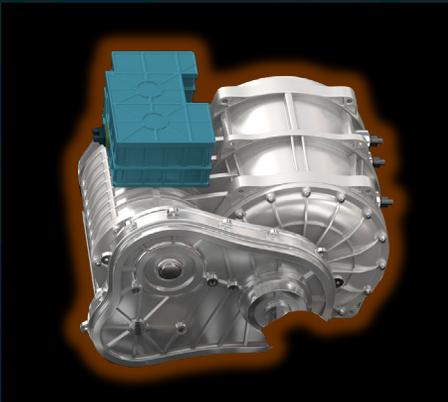


Enabling a Greener Choice

✓ Customer Wins
& LTSAs

Problem: Rare Earth Metals

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- Government mandate



SiC

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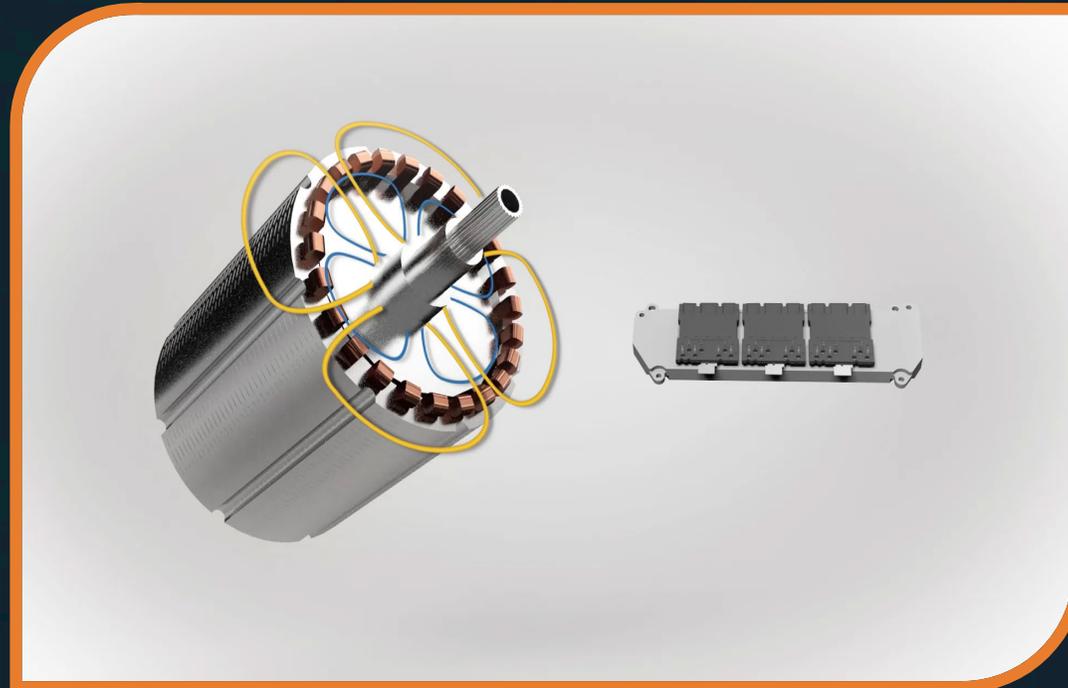
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Enabling a Greener Choice

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SiC

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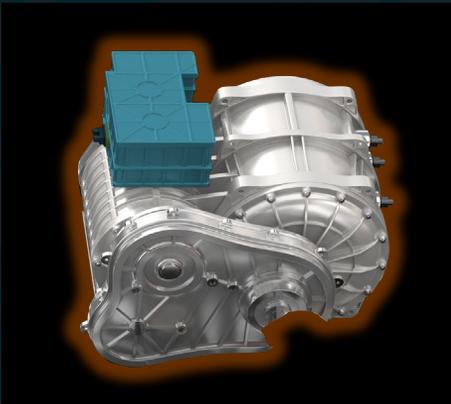
onsemi™

Enabling a Greener Choice

✓ Customer Wins
& LTSAs

Solution

- Enabling Separately Excited Synchronous Motor
- Eliminates Magnets



SiC

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Enabling a Greener Choice

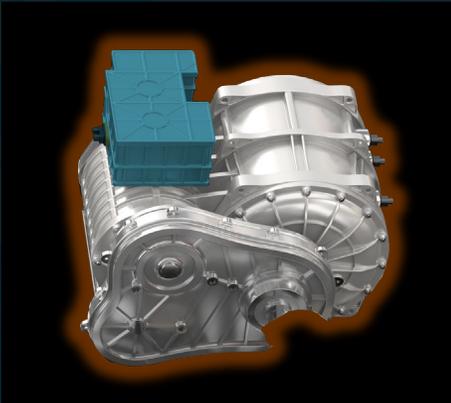
✓ Customer Wins
& LTSAs

Problem: Rare Earth Metals

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- Enabling Separately Excited Synchronous Motor
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SiC

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Enabling a Greener Choice

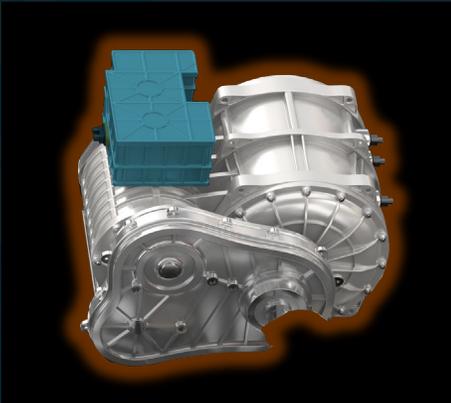
✓ Customer Wins
& LTSAs

Problem: Rare Earth Metals

- Regional dependency
- Industrial Waste (neodymium)
- Government mandate

Solution

- Enabling Separately Excited Synchronous Motor
- Eliminates Magnets



Enabling a Greener Choice

✓ Customer Wins & LTSA's

Problem: Rare Earth Metals

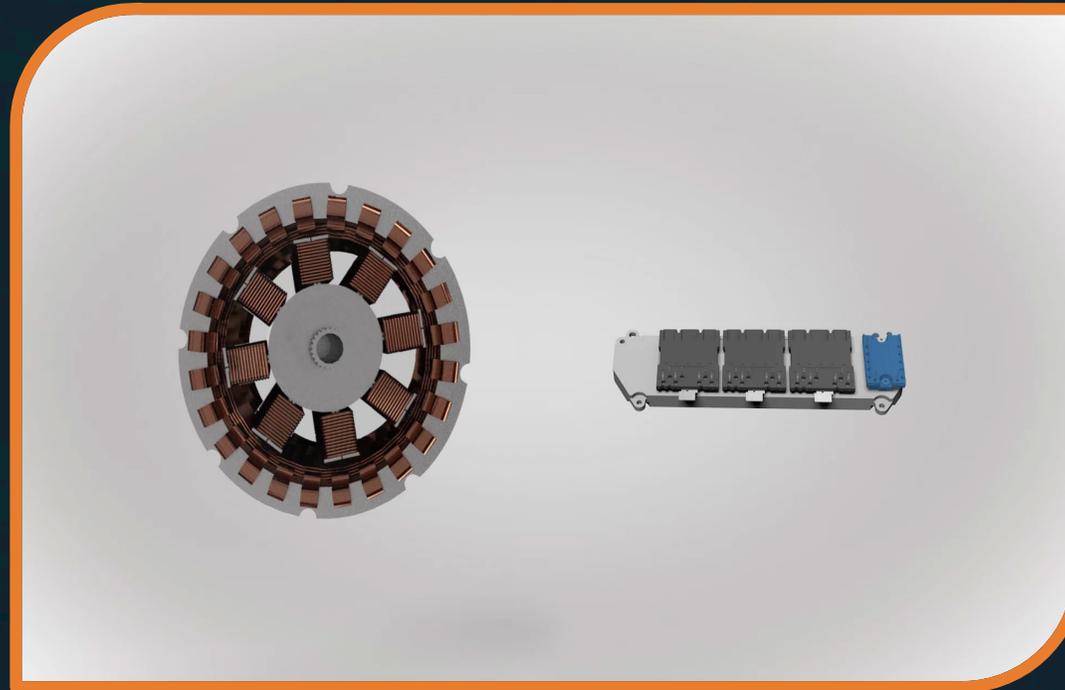
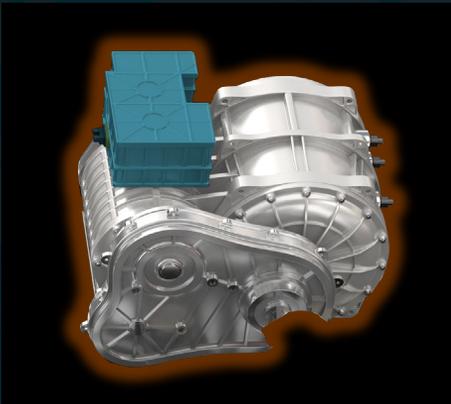
- Regional dependency
- Industrial Waste (neodymium)
- Government mandate

Solution

- Enabling Separately Excited Synchronous Motor
- Eliminates Magnets

onsemi delivers

- Exciter Module → completes the onsemi traction solution
- ✓ Customer Win & LTSA



SiC

Enabling a Greener Choice

✓ Customer Wins & LTSAs

Problem: Rare Earth Metals

- Regional dependency
- Industrial Waste (neodymium)
- Government mandate

Solution

- Enabling Separately Excited Synchronous Motor
- Eliminates Magnets

onsemi delivers

- Exciter Module → completes the onsemi traction solution
- ✓ Customer Wins & LTSAs



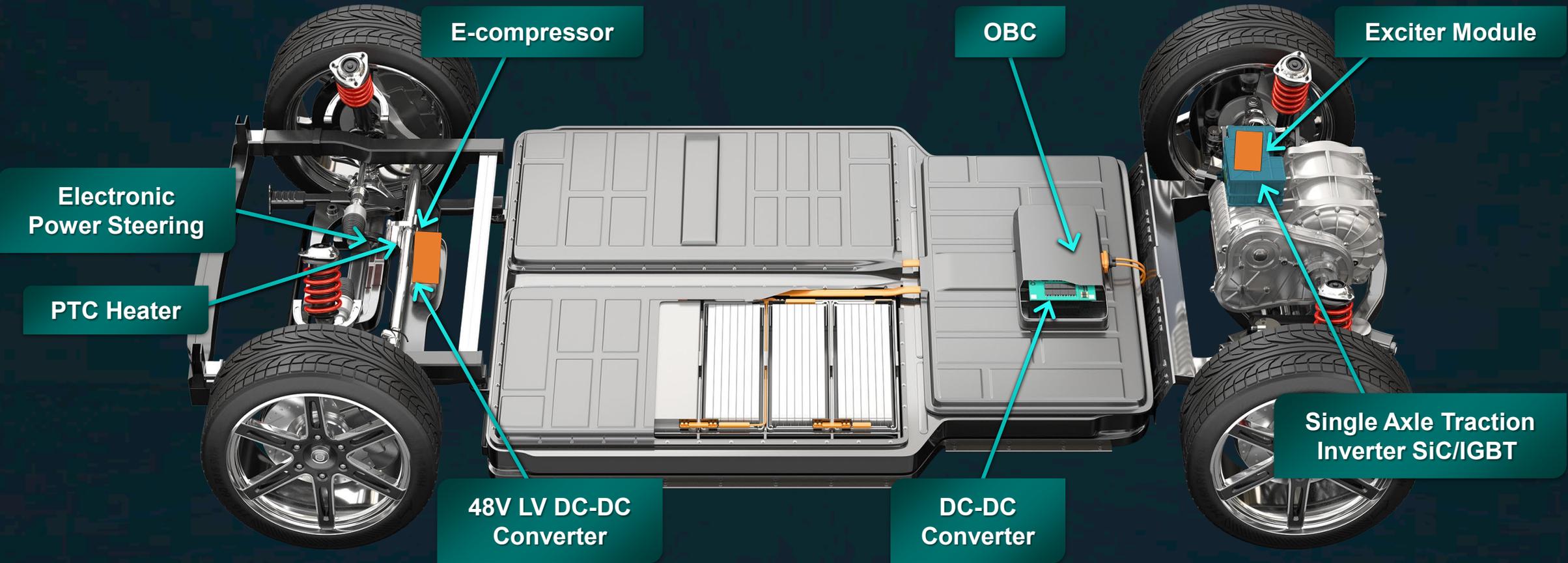
onsemi Solutions for a Sustainable Future



Power of the Portfolio

Broadest Portfolio to Capture the EV Market

✓ Customer Wins & LTSAs



160% annual growth in each of the last two years



GENERATION



STORAGE



ELECTRIFICATION

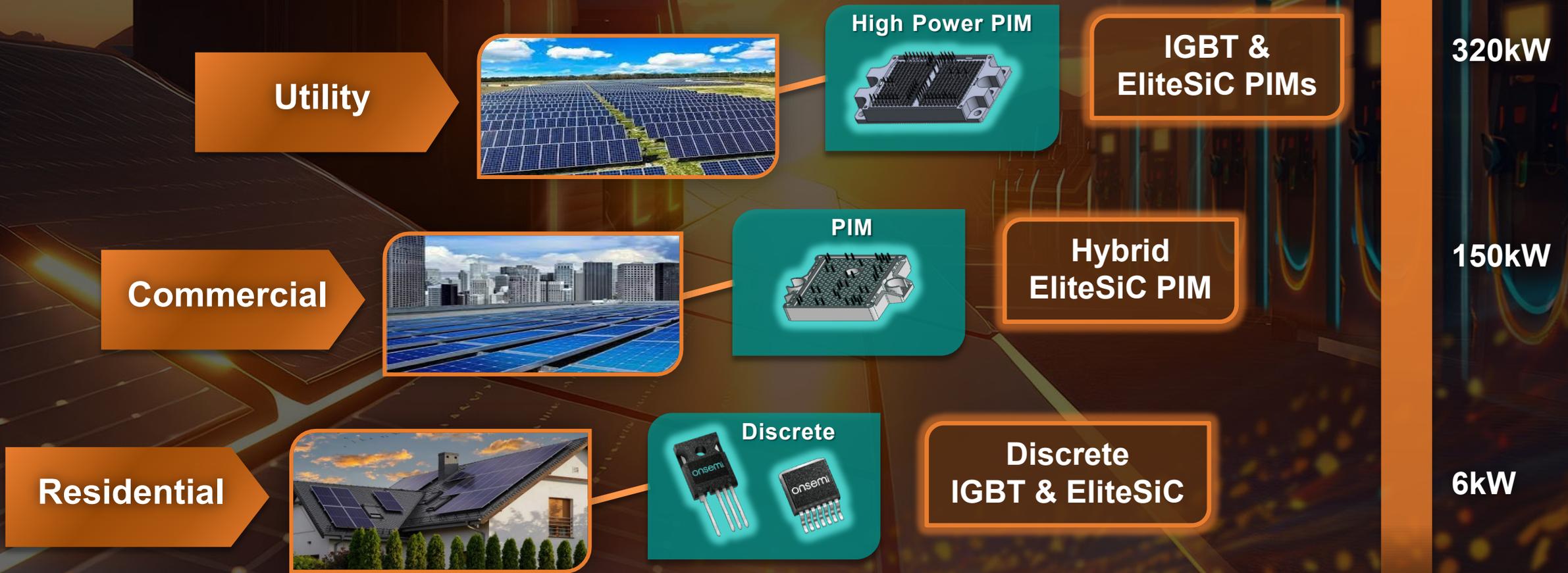


CHARGING





Lead with Scalability...



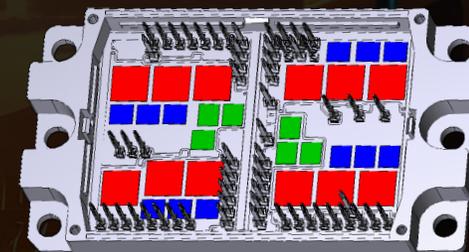
Lead with Scalability... Differentiate with Optimization

✓ Customer Wins
& LTSA's

Case Study:
320kW, 1500V
Utility Scale
Solar Inverter

Customer Needs:

Performance ✓ System Cost ✓
Weight ✓ Go-to-Market speed ✓
Size ✓ Supply assurance ✓



■ IGBT
■ SiC
■ Si Diodes

onsemi Delivers

Time to Market	Elite Power Simulator
Module Design	Optimized topology with a combination of best of Si and SiC devices
Technology	Optimized die process with leading performance
Packaging	Optimized for best thermals, 15% reduction in Rth with tailored package & layout

Powering Every Architecture

Energy Storage

Power System

SiC/
IGBT

Energy Generation

DC-AC
Inverter

DC-AC
Inverter

SiC

IGBT

Ultra Fast EV Charger

AC-DC
inverter

DC-DC
converter

SiC

LTSAs with **8 of top 10** Solar Inverter Customers

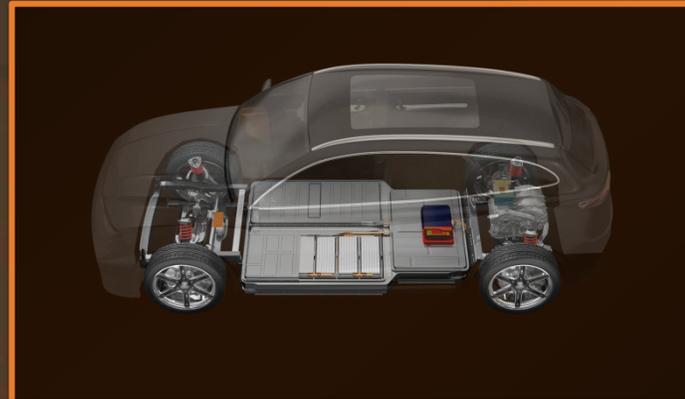
70% annual growth in each of the last 2 years



GENERATION



STORAGE



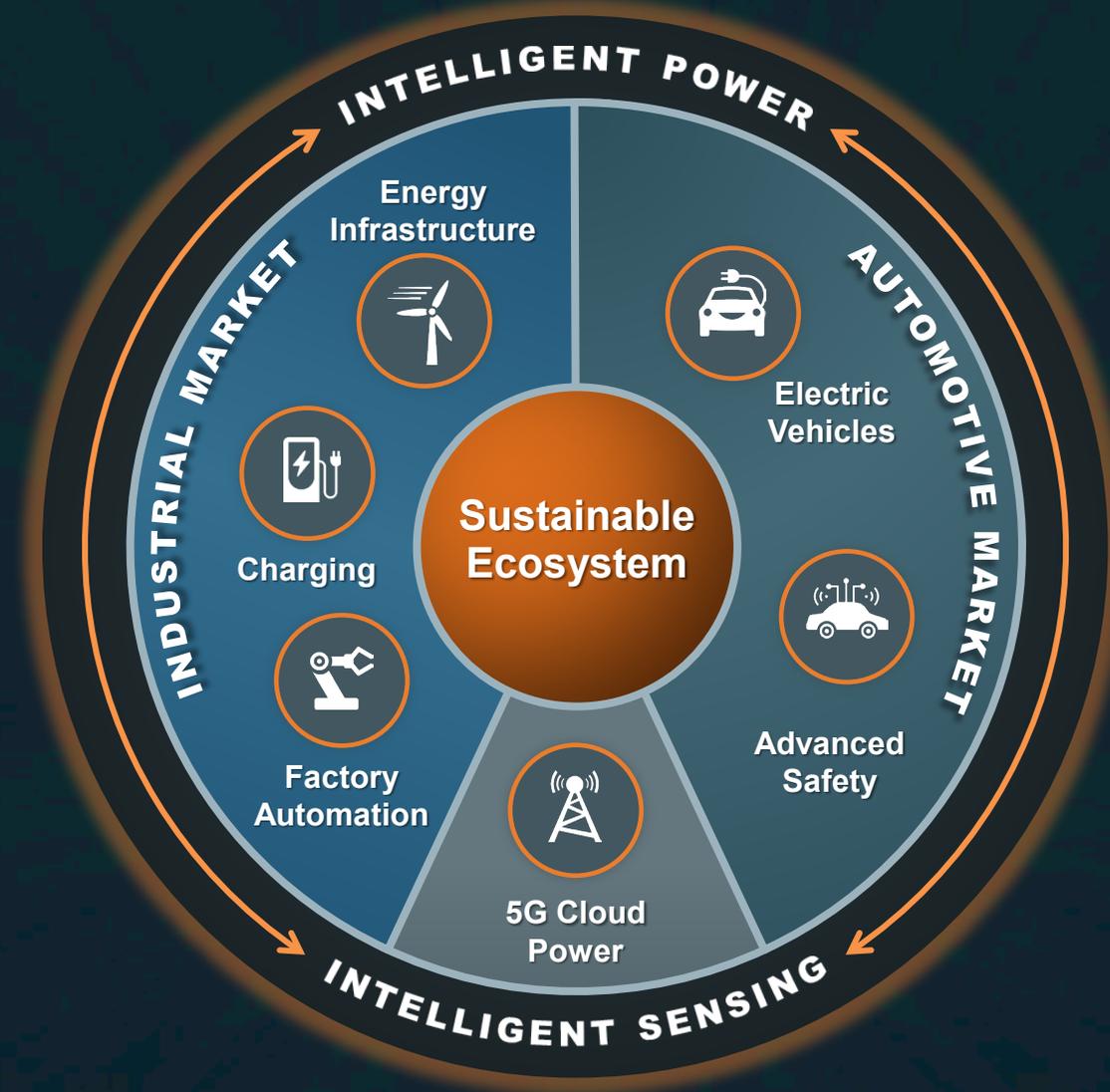
ELECTRIFICATION



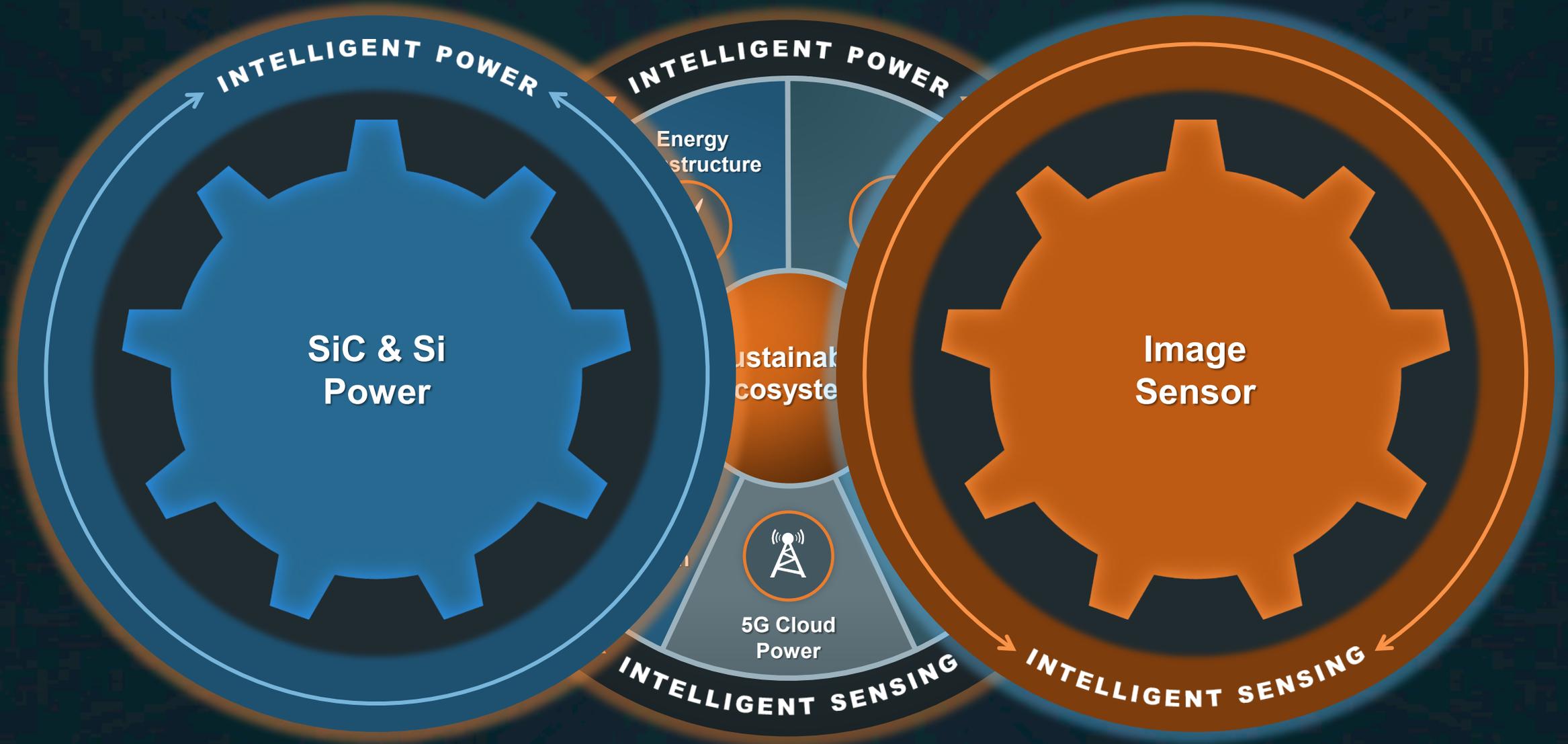
CHARGING



onsemi Flywheel



Winning at the Core



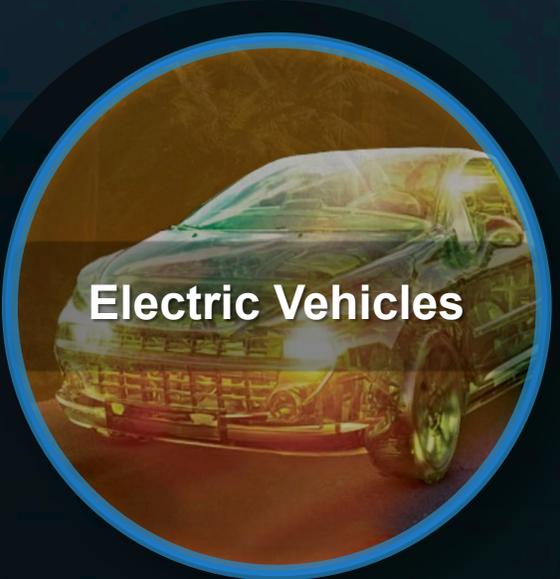


#2 Global Position

9% Market Share ('22)

38% Rev Growth CAGR
('22 - '27)

The Profound Impact of 1%



Electric Vehicles

EV Miles Driven



>3.2B/year
more EV miles driven WW



Data Centers

Power Consumption

205 TWh
= ~19M homes

>\$390M/year
electricity cost savings WW



Industrial Automation

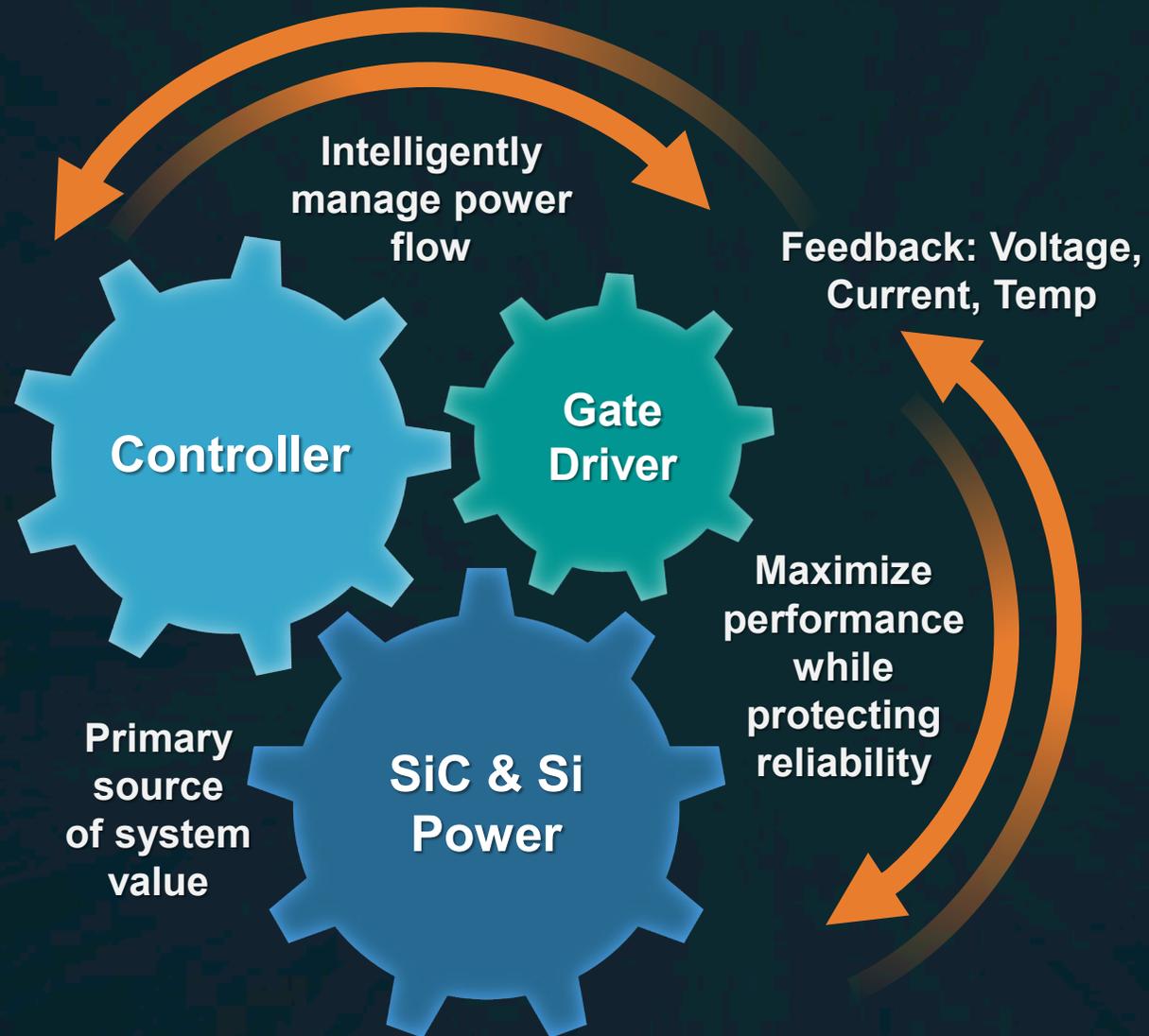
Industrial Motor

50% of the World's Electricity

>\$25B/year
electricity cost savings WW

1% Efficiency Improvement

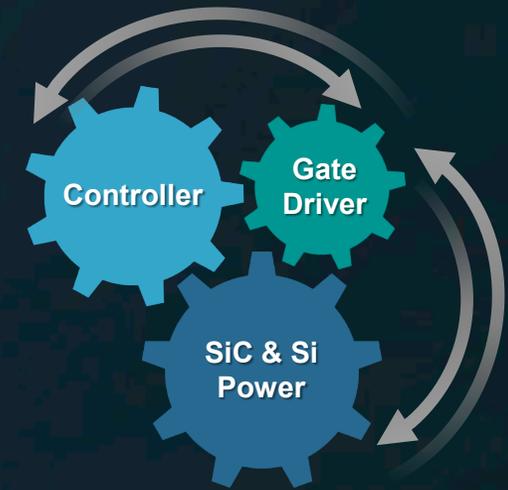
Expanding from the Core



onsemi delivers

- ↑ **Efficiency (1-2%)**
- ↑ **Reliability**
- ↑ **Ease of Design**
- ↓ **System Cost**

Expanding from the Core Build from Leadership Position



Expanding from the Core Proliferate Power IC Portfolio

Lowest Cost
Highest Flexibility
Ease-of-Design



Highest Efficiency

Digital

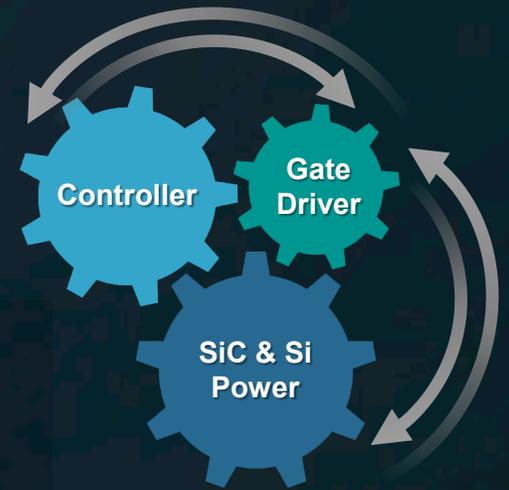
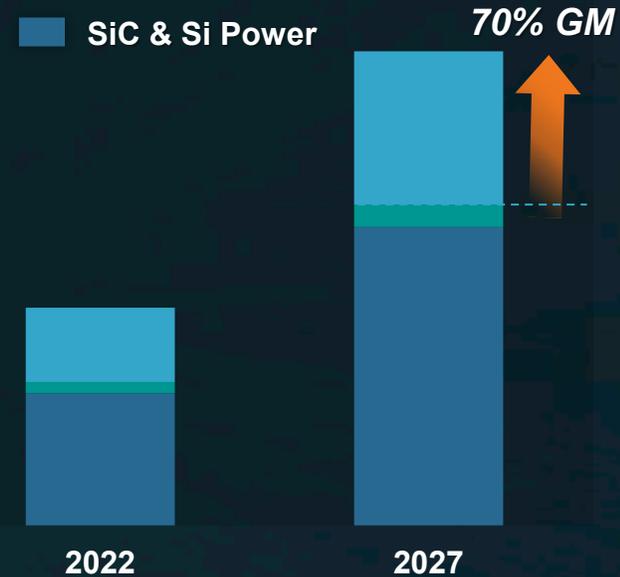
Analog



	Auto	Ind	Cloud
AC-DC			
PoL			
PMIC			
Multi-Phase			
Switch/E-Fuse			

Sustainable Ecosystem
TAM (\$B)

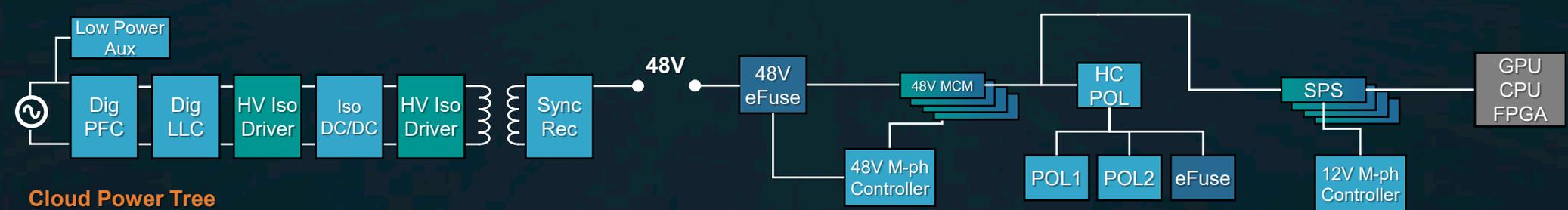
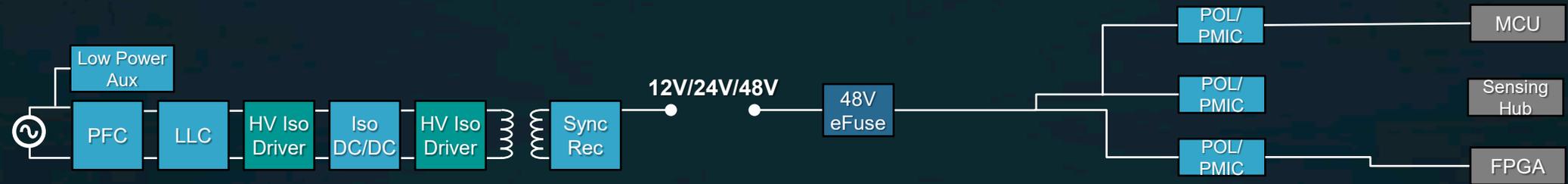
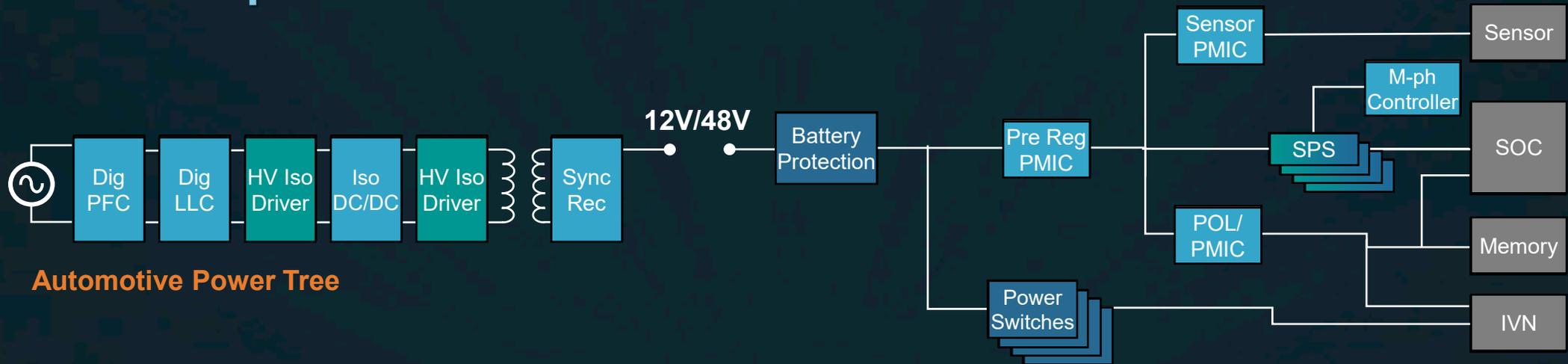
- Controller
- Gate Driver
- SiC & Si Power

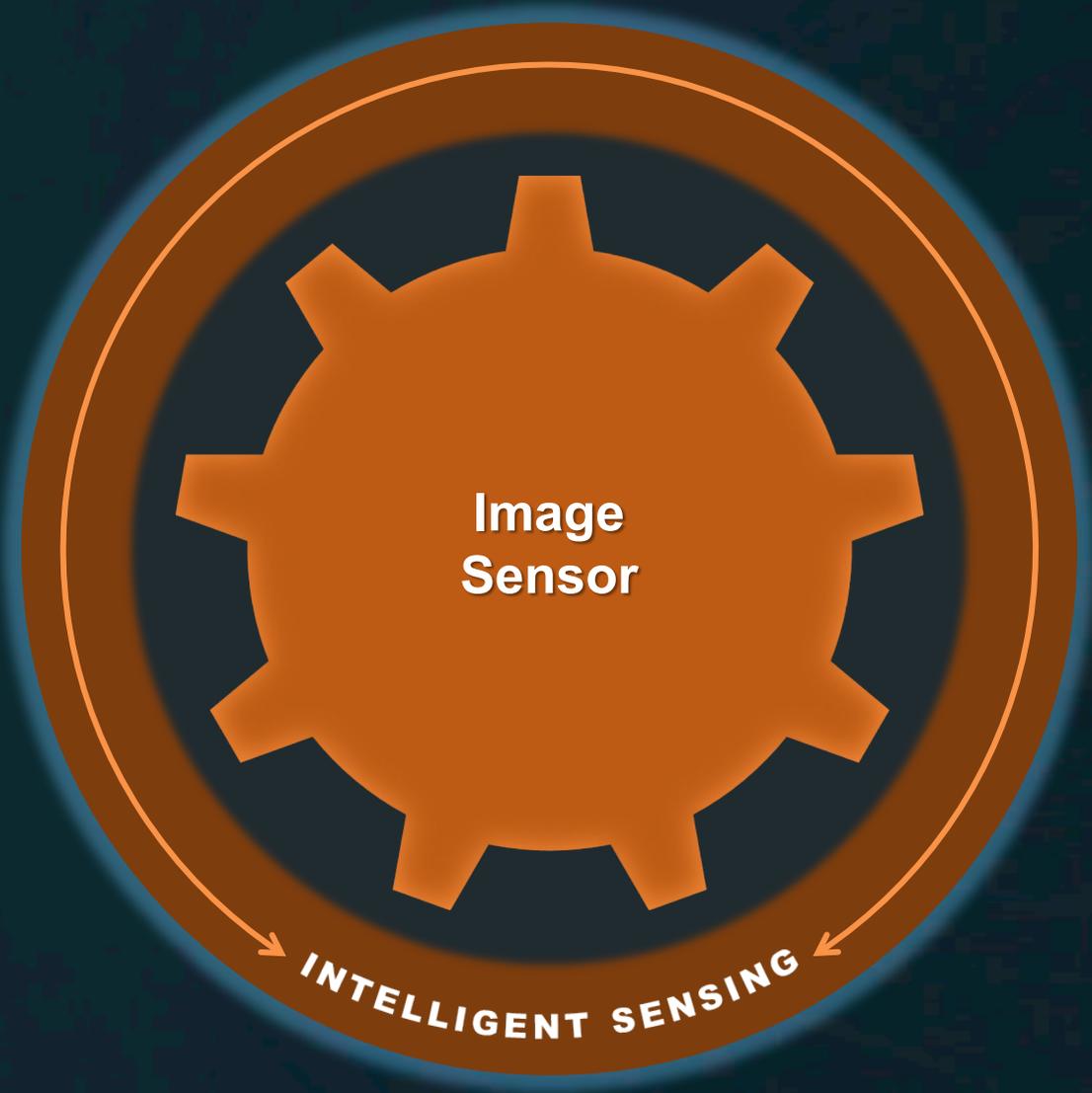


Unlocks \$14B of TAM Opportunity at up to 70% Gross Margin

Expanding from The Core Delivers Complete Power Tree

Controller	Gate Driver	SiC & Si Power	Non-Power
------------	-------------	----------------	-----------

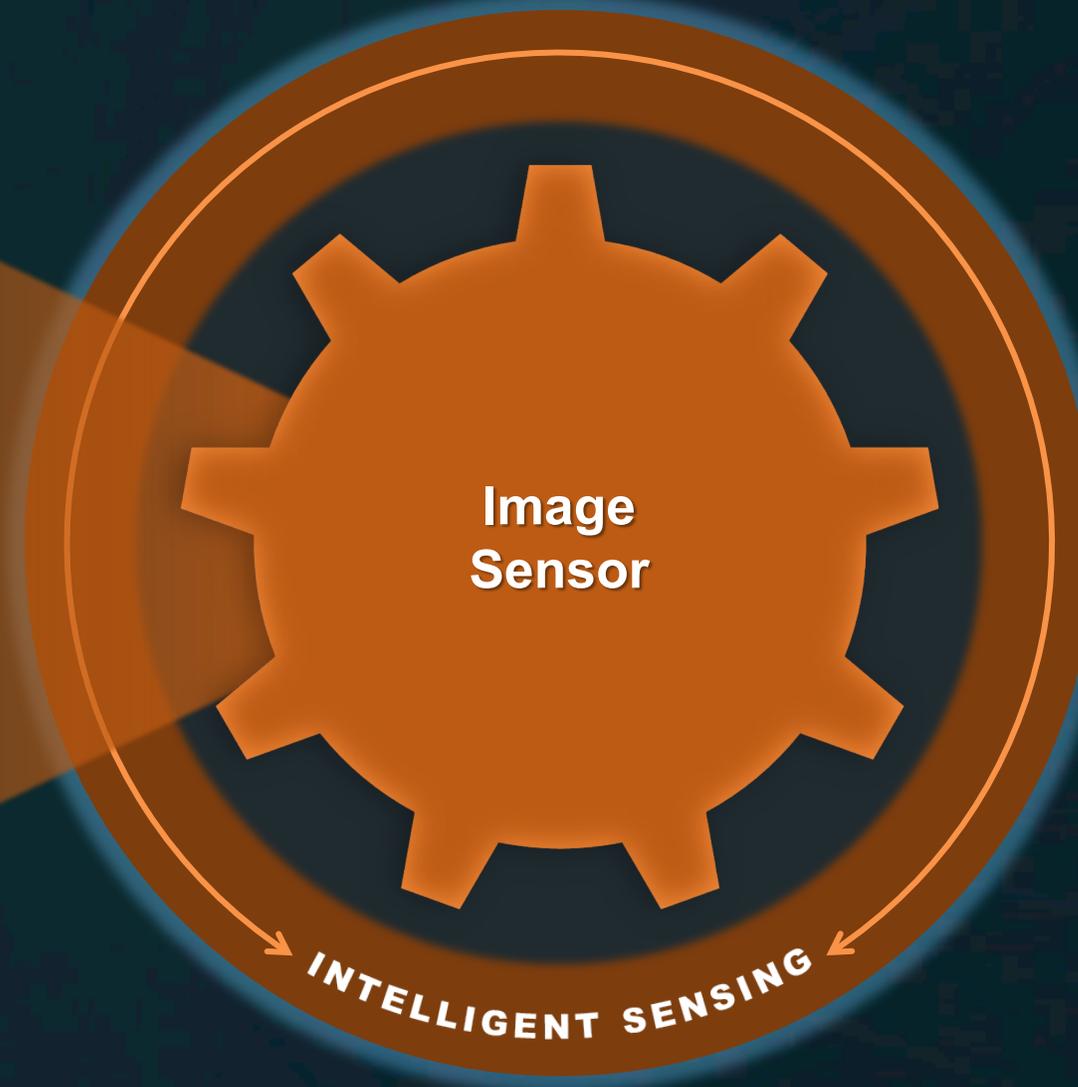




#1 Global Position
in auto & industrial

46% Auto Market
Share ('22)

68% ADAS Market
Share ('22)



onsemi Advantage

- Global Shutter
- Rolling Shutter
- Image Signal Processing

**Superior
Technology**

**Auto & Industrial
Focus**

- Installed base of >450M automotive sensors

**onsemi's
Image
Sensor**

- Devware
- Ref Designs
- Ecosystem

**Solution
Enablement**

**Decades
of Innovation**

- 45+ years of sustained innovation

onsemi Advantage

- Global Shutter
- Rolling Shutter
- Image Signal Processing

**Superior
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**onsemi's
Image
Sensor**

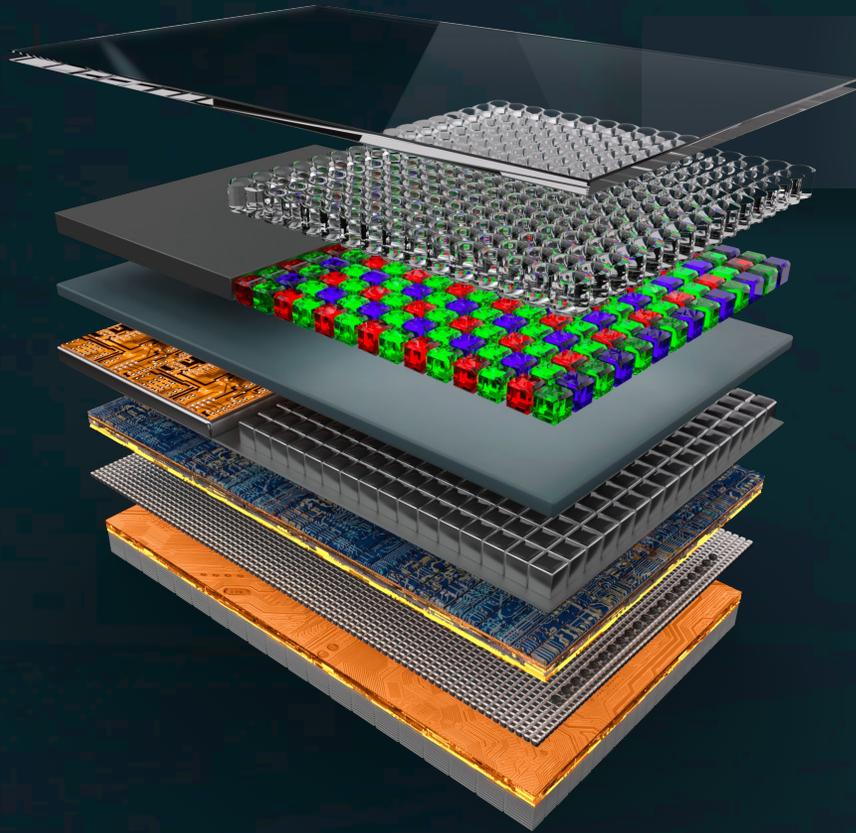
- Devware
- Ref Designs
- Ecosystem

**Solution
Enablement**

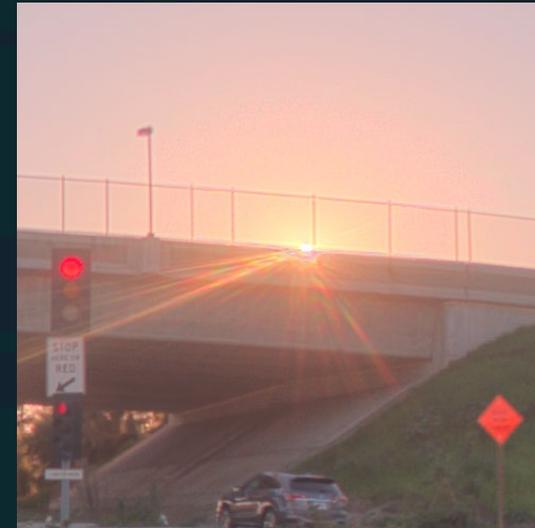
**Decades
of Innovation**

- 45+ years of sustained innovation

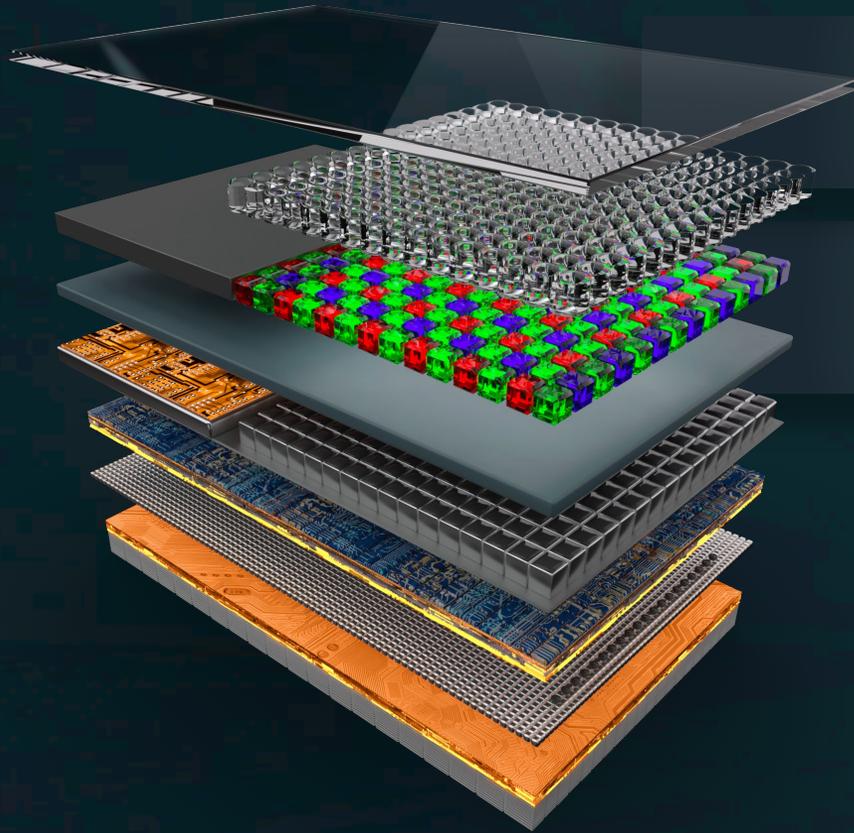
Superior Technology



High Dynamic Range

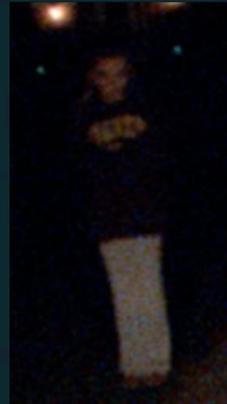


Superior Technology

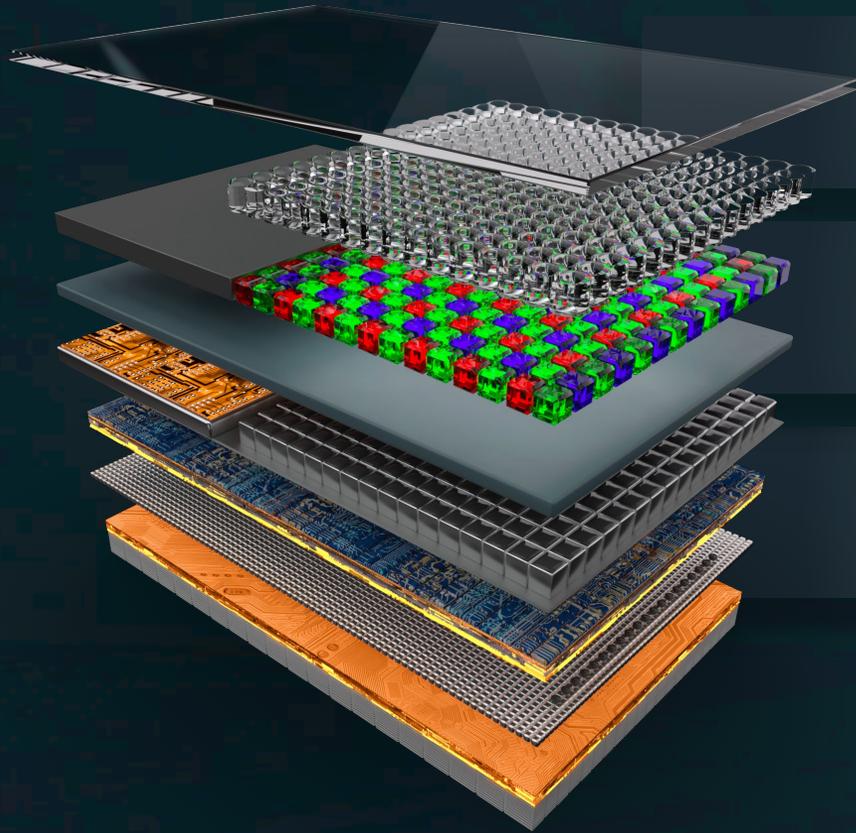


High Dynamic Range

Low Light Performance



Superior Technology



High Dynamic Range

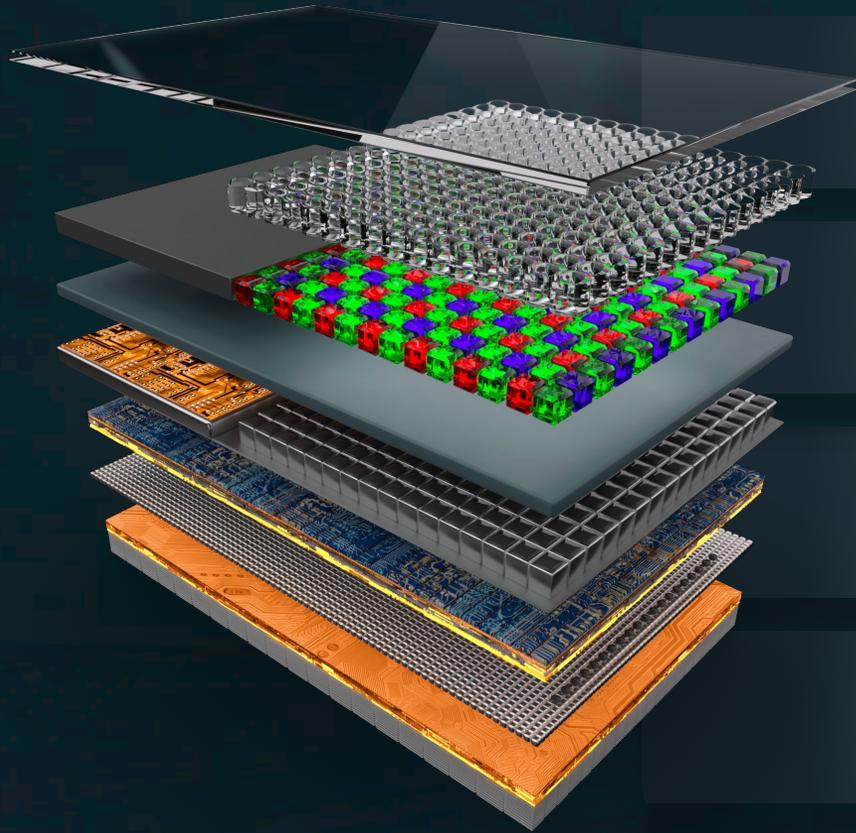
Low Light Performance

Low Power



Latest generation is
30-70%
more power efficient

Superior Technology



High Dynamic Range

Low Light Performance

Low Power

System Functions



Cybersecurity

Functional Safety

onsemi Advantage

- Global Shutter
- Rolling Shutter
- Image Signal Processing

Superior
Technology

Auto & Industrial
Focus

- Installed base of >450M automotive sensors

onsemi's
Image
Sensor

- Devware
- Ref Designs
- Ecosystem

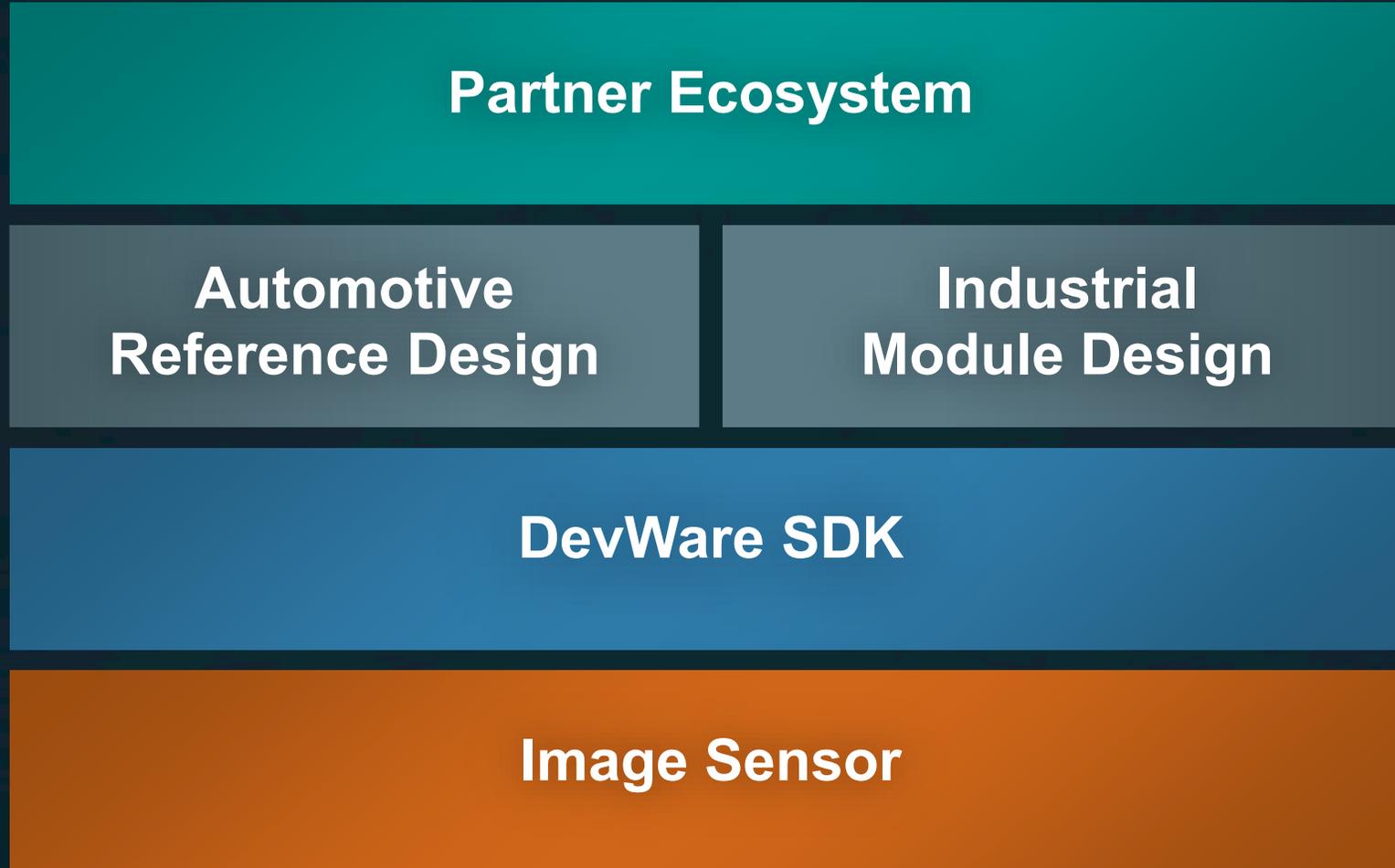
Solution
Enablement

Decades
of Innovation

- 45+ years of sustained innovation

Image Sensor Leadership

Only Provider to Enable Complete Solutions



DevWare SDK

Scale Business to 1000s of Customers

Info

Part Number	ASX340AT
Version	REV3
Firmware	2.1
Interface	Parallel/BT.656
Build Name	6.1.29_Daily
Build Version	6.1.29.59092
Build Date	04/06/2023
Demo Board	DEMO3 (4C/211)
Array Clock	27.00 MHz
Output Clock	54.00 MHz
Width	720
Height	487i
Image Type	YCBCR
Frame (bytes)	701,280
Frames	207
Dropped Frames	0
FPS (Sensor)	30.0
FPS (DataLink)	30.0
FPS (Display)	31.0
Cursor Pos	507, 63
Y: Raw Data	131
Cb: Raw Data	134
Cr: Raw Data	129
RGB Output	135, 131, 143

Image/SOC Control

Filter: YCbCr to RGB

Bayer Pattern: Auto G R R G B G G B R G

True Black Subtraction (Bayer Data Pedestal): Automatic Off On Level: 42 Scale: 10-bit (1024)

De-Interlacing: Automatic Off Top Field First Bottom Field First

Display Color Channel: All Channels in Color Orientation: Normal

Registers

Address (hex)	Display Name	Value (hex)
0x3002	y_addr_start	0x0024
0x3004	x_addr_start	0x0028
0x3006	y_addr_end	0x0208
0x3008	x_addr_end	0x02AF
0x300A	frame_length_lines	0x020D
0x300C	line_length_pck	0x035A
0x3010	fine_correction	0x0031
0x3012	coarse_integration_time	0x0105
0x3014	fine_integration_time	0x0044
0x301A	reset_register	0x90F4
0x301E	data_pedestal	0x002A
0x3040	read_mode	0x0041
0x3056	green1_gain	0x1020
0x3058	blue_gain	0x1020
0x305A	red_gain	0x1020
0x305C	green2_gain	0x1020
0x305E	global_gain	0x1029
0x31F4	fuse_id1	0xE228
0x31F6	fuse_id2	0x7CD8
0x31F8	fuse_id3	0xDF47
0x31FA	fuse_id4	0x546A
0x31FE	customer_rev	0x23

Register Watch

Key	Addr (hex)	Description	Value (hex)	Change (hex)
REG	0x305E	global_gain	0x1029	+ 0x0009

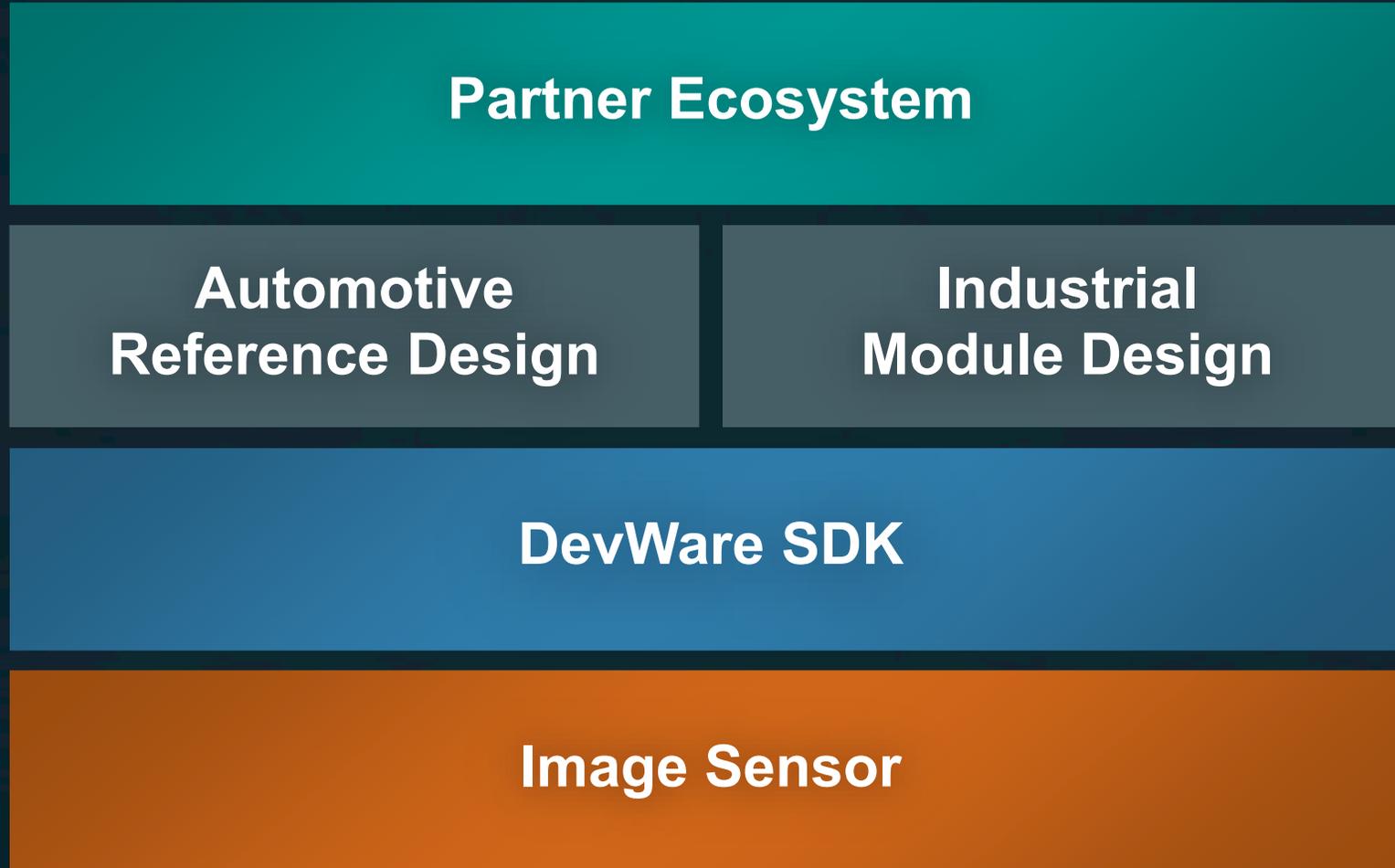
Analysis Graph

Intensity Cumulative Intensity Histogram Cumulative Histogram Noise Vectorscope

Y min: 0, Y max: 256

Image Sensor Leadership

Only Provider to Enable Complete Solutions



Automotive Reference Design

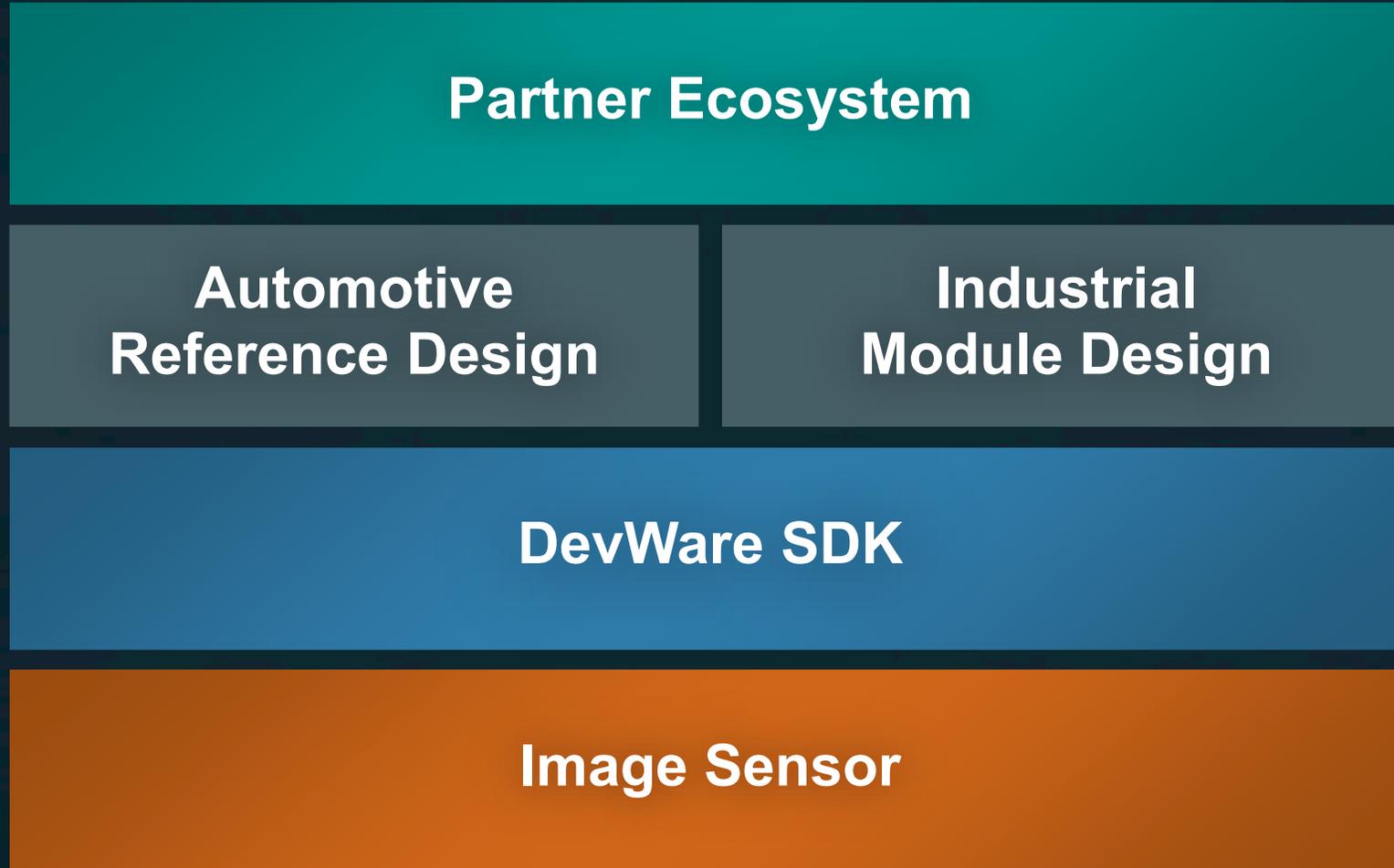


Industrial Module Design



Image Sensor Leadership

Only Provider to Enable Complete Solutions



Partner Ecosystem

Partner Ecosystem

Partner Ecosystem

Optics



Sunex

EVETAR®



Nidec



Discrete ISP



SerDes /IF



Techpoint



SoC/FPGA



ISVs



smart eye



onsemi Automotive Partner Ecosystem

> 50 End-to-End Image Solution Partners

onsemi Advantage

- Global Shutter
- Rolling Shutter
- Image Signal Processing

Superior
Technology

Auto & Industrial
Focus

- Installed base of >450M automotive sensors

onsemi's
Image
Sensor

- Devware
- Ref Designs
- Ecosystem

Solution
Enablement

Decades
of Innovation

- 45+ years of sustained innovation

Image Sensor Leadership

45+ Years of Sustained Innovation

onsemi™



Kodak

TRUESENSE

JPL Photobit Micron Aptina

sensL

1st proto digital camera
1975

Bayer Pattern
1975

1st Megapixel CCD
1986

1st Camera on Chip
1995

1st CMOS APS
1993

1st Global Shutter Pixel
1995

1st Auto CMOS Sensor
2005

1st >Film Digital Sensor
2012

1st HDR+LFM Auto Sensor
2017

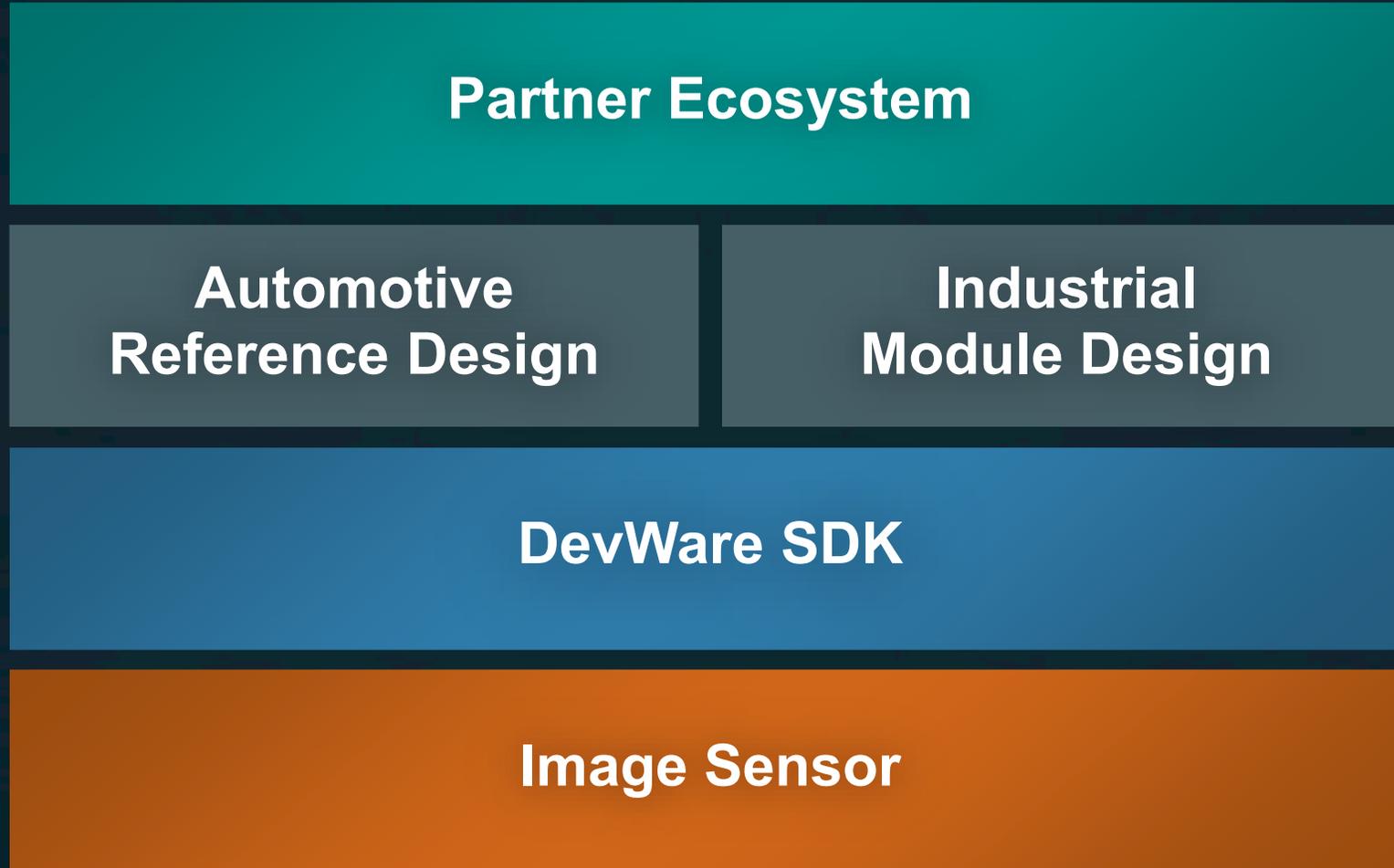
SiPM for dToF LiDAR
2018

Smart iToF Depth Sensor
2022

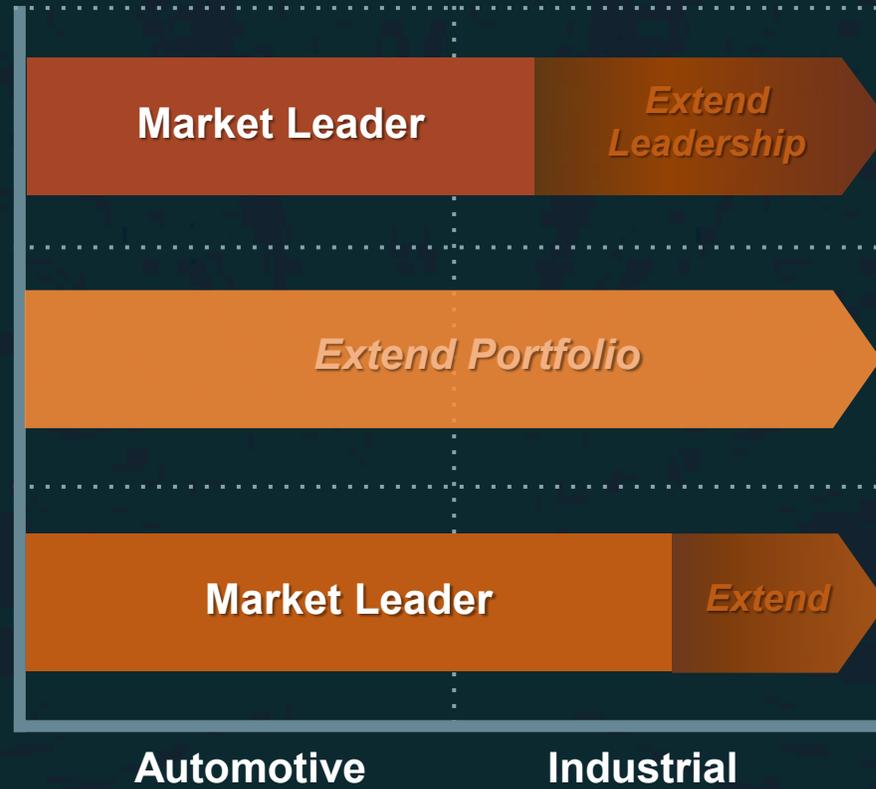
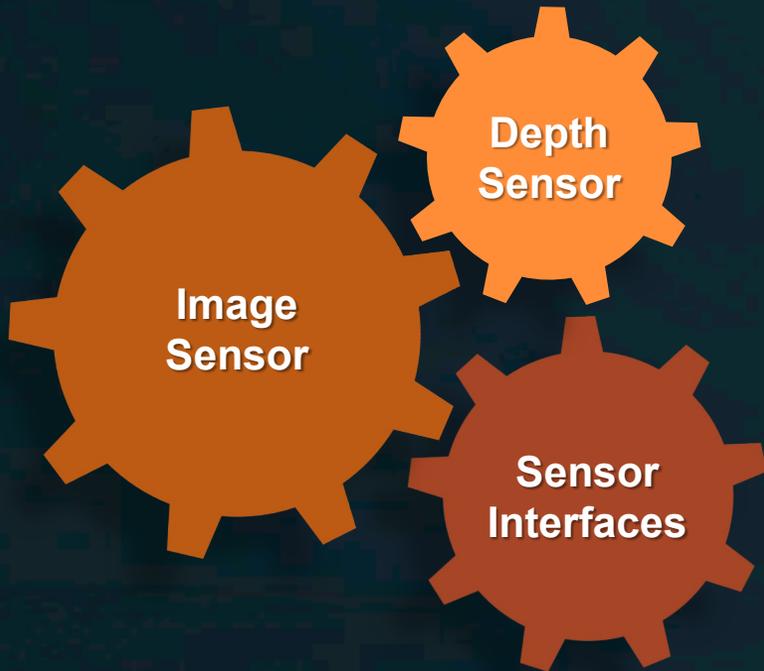
1st 150 dB HDR+LFM Sensor
2023

Image Sensor Leadership

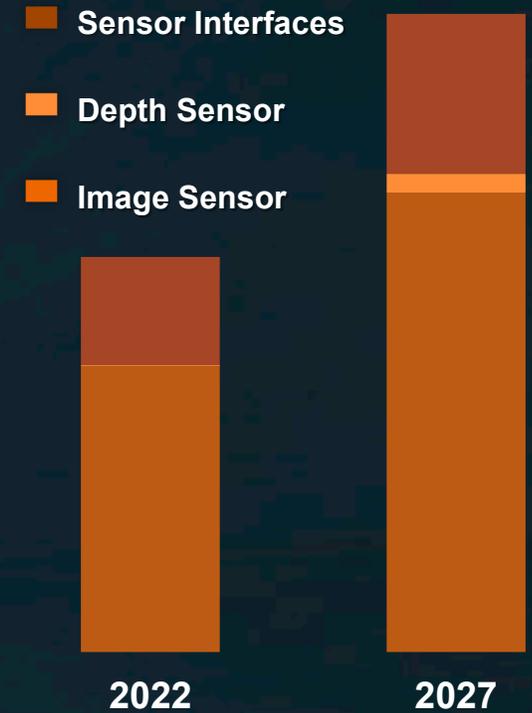
Only Provider to Enable Complete Solutions



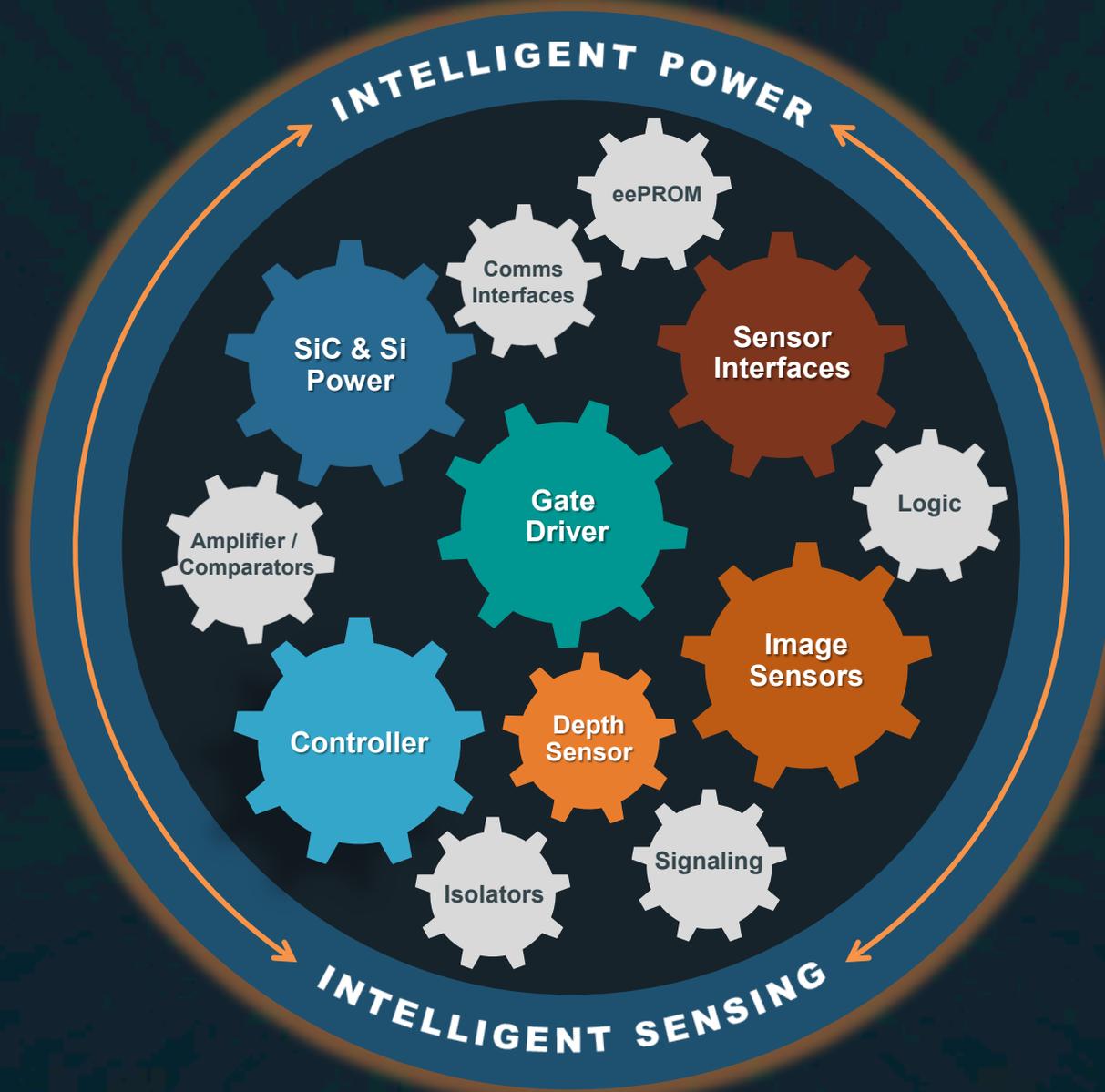
Expanding from the Core

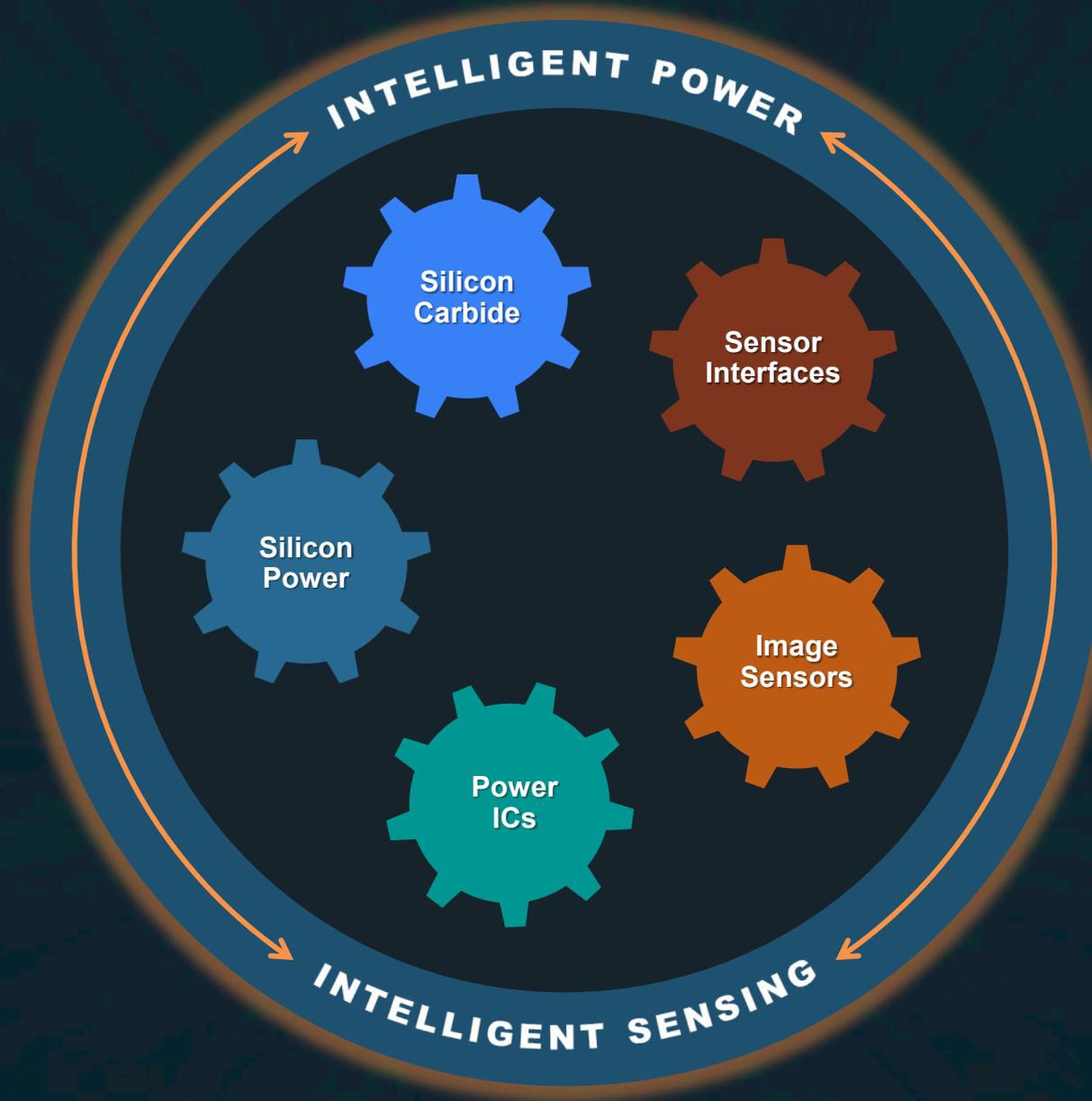


Sustainable Ecosystem TAM (\$B)



\$5.3B TAM Opportunity by 2027

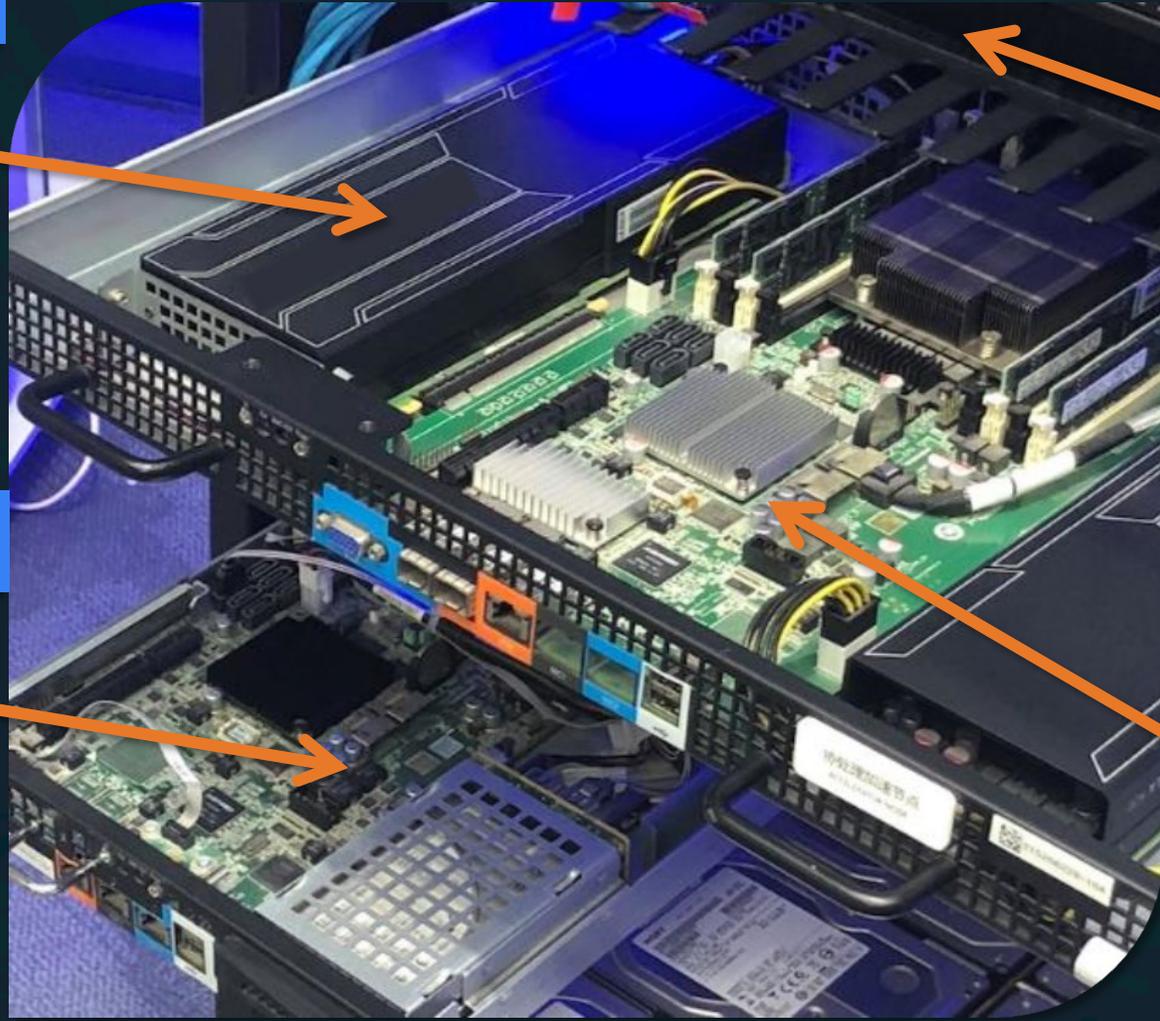




\$14 → \$60

Artificial Intelligence Accelerator

- Multiphase Controllers
- Smart Power Stages
- 48V MCM
- POL Regulators
- e-fuse Protection Devices



\$14 → \$25

High Power AC/DC

- AC/DC Totem Pole PFC
- LLC Controller
- HV Isolated Drivers
- Isolated DC/DC Converter
- WBG FETs

\$2 → \$17

Networking Unit

- Multiphase Controllers
- Smart Power Stages
- POL Regulators
- e-fuse Protection Devices

\$7 → \$50

Server Board

- Multiphase Controllers
- Smart Power Stages
- 48V MCM
- POL Regulators
- e-fuse Protection Devices

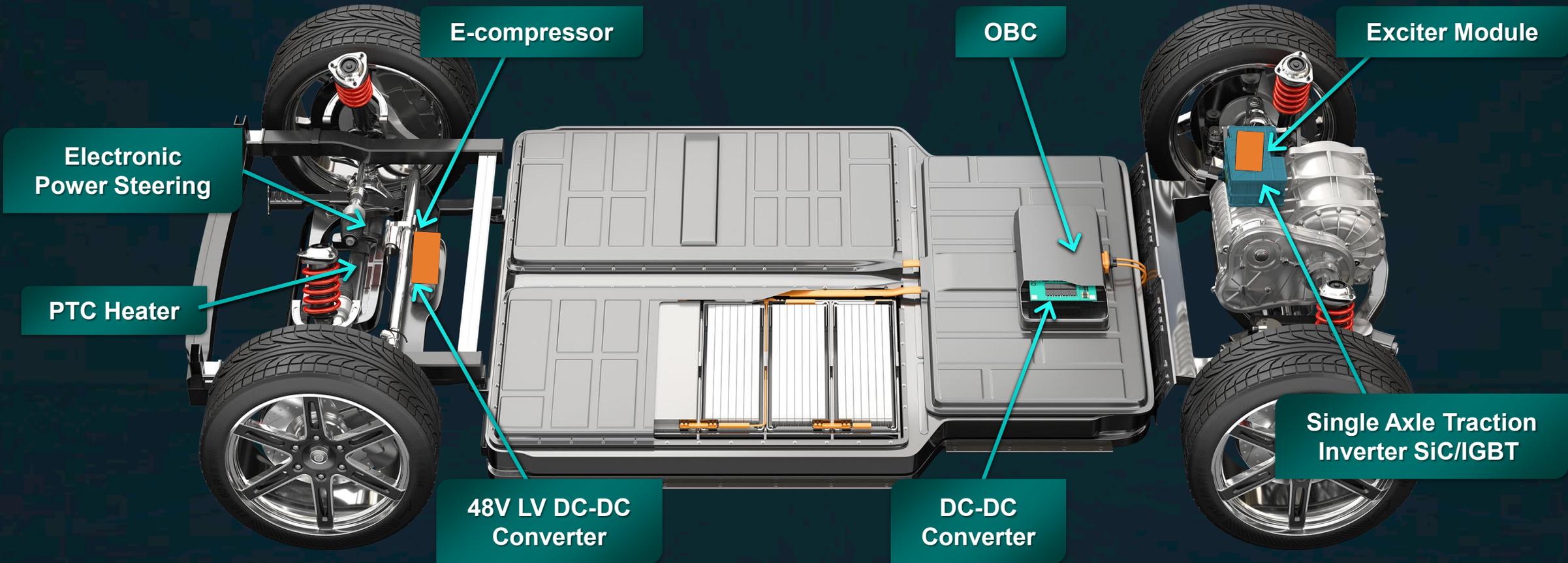
Portfolio expansion increases our opportunity up to \$5M per data center

Power of the Portfolio

✓ Customer Wins & LTSAs

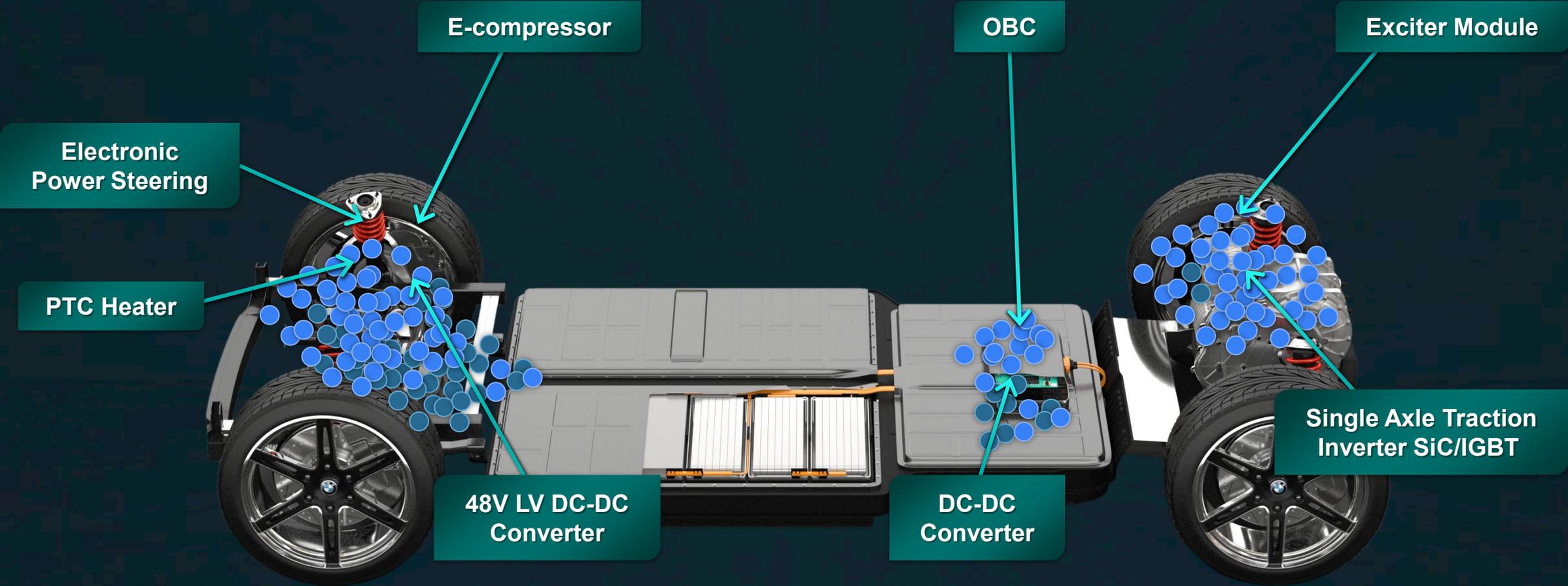
Broadest Portfolio to Capture the EV Market

EV Power Applications



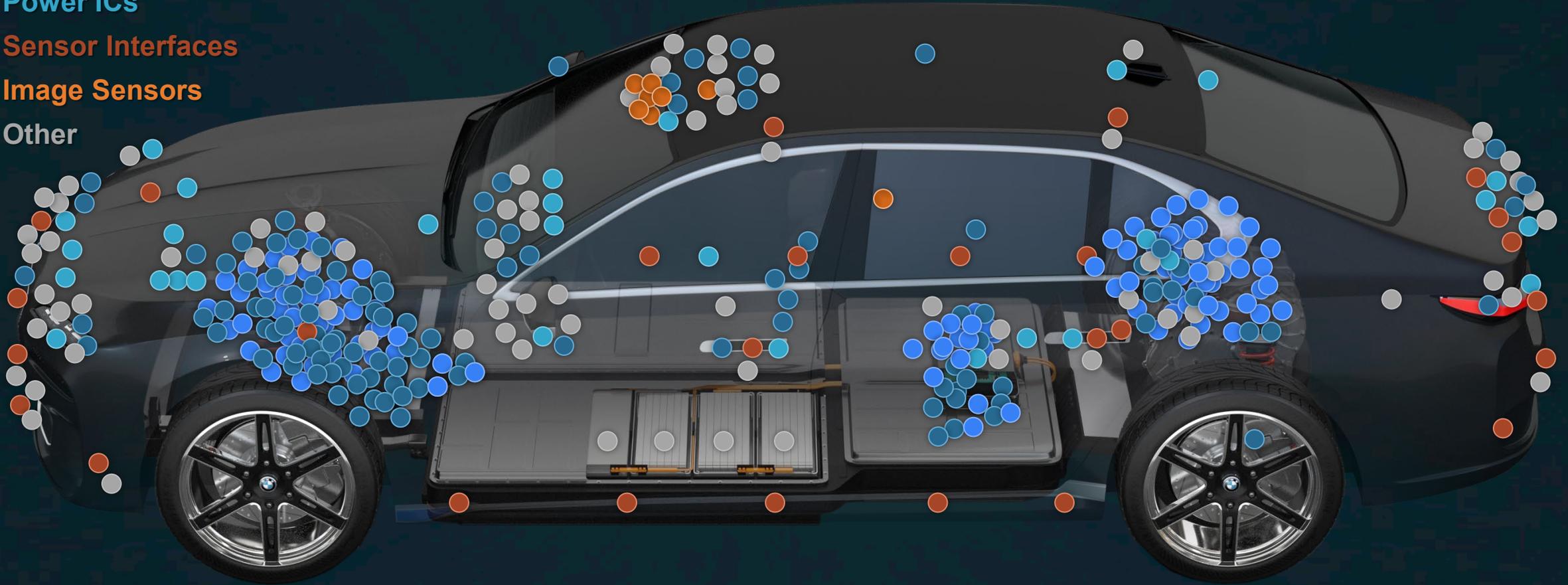
onsemi. Everywhere. Today.

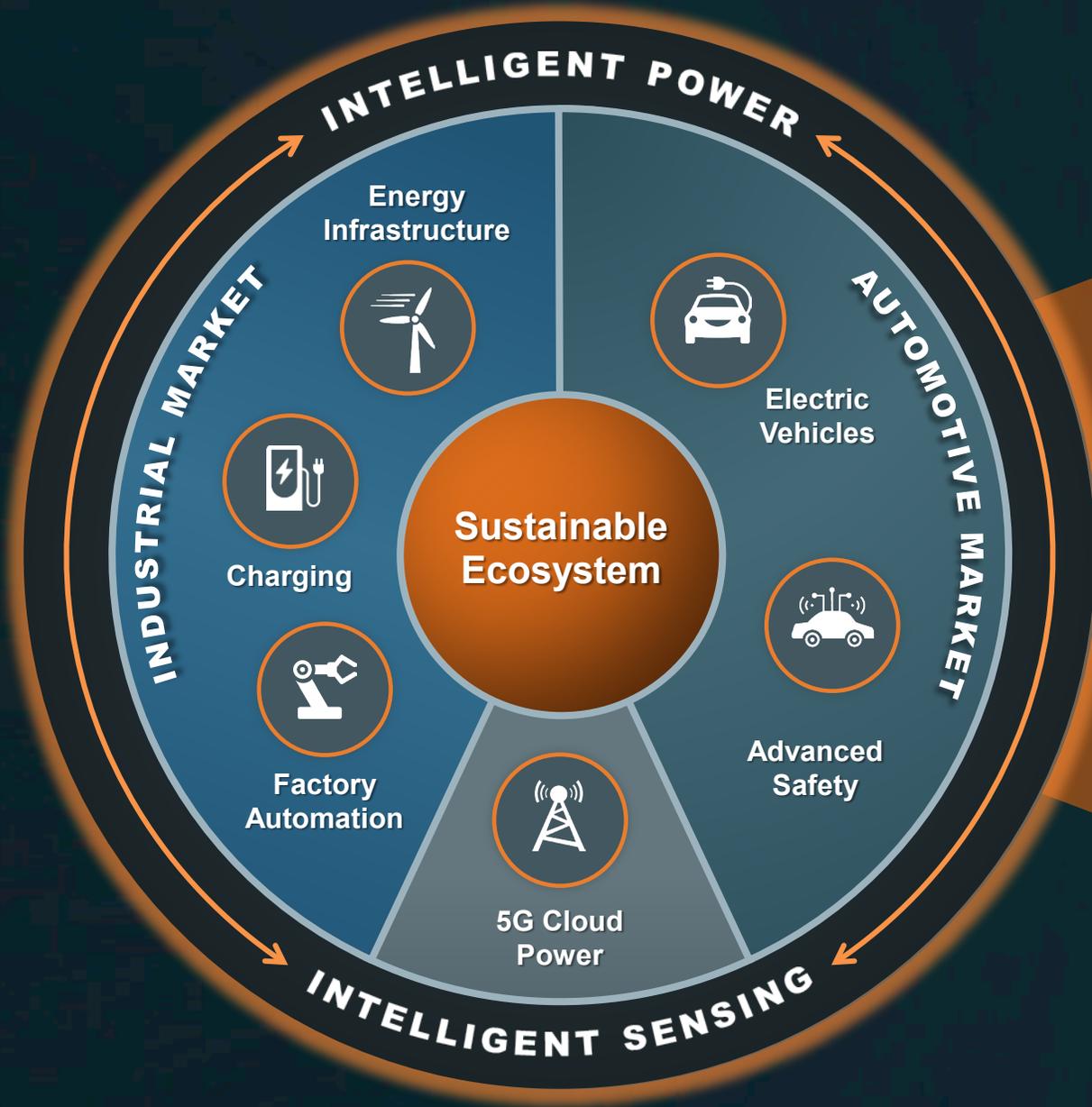
EV Power Applications



onsemi. Everywhere. Today.

- Silicon Carbide
- Silicon Power
- Power ICs
- Sensor Interfaces
- Image Sensors
- Other



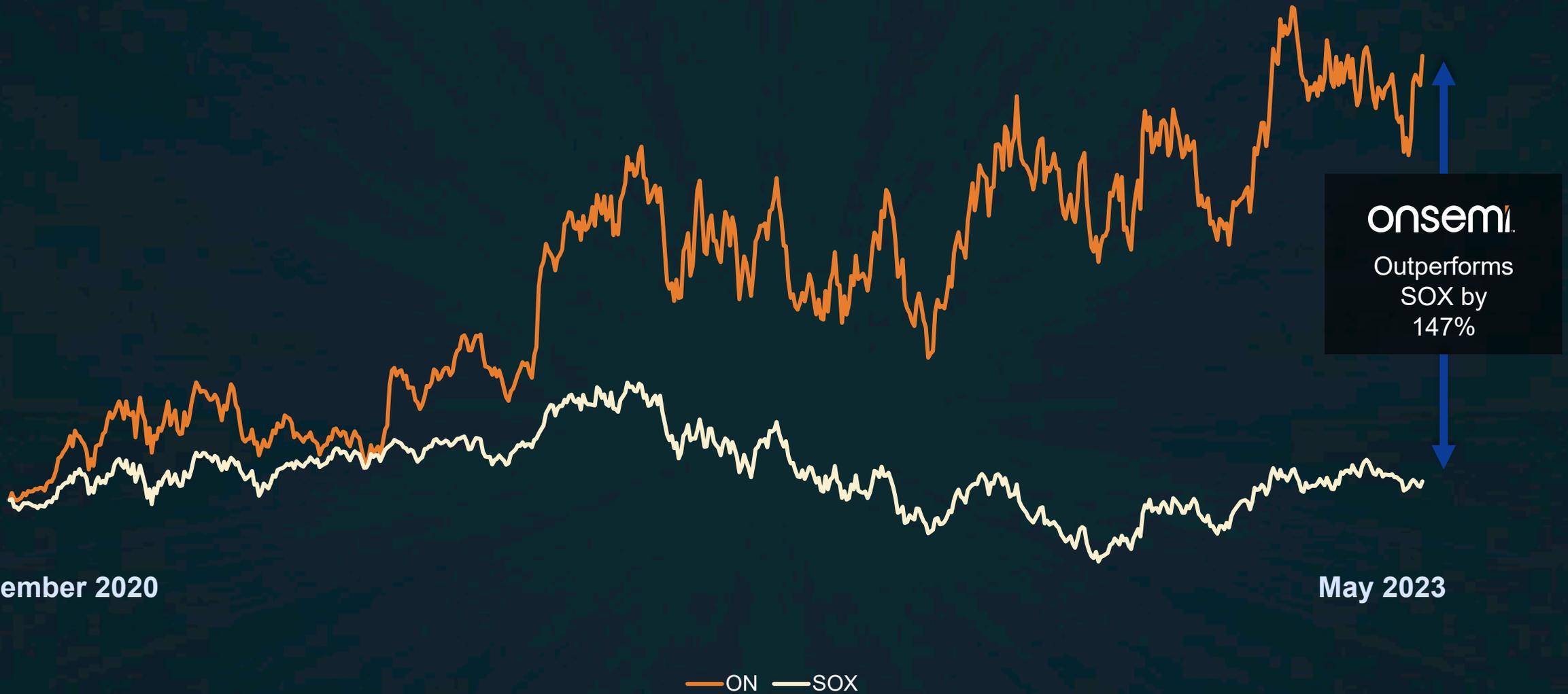


SiC/Si Power leadership enables us to win complete power trees, unlocking \$14B TAM @ up to 70% GM

We are expanding intelligent sensing leadership through focused innovation in Auto & Industrial

We accessorize these solutions with a broad array of products that make us indispensable to customers

onsemi's Transformation has Driven Outperformance



December 2020

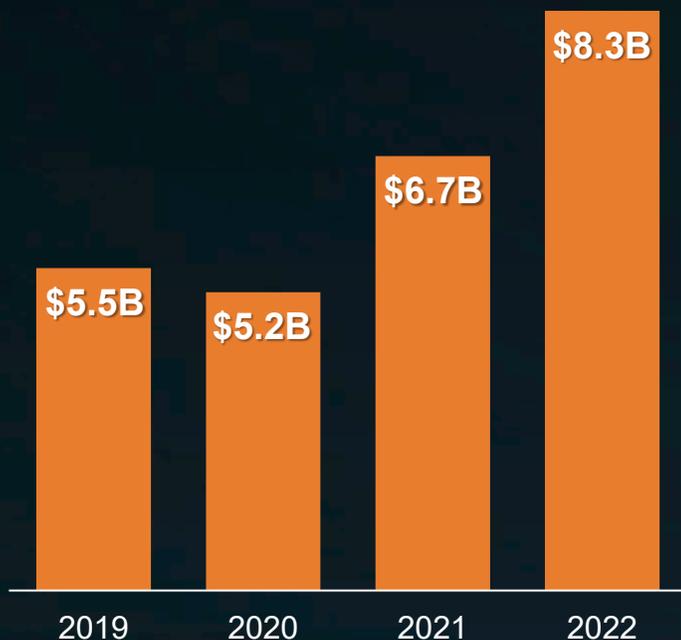
May 2023

— ON — SOX

onsemi
Outperforms
SOX by
147%

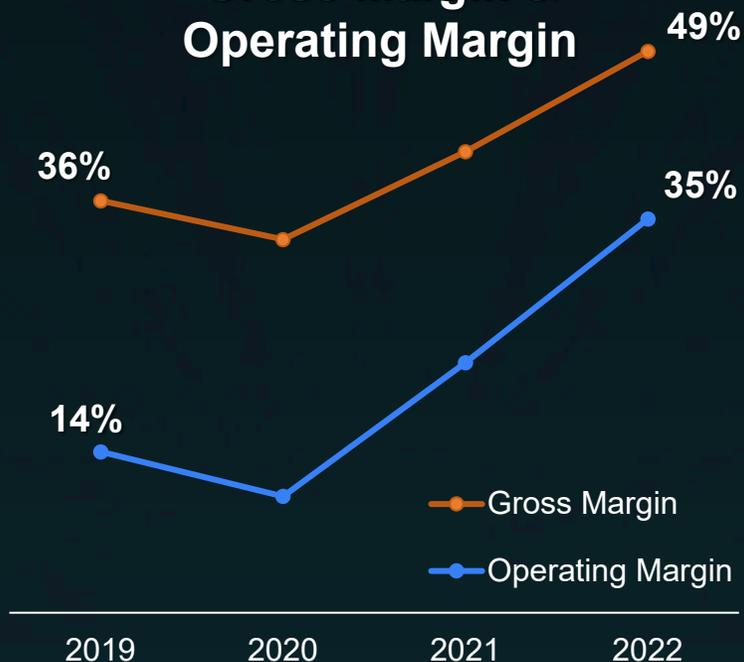
Structural Changes Set the Foundation for Growth

Revenue



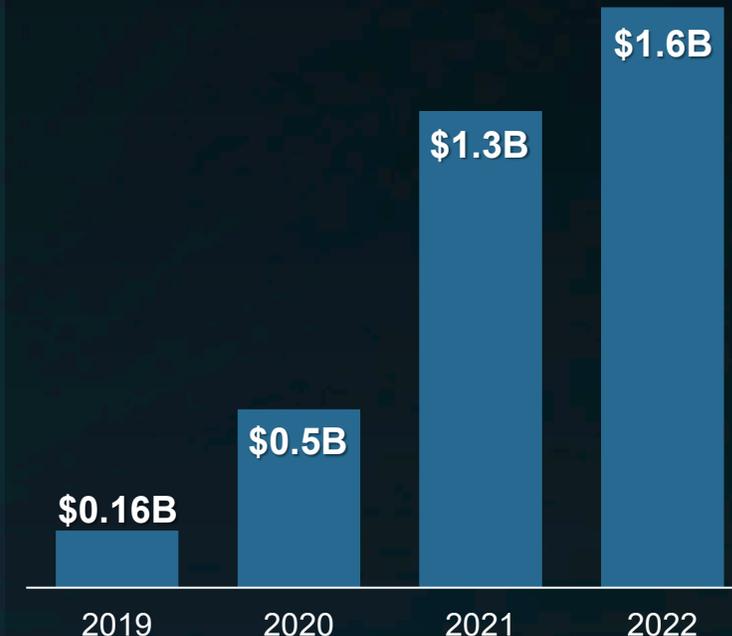
- **Revenue** at 26% CAGR 2020-2022
- Focused on high-growth megatrends in Auto and Industrial
- Doubled down on Silicon Carbide

Gross Margin & Operating Margin



- **Gross Margin** improved by 1,310 bps
- Exited non-core low margin businesses
- Executed Fab Litter Strategy
- Eliminated Price to Value Discrepancies
- **Operating Income** increased 5.3x faster than revenue
- Reduced OpEx to <15% of revenue

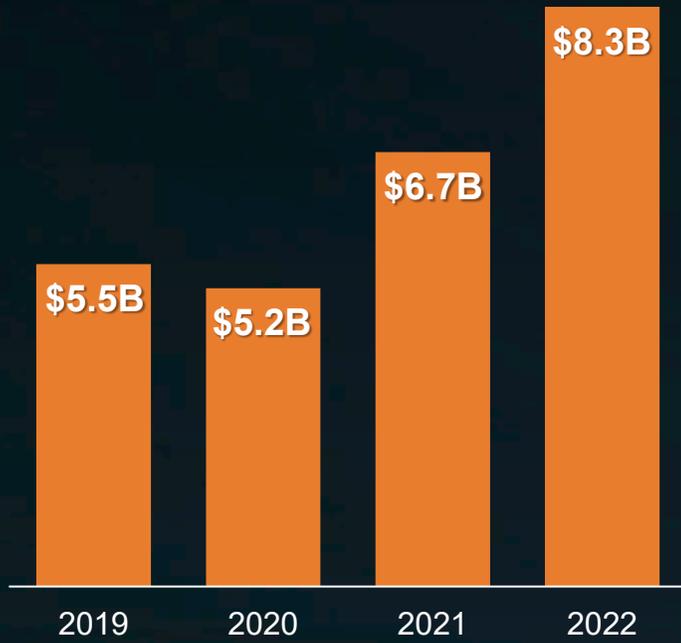
Free Cash Flow



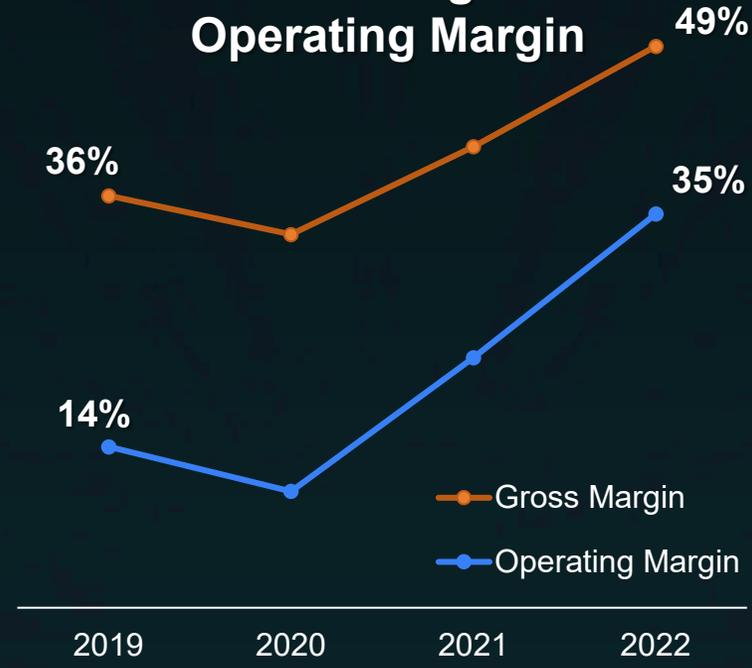
- **Free Cash flow** increased by 10x
- Invested in Silicon Carbide and 300mm fab
- Initiated share repurchases; \$3B repurchase authorization

Structural Changes Set the Foundation for Growth

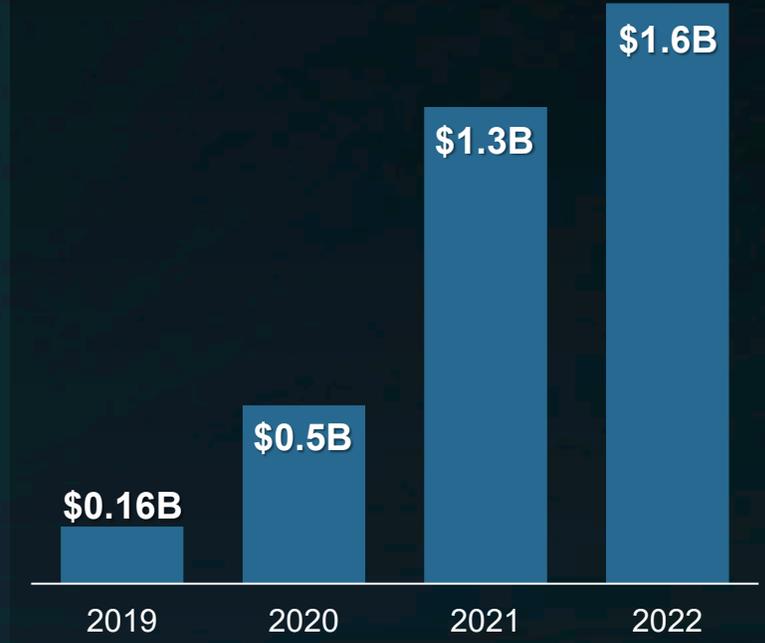
Revenue



Gross Margin & Operating Margin



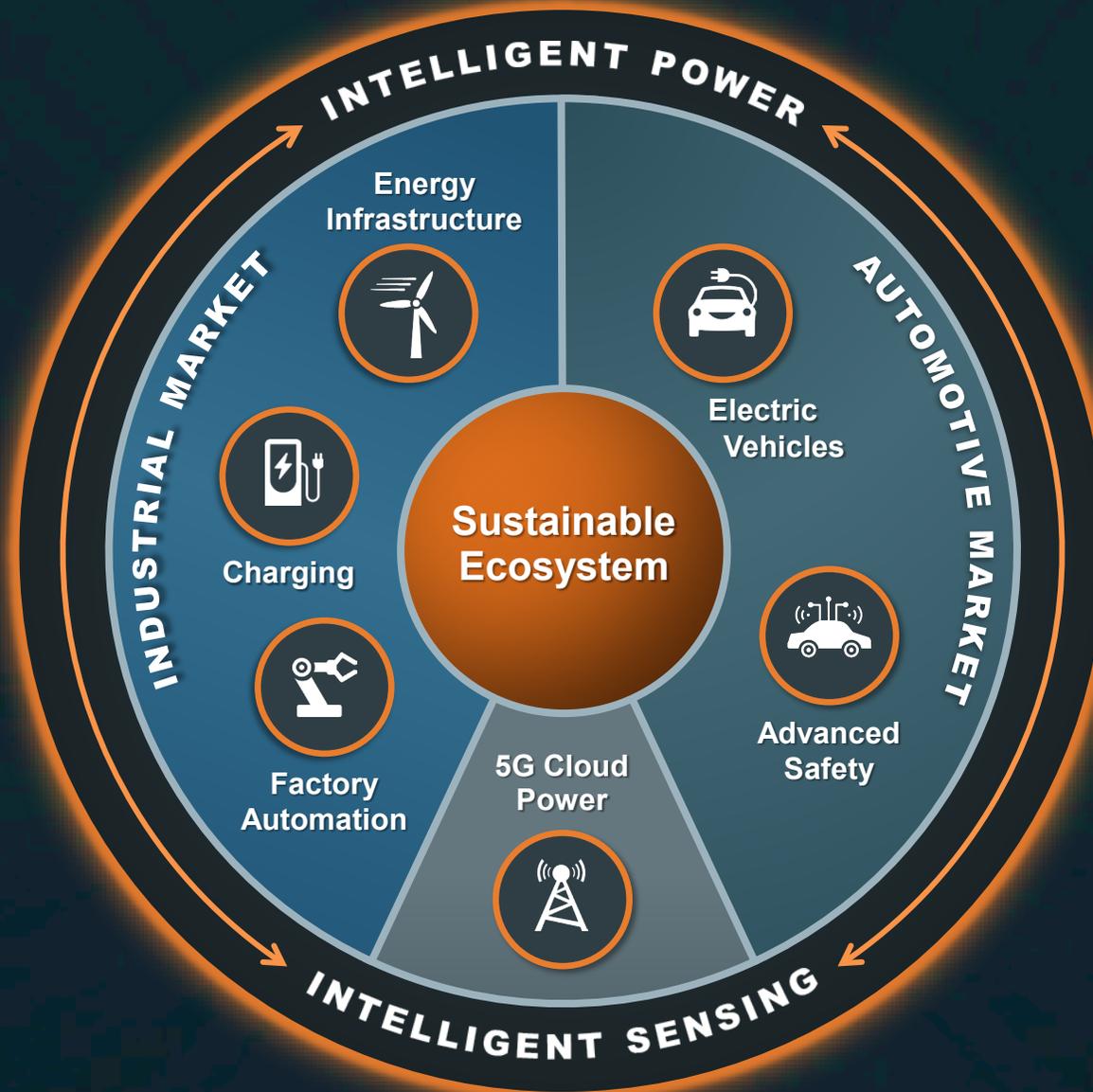
Free Cash Flow



Industry-Leading Results Accelerating Shareholder Value

- Free Cash Flow growth of 10x: **#1** among global semis
- ROIC of 38.6%: **Top 4** in global semis
- Operating Income growth of 3.7x: **Top 3** in global semis

Premium Businesses



Premium Businesses

Intelligent Power

Silicon Carbide

- Revenue growing >2x market at 70%
- Vertically integrated manufacturing at scale
- Industry-leading efficiency through innovative device and packaging technologies

Silicon Power – IGBT, FET

- #2 position with growing market share
- Expanding BOM coverage with new products
- Exited price sensitive markets

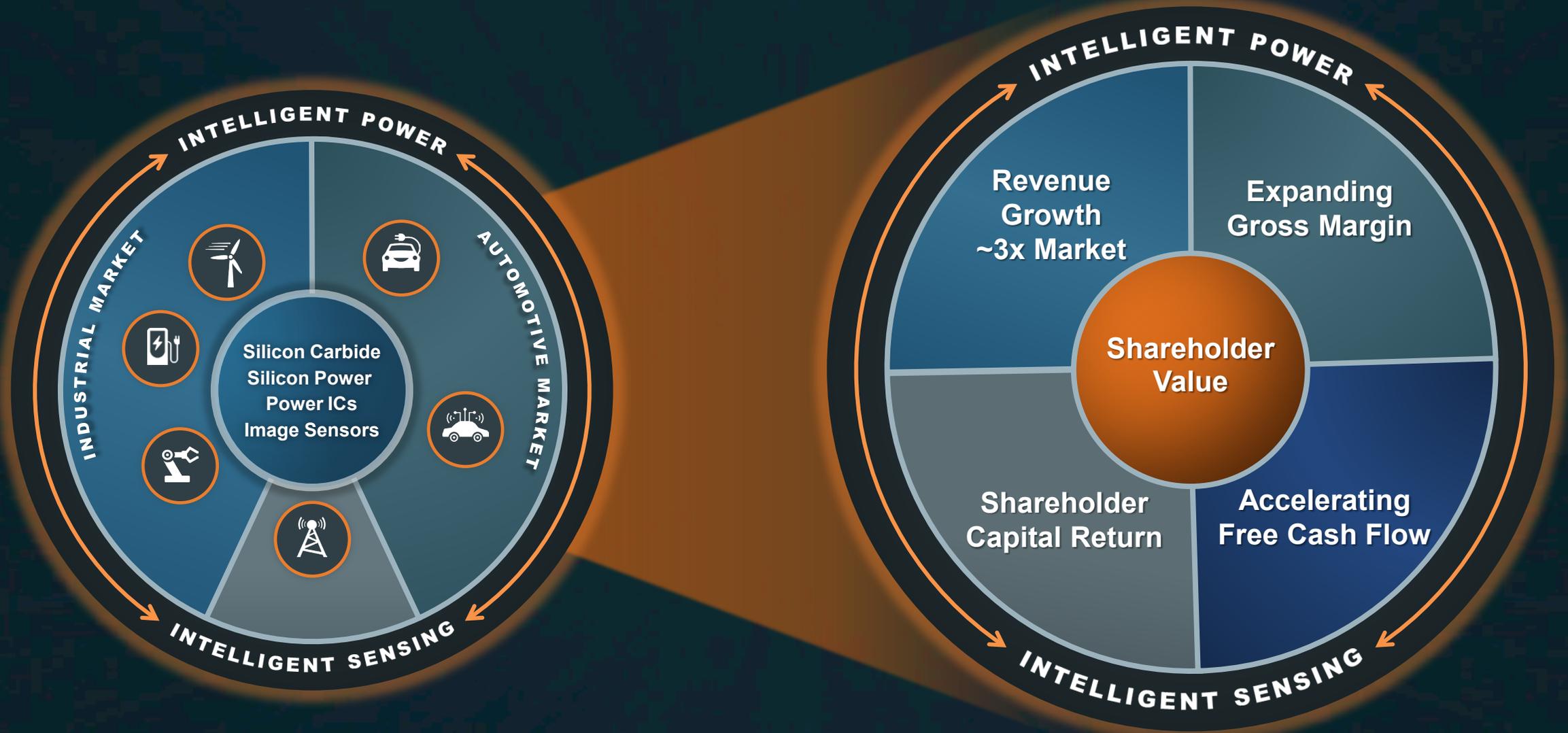
Power ICs

- Double down on \$14B TAM with >70% gross margin
- Optimize system cost with gate drivers and controllers
- Expand leadership to full Power Tree solutions

Intelligent Sensing

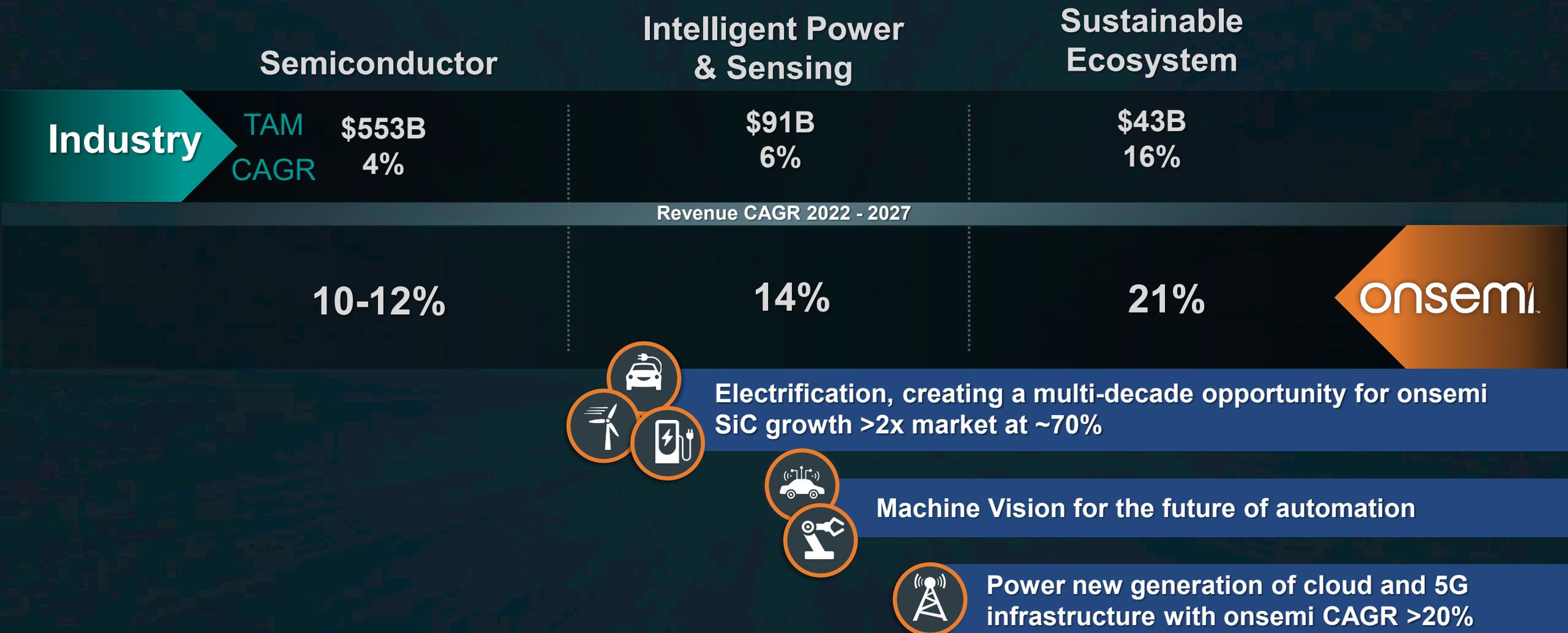
- #1 position in Auto and Industrial
- Growing in machine vision
- 68% market share in ADAS, 27% market share in industrial
- 8MP ramping with ~2.5x ASP uplift
- #1 in Ultrasonic and Inductive Sensing for Automotive and Industrial
- Delivering high margin and the most profitable sensor business in the industry

Premium Businesses Driving Premium Results

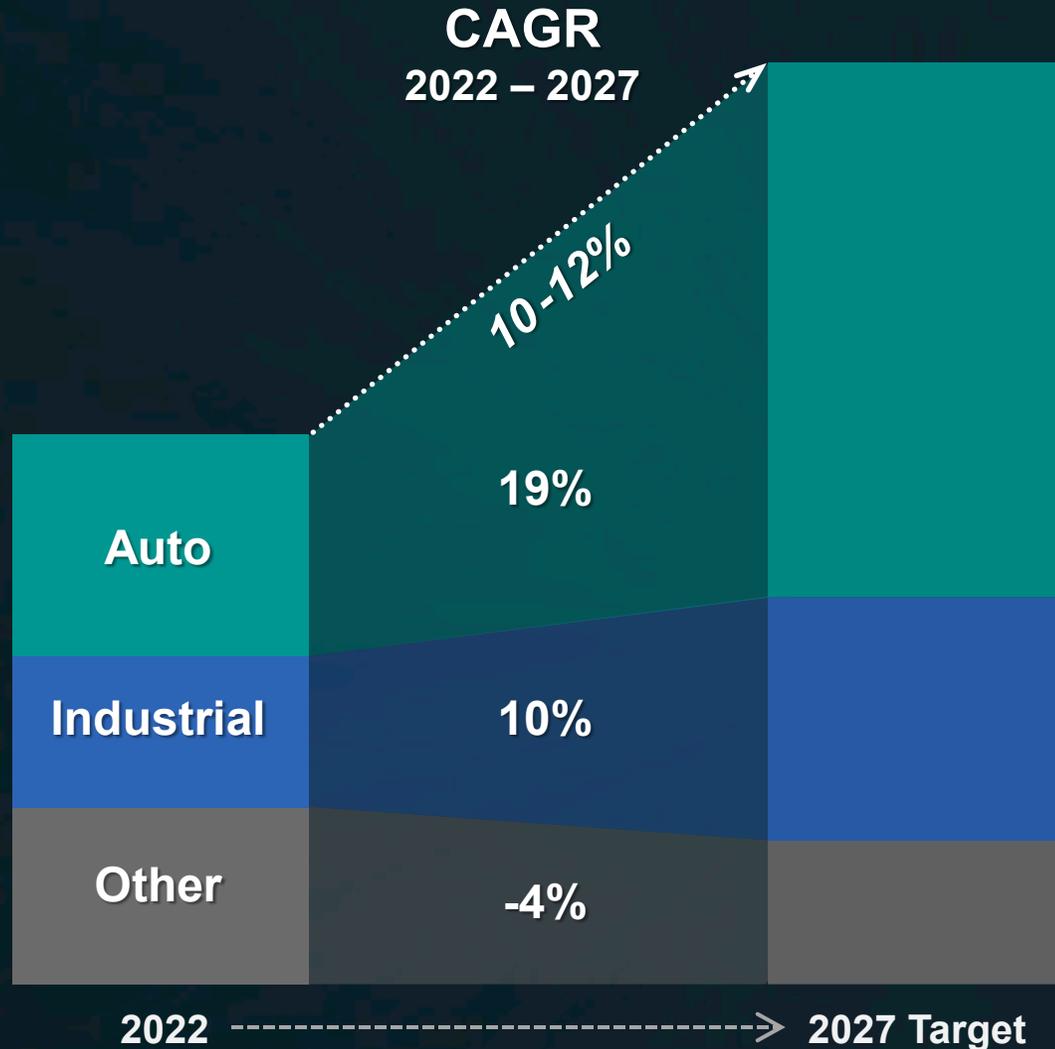




Markets that Matter



Sustainable Ecosystem to Drive ~3x the Market Growth



Automotive

- Electrification – SiC & IGBT
- Increasing ADAS Adoption
- Power Management for LED and Advanced Safety

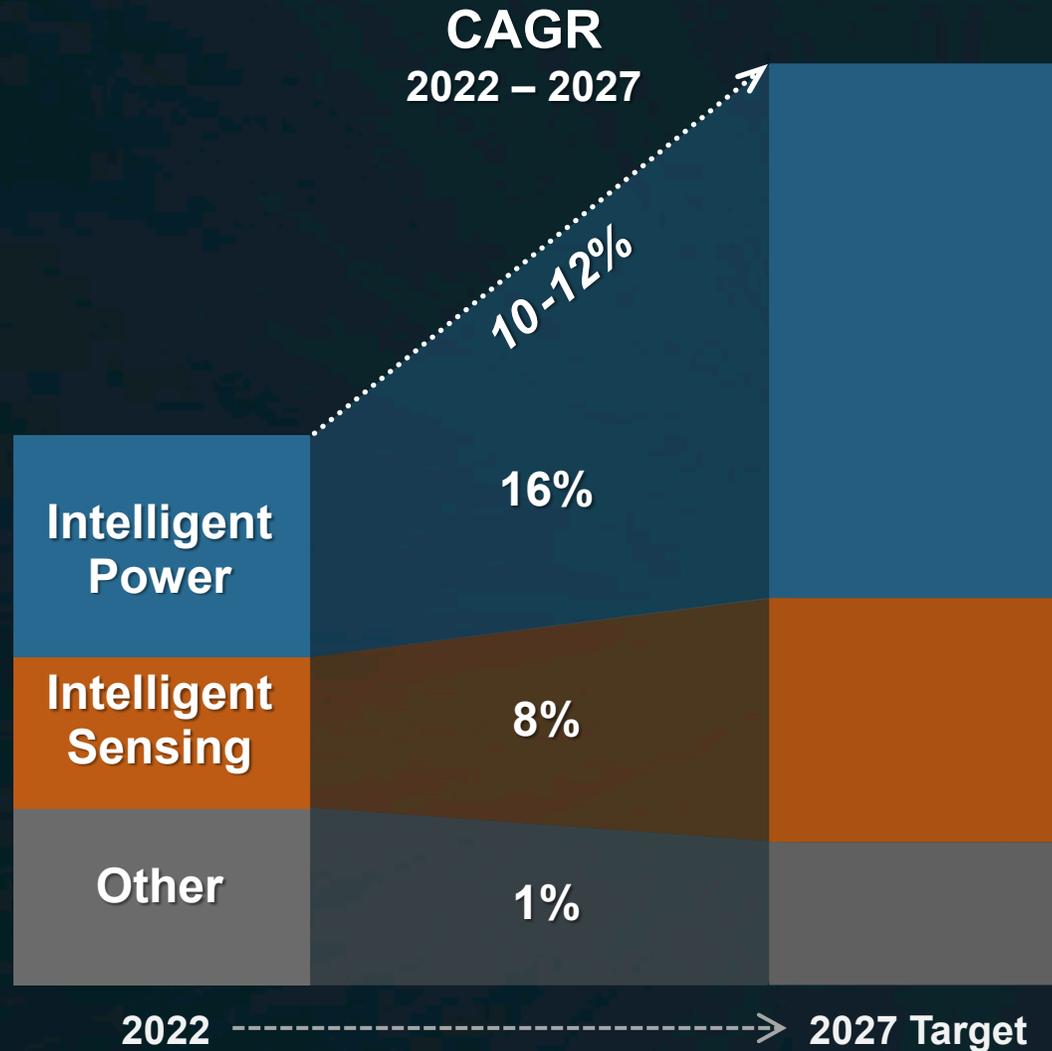
Industrial

- Energy Infrastructure
- Factory Automation
- EV Charging

Other

- 5G & Cloud Power growing at 22%
- Engage with Strategic market leaders opportunistically with value driven solutions
- No investment in broad markets

Sustainable Ecosystem to Drive ~3x the Market Growth



Intelligent Power

- SiC growth 2x the industry at 70%; 35-40% market share
- Si Power – IGBT, FET share gain in Auto & Industrial
- Accelerate Power IC growth with controllers and gate drivers

Intelligent Sensing

- Grow in machine vision for auto and industrial
- Advanced safety for ADAS and in-cabin vision
- Factory Automation
- Opportunistic in human vision applications

Other

- Attractive cash flow businesses
- BOM indispensability and complementarity

Highly Diversified Customer Base



Customer Needs:

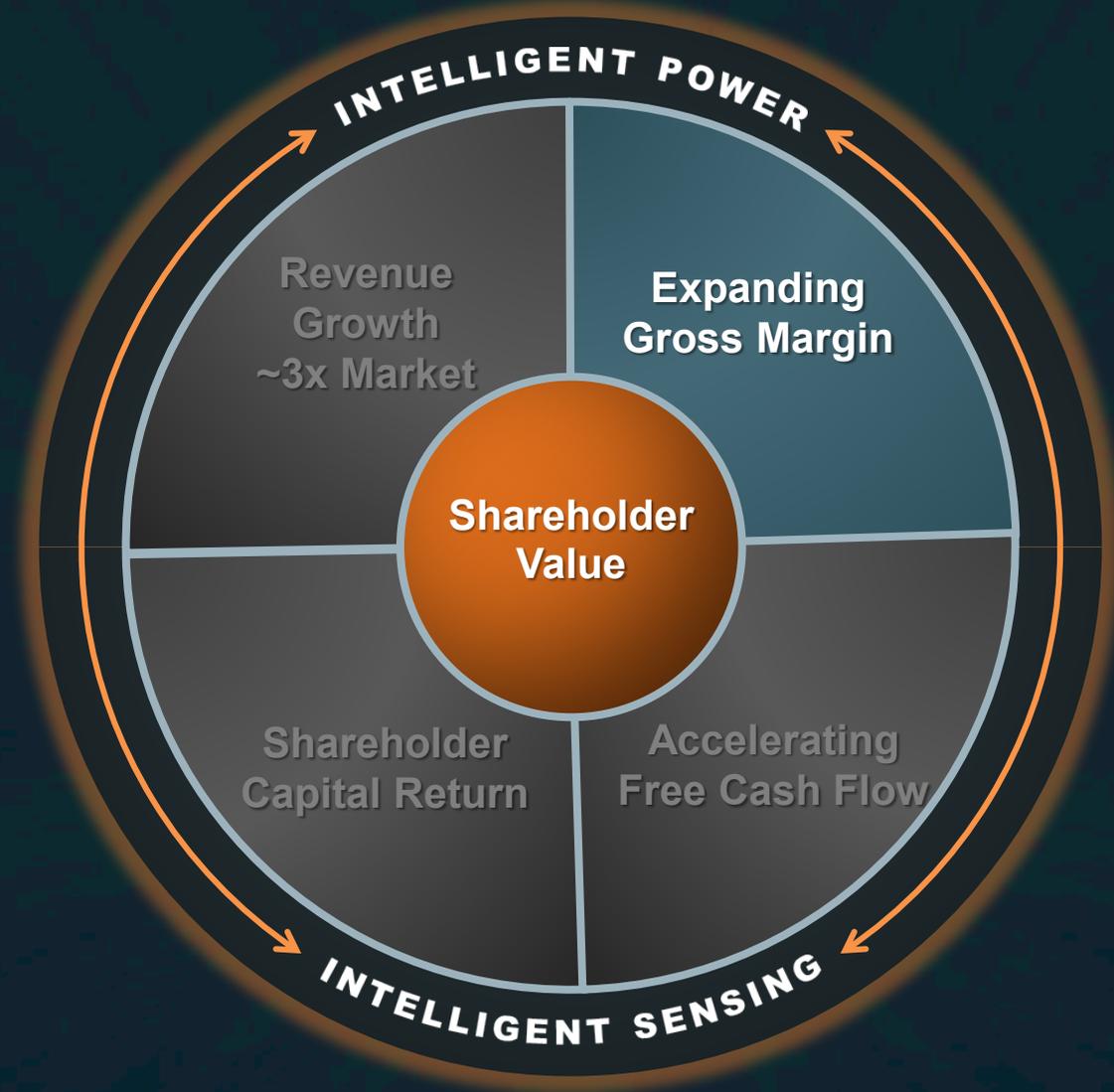
- Best-in-Class Performance
- Reliable suppliers at scale
- Tighter supplier base
- Competitive system cost

onsemi Delivers:

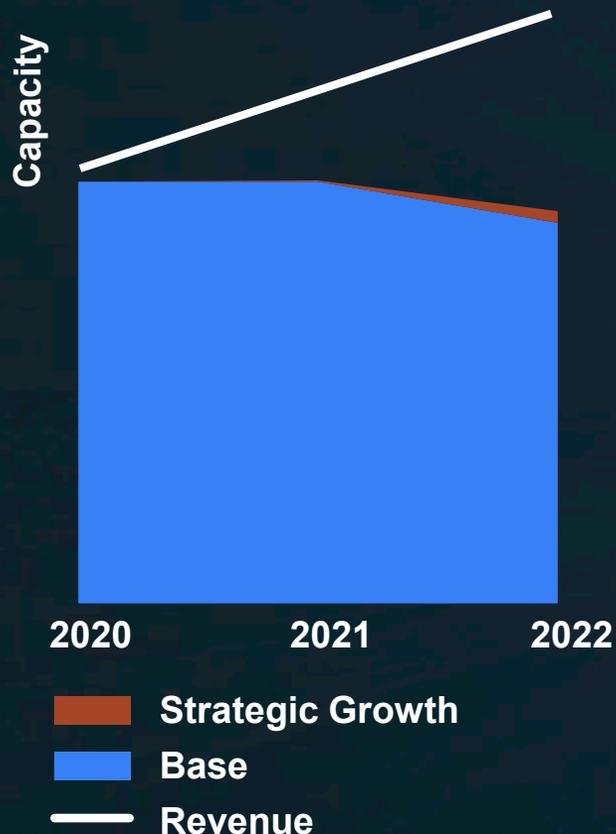
- Industry-leading products
- Vertically integrated supply chain
- Broad portfolio of products
- Solution optimization across BOM

Top 20 customers represent ~35% of revenue

Top 20 customers each buy ~800 products on average



Executed Fab Liter Manufacturing Strategy

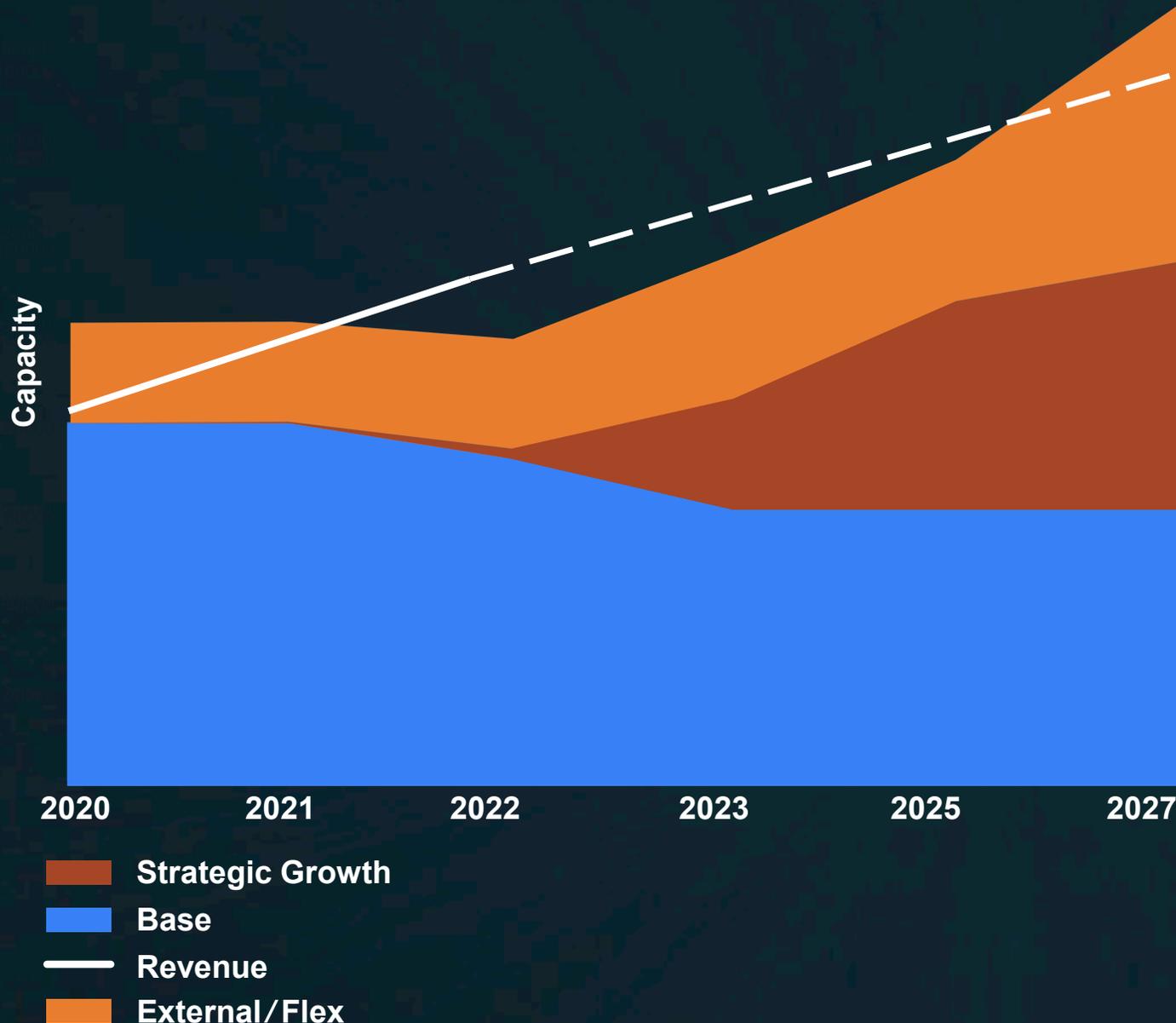


Fab Liter

Flexible, Low Fixed-Cost Footprint

- Reduced legacy capacity to minimize fab footprint – Fab Filler strategy is dead
- Captive capacity for differentiated technologies. Leverage external manufacturing for non-proprietary technologies
- Invested in brownfield expansion for capital efficiency and industry-leading ROIC
- Divested four subscale fabs – recognize \$160M in annualized savings through 2025
- Reduces gross margin volatility

The Next Strategy: Fab Right



Fab Right

Optimize asset footprint for efficiencies and best-in-class ROIC

- Optimize mix across the network for best cost structure
- Ramping 300mm Fab for scale and capacity
- Leverage Base footprint and brownfield investments for Strategic Growth
- Multi-year LTSA's provide visibility for expansion
- Extract savings of \$160M from divestiture of four Fabs
- Geographically diverse footprint for supply chain assurance
 - EFK is the only US-based 300mm power semiconductor Fab

External/Flex capacity

- Utilize internal capacity for differentiated products with external partners for flex capacity
- Maximize internal utilization to reduce volatility in margins

Fab Right: onsemi's Path to Net Zero by 2040



Greenhouse Gas Emissions

Near-term targets to be published in 2024

21% YoY Scope 2 emissions reduction in 2022



Water

42% water recycled in 2022

19% YoY water withdrawal reduction in 2022

SBTi
Letter signed
December
2022

Waste

70% waste diverted from landfill in 2022

23% YoY waste Reduction in 2022



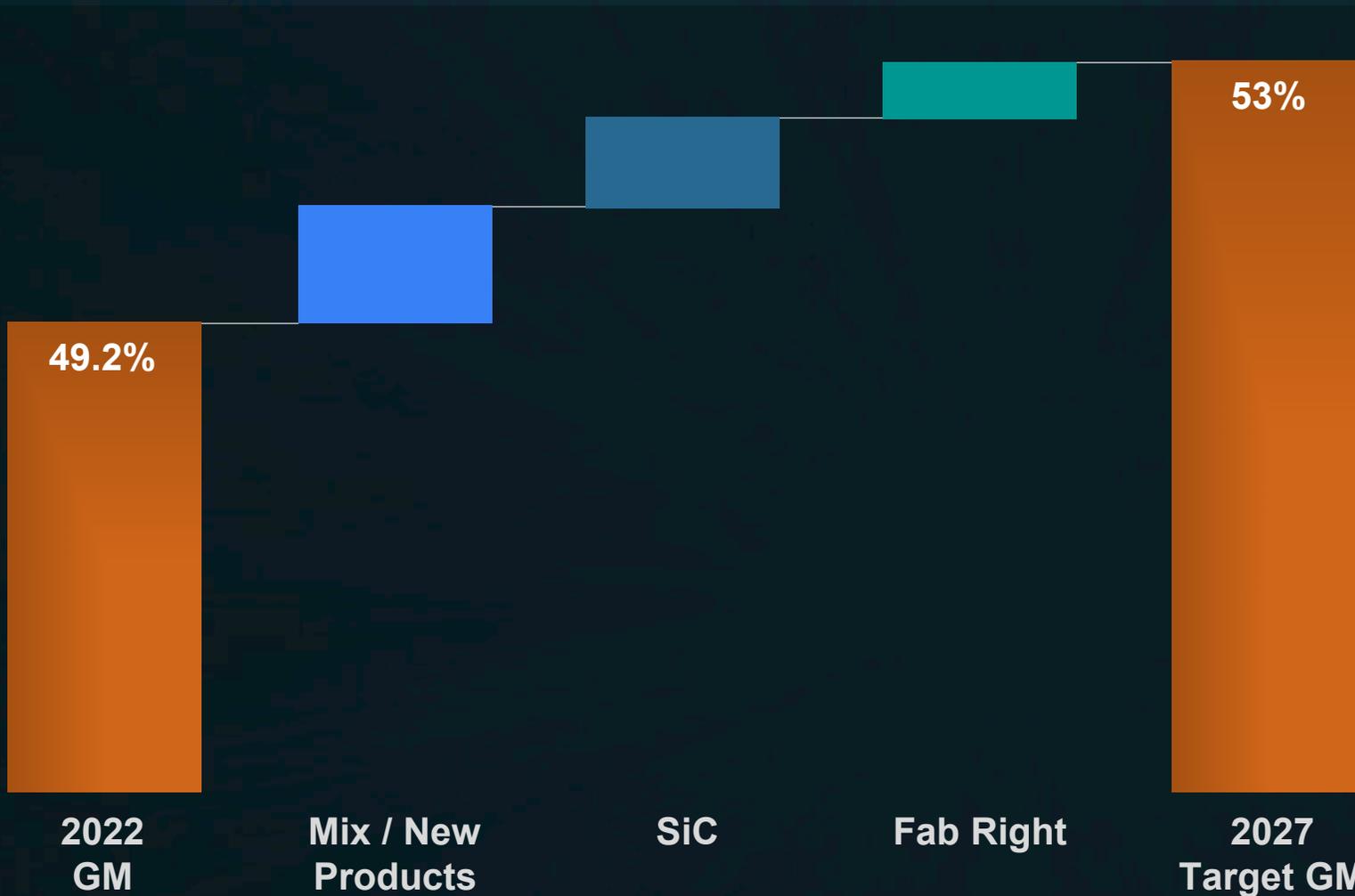
Energy Saving

Fab Right Energy Savings of 18% in kWh/Wafer by 2027

18% savings by 2027



The Next Milestone: Expand Gross Margin to 53%



Mix / New Products

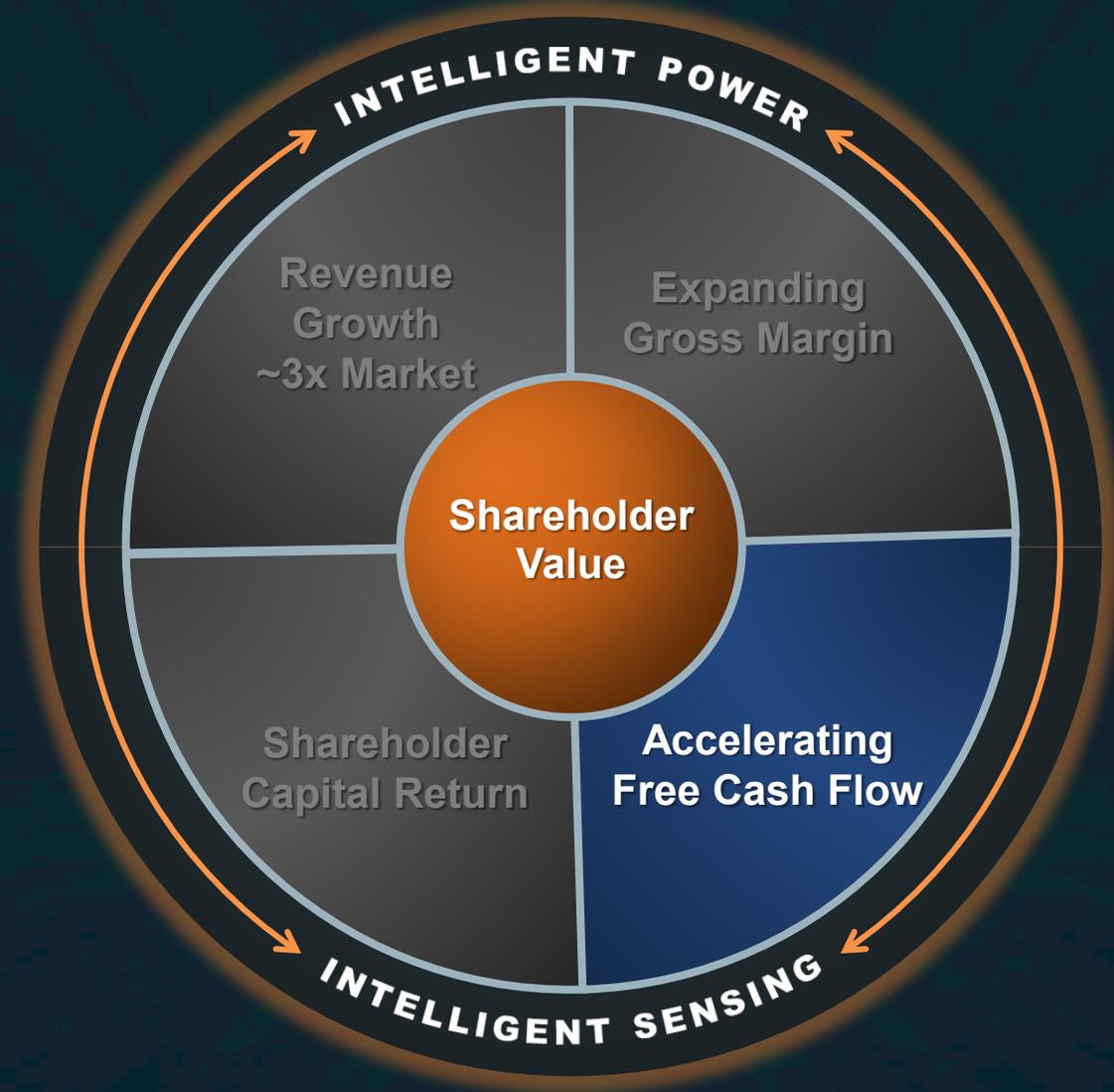
- Continued mix shift to Auto & Industrial
- Ramp new and differentiated products at margins above target

Silicon Carbide (SiC)

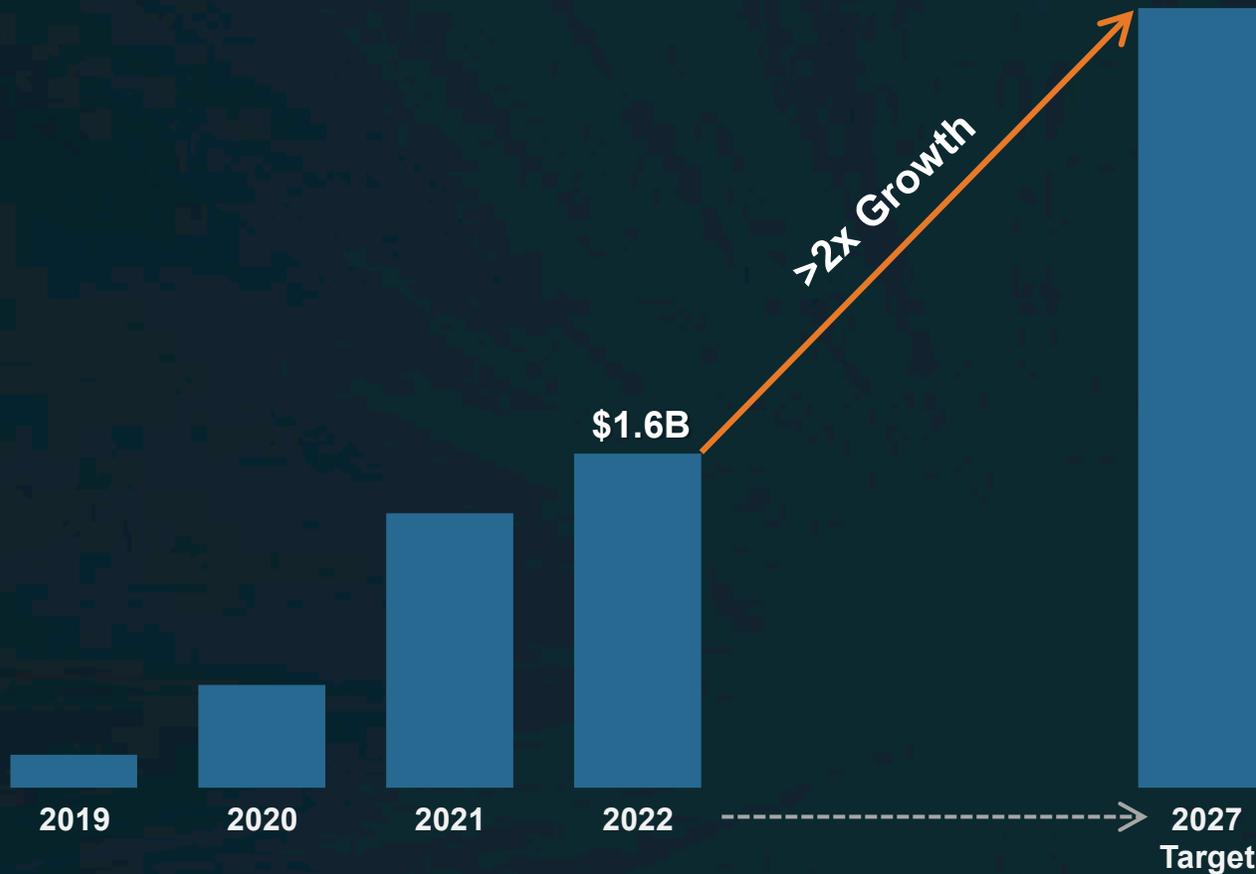
- Accretive margins at scale
- Absorption of startup costs
- SiC growing 2x market¹

Fab Right

- Optimize manufacturing network for cost efficiency
- \$160M in fixed-cost savings from four Fab divestitures in 2022
- Maximize utilization across network with flex to external capacity



Accelerating Free Cash Flow



Expanding Free Cash Flow Margin to 25-30%

- Grow revenue ~3x semiconductor industry
- Expand Gross Margin
- Targeted Operating Expense deployment
- High ROIC investments
- Working Capital & Inventory management

\$3.5 - 4.0 billion in Free Cash Flow in 2027

Market Success Driving Investments

Fab Right: Expanding Capacity

- Expand capacity for strategic growth to capture market opportunity
- Ramp 300mm and capacity expansion
- Augment competitive advantage in packaging

Silicon Carbide Expansion

- Invest \$2B in next phase of end-to-end SiC capacity
- Evaluate brownfield opportunities in Europe, USA and Korea

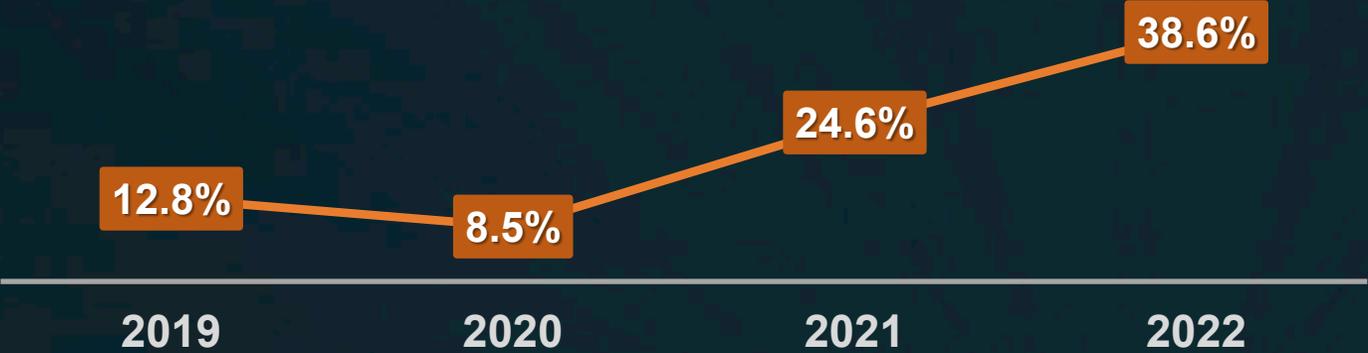
Capital Efficiency

- Capital Intensity to be 15-20% through 2024 and decline to 11% by 2027
- Minimize risk through customer co-investments and LTSA visibility
- Government subsidies to offset CapEx investments and enhance ROIC

Investing for growth while maintaining best-in-class ROIC

Delivering Best-in-Class ROIC

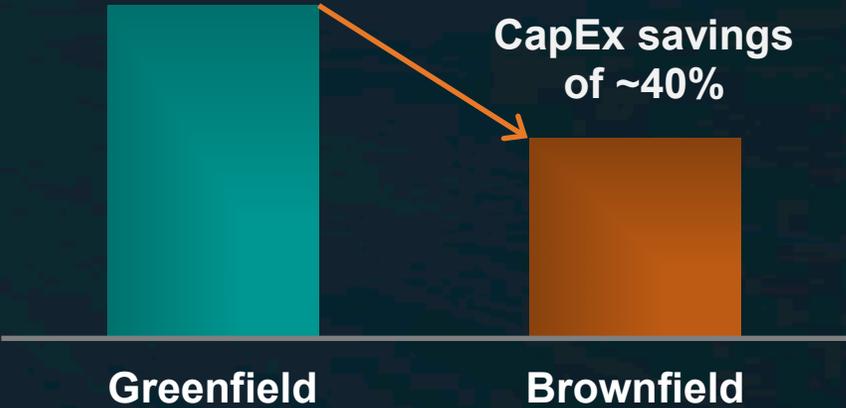
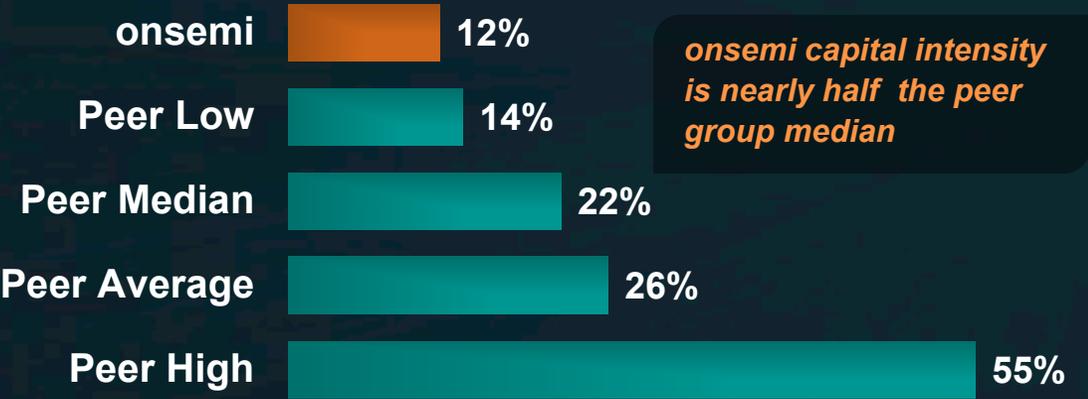
onsemi ROIC

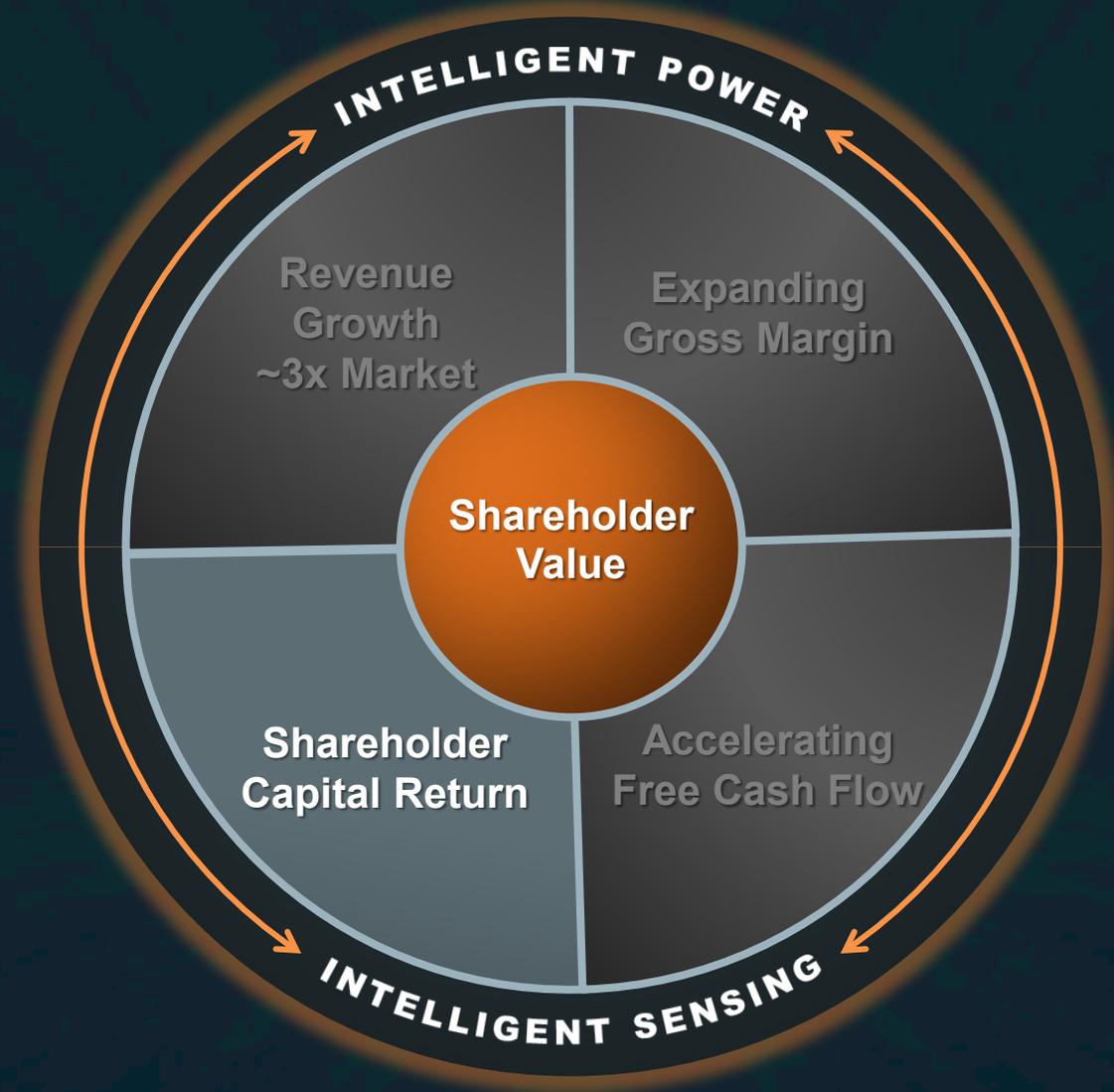


Brownfield Efficiency

- 40% less CapEx compared to Greenfield investment
- Accelerates time to market by 2 years

2022 Capital Intensity





Investments and Capital Allocation



R&D and CapEx

- Invest in organic initiatives to extend competitive advantage
- Maintain best-in-class ROIC



M&A

- Strategic M&A adjacent and complimentary
- Technology tuck-ins
- Accretive to financial model
- Low leverage provides firepower



Balance Sheet

- Maintain flexibility to pursue organic and inorganic growth
- Maintain existing credit rating of BB+/Ba1



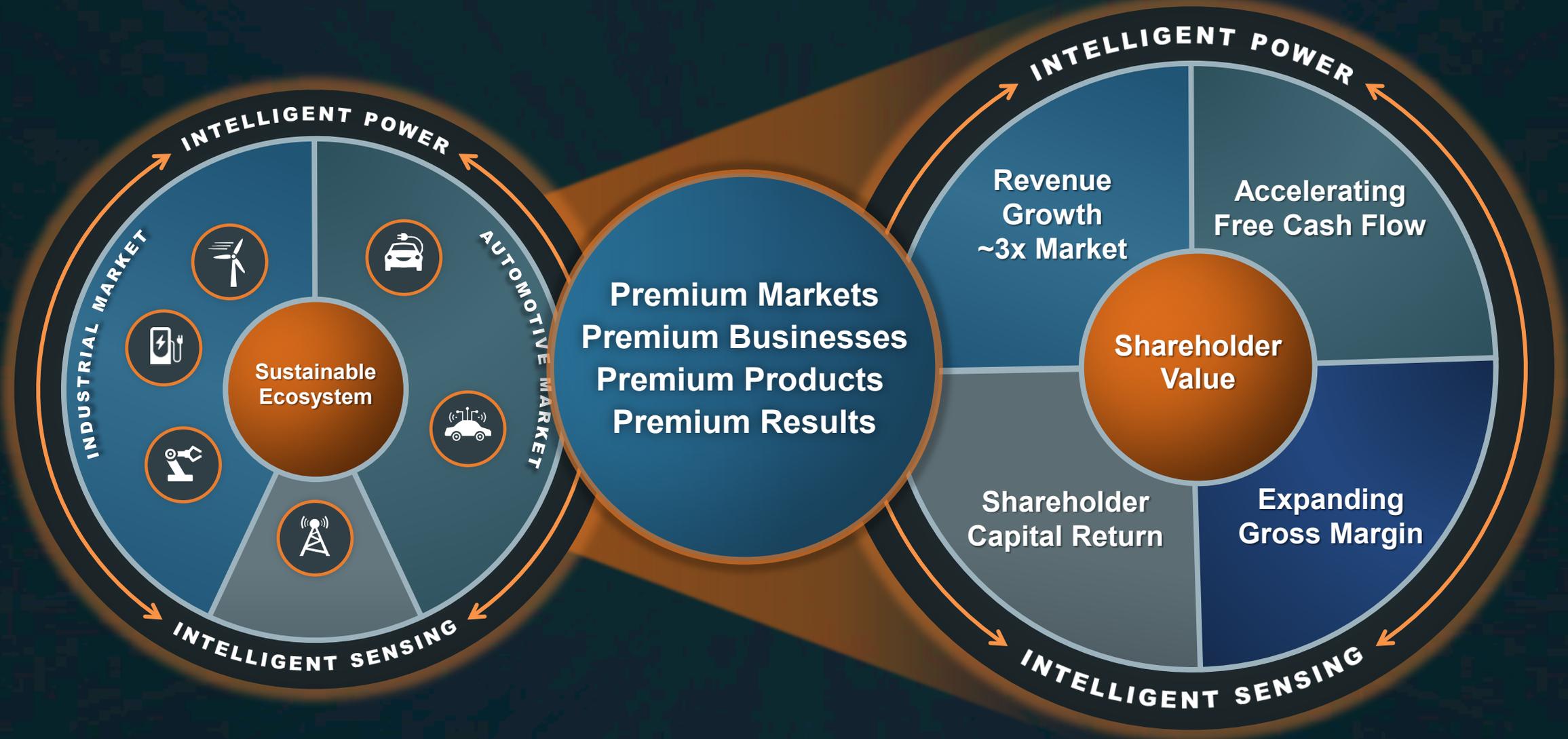
Shareholder Returns

- Return 50% of Free Cash Flow through share repurchases
- \$3B repurchase authorization in place

Accelerating the Financial Model

	2022 Actual	2027 Target	
Revenue	\$8.3B	10-12% CAGR	<ul style="list-style-type: none"> • Grow at ~3x the semiconductor industry
Gross Margin	49.2%	53%	<ul style="list-style-type: none"> • Mix shift, new products & SiC ramp at accretive margins • Optimize cost through Fab Right
Operating Expenses	14.6%	13%	<ul style="list-style-type: none"> • Invest in R&D for long-term growth • Digital First - embrace new technologies & data analytics
Operating Margin	34.7%	40%	<ul style="list-style-type: none"> • Grow Operating Income faster than revenue
CapEx	12%	11%	<ul style="list-style-type: none"> • Market success drives investments • High ROIC brownfield investments
Free Cash Flow	20%	25-30%	<ul style="list-style-type: none"> • \$3.5-\$4.0B of Free Cash Flow in 2027 • Return 50% to shareholders

Premium Businesses Driving Premium Results



Appendix

Appendix – GAAP to Non GAAP Reconciliation

\$ in Millions	FY 2019	FY 2020	FY 2021	FY 2022
Reconciliation of GAAP to Non-GAAP Gross Margin:				
GAAP Gross Margin	35.8%	32.7%	40.3%	49.0%
a) Impact of business wind down	0.0%	0.0%	0.0%	0.2%
b) Amortization of acquisition-related intangible assets	0.0%	0.0%	0.0%	0.1%
c) Non-recurring facility costs	0.0%	0.0%	0.1%	0.0%
d) Amortization of fair market value step-up of inventory	0.4%	0.0%	0.0%	0.0%
Non-GAAP Gross Margin	36.1%	32.7%	40.4%	49.2%

Reconciliation of GAAP to Non-GAAP Operating Margin	FY 2019	FY 2020	FY 2021	FY 2022
GAAP Operating Margin	7.8%	6.6%	19.1%	28.3%
a) Amortization of acquisition-related intangible assets	2.1%	2.3%	1.5%	1.0%
b) Restructuring, asset impairments and other, net	0.5%	1.2%	1.1%	0.2%
c) Goodwill and intangible asset impairment	0.0%	0.0%	0.0%	4.6%
d) Third party acquisition and divestiture-related costs	0.2%	0.0%	0.2%	0.2%
e) Non-recurring facility costs	0.0%	0.0%	0.1%	0.0%
f) Impact of business wind down	0.0%	0.0%	0.0%	0.2%
g) Amortization of fair market value step-up of inventory	0.4%	0.0%	0.0%	0.0%
h) Litigation settlement	3.1%	0.0%	0.0%	0.0%
Non-GAAP Operating Margin	14.1%	10.2%	21.9%	34.5%

Reconciliation of net cash provided by operating activities to free cash flow:	FY 2019	FY 2020	FY 2021	FY 2022
Net cash provided by operating activities	\$ 694.7	\$ 884.3	\$ 1,782.0	\$ 2,633.1
Purchase of property, plant and equipment	(534.6)	(383.6)	(444.6)	(1,005.0)
Free Cash Flow	\$ 160.1	\$ 500.7	\$ 1,337.4	\$ 1,628.1
Free Cash Flow Margin	2.9%	9.5%	19.8%	19.6%

Notes and Sources – Welcome to the New World

What you are used to seeing (images)

- Maximize Market Research Pvt. Ltd
- Deloitte and Mordor Intelligence
- KBV Research
- Yole

Sustainable Ecosystem '22-'27 TAM CAGRs

- onsemi estimates
- LMC Automotive: Global Hybrid & Electric Vehicle Forecast - Quarter 4, 2022
- Omdia: Power IC Market Tracker, Sep'22

Sustainable Ecosystem Accelerating onsemi Content

- Based on total onsemi BOM opportunity

Markets that Matter

- onsemi estimates based on current market projections
- Semiconductor TAM excludes Memory

Winning Formula...and Execute

- >\$17B: onsemi Form 10-Q filing for period ended March 31 2023

Notes and Sources – Powder to Power

Die Performance

- Internal benchmarking

Optimized Package Thermals 15% reduction in Rth

- Based on internal estimates

Lifetime LTSA Value

- Based on signed customer agreements

Notes and Sources - Accelerating The Flywheel

Winning at the Core – SiC and Si Power

- '22 – '27 CAGR, Global position and market share based on onsemi estimates

The Profound Impact of 1%

- <https://www.iea.org/data-and-statistics/charts/global-ev-sales-by-scenario-2020-2030>
- 2022 Global Electricity Cost: https://www.globalpetrolprices.com/electricity_prices/
- 2022 Global Electricity Production: <https://ourworldindata.org/electricity-mix>
- Industrial motor consumption: <https://www.globalefficiencyintel.com/new-blog/2017/infographic-energy-industrial-motor-systems>
- 2022 WW data center power consumption: [cc-techgroup.com](https://www.techgroup.com)
- 2022 US Household Total Power Usage: [enerdata.net](https://www.enerdata.net)

Expanding from the Core - Power

- onsemi estimates
- Omdia: 1Q23 - Semiconductor Device Data By Application Markets
- Omdia: Industrial Semiconductor Market Tracker – 3Q22 Database, Jan'23
- Omdia: Power Semiconductors in Automotive Report – 2022 Database, 5/26/22
- LMC Automotive: Global Hybrid & Electric Vehicle Forecast - Quarter 4, 2022
- Omdia: Power IC Market Tracker, Sep'22
- Yole: Silicon Carbide Forecast 2023
- Yole: 2022-27 SiC market forecast of 33% CAGR

Winning at the Core - Image Sensor

- onsemi estimates
- TSR: Automotive Camera Market Analysis 2021-2022
- Yole: Status of CMOS Image Sensor Industry 2021 Report

Image Sensor – onsemi Advantage

- onsemi image sensor shipments

Image Sensor – Superior Technology

- onsemi estimates

Expanding from the Core - Sensing

- onsemi estimates
- Sensor Interfaces Source: Research & Markets 2020 report
- Omdia: 2021 Industrial Market Tracker
- Omdia: Industrial Semiconductor Market Tracker – 3Q22 Database Jan'23
- Omdia: AMFT 1Q23
- Yole: Imaging for Automotive 2022

Data Center Opportunity

- onsemi estimates based on total BOM opportunity

Electric Vehicle Opportunity

- onsemi estimates based on onsemi devices designed in BMW's electric 7 Series vehicles

Notes and Sources – Foundation Set: Ready to Accelerate

Stock Chart

- Stock Chart represents period from: December 7, 2020 to May 5, 2023; Source: FactSet

Structural Changes Set the Foundation for Growth

- Non-memory semiconductor device companies with market cap. of more than \$5B & 100% revenue from semiconductor devices, adjusted for acquisitions; Source: FactSet
- 2019-2022 for Free Cash Flow & Operating Income growth; 2022 for ROIC ; Source: FactSet

Premium Businesses

- onsemi estimates
- Omdia: 1Q23 - Semiconductor Device Data By Application Markets
- Omdia: Industrial Semiconductor Market Tracker – 3Q22 Database, Jan'23
- Yole: Imaging for Automotive 2022
- Omdia: Power Semiconductors in Automotive Report – 2022 Database, 5/26/22
- LMC Automotive: Global Hybrid & Electric Vehicle Forecast - Quarter 4, 2022
- Omdia: Power IC Market Tracker, Sep'22
- Yole: Silicon Carbide Forecast 2023
- Bank of America Research
- Yole: 2022-27 SiC market forecast of 33% CAGR
- TSR: Automotive Camera Market Analysis 2021-2022
- Yole: Status of CMOS Image Sensor Industry 2021 Report

Markets that matter

- onsemi estimates based on current market projections, excludes Memory

Sustainable Ecosystem to Drive ~3x the Market Growth

- onsemi estimates based on current market projections

Fab Right, Revenue by End markets and technology

- onsemi estimates based on current market projections

Onsemi's Path to net Zero

- Scope 2 Emissions normalized by annual revenue (Metric Tons CO2e per \$ Million Revenue); 2022 GHG data is in progress for limited assurance
- Total Water Withdrawal normalized by annual revenue (Megaliters per \$ Million Revenue)
- Total Waste Generation normalized by annual revenue (Metric Ton Waste per \$ Million Revenue)
- Projected. Energy Savings based on internal estimates

The Next Milestone: Expand Gross Margin to 53%

- 2027 Target based on onsemi internal estimates

Market Success Driving Investments

- Capital Efficiency projections based on internal onsemi estimates

Driving Best in Class ROIC

- Factset
- Company reports, onsemi estimates
- Capital Intensity peer group includes TXN, IFX, Rohm, STM & WOLF
- $ROIC = (\text{Operating income} - \text{Tax}) / (\text{Shareholder equity} + \text{net debt})$

Accelerating the Financial Model

- 2027 Target based on internal onsemi estimates

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