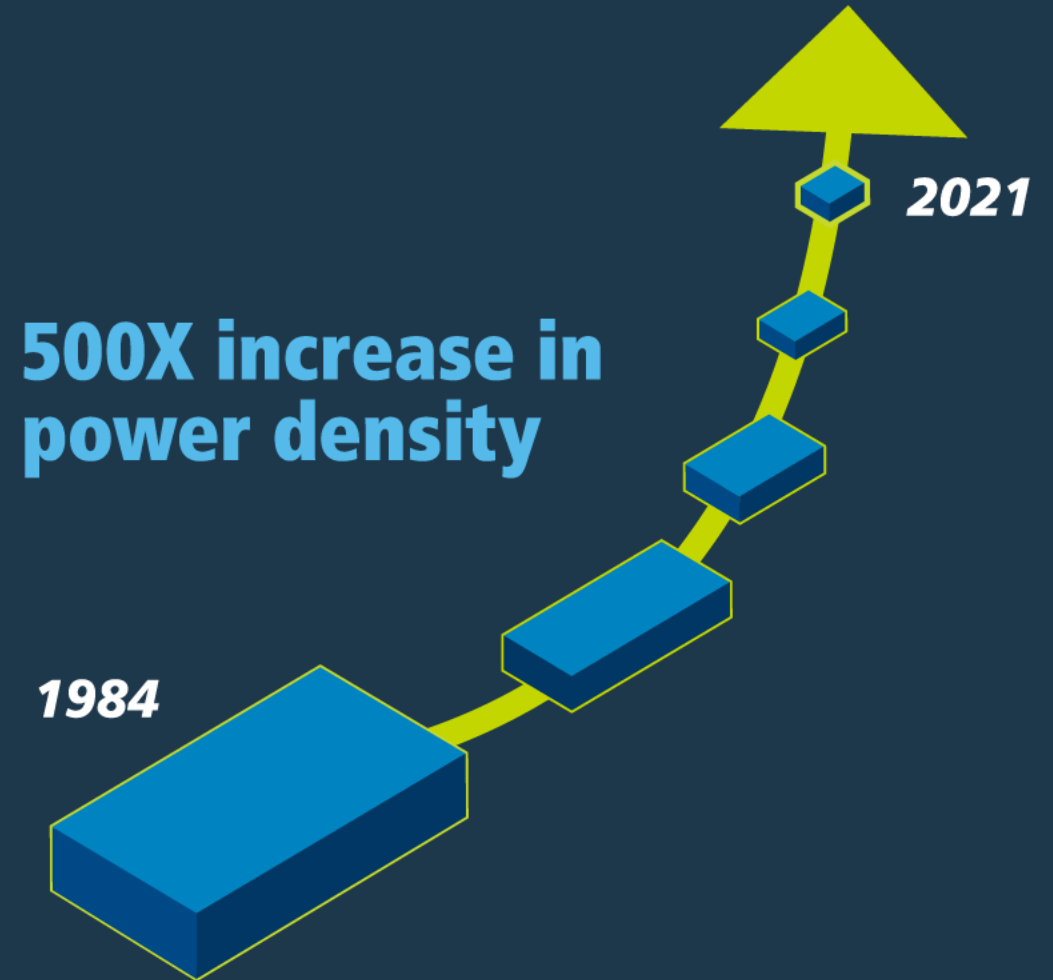


**VICOR**

# Annual Shareholders Meeting

June 25th 2021

Innovation with operational excellence drives sustainable growth with world class customers in high growth markets



# Safe Harbor Statement & Disclaimer

This presentation includes forward-looking statements. When used in this presentation, the words “anticipate,” “believe,” “estimate,” “forecast,” “expect,” “intend,” “plan” and “project,” and similar expressions, as they relate to us, Vicor Corporation management, or third parties, identify forward-looking statements. Forward-looking statements include statements regarding our business strategy, financial condition, results of operations, and market data, as well as any other statements that are not historical facts. These statements reflect beliefs of our management, as well as assumptions made by our management based on information currently available to us.

Although we consider these beliefs and assumptions are reasonable, such forward-looking statements are subject to numerous factors, risks, and uncertainties that could cause actual outcomes and results to be materially different from those anticipated or projected. These factors, risks, and uncertainties expressly qualify all subsequent oral and written forward-looking statements attributable to us or persons acting on our behalf and include the following: market demand and industry conditions, our ability to successfully introduce new technologies and products, the demand for the goods into which our products are incorporated, our ability to generate sufficient cash or raise sufficient capital to meet both our research and development and capital investment requirements, our ability to accurately estimate demand and match our production capacity accordingly or obtain supplies from third-party producers, our access to production from third-party outsourcing partners, and any events that might affect their business or our relationship with them, our ability to secure adequate and timely supply of equipment and materials from suppliers, our ability to avoid operational problems and product defects and, if such issues were to arise, to rectify them quickly, our ability to form strategic partnerships and joint ventures and successfully cooperate with our alliance partners, our ability to win competitive bid selection processes to develop products for use in our customers’ equipment and products, our ability to successfully establish a brand identity, our ability to successfully hire and retain key personnel; and our ability to maintain good relationships with our suppliers.

We do not have any intention or obligation to update forward-looking statements after we distribute this presentation. In addition, this presentation contains information concerning our industry and our market segments that is forward-looking in nature and is based on a variety of assumptions regarding the ways in which our industry and our market segments will develop. We have based these assumptions on information currently available to us. Although we believe this information is reliable, we have not independently verified and cannot guarantee its accuracy or completeness. If any one or more of these assumptions turn out to be incorrect, actual results may differ from those predicted. While we do not know what impact any such differences may have on our business, if there are such differences, our future results of operations and financial condition, and the market price of our common stock, could be materially adversely affected.

Any trademarks, service marks, trade names, product names, and logos appearing within this presentation are the property of their respective owners.

Vicor is in its “quiet period” and will not comment on current or anticipated financial or operational performance for Q2 2021.

# Today's agenda

- Introductions
- Official business meeting
- Management presentations
- Stockholder Q&A

# Introductions: Independent Directors

- Samuel J. Anderson\*
  - *Chief Executive Officer, IceMOS Technology Ltd.*
- M. Michael Ansour\*\*
  - *Managing Partner of March Partners LLC*
- Jason L. Carlson\*
  - *Chief Executive Officer, congatec AG*
- Andrew T. D'Amico
  - *General Counsel for Intellectual Property Matters for Vicor Corporation*
- Estia J. Eichten\*
  - *Senior Scientist, Fermi National Accelerator Laboratory*

- \* Member, Audit Committee & Compensation
- \*\* Nominee

# Introductions: Inside Directors

- Philip D. Davies, Corporate Vice President
- Michael S. McNamara, Corporate Vice President
- Claudio Tuozzolo, Corporate Vice President
- Patrizio Vinciarelli, Chief Executive Officer
- James F. Schmidt, Chief Financial Officer \*
  - \* To be appointed at a Board of Directors meeting, immediately following the Annual Shareholders Meeting, in which the size of the Board will be increased to ten. James A. Simms, the former Chief Financial Officer, is not standing for re-election.

# Introduction: James F. Schmidt, Chief Financial Officer

- 35 Years at Analog Devices including leadership positions in Finance, Engineering, Operations & Sales
- BS Chemical Engineering, MBA
- Areas of expertise: Financial Management, Cost Accounting / Pricing, Business Processes, Systems Integration, Semiconductor Manufacturing, Distribution

# Introduction: James F. Schmidt, Chief Financial Officer

## ■ Areas of focus

- Scaling Business: Investments, Systems, Processes
- Cost & Pricing: Systems, Visibility, Continuous Improvement
- Business Model: Revenue & Margin Streams
- Go-to-Market: Global Strategy & Execution

# Introductions: Third Parties

- Gabor Garai
  - *Outside Counsel, Foley & Lardner LLP*
- Harold Murphy
  - *Computershare Trust Co.*
- John Murphy
  - *Audit Partner, KPMG LLP*



# Official business meeting agenda

- Business meeting call to order
- Declaration of quorum
- Proposal before stockholders
- Stockholder questions
- Adjourn

# Shares outstanding and voting power

Less Treasury:	11,634,806		11,634,806		11,634,806	
Outstanding:	28,768,252		31,569,865		31,776,960	
<b>Common Stock Votes</b>	<b>28,768,252</b>	<b>19.7%</b>	<b>31,569,865</b>	<b>21.2%</b>	<b>31,776,960</b>	<b>21.3%</b>
<b>Class B Shares</b>						
Issued:	11,758,218		11,758,218		11,758,218	
Less Treasury:	0		0		0	
Outstanding:	11,758,218		11,758,218		11,758,218	
<b>Class B Votes</b>	<b>117,582,180</b>	<b>80.3%</b>	<b>117,582,180</b>	<b>78.8%</b>	<b>117,582,180</b>	<b>78.7%</b>
<b>Total Outstanding</b>	<b>40,526,470</b>		<b>43,328,083</b>		<b>43,535,178</b>	
<b>Total Votes</b>	<b>146,350,432</b>	<b>100.0%</b>	<b>149,152,045</b>	<b>100.0%</b>	<b>149,359,140</b>	<b>100.0%</b>

[1] Totals shown represent basic shares (i.e., no dilutive considerations).

[2] Class B Shares are entitled to 10 votes per share.

[3] Class B Shares are not registered nor listed.

[4] Upon transfer, Class B Shares are convertible into shares of Common Stock on a 1:1 basis.

# Declaration of quorum



- Record Date shares:
  - Common Stock: 31,776,960
  - Class B Stock: 11,758,218
  - Total eligible votes: 149,359,140
- Votes for which proxies received prior to meeting:
  - 139,086,782
  - 93.1% of total eligible votes
- Quorum confirmed

# Proposal and stockholder questions

1. To fix Directors at nine and to elect the nine nominees

The Board will now respond to questions from registered stockholders submitted prior to the meeting or during the meeting via the Computershare website.

# Voting results

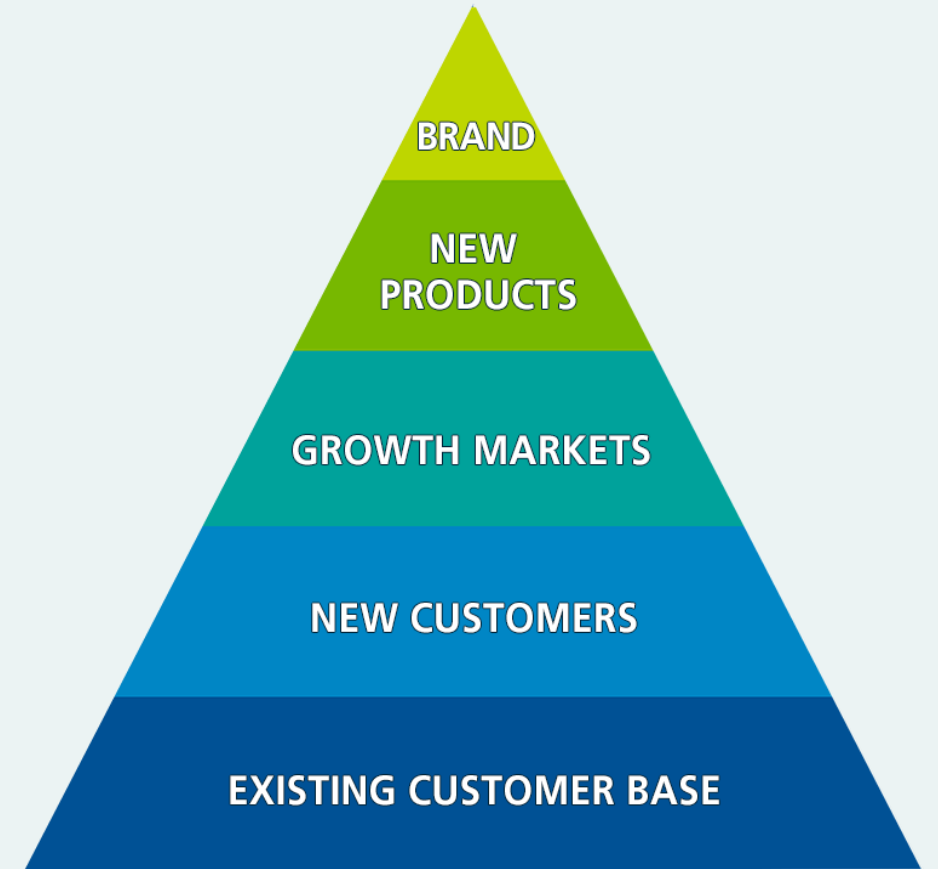
Proposal	Board Recommendation	Shareholder Action	Votes in Favor * (Millions)	Votes in Favor * (%)
1.	FOR	APPROVAL	132.7	95.4%

\* Each nominee received an affirmative vote of at least 132.7 million votes and 95.4% in favor.

# Adjournment

- End of official business
- Call for adjournment

# Strategy update: 5 layers of growth

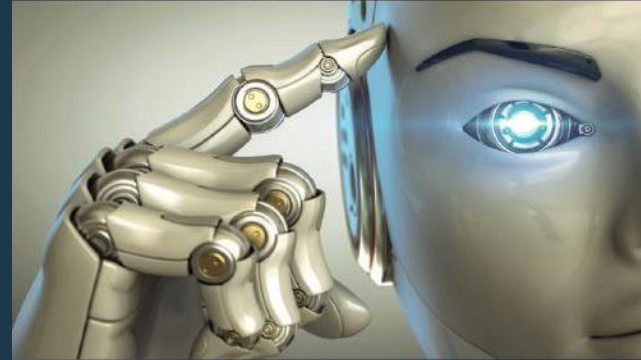


SAM: \$20B +

500X increase in  
power density

1984

2021





# 5 layers of growth strategy

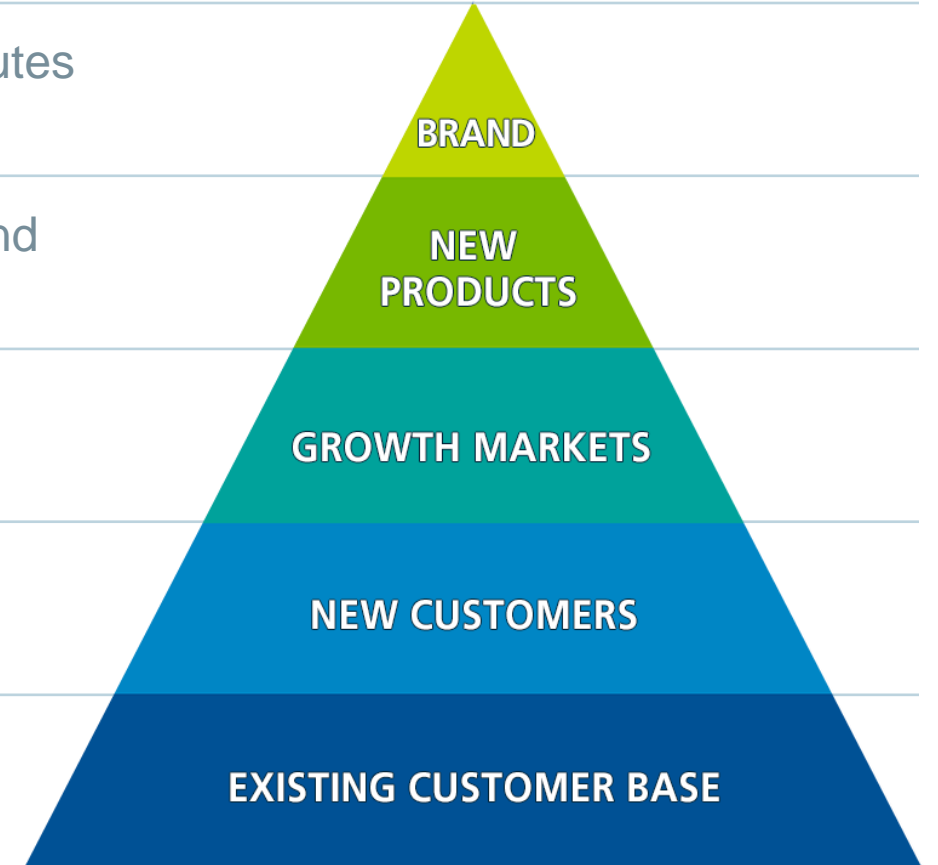
Develop clear messaging on who Vicor is and attain the attributes of our brand message

Develop world class new product launch, lead development and closure processes

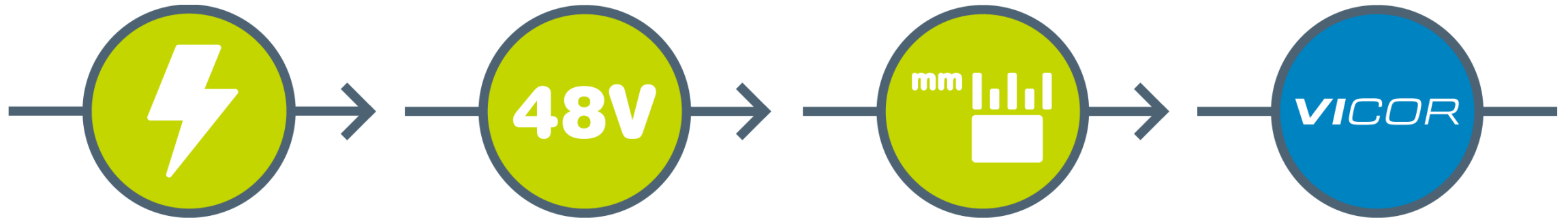
Identify and target high growth market segments with major OEMs worldwide

Build a New Customer franchise worldwide with global channel partners

Nurture and support existing customers worldwide with legacy and new products



# Vicor: Modular Power Delivery Networks (PDN)



System performance demands driving rapidly increasing load power:

*HPC and AI in data centers*

*Automobile Electrification*

PDNs moving to higher voltages in high growth markets to facilitate efficient power distribution

*Power = Voltage x Current*

High-density, modular power delivery solutions:

*Scalable*

*Flexible*

*Repeatable*

*Proven*

The power module company with superior performance, density

# Layer 1 and 2 advanced standard products

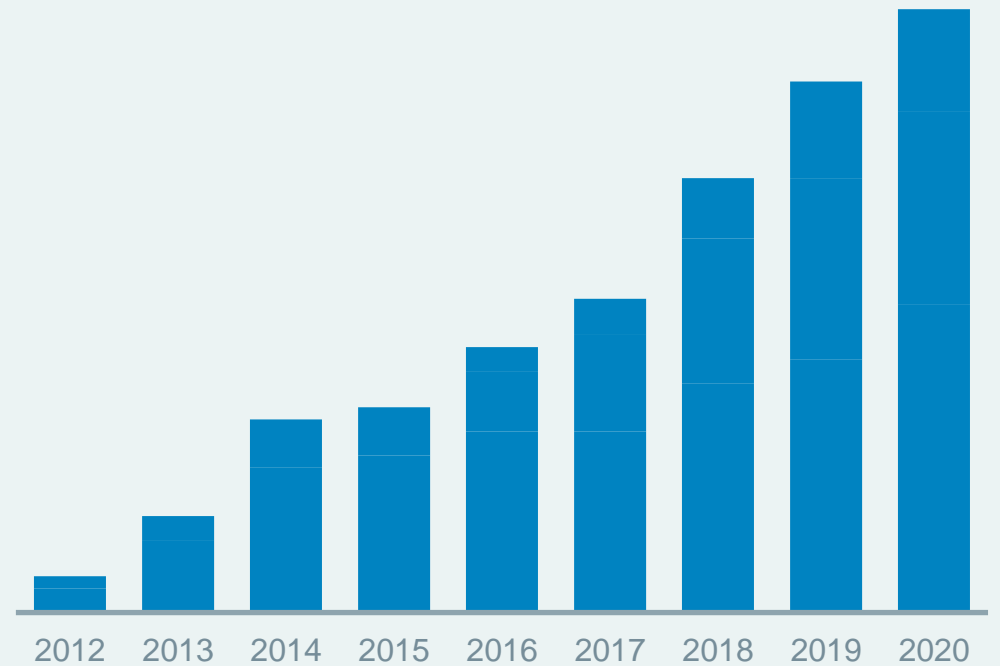
- 140 DCM products
- 10X the power density of bricks
- 50% reduction in power losses
- Building a new ChiP franchise



# Global distribution channel partners



Global franchise distributor revenue growth



# New growth markets

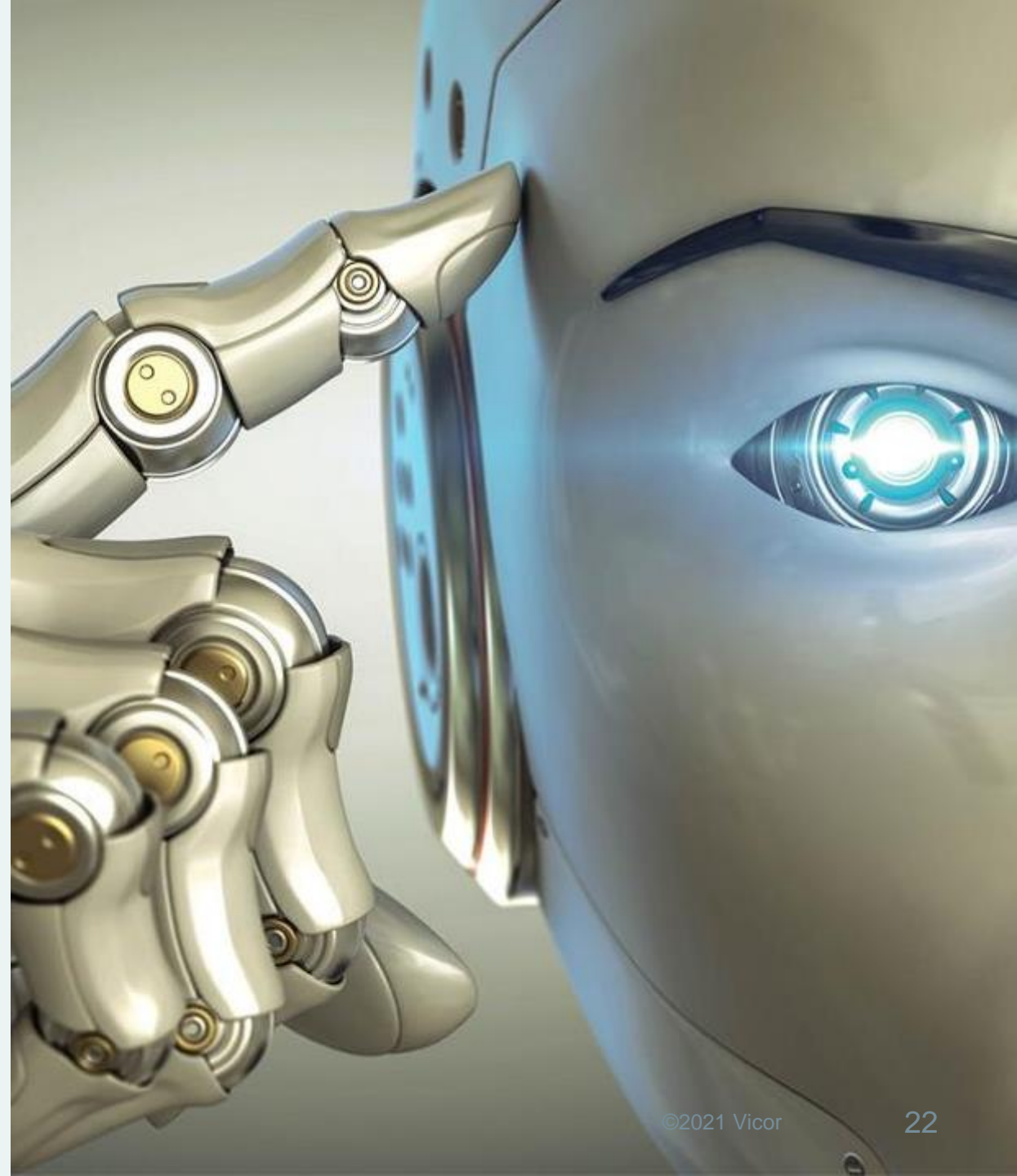
\$1B SAM expansion by 2026

- Robots
- LEVs
- UAV
- Satellite Communications
- LED Displays
- ATE



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# AI Computing



# AI Computing Today

## ■ E-commerce/Cloud Service Providers

- Big 5(USA) + Big 3(China)
- Hyperscale deployments
- AI and XPU for dedicated workflows

## ■ HPC/Super Computing

- Enable leading edge research systems
- Benchmark computing (Top500)

## ■ AI accelerators

- Traditional GPU/CPU houses
- AI Innovators (Unicorns)

## ■ AI Pods

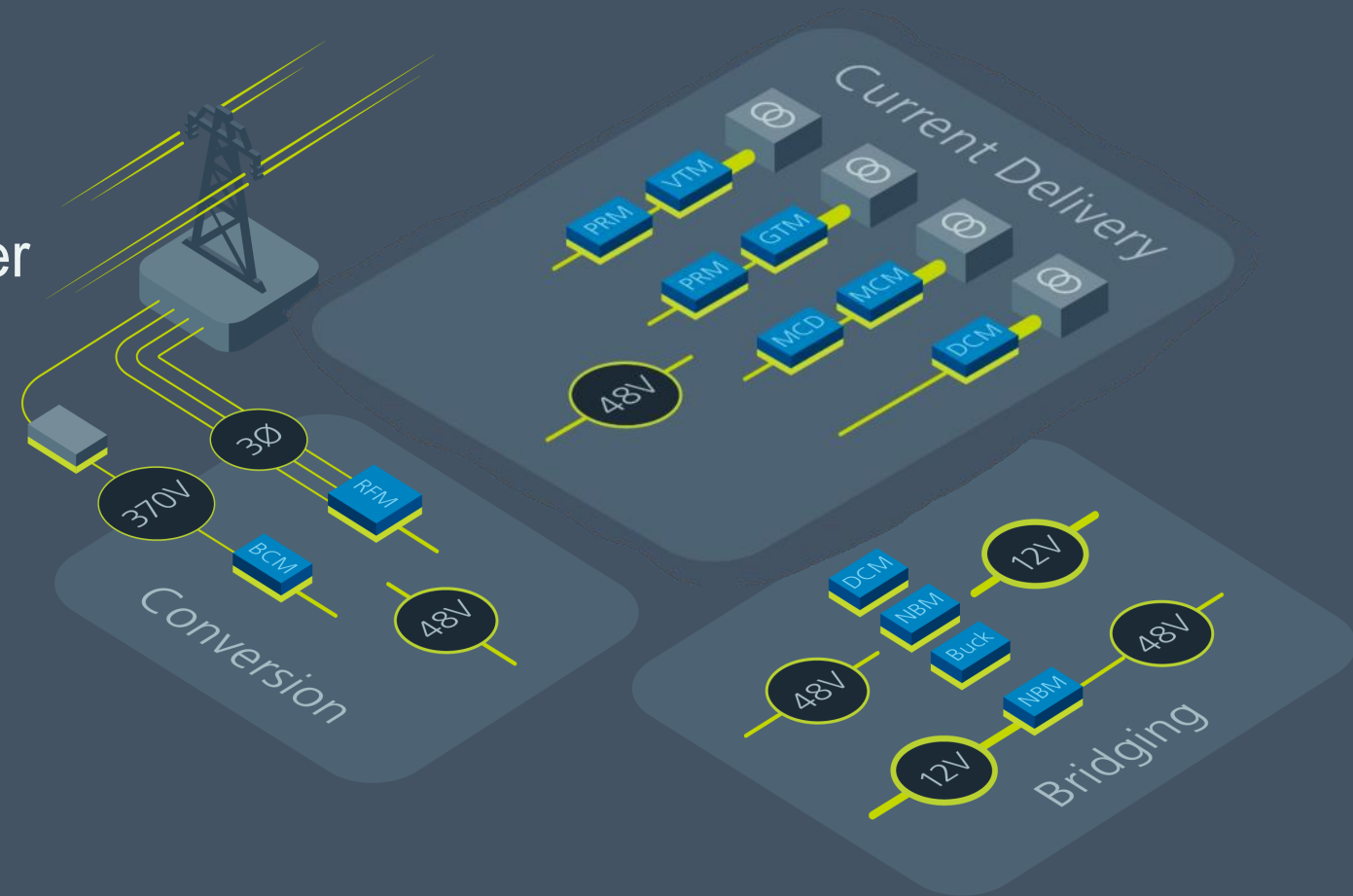
- High density computational systems
- Maximizing computational system density
- Provides system level clusters

## ■ 5G systems

- Edge computing
- Local inferencing

# Power delivery within AI Computing

- Increasing current consumption and form factor constraints
- Meeting new demands on power delivery and system level performance
- Advancing power density and system performance
- Addressing power delivery challenges from the grid to point-of-load with a SAM(2025) of \$2.5B

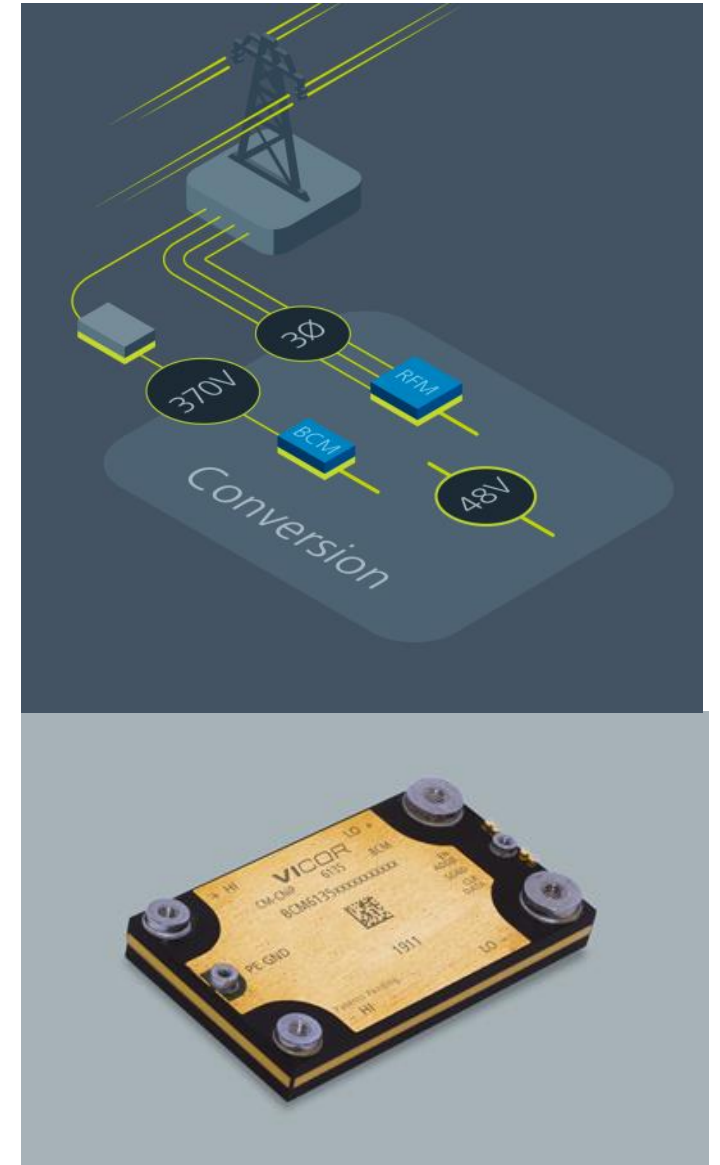




# Conversion

No longer a silver box

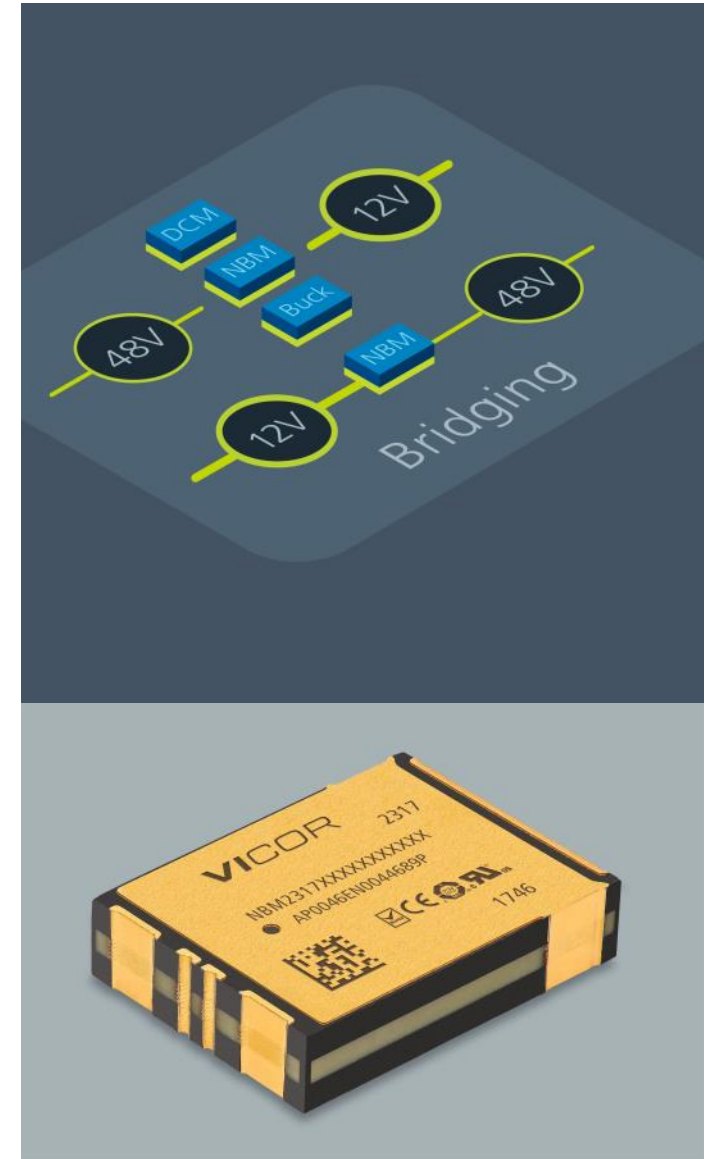
- HPC/Supercomputing and emerging AI Pods
  - Optimize computational power and physical form factor
- Our AC and high voltage DC solutions are enabling these new form factors
- BCM6135 example :
  - 380V to 48V conversion for HPC/supercomputer
  - Very high power density
  - Enables high voltage power distribution



# Bridging

48V and 12V coexisting

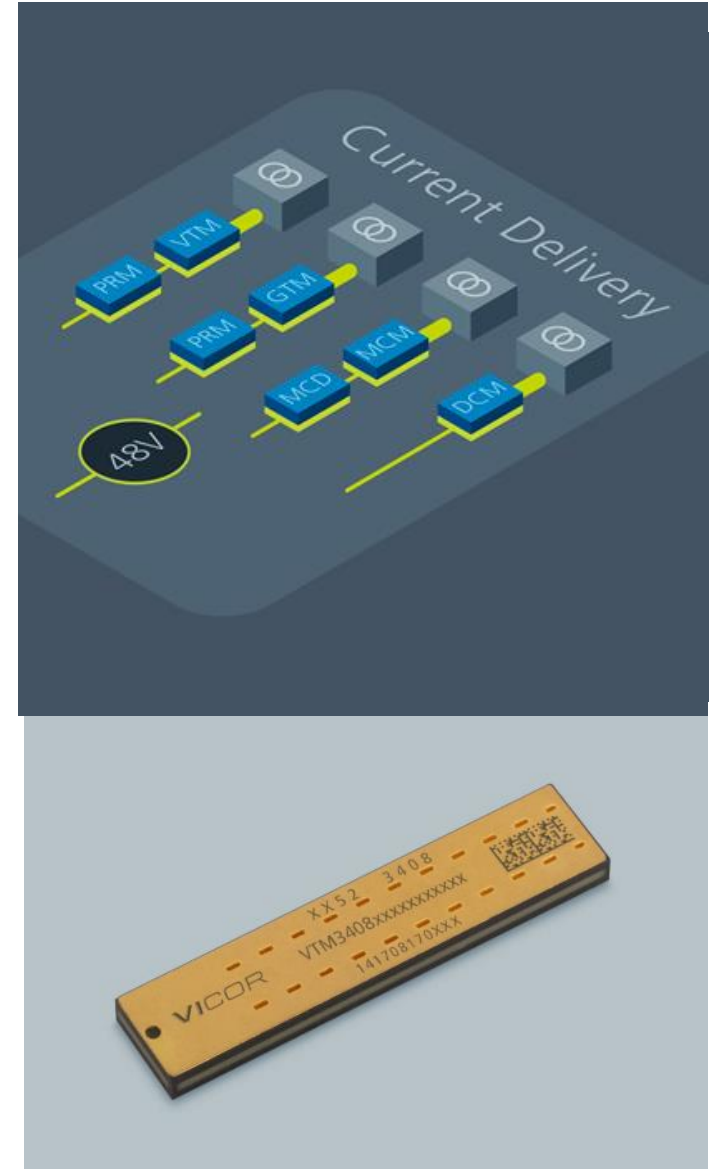
- 12V to 48V
  - Legacy systems implementing new AI accelerator cards
- 48V to 12V
  - Advanced systems supporting aux devices and host CPUs
- NBM2317 example:
  - Bi-directional power converter
  - Supporting AI accelerator cards and host CPUs
  - 70% increase in power density from previous generation



# Current Delivery

## Power to the xPU

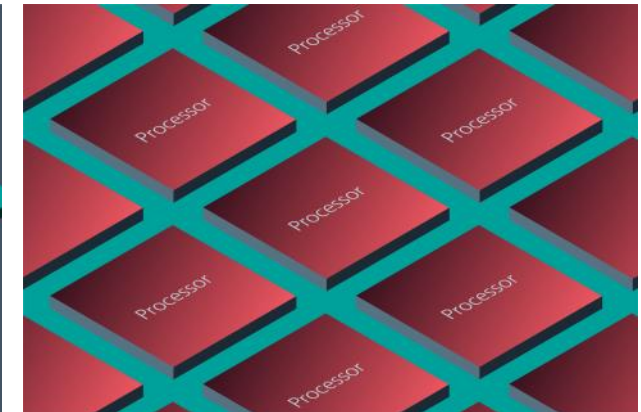
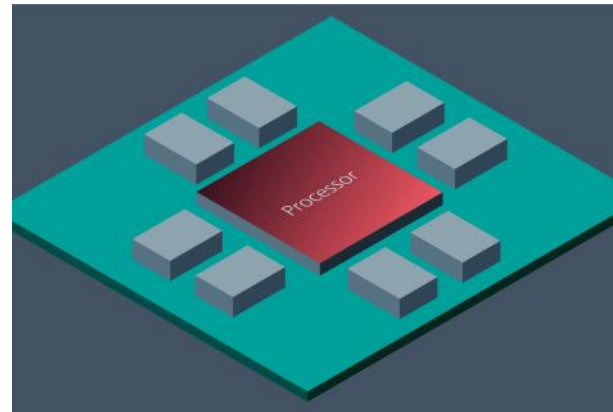
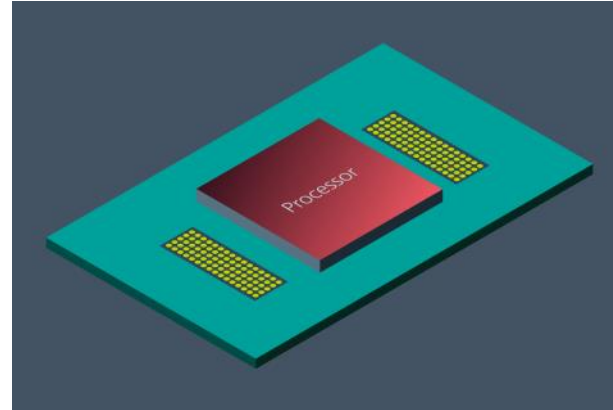
- Design-ins and engagements with AI, high-speed network, and host processors
- Current delivery challenged by the combination of :
  - Space constraints
  - Higher currents / Lower voltages
- Factorized Power Architecture based designs meet these challenges



# Current Delivery

## New space constraints

- OAM standard, PCIE, and custom AI accelerator cards
  - PCB size limitations
  - Connector constraints
  - On-board memory blockage
- Network switch processors
  - High speed transceiver blockage
- Clustered computing
  - Wafer level / PCB level xPU grid fabric

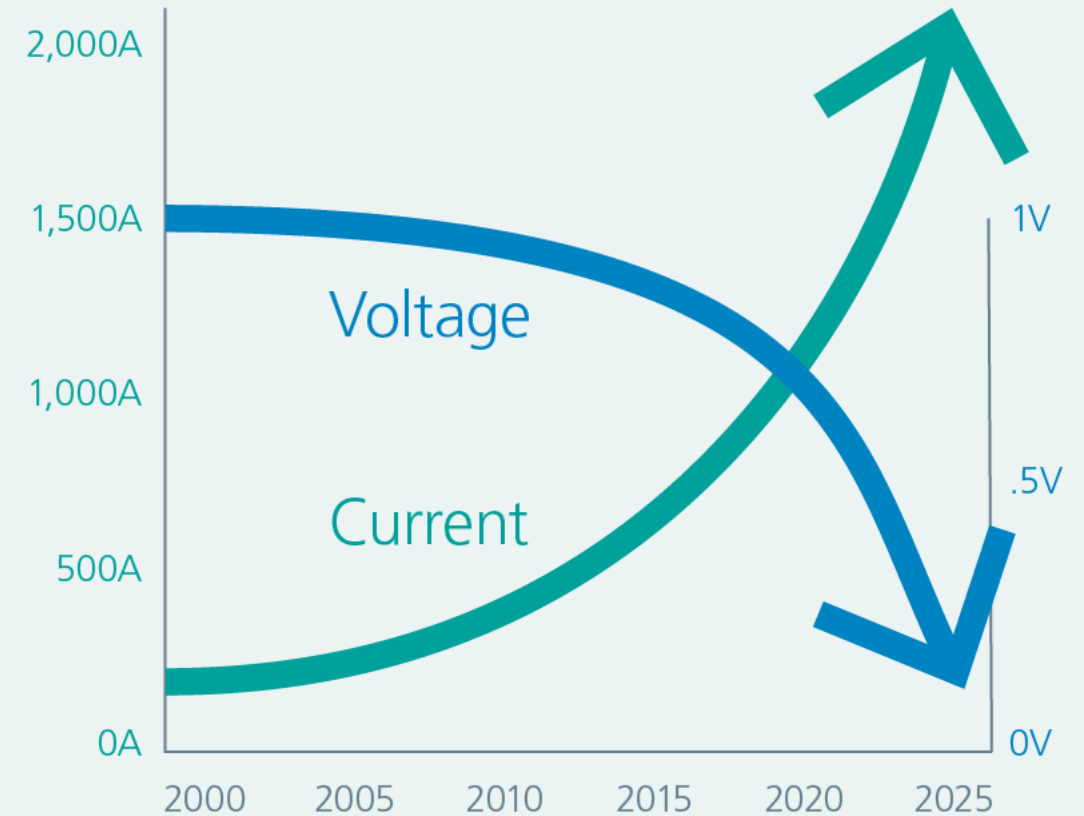


# Current Delivery

## Higher Currents and Lower Voltages

- XPU are consuming 500A+
  - Transient load performance also increasing
- XPU operating voltages decreasing to less than 0.8V
  - Follows the progression of wafer fabrication geometry nodes (12nm, 10nm, 7nm...)
- Close placement to the XPU is critical

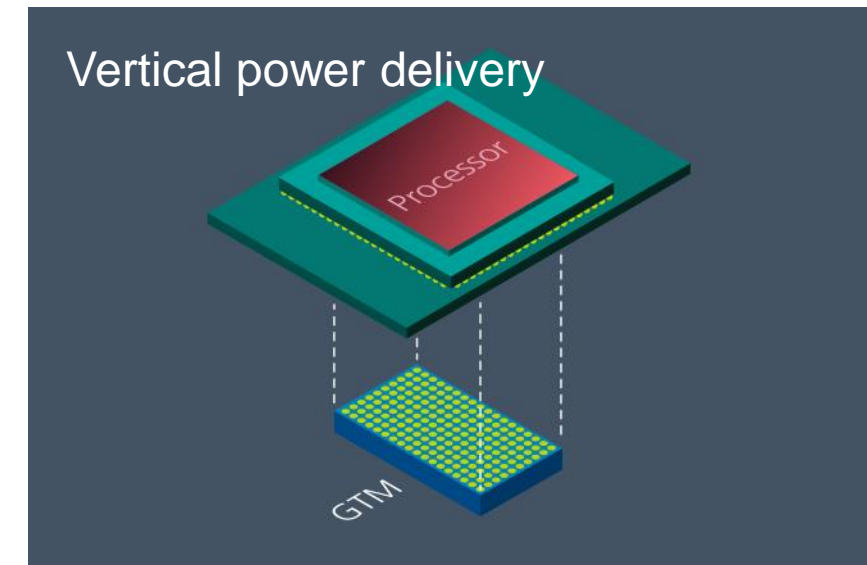
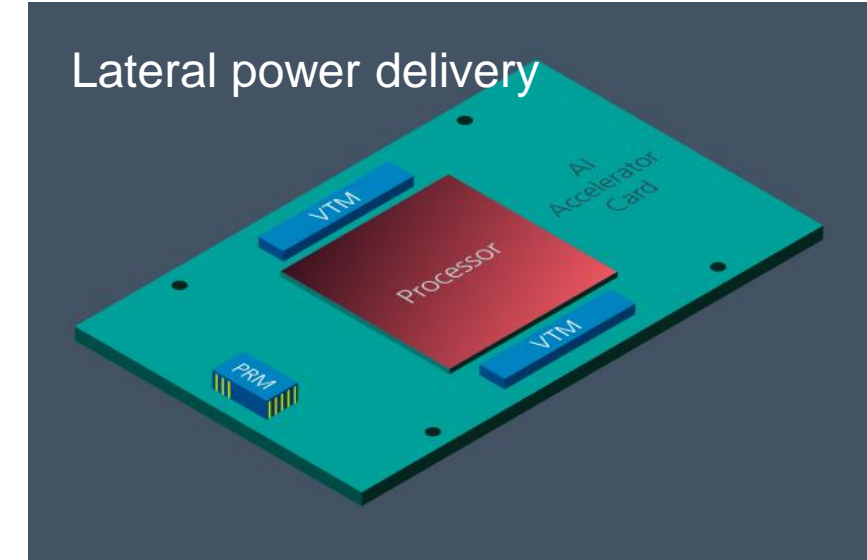
Progression of CPU/GPU/ASIC/FPGA peak current requirements



# Current Delivery

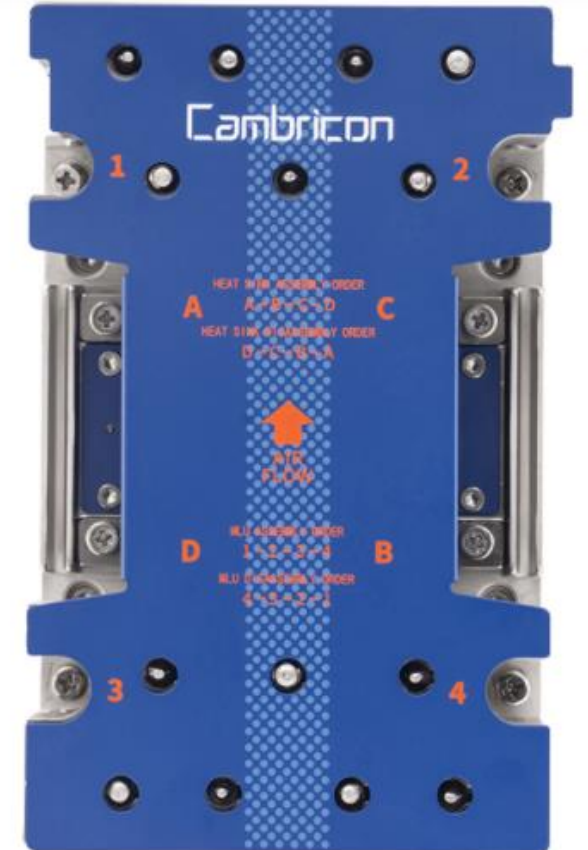
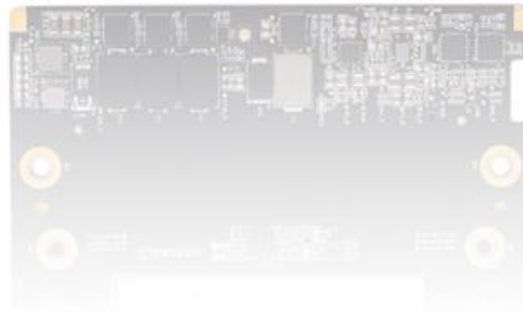
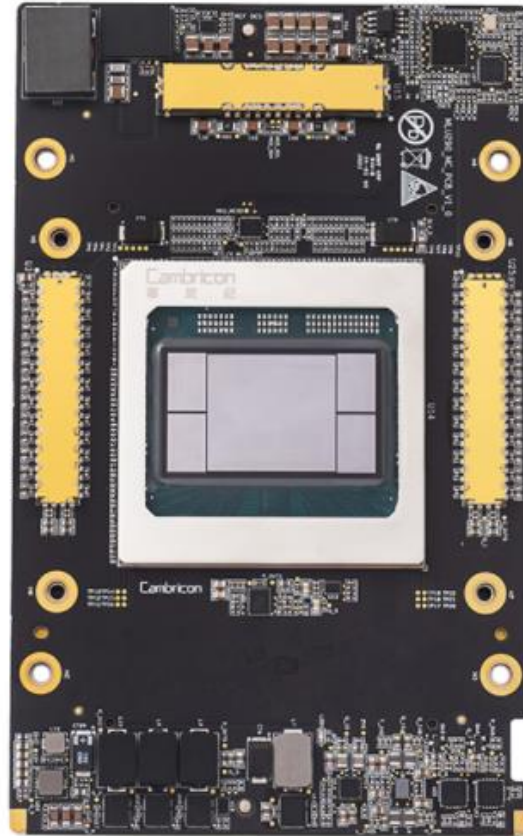
## Factorized Power

- Supporting power delivery architectures :
  - Lateral
  - Lateral/Vertical
  - Vertical
  
- Winning on :
  - Density
  - Efficiency
  - Transient performance
  - Low noise generation



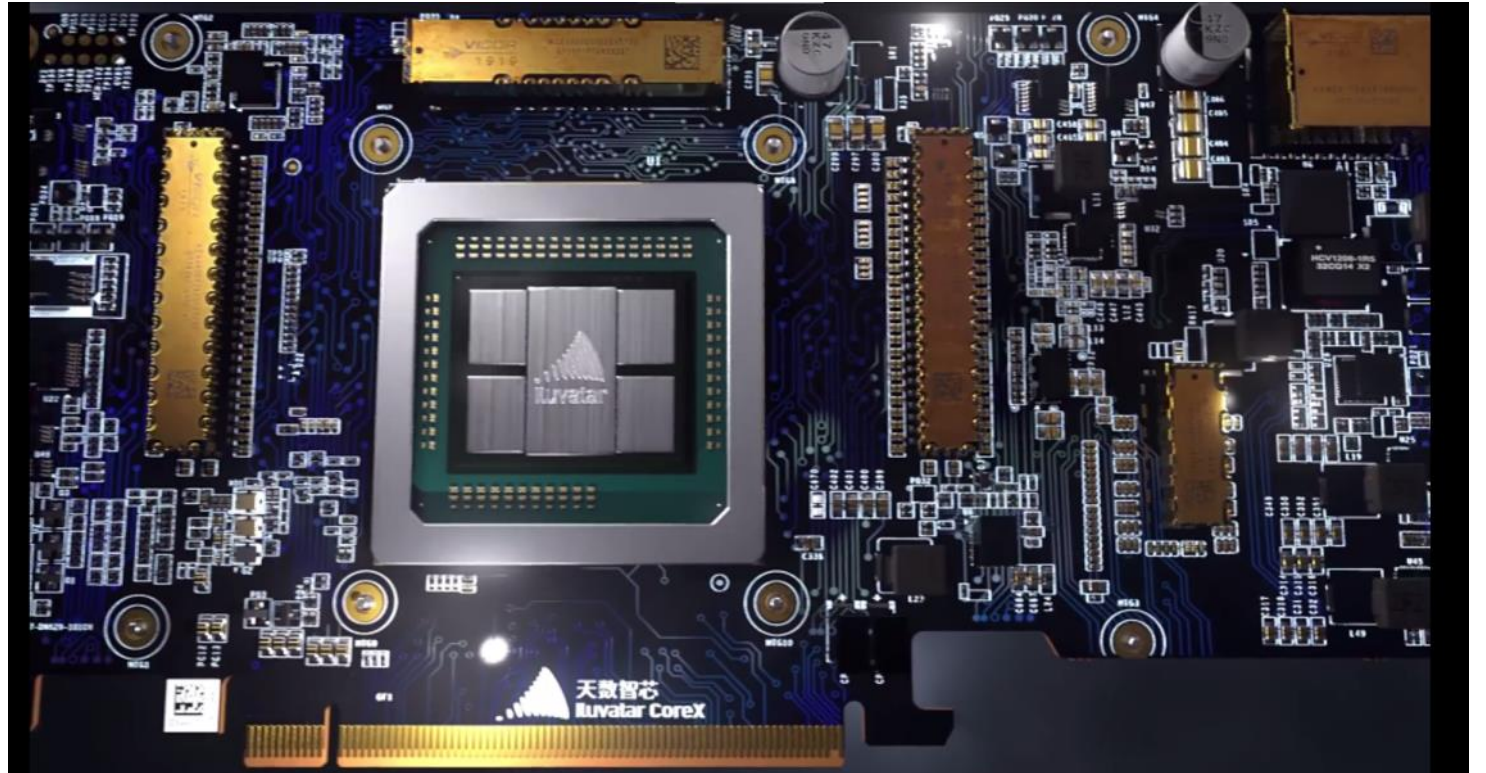
# Cambricon

- China AI Unicorn
- MLU290-M5 accelerator
- OAM card format
- 7nm fabrication node



# Iluvatar

- China AI Unicorn
- “Big Island” AI processor
- PCIe card format
- 7nm fabrication node

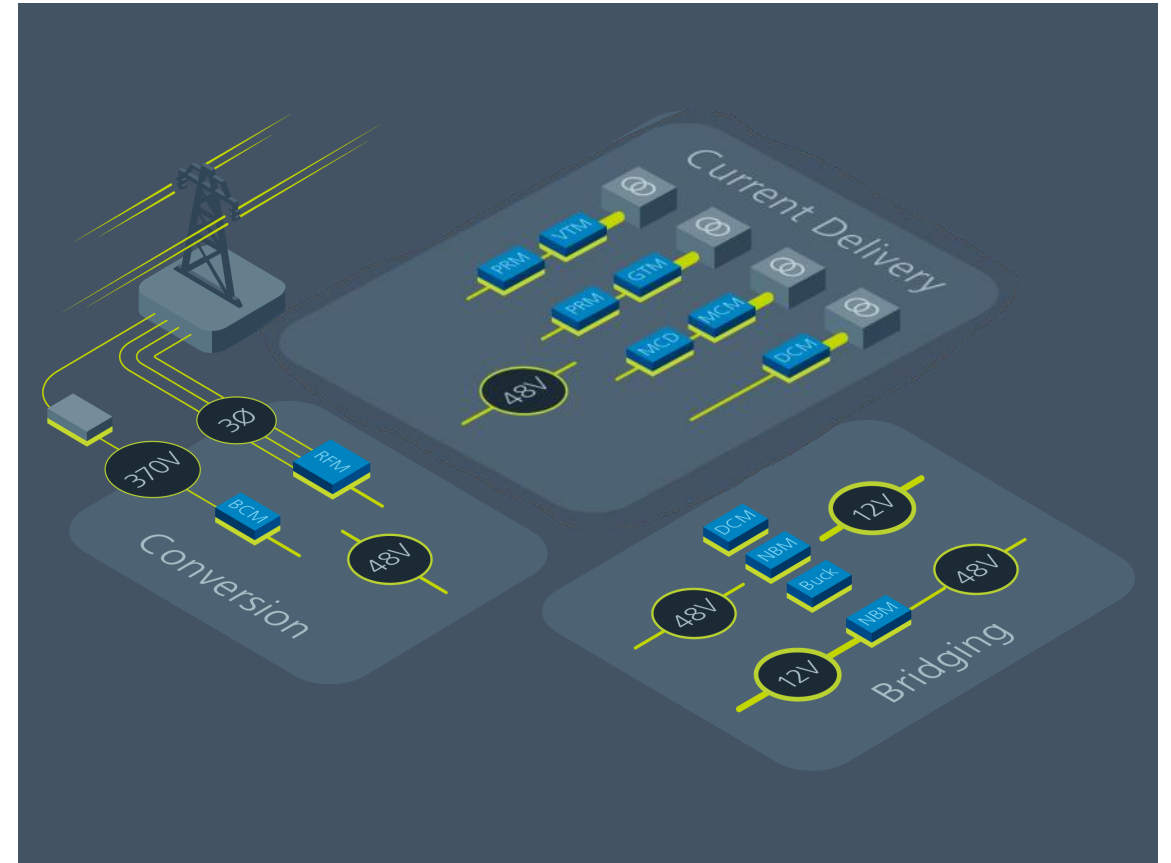




# Summary

## AI Computing

- Global effort targeting Cloud, Supercomputer, AI Accelerator, AI POD, and 5G systems
- Focus on Conversion, Bridging and Current Delivery
- Continue to innovate our product power and efficiency performance
- We extend our performance lead with:
  - Proprietary architectures
  - Silicon integration
  - Proprietary high density package technology



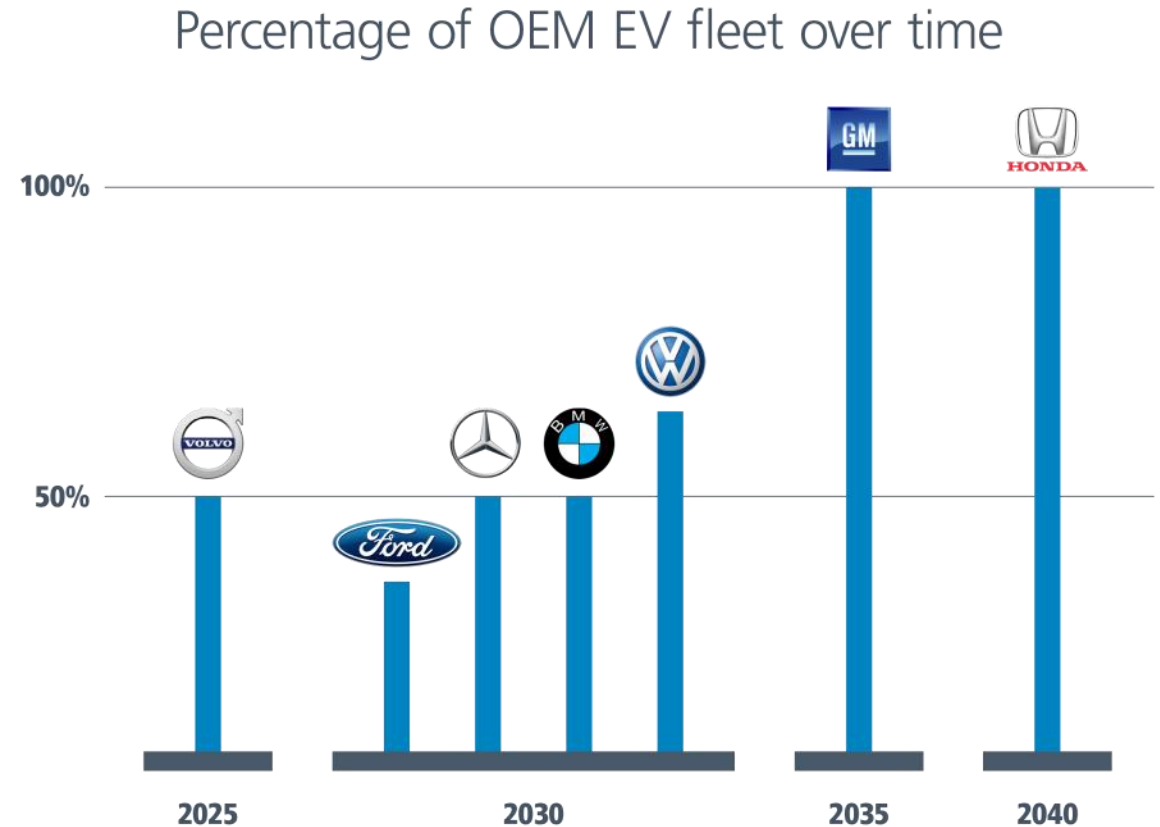
*VICOR*

Automotive



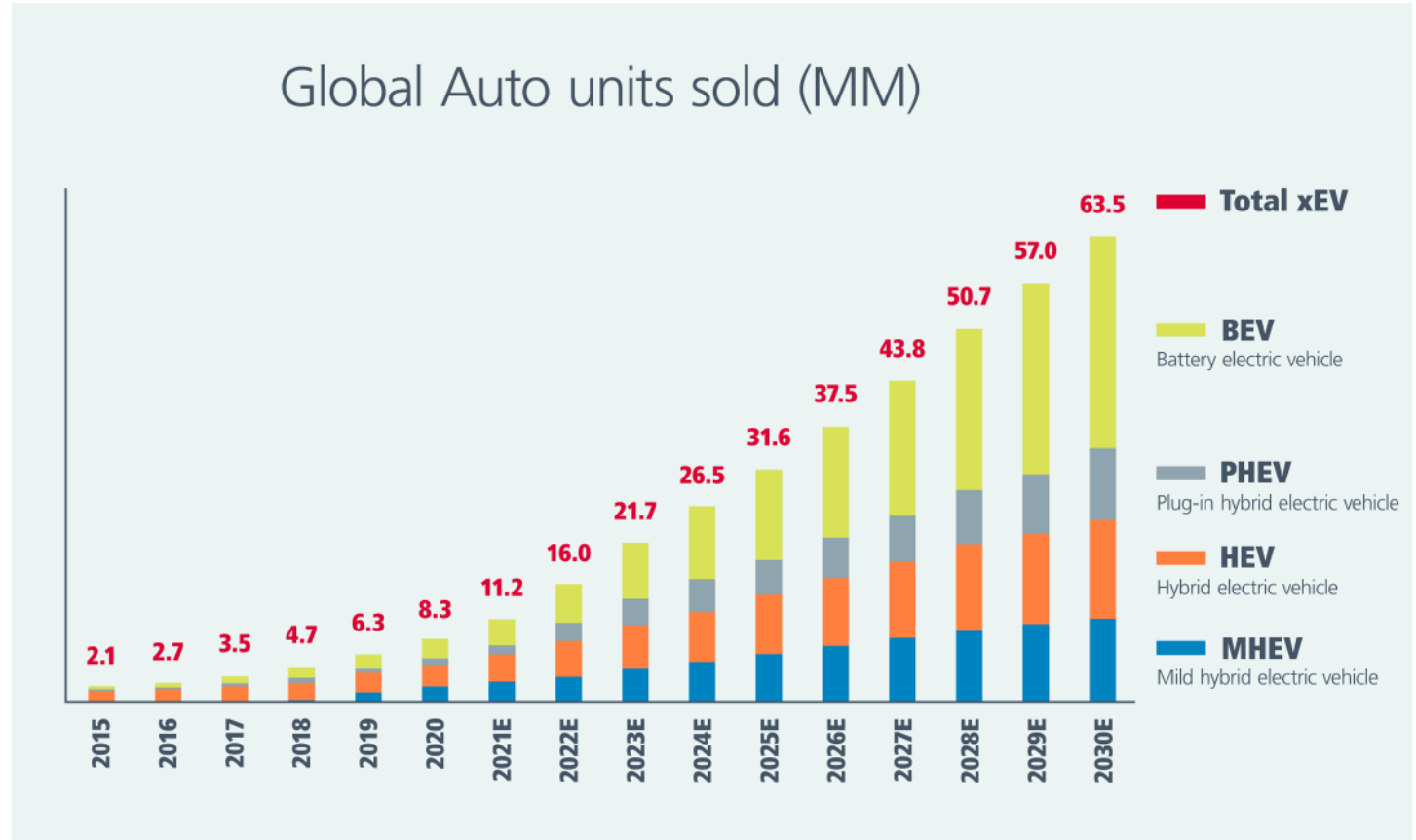
# OEM examples: Accelerating EV development

- For many years, the total electric vehicle production rate was only 1 – 2% of all vehicles produced worldwide
- Government incentives started the ball rolling, consumer demand is driving the acceleration of EV adoption
- Faster charging, higher performing, better styling vehicles drive consumer demand



# The race to electrification

- This year new vehicle estimates are even higher than last year
  - New vehicle introductions drive consumer demand
  - Higher number of xEV introductions
- Out of 63M xEV cars by 2030, we expect battery electric vehicles to account for 29M cars
  - 45% of the xEV total
- ICE vehicle production could fall from 97% in 2020 to as low as 10% in 2040



Source: Credit Suisse estimates (Global Research team)

# xEV content-rich vehicle platforms for Vicor

\$29B SAM by 2030

Range of potential content: \$50 to \$720 on average per vehicle



Mild Hybrid

Hybrid

PHEV

BEV

ICE (Internal Combustion Engine)

Hybrid

Electric Power

# Vicor high level corporate automotive strategy

Create demand with automotive OEMs, OEM spec, build to print, directed supplier

Focus on 3-way OEM and T1 partnerships to provide systems engineering and manufacturing capability

Enable tier 1 suppliers of auxiliary systems to implement (integrate) Vicor technology for point-of-load conversion



# Modular advantages in automotive

## Power density

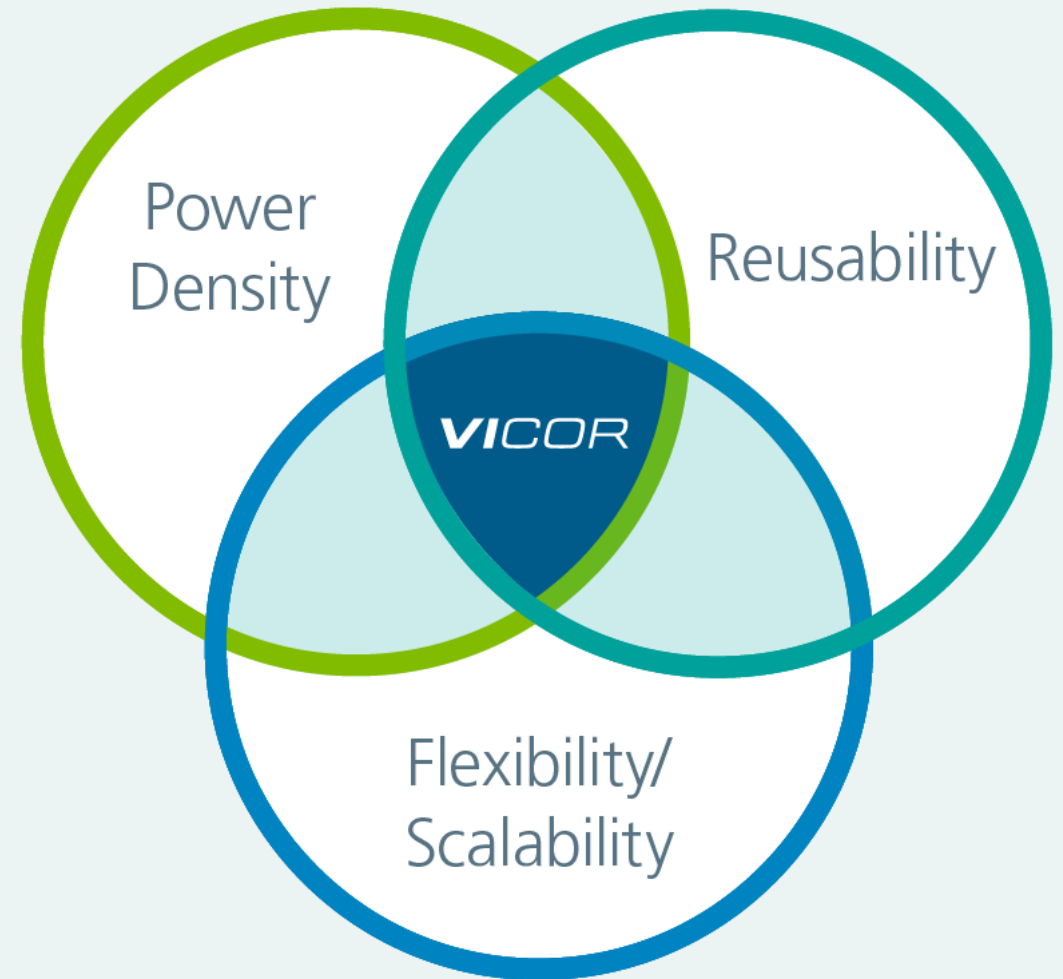
Whether it's a fast sports car, a light duty truck, or a family car, OEMs need to pack as much power as possible in a constrained space. Vehicles need compact and efficient power solutions.

## Reusability

To achieve full fleet electrification, OEMs need to be able to reuse designs across different platforms to speed time-to-market.

## Flexibility/scalability

Automakers have many vehicles using the same platform and easy power scaling is essential when modifying the power between sedans, minivans, SUVs, etc. that share the same platform.



# Vicor Automotive



High-performance power module

## THE TINY "48V BATTERY"

**VICOR**

VICOR  
CM-CHP E135 BCM  
BCM61 25xxxxxxxxxx  
AP0655E14056-02AP  
2012 V A  
LO



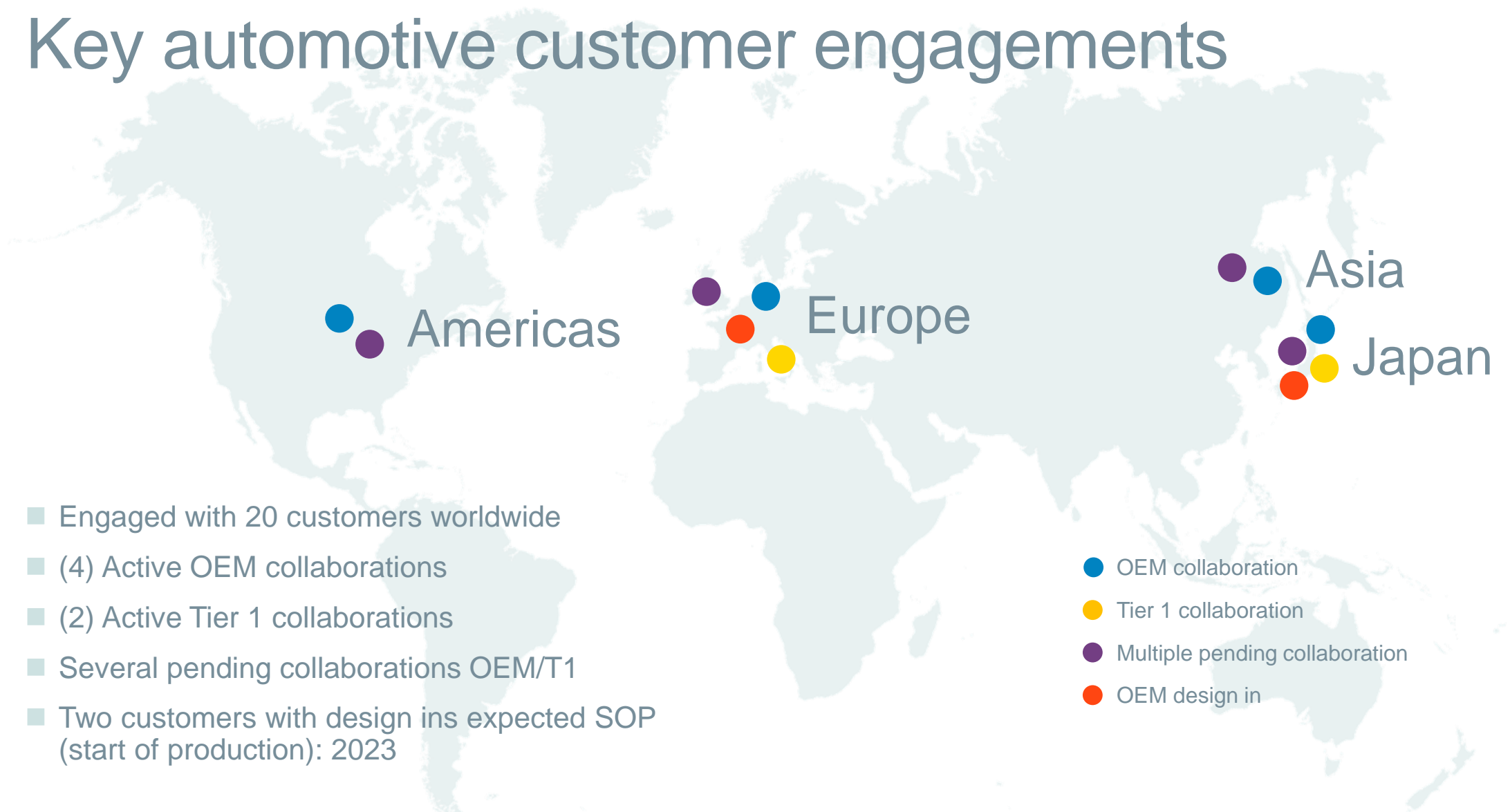
12V = 40 lbs.



48V = 16 lbs.



# Key automotive customer engagements



# Vicor automotive development timeline

Nov 2019  
Signed collaboration  
agreement with  
Japanese OEM

Jul 2020  
Signed collaboration  
agreement with  
North America OEM

Q4 2021  
Expected  
IATF16949  
certification

Oct 2022  
Automotive products  
complete PPAP,  
ready for market

2018

2019

2020

2021

2022

2023

Oct 2018  
Launched  
automotive  
business  
initiative

Sep 2019  
Signed MOU  
agreement  
with  
European  
customer

Mar 2020  
Shipped  
first  
samples to  
automotive  
customer  
800/48V

Dec 2020  
Close the  
year with  
3 design ins

Jul 2021  
First  
shipment  
with  
automotive  
qual BOM

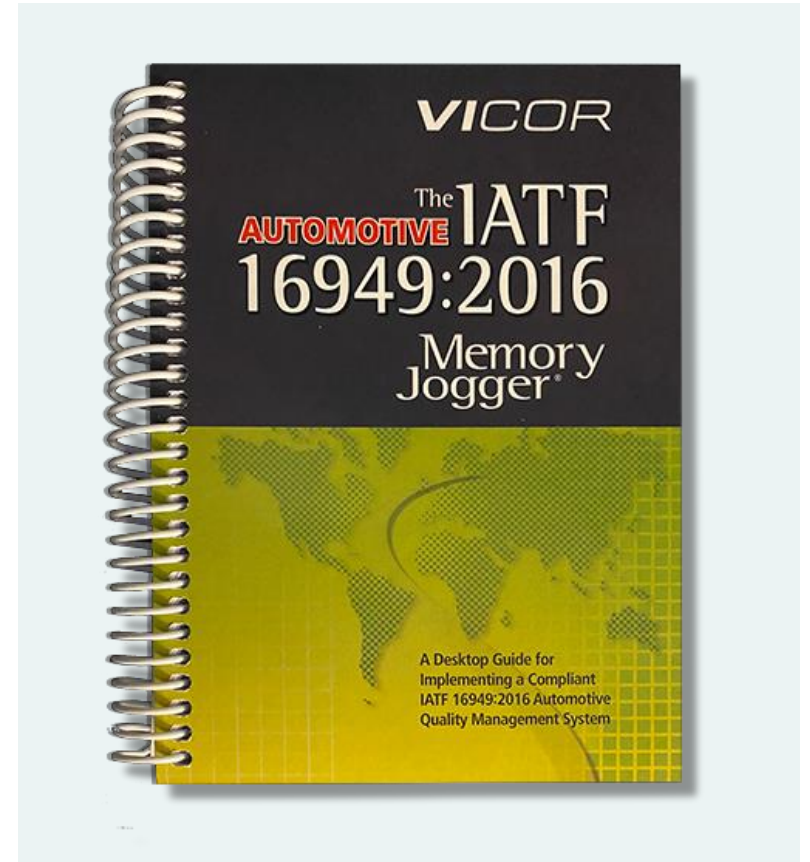
Feb 2022  
Complete  
design  
validation  
automotive  
core  
products

Dec 2022  
Production  
ramp

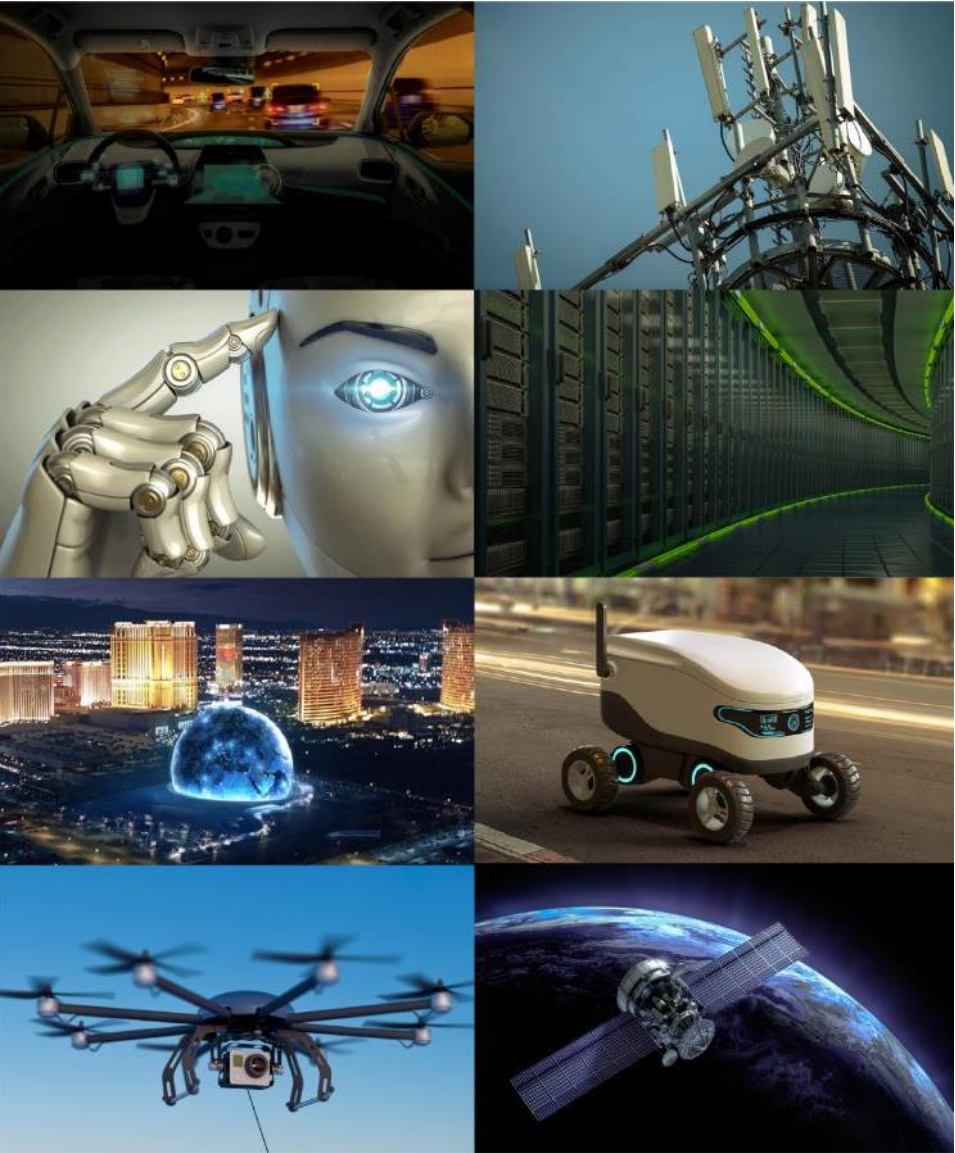
Jul 2023  
SOP  
MY2024

# Automotive quality and reliability

- ISO 9001: 2015 Certified through TUV Management Services
- Implementation of an APQP automotive quality management system
- Expected to ship auto grade material in 2021 with PPAP in 2022
- IATF 16949:2016 Certification Targeted for Q4 2021
- Driving the company towards a zero defects mindset



# 5 layers of growth strategy



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# Facilities expansion



# Vertical integration

- Expansion enables vertical integration of critical processes
  - Reduced manufacturing cycle time
  - Scaled up capacity to catch up with demand
  - Leverages existing operational overhead and infrastructure




# Capacity expansion

- New wing added to Federal St. factory for advanced products:
  - Upper floor for vertical integration
  - Lower floor for additional AP capacity
- Construction complete in Q421
  - Equipment on order
  - Complete vertical integration 1H 2022



# Operational expansion underway

- Investment in equipment to ramp capacity
- Vertical integration to catch up with demand and improve gross margins
- New facility to support forecasted growth
- Approaching mix shift
  - Advanced Products > Brick in Q3 2021

Expanding production capacity		
	Estimated timing	Expected annualized revenue capacity
Capacity expansion	Online Q2 2019 ✓	~\$450M-\$500M
New wing addition	Online 1H 2022	~\$750M
New facility	TBD	~\$1.5B



# Long term financial model

	Q1 2020	Q1 2021	Long Term Targets
Revenue	\$63M	\$89M	DD CAGR
Advanced Products	28%	39%	~80%
Brick Products	72%	61%	~20%
Gross Margin	43.1%	50.3%	~65%
R&D	21%	15%	~15%
SG&A	26%	19%	~15%
Operating Income	(3.7)%	16.6%	~35%

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Q&A

