

# MPS Management

August 2, 2024

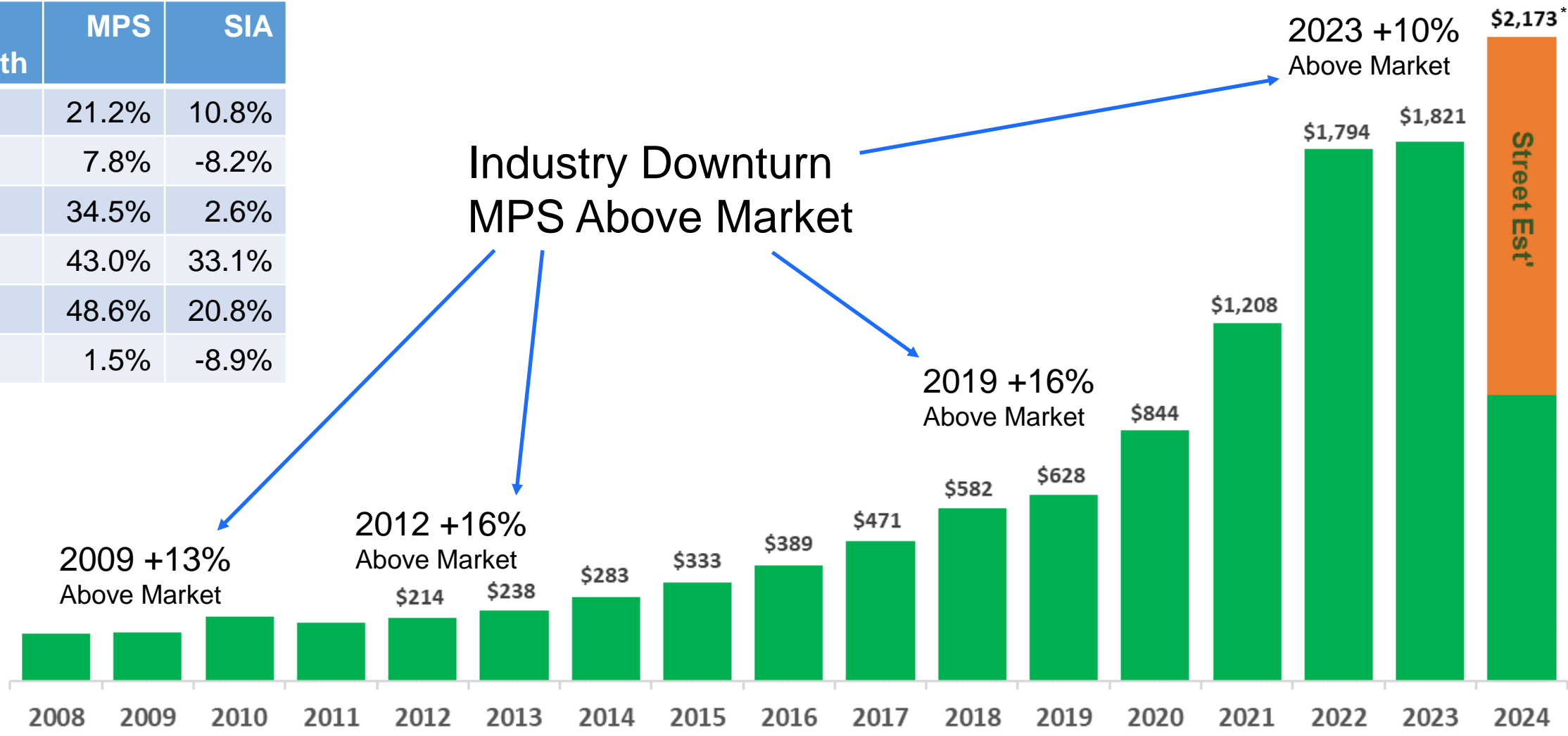
**MPS**

# Forward Looking Statements

This presentation includes forward-looking statements that involve risks and uncertainties, including our belief in continued expansion of our product lines, advances in our technology, anticipated market opportunities, gross margin targets, net & operating margin targets, inventory targets, continuing business diversification, growth and opportunities in China and Taiwan, and increasing sales penetration in Japan, Korea, the U.S., Singapore and Europe. Other forward-looking statements can be identified by terms such as “would,” “could,” “may,” “will,” “should,” “expect,” “Wall Street estimates,” “intend,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” “targets,” “target ranges”, “seek,” or “continue,” the negative of these terms or other variations of such terms. These statements are only predictions based on our current expectations and projections about future events. Because these forward-looking statements involve risks and uncertainties, there are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements. In this regard, you should specifically consider the risks identified in our most recent 10-K in the section entitled “Risk Factors,” including the risks, uncertainties and cost of litigation and risks related to fluctuations in our operating results.

# MPS Growing, Even in Tough Markets (\$M)

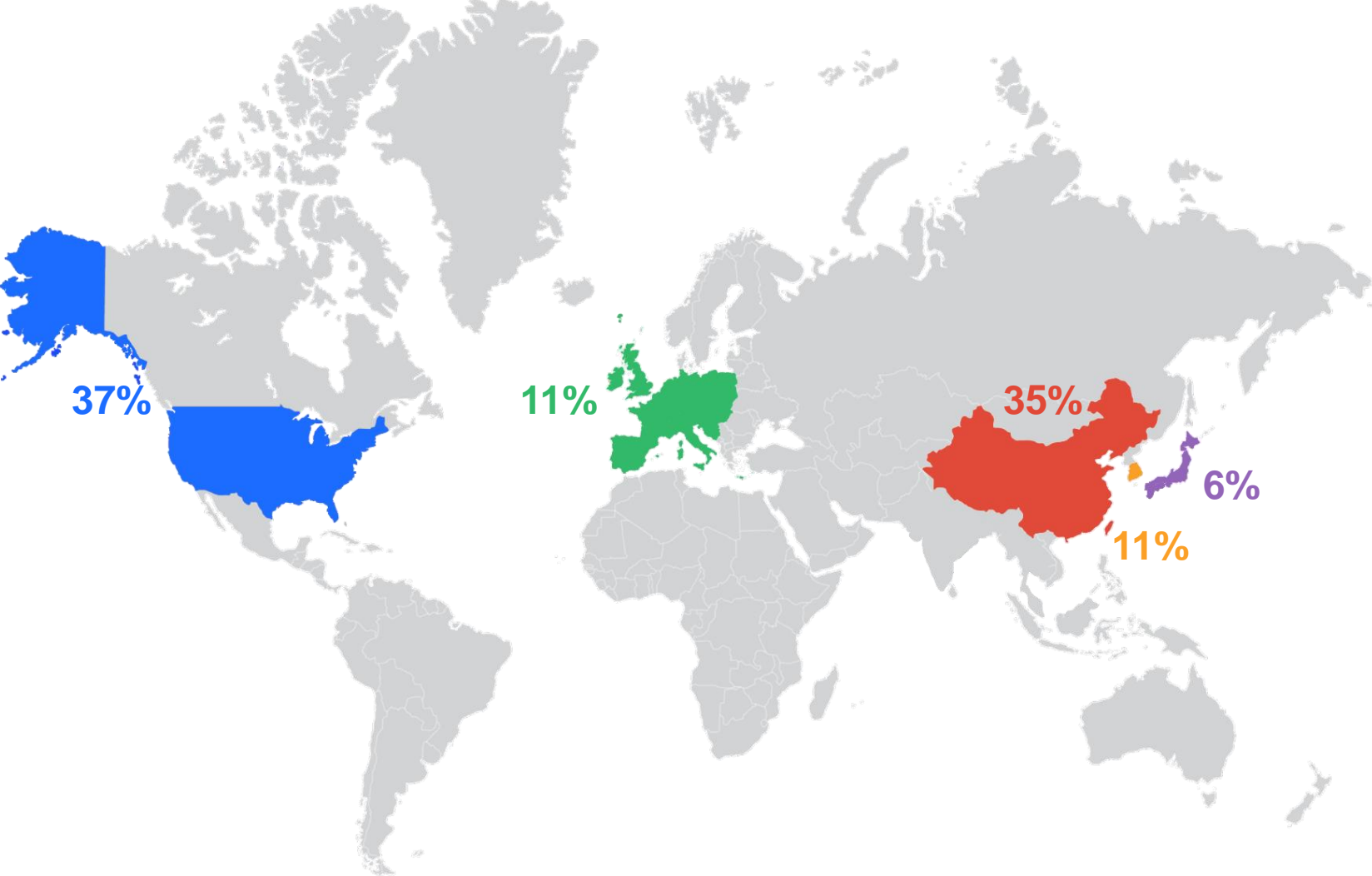
YoY Growth	MPS	SIA
2018	21.2%	10.8%
2019	7.8%	-8.2%
2020	34.5%	2.6%
2021	43.0%	33.1%
2022	48.6%	20.8%
2023	1.5%	-8.9%



\* Wall Street analysts' average revenue

**2011 MPS Transformation**

# Great Revenue Diversification by GEO



## Diverse End Markets

<b>% of Revenue</b>	<b>2010</b>	<b>2020</b>	<b>2023</b>	<b>24Q2</b>	<b>2019-2023 CAGR</b>
<b>Enterprise Data</b>	<b>-</b>	<b>8.6%</b>	<b>17.7%</b>	<b>36.9%</b>	<b>61.1%</b>
<b>Storage and Computing</b>	<b>10.4%</b>	<b>21.4%</b>	<b>27.0%</b>	<b>22.6%</b>	<b>36.5%</b>
<b>Automotive</b>	<b>1.9%</b>	<b>12.9%</b>	<b>21.7%</b>	<b>17.2%</b>	<b>44.6%</b>
<b>Communications</b>	<b>17.8%</b>	<b>16.9%</b>	<b>11.3%</b>	<b>8.6%</b>	<b>24.7%</b>
<b>Consumer</b>	<b>65.1%</b>	<b>26.1%</b>	<b>12.9%</b>	<b>8.3%</b>	<b>9.3%</b>
<b>Industrial / Other</b>	<b>4.8%</b>	<b>14.2%</b>	<b>9.4%</b>	<b>6.4%</b>	<b>14.8%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>30.5%</b>

# Growth Drivers by End Market

## Computing



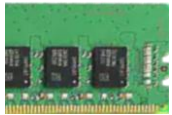
**Accelerators**



**Artificial Intelligence**



**Cloud Based Data Center**



**Storage**



**Portable**

## Automotive



**ADAS**



**BMS / Traction Inverters**



**Digital Cockpit**



**Lighting**



**Body Control**

## Industrial



**Smart Meters**



**Factory & Building Automation**



**Robotics**



**Healthcare**



**Security**

## Infrastructure



**5G and Wireless**



**Base Stations**



**Networking**



**Optical**

## Consumer



**AI at the Edge**



**Home Appliances**



**Gaming**



**Augmented Reality**



**Audio**



# Leveraging 4000+ Products



## AC/DC Power Conversion

- High-Voltage Buck Regulators
- High-Voltage LDOs
- Flyback Controllers
- Flyback Synchronous Rectifiers
- Active PFC Controllers
- LLC Resonant Converter Controllers
- LLC Synchronous Rectifiers
- PFC & LLC Combo Controllers
- X-Capacitor Bleeders

## Display Backlighting Power

- Backlight Drivers
- Electroluminescent Drivers
- Photo Flash Drivers
- LCD Power Supplies

## AI & Computing Power

- CPU & GPU Core Power
- High-Current DrMOS
  - 70A DrMOS 4mmx5mm Package
  - 25A POL Module 5mmx6mm Package
- 60V Intermediate Bus Converter Modules
- Z-Axis Power Delivery Multiphase Modules

## DC/DC Power Conversion

- Step-Up (Boost)
- Step-Down (Buck)
- Buck-Boost
- PMICs
- Power over Ethernet (PoE)
  - Power-Sourcing Equipment (PSE)
  - Powered Devices

## Power Magnetics

- Molded Inductors
- Semi-Shielded Inductors

## E-Fuse, USB & Load Switches

- Configurable Current Limit, Up to 50A per Device
- Adjustable Slew Rate
- Reverse Current Blocking
- Output Discharge (Load Switch)
- Integrated Auto-Detection
- Pin-to-Pin Compatible
- Parallelable Up to 10 Devices
- Digital Interface Command and Control
- USB Type-C and USB PD

## Motor Drivers, Position & Current Sensors

- Brushless DC Motor Drivers
- Stepper Motor Drivers
- Brushed DC Motor/Solenoid Drivers
- Half-Bridge/Full-Bridge/Three-Phase Power Stages
- Magnetic Angular and 3D Position Sensors
- Isolated, Integrated Current Sensors, 5A to 400A

## Automotive (AEC-Q100) & Industrial

- DC/DC
- LED Lighting
- Power Modules
- Motor Drivers
- Angular Position and 3D Position Sensors
- USB Charging
- Wireless Charging
- Display Backlighting
- Precision Analog
- ADAS Core Power
- Supervisors
- Load Switches
- Isolated, Integrated Current Sensors, 5A to 400A
- Class-D Audio
- E-Fuses, High-Side Switches

## Battery Management

- Battery Monitors & Protectors
- Fuel Gauges
- Active Balancers
- Switching Chargers: Buck, Boost, Buck-Boost
- Linear Chargers

## Class-D Audio

- Digital Controllers and Processors
- Analog Input Class-D Amplifiers
- PWM Input Power Stages
- Digital Signal Processors

## Isolated Solutions

- Isolated Gate Drivers
- Isolated Power Modules
- Digital Isolator with Integrated Power
- Digital Isolators
- Integrated Current Sensors, 5A to 400A
- Totem-Pole PFC/LLC Controllers

## Power Modules

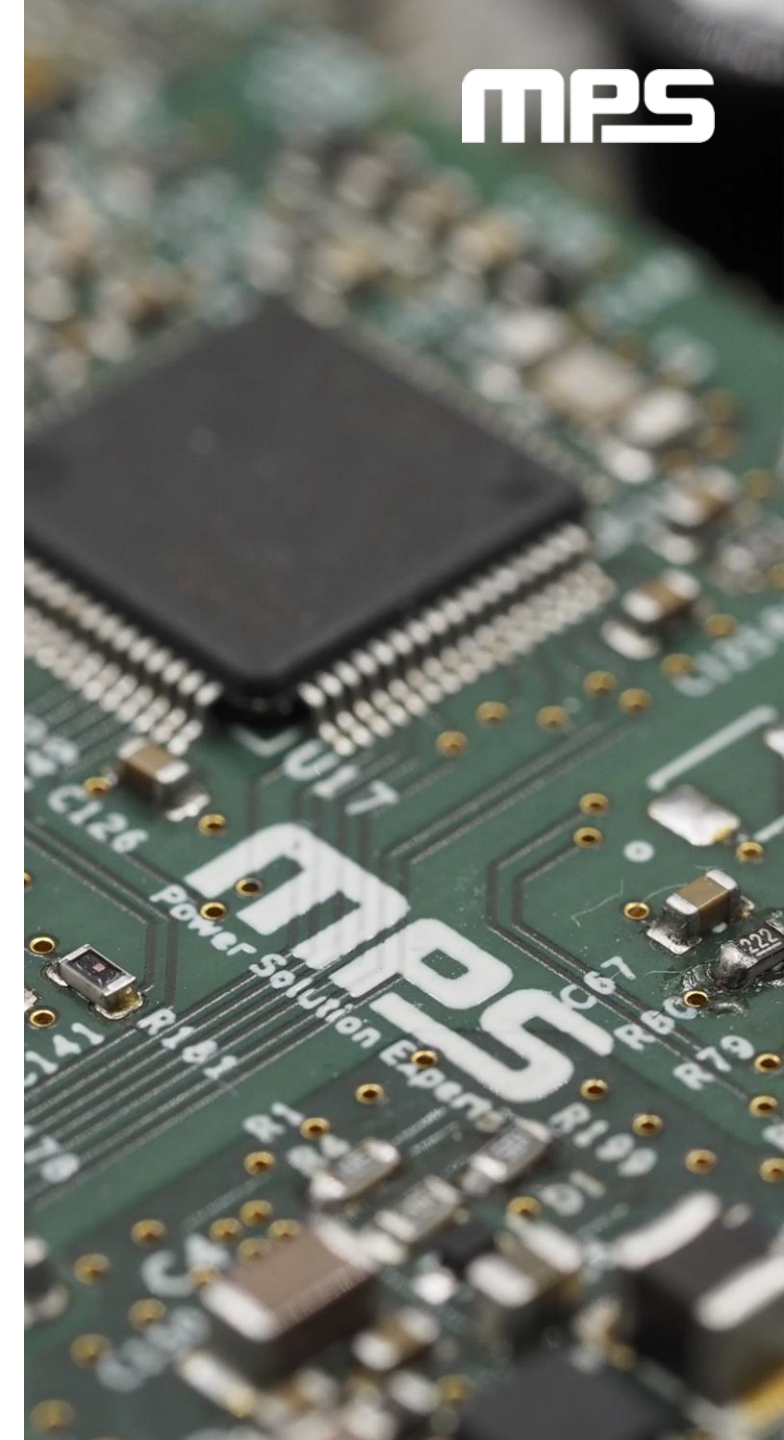
- 6V, 600mA to 100A
- 16V, 600mA to 1000A+
- 36V, 600mA to 24A
- 55V, 1A to 3A
- 80V, 600mA

## LED Lighting & Illumination

- TRIAC-Dimmable AC/DC LED Controllers
- PWM and Analog Dimmable AC/DC LED Controllers
- DC/DC LED Controllers: Buck, Boost, Buck-Boost
- LED Protection ICs
- IR LED Drivers

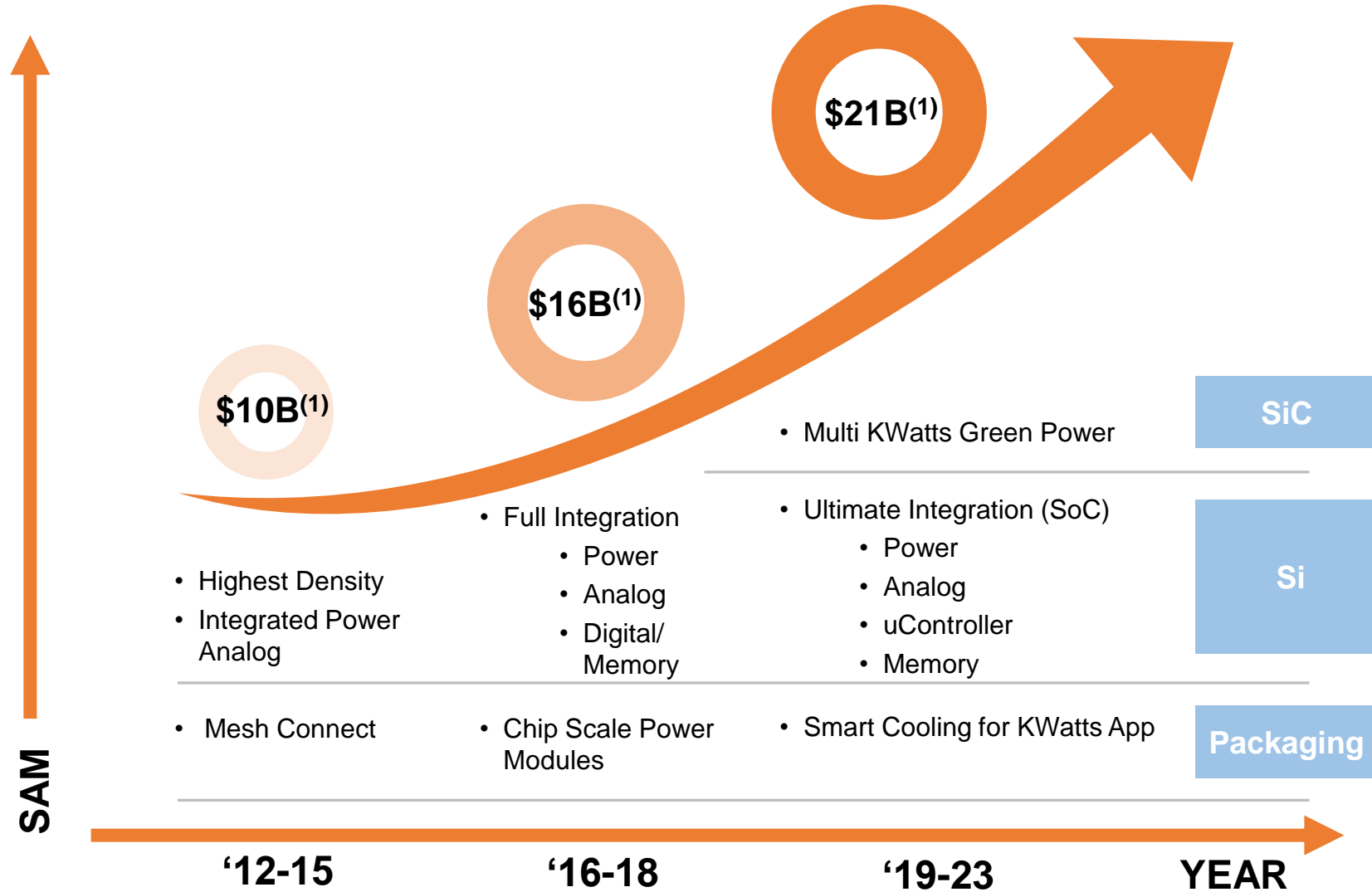
## Precision Analog

- Analog-to-Digital Converters
- Analog Switches
- Current-Sense Amplifiers
- Operational Amplifiers
- Voltage Reference



# MPS Technology Evolution

Proprietary Technologies Drive SAM Proliferation

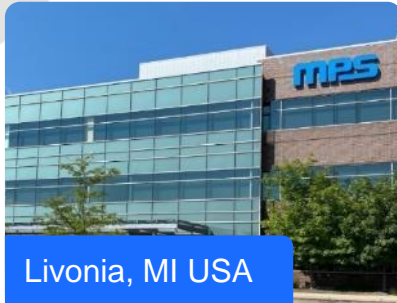
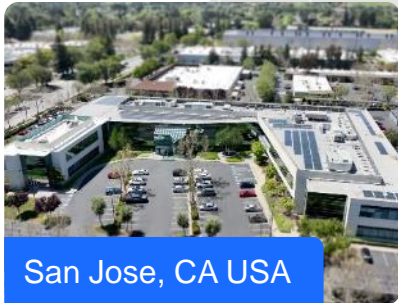
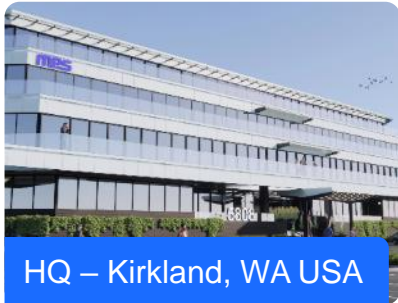




# SAM Expansion

Market	2015 SAM	2018 SAM	2023 SAM
Automotive	\$4B	\$6B	\$7B
Motion Control	\$2B	\$3B	\$4B
ACDC	\$1B	\$2B	\$2B
Modules	\$1B	\$2B	\$2B
Cloud Computing (Server / Storage)	\$800M	\$1B	\$4B
Networking / Telecom	\$600M	\$1B	\$1B
Battery Management	\$600M	\$1B	\$1B
<b>Total Market SAM</b>	<b>\$10B</b>	<b>\$16B</b>	<b>\$21B</b>

# MPS Global Footprint

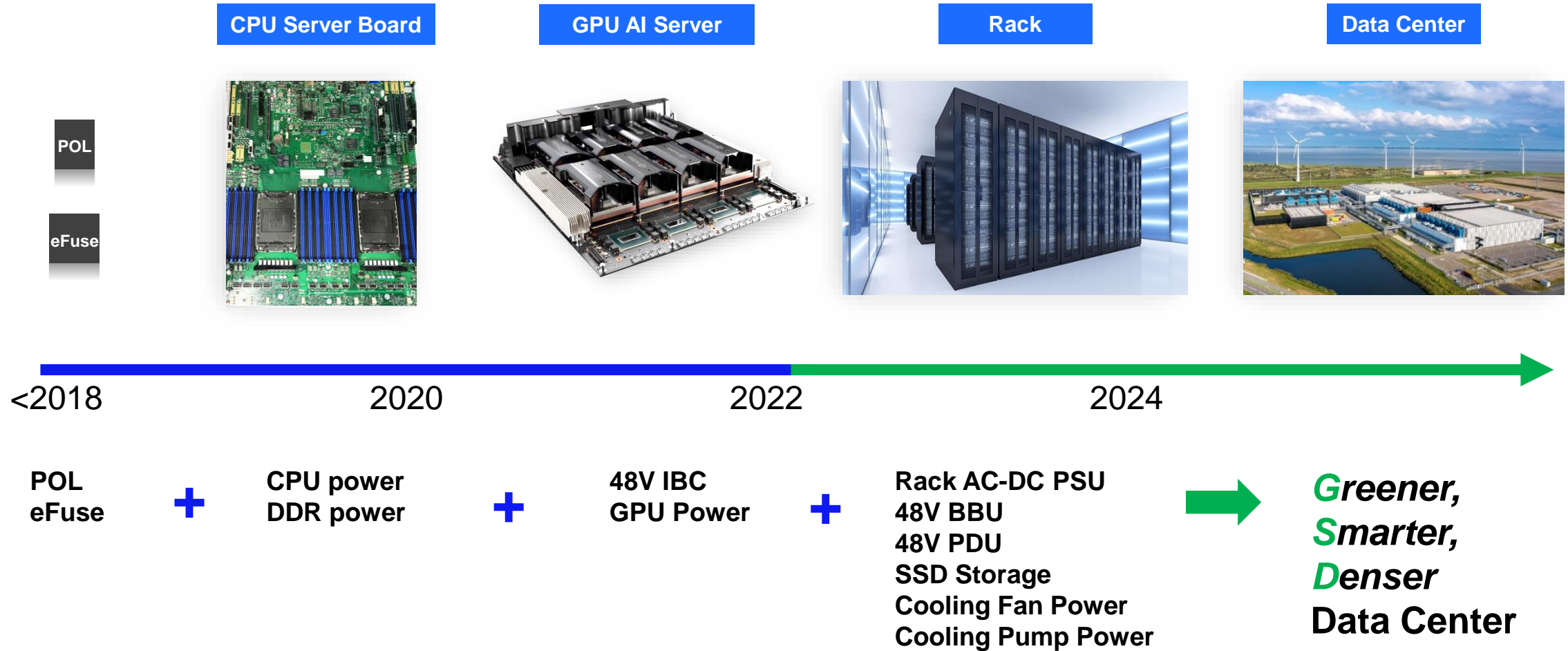


**Computing**

**MPS**

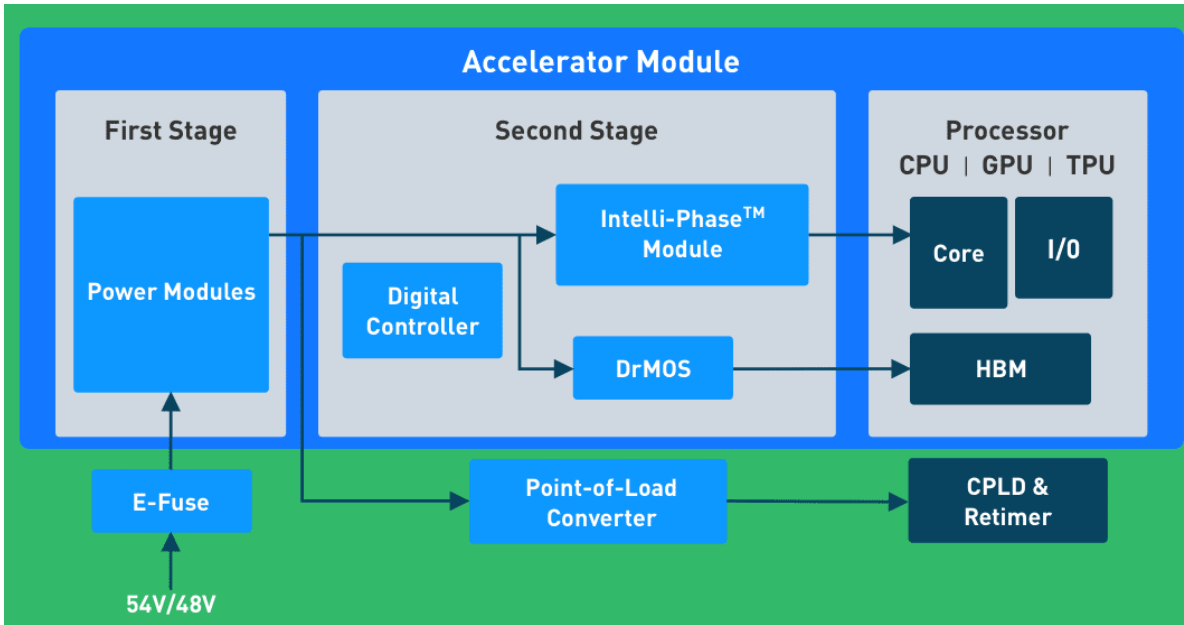
# From Board Level Power to Rack and Beyond

## >\$4B SAM and Rapidly Growing

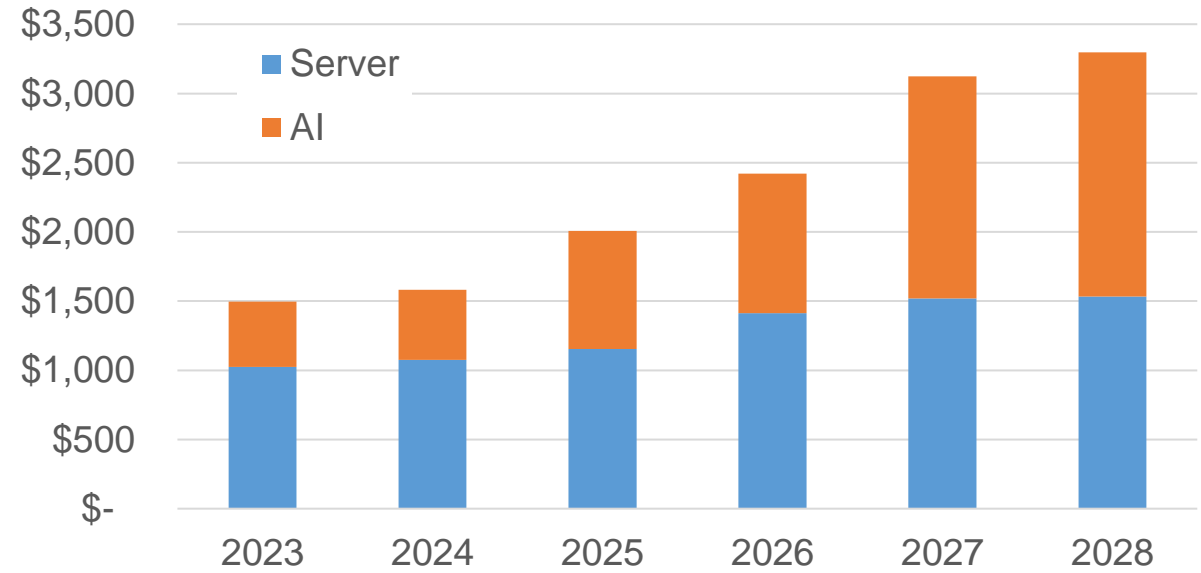


# MPS Powers AI

## AI Server Power Architecture



## AI driving growth to > \$3B in data center



Source : Intel, Omdia, Semianalysis

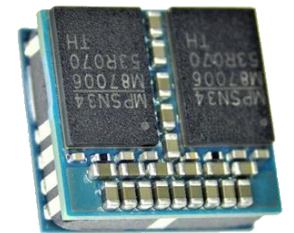


48V Module

## Defining the Ecosystem

**Designing** solutions for the toughest challenges

**Delivering** to the most demanding schedules



Z-axis Power Delivery (ZPD) Intelli-Module



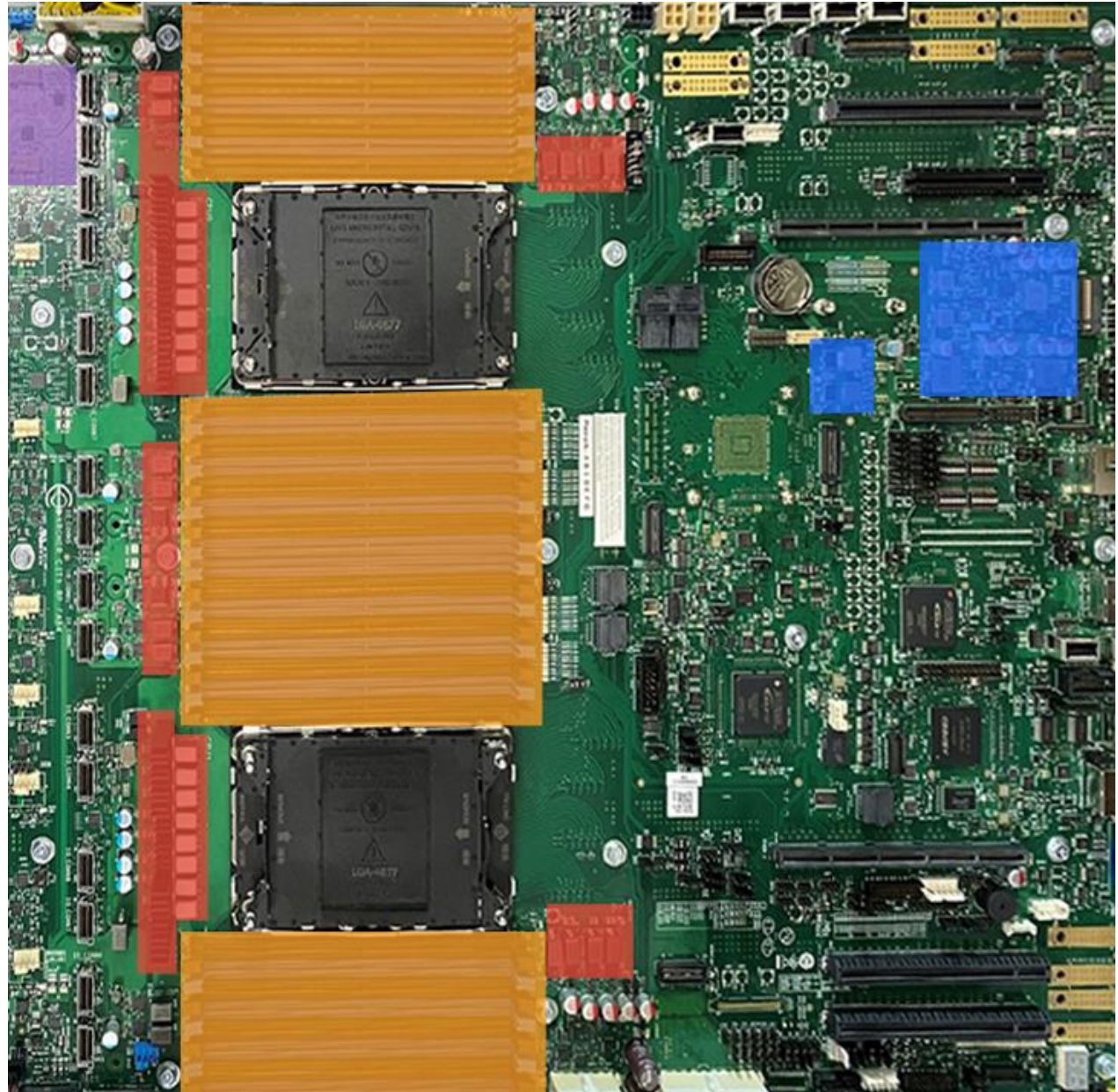
# Server Board Level Power Solutions

**CPU Server: \$1B SAM**

**\$80 MPS Content / Server**

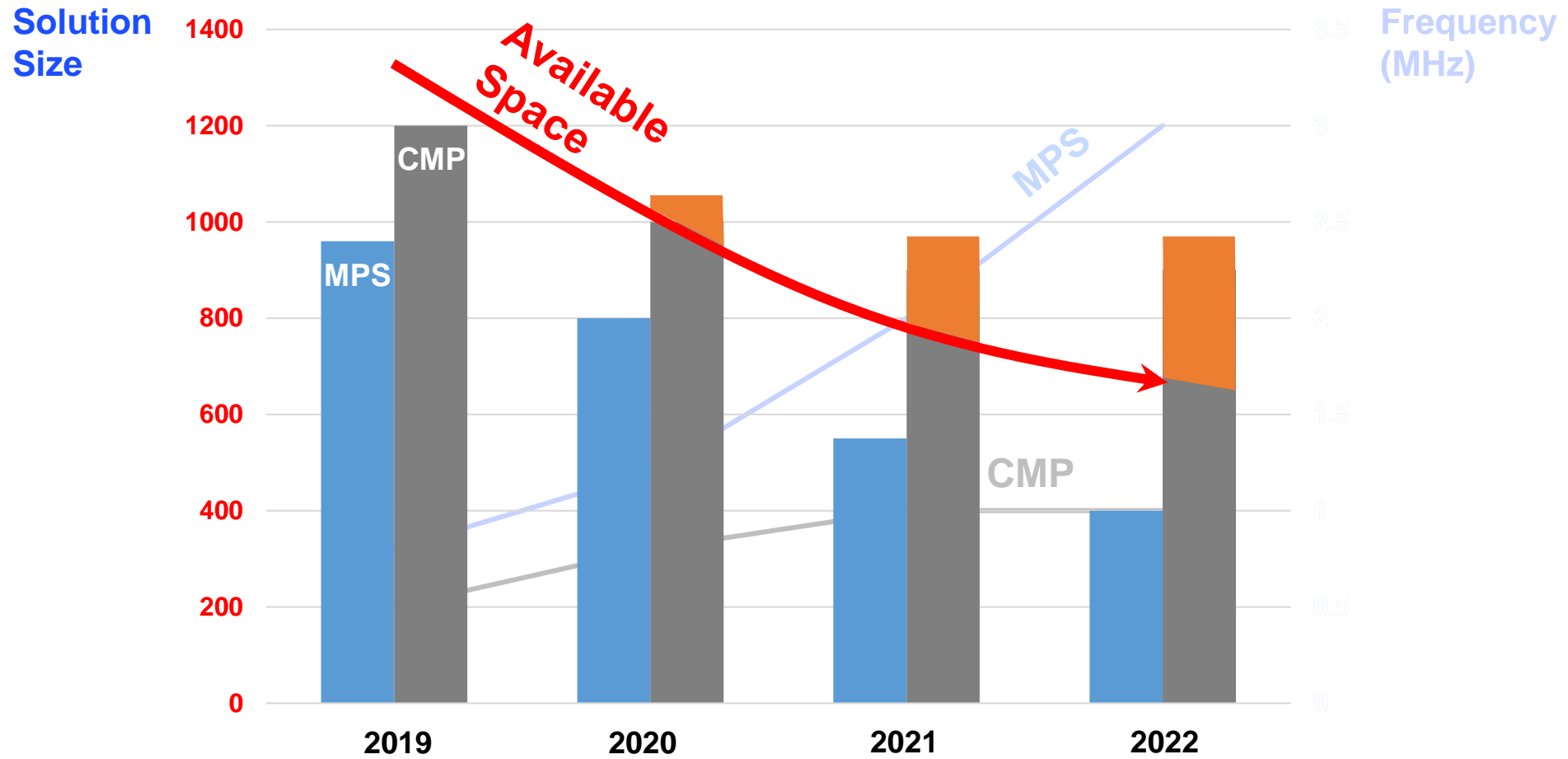
- CPU Power**  
\$600M SAM
- DDR5 Memory Power**  
\$280M SAM
- Point of Load**  
\$60M SAM
- EFuse**  
\$60M SAM

**GPU Server: \$500M SAM**





# Why is MPS Winning?



While Others Hitting Size and Frequency Boundaries, MPS Monolithic Solution Takes Off

# Direct to Data Center Builders & Owners, Additional \$2B SAM

## Datacenter Rack Front View

Network Switch

CPU Servers

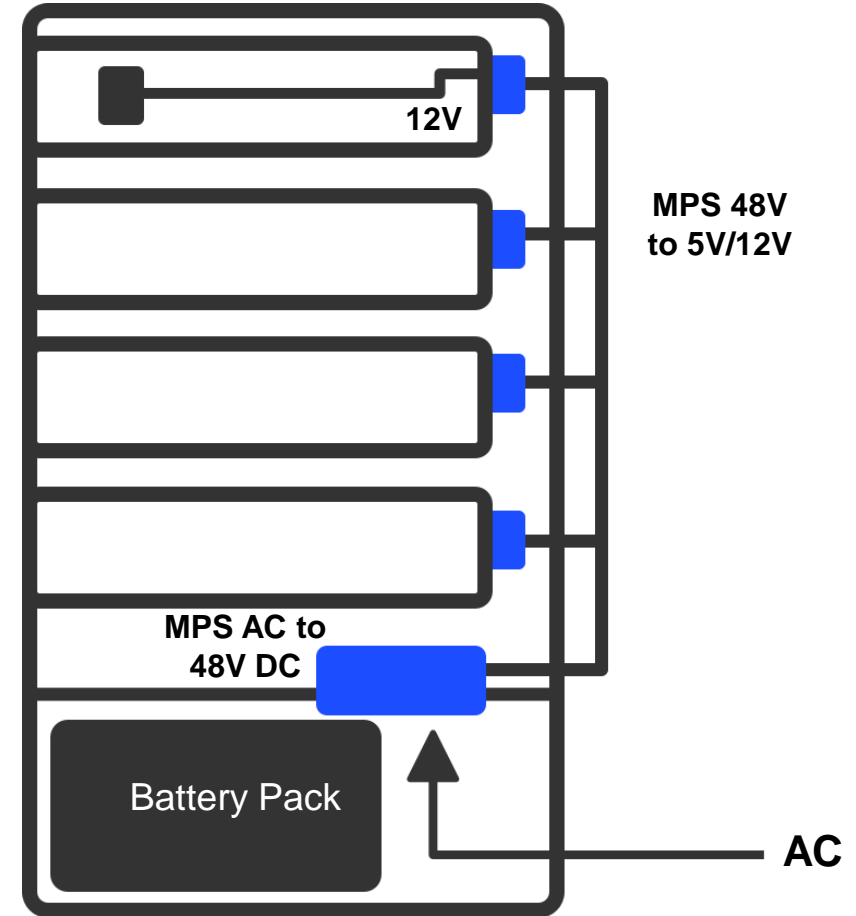
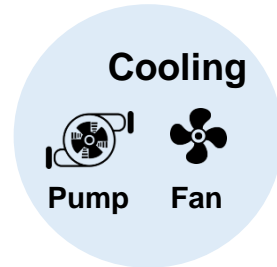
GPU Servers

Network Storage

AC Power Supply



## Rack Side View

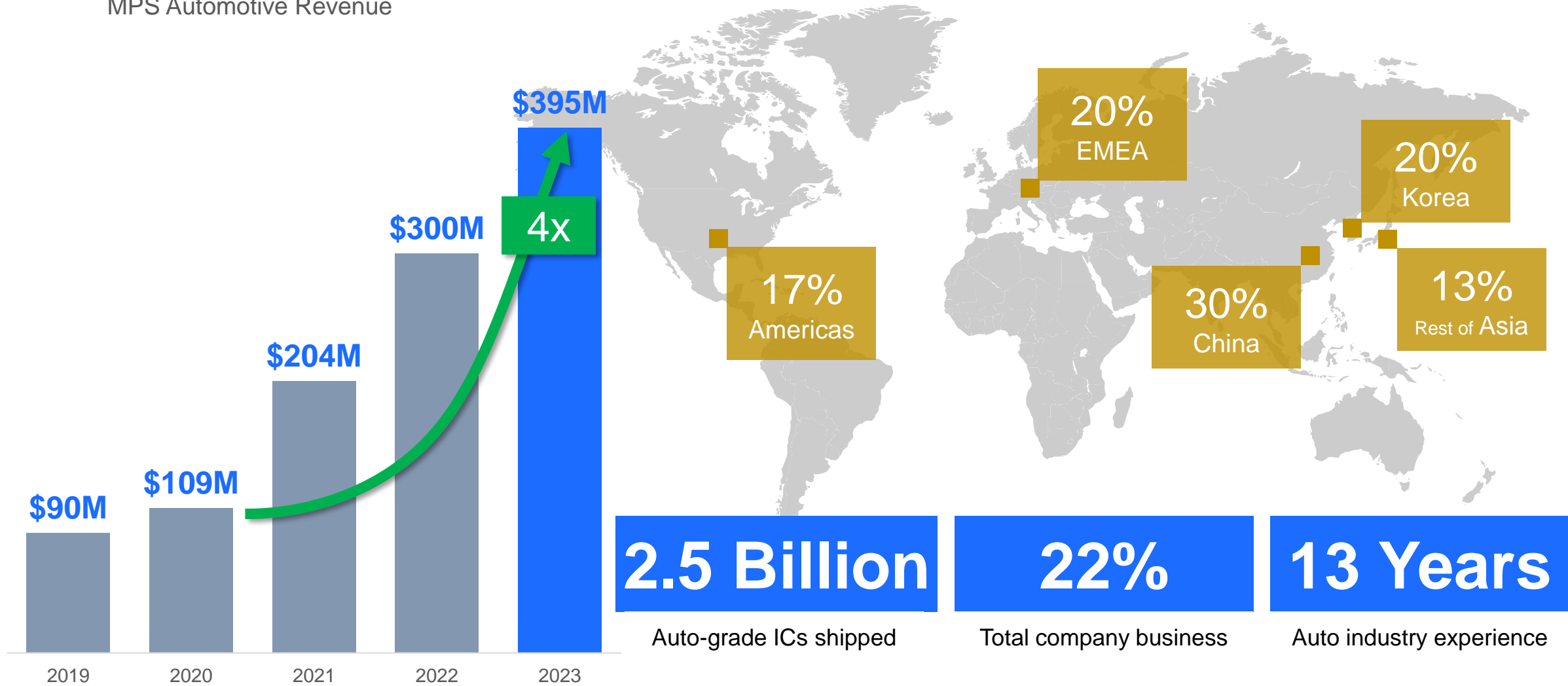


**Automotive**

**MPS**

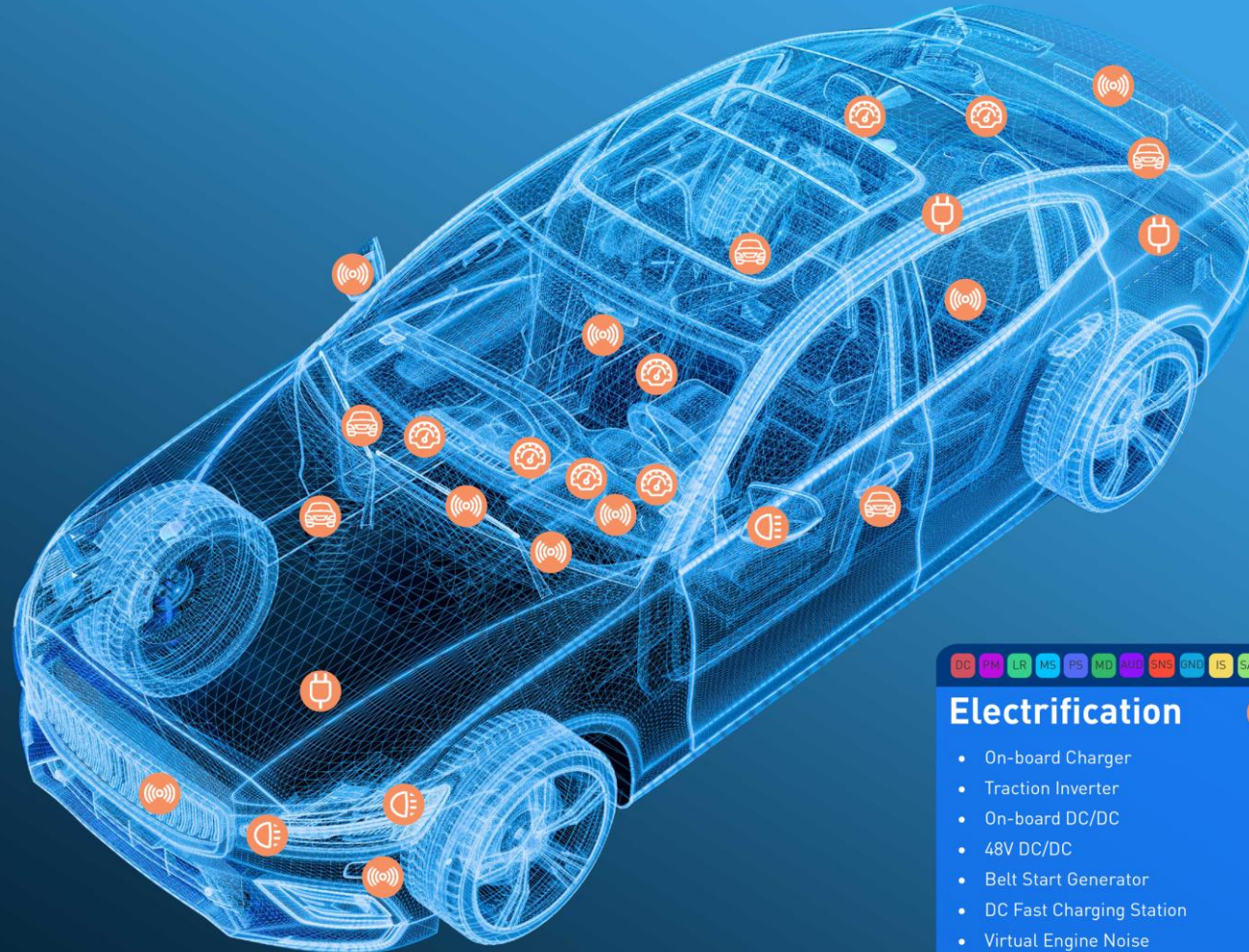
# MPS Automotive – Global and Growing

MPS Automotive Revenue





# Automotive Applications Covered



DC PM LR MS PS SAFE

## ADAS

- 360° Camera
- Front Camera
- Backup Camera
- Thermal Camera
- Driver Monitoring
- Cabin Sensing
- Sensor Fusion
- Radar
- LiDAR
- Ultrasonic
- A/V Computing

DC PM LR MS PS LED USB MD MD3 SNS

## Digital Cockpit

- Infotainment
- E-Call
- Digital Mirror
- USB Charging
- Wireless Charging
- Telematics/V2X
- HUD
- Cluster
- Ambient Lighting

DC PM LR MS PS SNS

## Body Control & Other

- Motor Modules
- Door Latch/Lock
- Keyless Entry
- Junction Box
- HVAC
- Gateway
- Liftgate
- Power Assisted Steering
- Suspension Sensor
- Wiper Motor
- Electronic Braking System
- Fluid Pumps
- Electronic Parking System
- Power Seat
- eShift

DC PM LR MS PS MD MD3 SNS GND IS SAFE

## Electrification

- On-board Charger
- Traction Inverter
- On-board DC/DC
- 48V DC/DC
- Belt Start Generator
- DC Fast Charging Station
- Virtual Engine Noise

DC LR MS PS LED MD SAFE

## Lighting

- Daytime Running Lights
- Matrix Lights
- Fog Lights
- Headlamps
- Brake Lights/CHMSL
- Turn Indicator Lights

PRODUCT TYPES

Buck, Buck-Boost & Boost Converters

PMICs

Linear Regulators

Monitoring & Supervision

Power Switches

LED Lighting

USB & Wireless Charging

Motor Drivers

Class-D Audio

Position Sensors & Current Sensors

Isolation Solutions

GaN Driver

MPSafe™

# MPS Exclusive Solutions for ADAS / Electrification

## Smaller, Safer ADAS

ONLY Single Vendor



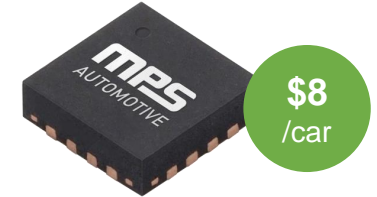
**MPSafe™ High Power Controller + DrMOS**  
For ADAS Compute SoC

40% Smaller Footprint



**MPSafe™ Camera PMIC**  
For L2/L3/L4 Surround View Cameras

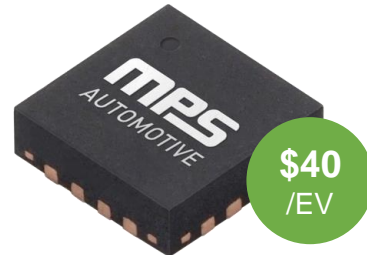
4X Higher Power Density



**30W Buck-Boost Converter**  
For Sensor Fusion modules

## Higher Power Electrification

4X Faster Switching



**Isolated SiC and IGBT  
Power Supply**  
for Traction Inverter,  
On-Board Charger,  
DC Fast Charging Stations

2X Smaller Footprint



**100V GaN  
Gate Driver**  
for 48V Mild Hybrid

2X Higher Power



**5kV Isolated SiC  
Gate Driver**  
for Traction Inverter



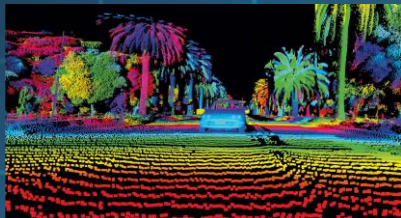
# Relentless Expansion of Product Categories

New Portfolio Launches

## Electrification



## ADAS



## Digital Cockpit



## Lighting & Body



System Safety Sequencer

GaN Driver

Hall-Effect Current Sensor

Intelligent Dynamic LED Driver

Precision Voltage Monitor

Isolated Power / Gate Drivers

ADAS SoC Compute w/ DrMOS

ADAS Camera Safety PMIC

Digital Matrix LED Manager

Safety Subsystem Module

Smart FET

High-End Premium Audio Amplifier

High Voltage Battery Monitor

SiC

New products  
allow MPS to  
address up to  
**\$400/car**  
additional  
sockets



# MPS Automotive: \$1B Wins in Pipeline

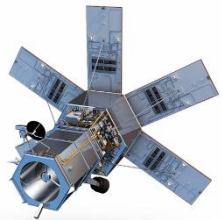


**Data Com**

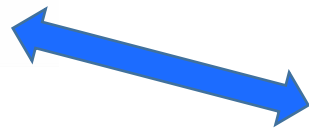
**MPS**



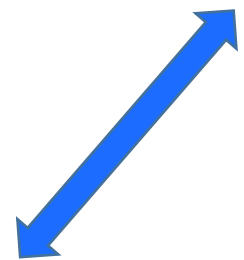
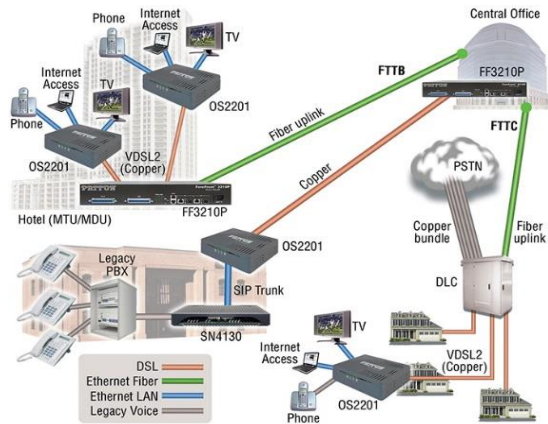
# Data Com / Security – \$4B SAM



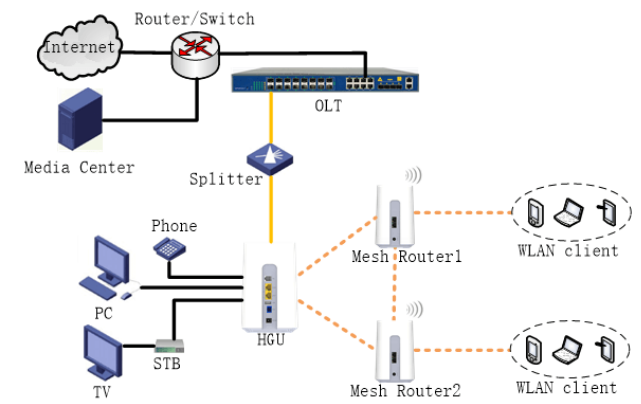
## Satellite & Ground Receiver: Dish + Wifi Router



## DSL/VDSL & Security Systems



## Enterprise WiFi & Security Systems



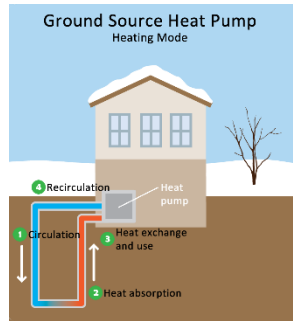
# Clean Energy & Storage

**MPS**

# \$2B SAM Opportunities in Carbon Reduction: Clean Energy and Storage

Over \$150M design wins  
25+ products in development

**Geothermal**  
In development



**Solar Inverter**



**Smart meter**



**Wind Farm**  
In development



**Megawatt Battery  
Storage**



**Home Battery  
Storage**





# Other Revenue

**MPS**

# Over \$3B SAM

## Super Computer / Big Data



## 5G Base Station



## Semi-equipment



## Inspection Robot



## Co-Robot



## UltraSound



## Home appliances



## Point of sale



## USB PD



## RV&Boat



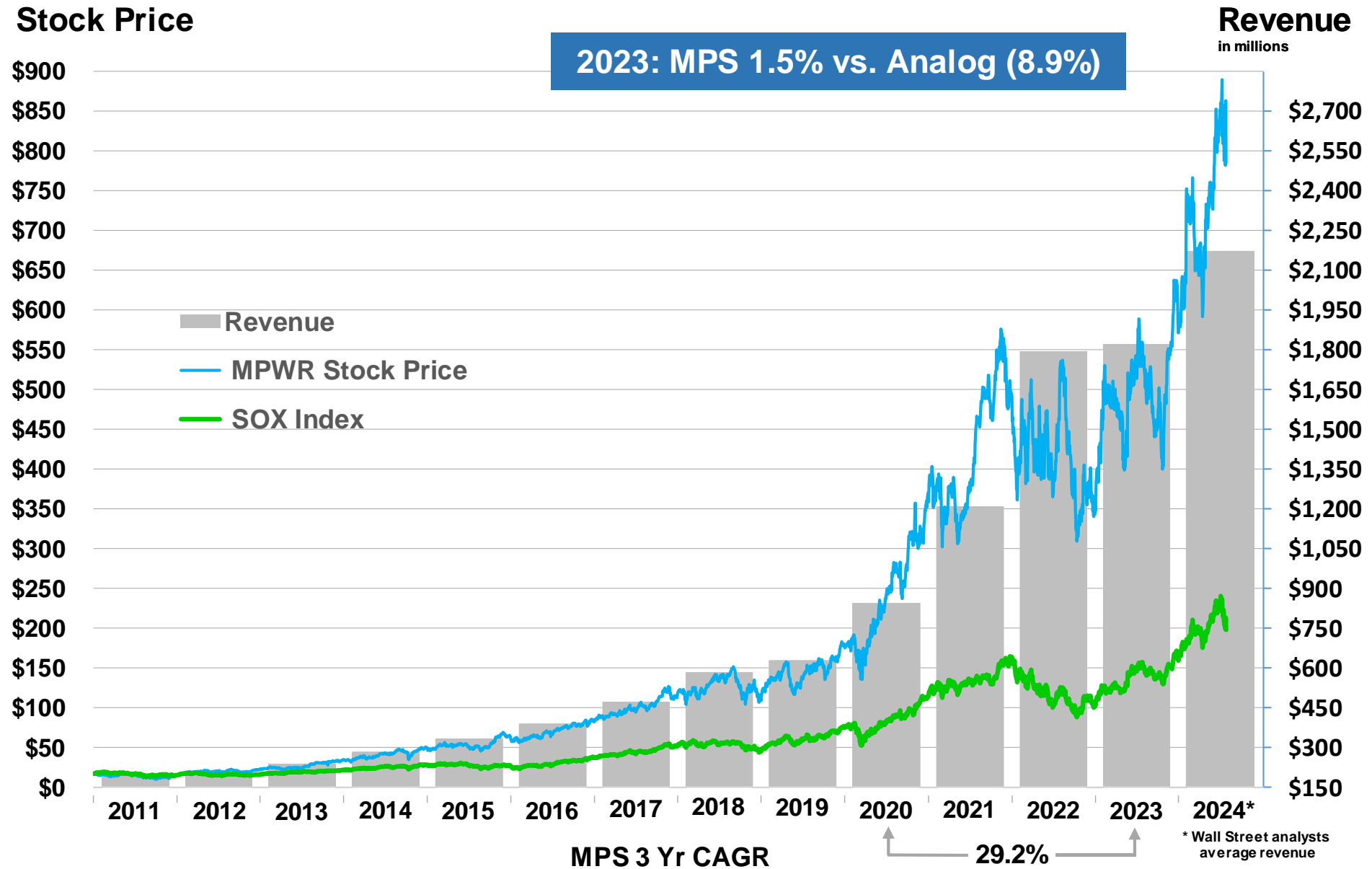
## X-Ray



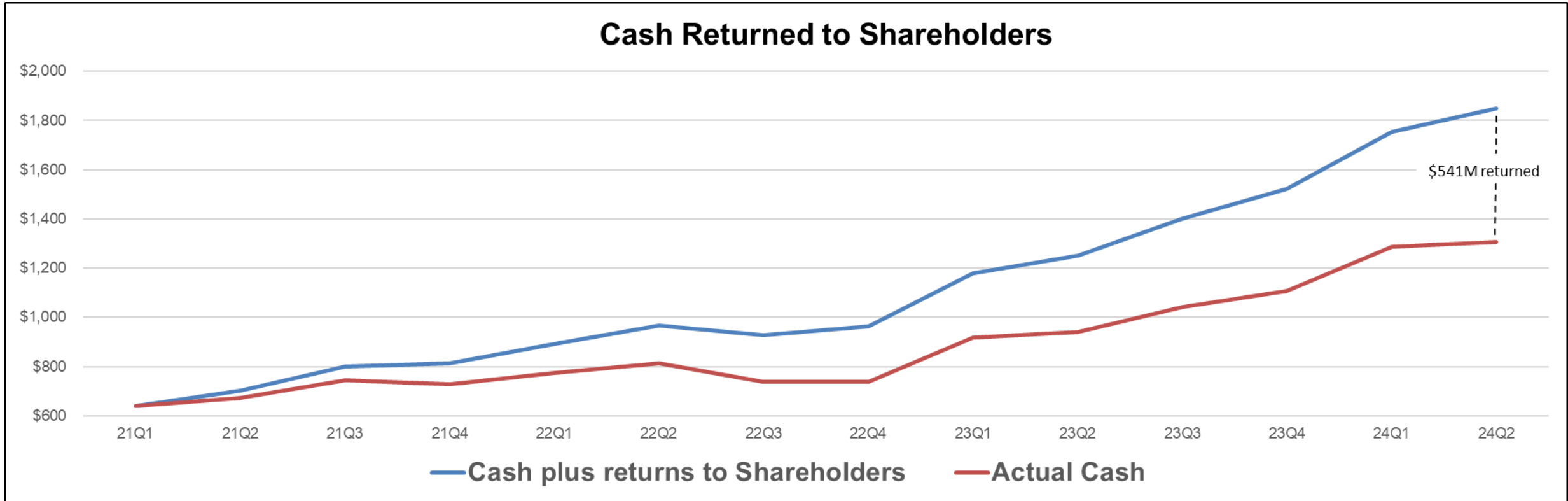
**Well Positioned with Excellent  
Financial Strength**

**MPS**

# Consistent Revenue Growth & Shareholders' Return



# Cash and Cash Returned to Shareholders



- Dividend payout: \$68.1M or \$1.25/sh in Q2'24 (49.6M or \$1.00/sh in Q1'24)
- Dividend increase to \$1.25/share beginning in April 2024
- 45% free cash flow was returned to shareholders from 2021 to Q2'24.



**MPS grows regardless of the market environment**

**MPS**



**Q&A**