AI INFRA & COMPUTE

JUNE 25, 2026

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SVP AND GM OF POWER
RENESAS ELECTRONICS CORPORATION

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AT A GLANCE
AI INFRA & COMPUTE

Products

Digital power	Memory interface	Others
Smart power stage	Register clock driver	Control plane products
Digital multiphase controllers	Data buffer	MCU
Vertical power	Serial presence detect hub	Protocol bridge
High-density modules	Temperature sensor	GreenPAK
GaN FETs	Power management IC	Analog MUX/ Level translator
MOSFETs		NOR flash

Technologies

High density modules

Vertical power solutions

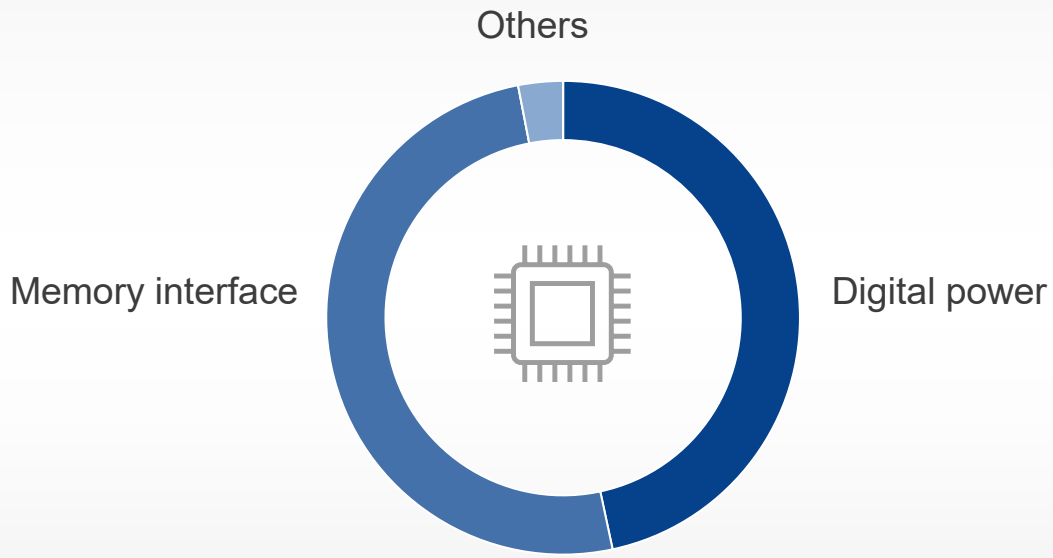
800V DC

GaN

DDR MRDIMM

Control plane

2025 Revenue mix



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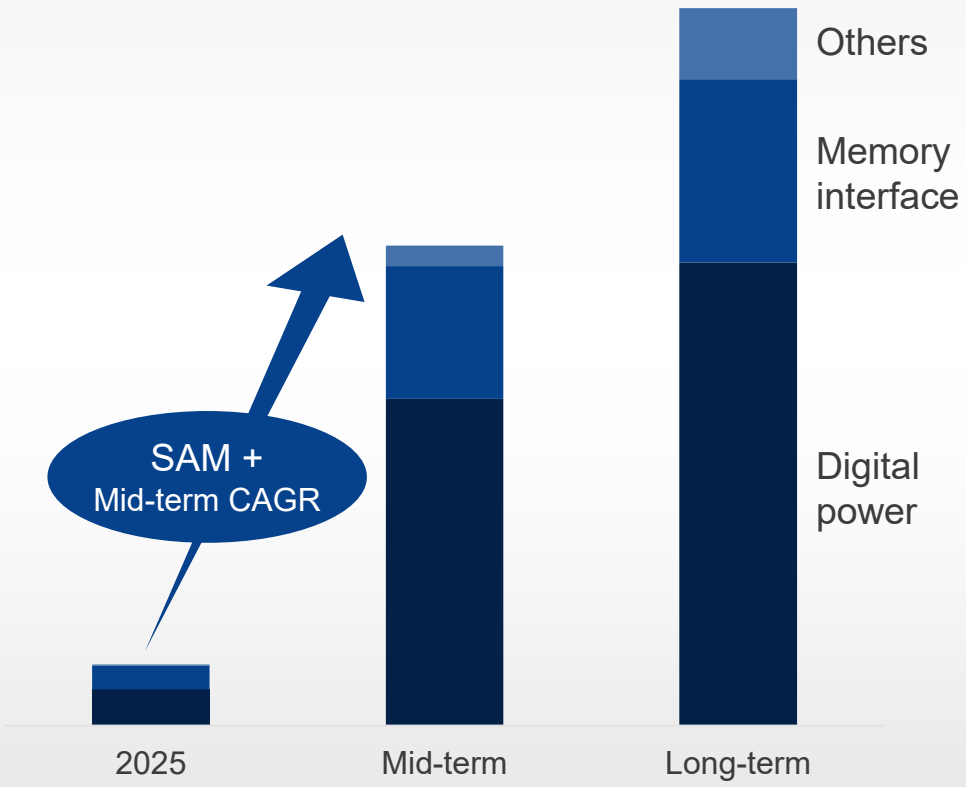
GROWTH DRIVERS
AI INFRA & COMPUTE

Revenue



Foundational growth drivers

AI driving xPU proliferation & absolute server volume growth, expanding demand for associated memory solutions

Grid-to-rack and increasing system complexity creates new opportunities for MCU and control functions

Shift to 800V and vertical power architectures materially increase power content per xPU and favors Renesas high-density module solutions

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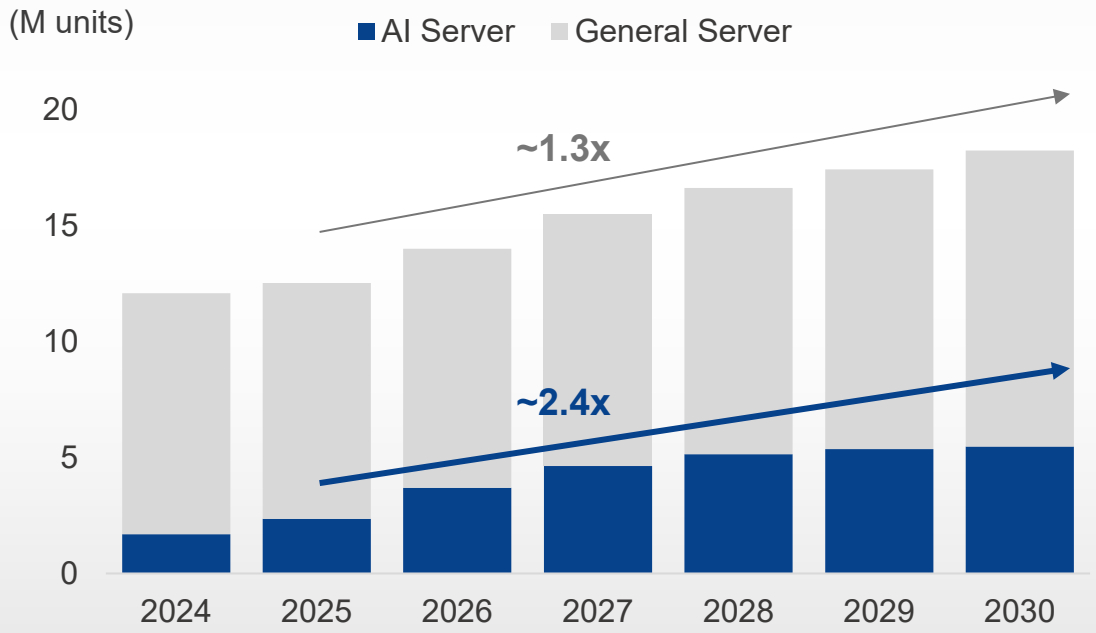
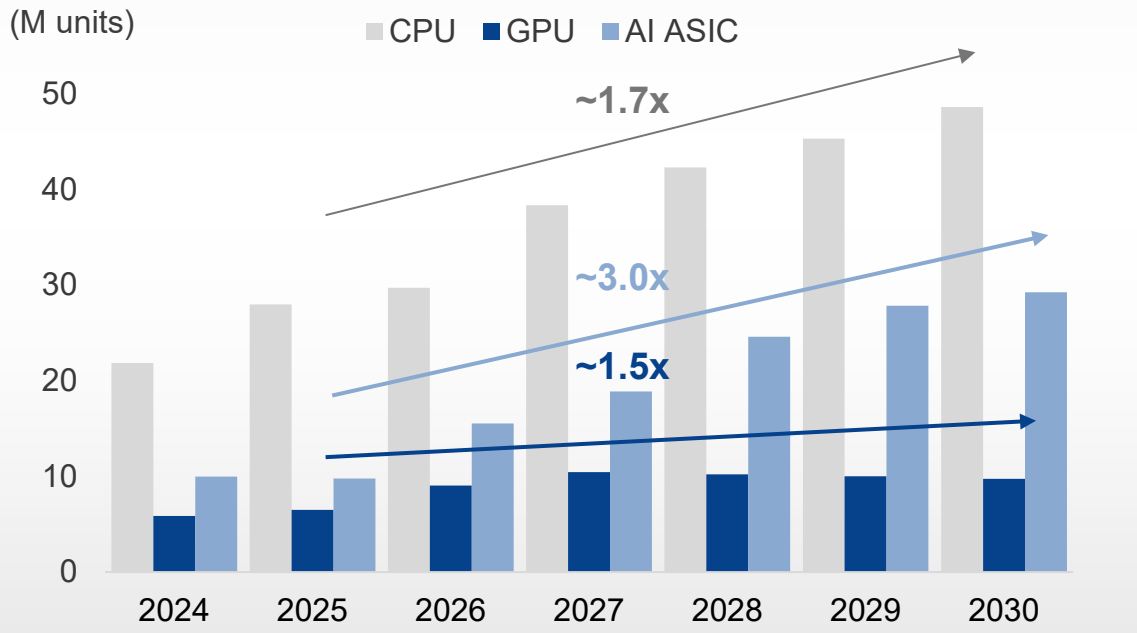
AI INFRA & COMPUTE MARKET GROWTH CONTINUES TO BE ROBUST

- Generative AI driving rapid expansion in AI and general server demand
- AI server volumes expected to more than double; CPUs & ASICs outgrow GPUs with shift to inference
- Diversified portfolio captures growth across all areas

Server shipments[1]



xPU shipments[2]



1. Graph created by Renesas based on Gartner research. Calculations performed by Renesas. Source: Gartner®, Forecast: AI-Optimized Servers, Worldwide, 2024-2030, 1Q26, Adrian O'Connell (April 27 2026), AI Server=AI-Optimized Servers, General Server=Traditional Servers, Shipment basis. GARTNER is a trademark of Gartner, Inc. and its affiliates.
2. Omdia, Server Silicon Tracker – 1Q26, June 2026 xPU Shipments. Results are not an endorsement of Renesas Electronics. Any reliance on these results is at the third-party's own risk.

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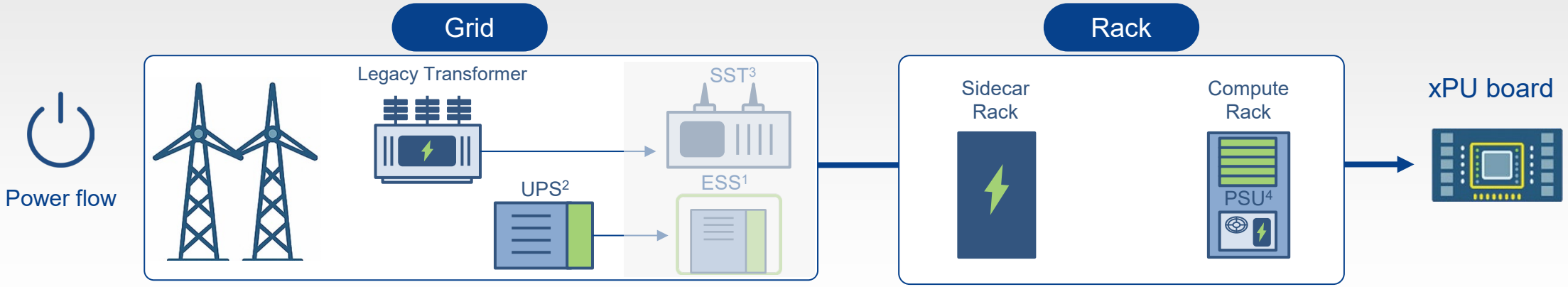
GRID TO CORE

RENESAS AI INFRASTRUCTURE AND COMPUTE PORTFOLIO (TODAY)



- Digital controller
- Charge IC
- Cell monitoring

- **800V DC/DC**
  Digital controller, Isolated driver, HV and LV GaN FETs, MOSFETs
- **800V Hot swap**
  80V Controllers, Isolator, Auxiliary supply

- **54V Hot swap**
  Controllers. MOSFETs
- **54V IBC[5]**
  Controllers, Drivers, MOSFETs, LV GaN
- **High-Speed optical module PMIC**
- **12V/6V Vcore**
  Smart power stages, Vertical power stages, Power tower module, Multiphase controllers, PoL[6]
- **Memory Interface**
  Register clock driver, Data buffer, Serial presence detect hub, Temperature sensor, PMIC
- **Control plane** (BMC[7]), **GreenPAK** (FPGA)

1. Energy Storage System
2. Uninterruptible Power Supply
3. Solid State Transformer
4. Power Supply Unit
5. Intermediate Bus Converter
6. Point of Load
7. Baseboard Management Control

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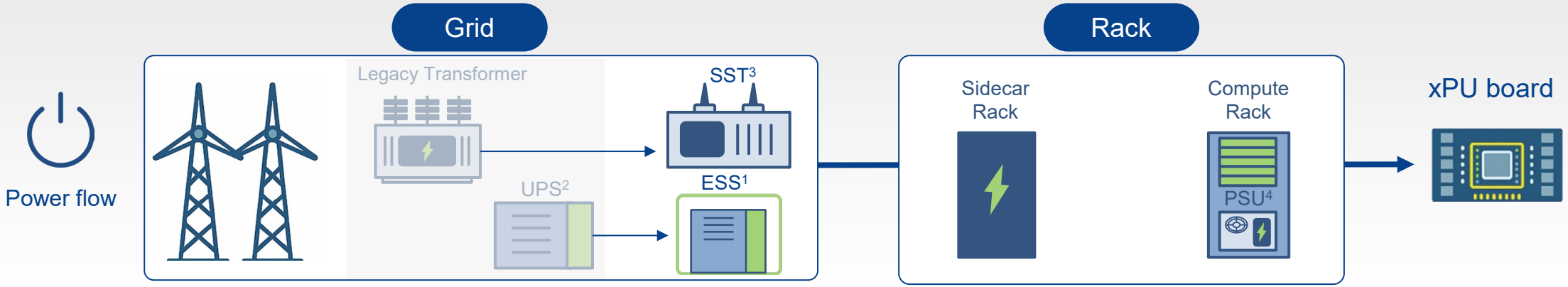
GRID TO CORE

RENESAS AI INFRASTRUCTURE AND COMPUTE PORTFOLIO (MID-TO-LONG TERM)



- Digital controller
- Charge IC
- Cell monitoring
- **Next-gen HV GaN**
- **Isolated driver**

- **800V DC/DC**
  Digital controller, Isolated driver, HV and LV GaN FETs, MOSFETs
- **800V Hot swap**
  80V controllers, Isolator, auxiliary supply
- **PSU[4] (AC/DC+DC/DC)**
  Digital controller, GaN bidirectional switches, **Isolated driver**

- **54V Hot swap**
  Controllers. MOSFETs
- **54V IBC[5]**
  Controllers, Drivers, MOSFETs, LV GaN
- **High-Speed optical module PMIC**
- **12V/6V Vcore**
  Smart power stages, Vertical power stages, **Integrated voltage regulator (IVR)**, Power tower module, Multiphase controllers, PoL[6]
- **Memory Interface**
  Register clock driver, Data buffer, Serial presence detect hub, Temperature sensor, PMIC
- **Control plane** (BMC[7], **USB-I3C**), **GreenPAK** (FPGA), **ForgeFPGA**

1. Energy Storage System
2. Uninterruptible Power Supply
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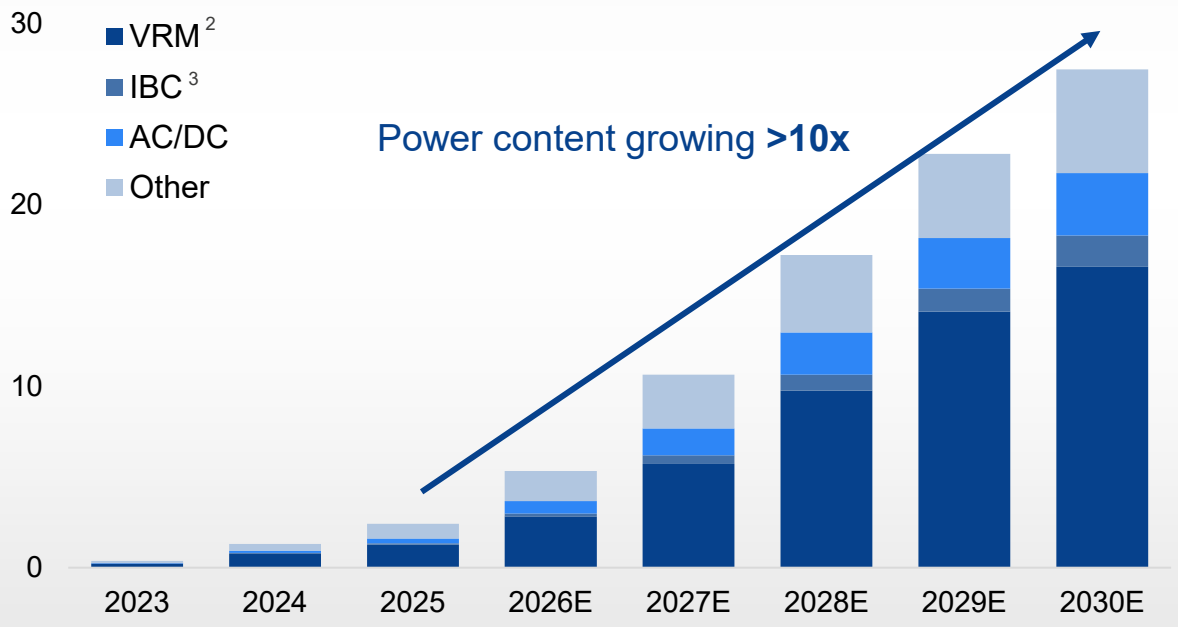
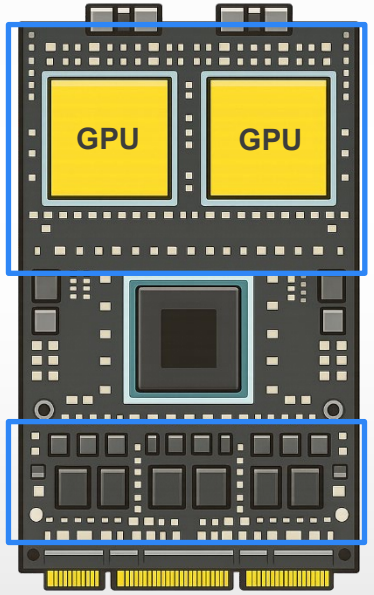
ORDER-OF-MAGNITUDE INCREASE IN AI RACK POWER CONTENT

- Next-gen racks to consume >1 megawatt (MW), power content per rack increasing >10x
- Dense xPU packing raises thermal constraints, making power efficiency critical
- Renesas solutions deliver high current density with superior thermal performance

AI Infra & Compute Power TAM[1] ($bn)



Example power content on leading next-generation AI board



GPU Power solution:

>10 Digital controllers

>100 Smart power stages

48V IBC solution:

>5 Digital controllers

>30 MOSFETs (i.e., REXFET)

1. Arete Research (Apr 14, 2026) 2. Voltage Regulator Module 3. Intermediate Bus Converter

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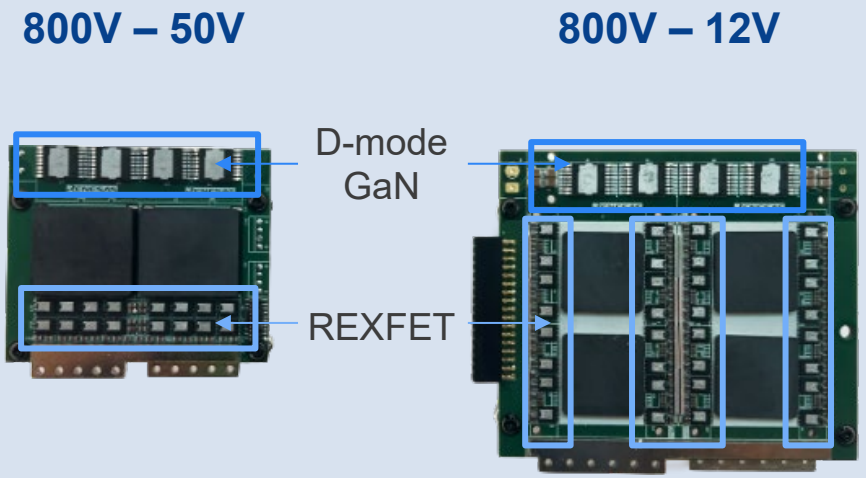
PURPOSEFUL INVESTMENT IN DISCRETE PRODUCTS FIT FOR AI

- Broad GaN portfolio (e-mode & d-mode) supports low- to high-voltage applications
- Continued investment in GaN and MOSFETs for 800V transition
- D-mode GaN optimized for high-power (>15kW) systems with efficiency and thermal advantages; additional savings with leading bi-directional switch design
- Latest MOSFET shows major improvement in efficiency and thermal performance; designed into next-generation boards



800V to 50V / 12V DTX Boards:

- Full load efficiency 98% / 97%
- Power Density 2600 W/in3 / 1600 W/in3
- Switching frequency 900 kHz / 650 kHz

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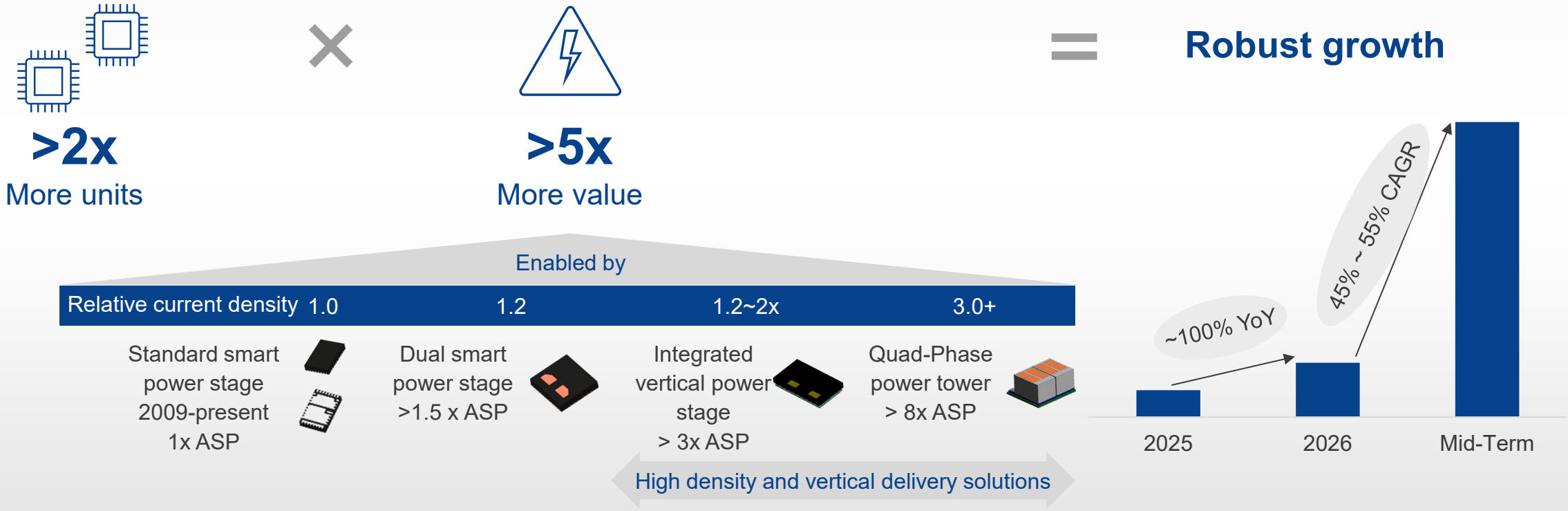
DIGITAL POWER IS OUR GROWTH ENGINE…

- Leading position at Rack and Core; gaining share with hyperscalers and AI customers
- Vertical power solutions address thermal limits at high current density
- AI inference drives CPU growth and unlocks incremental upside



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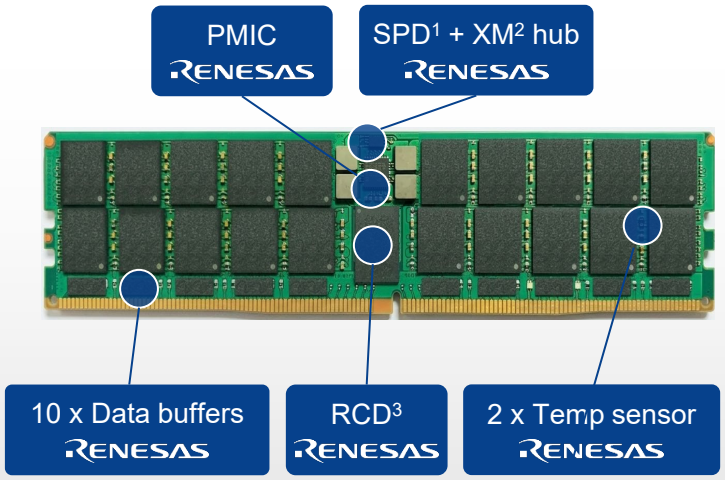
…BUILT ON TOP A ROBUST MEMORY AND CONTROL FOUNDATION

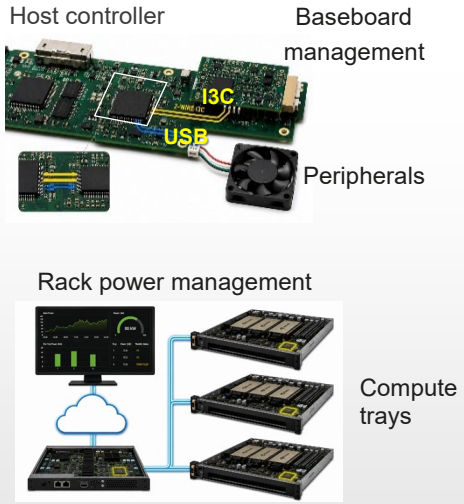
- AI inference drives higher CPU and DRAM demand, increasing memory interface content
- Memory interface portfolio enables performance, reliability, and system scalability
- MCU-based control adoption growing for flexibility and firmware-driven upgradeability

Renesas memory interface & other products

Memory Interface content

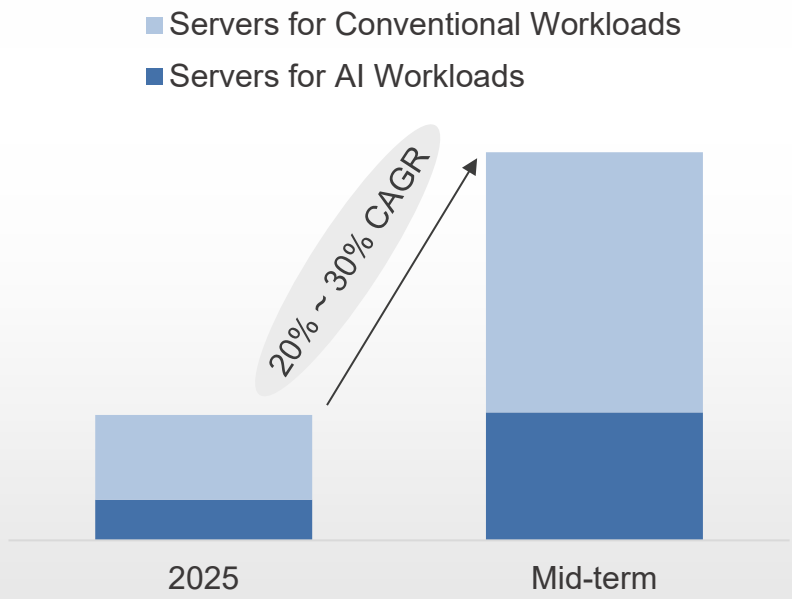


Control plane content



1. Serial Presence Detect 2. eXtended Management 3. Register Clock Driver

Memory interface & other data center revenue mix



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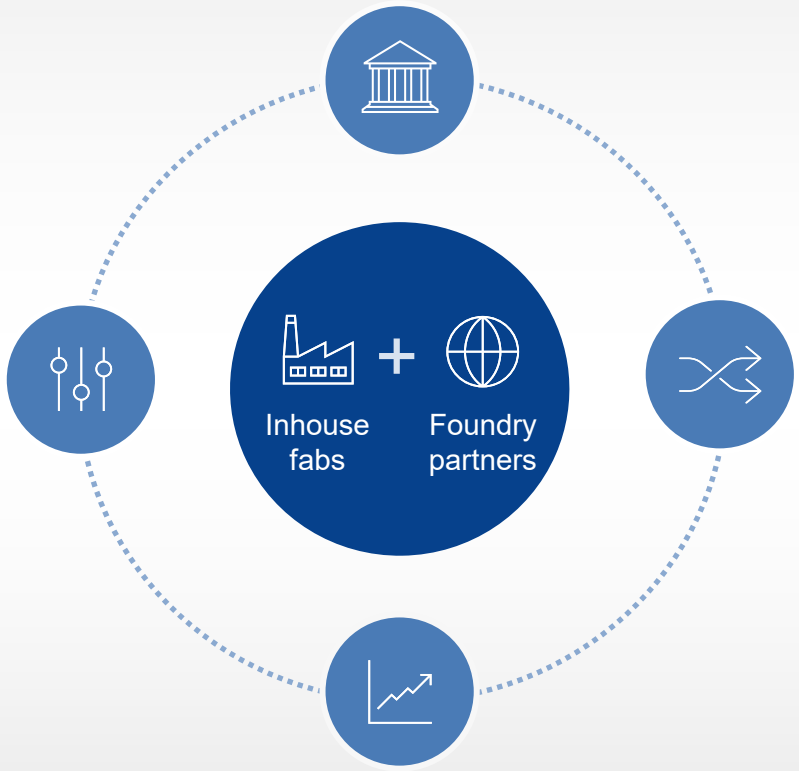
HYBRID MANUFACTURING
CAPITAL-EFFICIENT GROWTH ACROSS CYCLES

Purposeful investment

Improve supply chain resilience and flexibility



Maximize fixed-asset utilization

Enable rapid capacity ramp-up during market upturns

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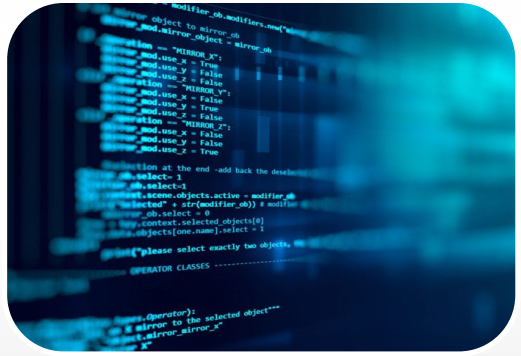
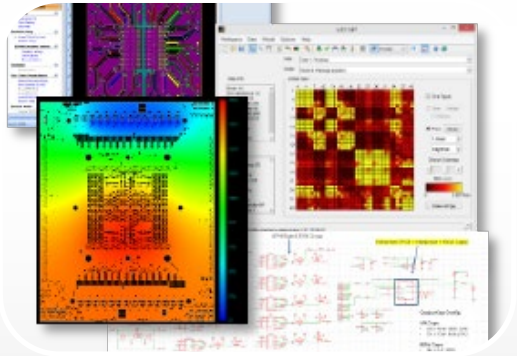
DIGITIZATION AND UX

ENABLING RAPID PRE- AND POST-PCB DESIGN

- Early co-development improves design visibility and increases win/attach rates
- Pre/post-PCB tools accelerate design cycles and improve first-pass success
- Faster time-to-market with fewer iterations and lower risk

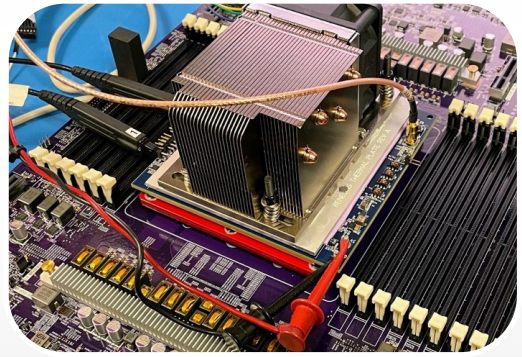


Detailed digital model throughout entire design cycle



Pre-Gerber simulation and analysis

Advanced, proprietary test tools and software



Post-Gerber power-up and validation

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SUMMARY
AI INFRA & COMPUTE

AI driving sustained infrastructure buildout needing higher power, memory bandwidth, and control

Renesas offers next-generation power delivery solutions that meet increasing voltage and current density requirements with best-in-class quality

Renesas memory interface technology critical to maximize compute efficiency and scale up memory capacity for Agentic AI

Renesas helping customers minimize time-to-market with custom SoC end-to-end design, test, and verification toolset

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THANK YOU

(FORWARD-LOOKING STATEMENTS)

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