

ASPEED Technology Investor Conference

June 2025

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Please note that while we have made every effort to list all significant risks, there may still be other risk factors that have not been identified or currently appear to be insignificant.

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請注意，儘管我們已盡力羅列各項重要風險，但仍可能存在尚未識別或當前看似不顯著的其他風險因素。



Agenda

- Company Profile
- Product Portfolio
- BMC in AI Servers
- 2025 Q3 Guidance
- Q&A

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Company Profile



Company Profile

- Founded in 2004
- Fabless-lite IC design company
- Number of employees: 126 (as of March 2024)
- Product lineup
 - Cloud & Enterprise (BMC/BIC/PFR): **#1 in BMC**
 - Smart AV (Cupola360 & AVoIP SoC): **#1 in AV over IP (1G Ethernet)**
#1 in Commercial 360 camera
- Locations:
 - Headquarter: Hsinchu City, Taiwan
 - Branch office: Taipei City, Taiwan
 - US office: San Jose, CA

The ASPEED logo is located in the top left corner. It features the word "ASPEED" in a bold, italicized, white sans-serif font. The letter "A" is stylized with a horizontal line through its top bar. The background of the slide is a close-up, high-angle photograph of a glowing orange microchip on a circuit board, with a large blue diagonal shape on the right side.

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Product Portfolio

Product Portfolio



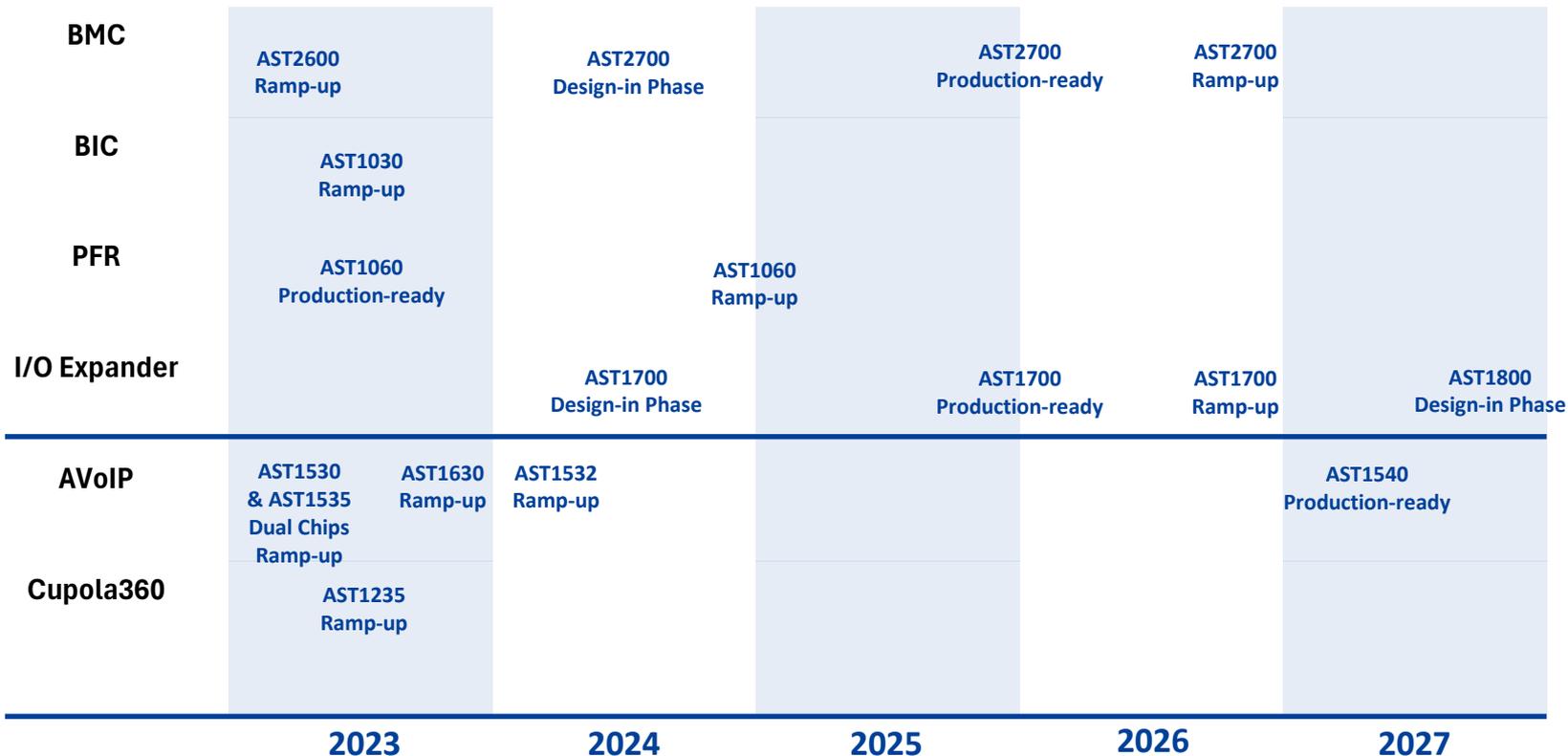
Cloud &
Enterprise

BMC : AST2500, AST2600, **AST2700, AST2750**
BIC : AST1030
PFR : AST1060
I/O Expander : **AST1700, AST1800**

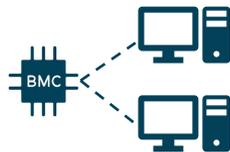
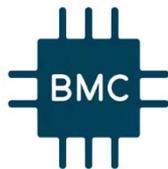
Smart AV

AV Matrix : AST1520, AST1530
AV Extender: AST1620, AST1630
Cupola360 : AST1220, AST1230

Product Roadmap



AST2700 Enhancement and Innovation



The most powerful BMC ever built (28x faster)

- 1 ARM Cortex® –A35 (Quda-core 1.6GHz per core)
- 2 ARM Cortex® –M4 (400MHz)
- 2 RISC-V CPU

* Multi-Thread benchmark between AST2600 and AST2700

The 1st BMC supports Dual-Node

- AST2750

Integration of Southbridge features

- USB 3.2 over PCIe xHCI

Compliant with OCP DC-SCM Standard

- LVDS Tunneling and Protocol Interface (LTPI)
- SiRoT (Caliptra)

arm

RISC-V



AST1060 – Platform Root of Trust



Enhanced Security

- Compliant with NIST SP 800-193 PFR
- Immutable / fail-over boot ROM
- SPI & I2C/SMBus traffic filtering



Key Functionalities

- Protection: real-time firmware protection
- Detection: firmware measurement and authentication
- Recovery: firmware roll back feature



Real-time Hardware Monitoring

- Constantly monitor and filter accesses in hardware

AST1700 Advantages



Simplify the H/W Design

- Firmware-less and LTPI interface connect to AST2700
- EIO (I3C, I2C, GPIO, JTAG, PWM, FAN Tech...)



Simplify the S/W Development

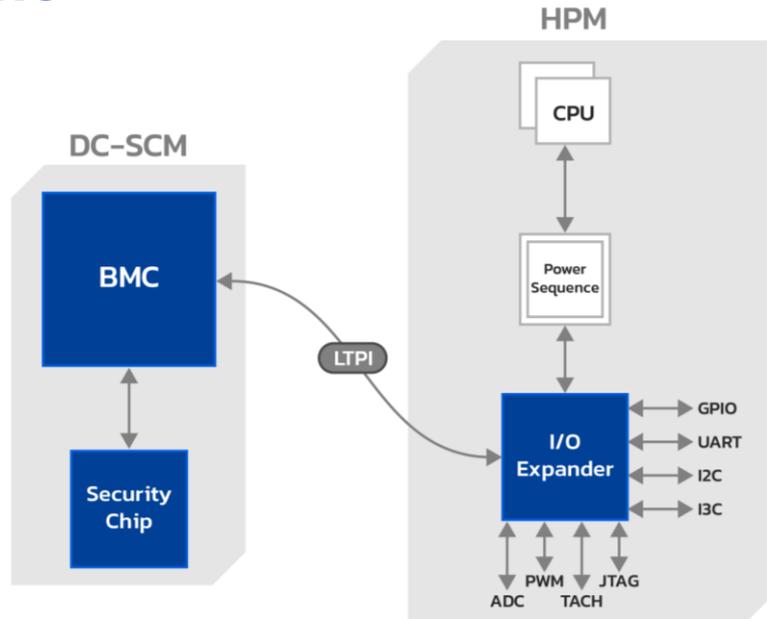
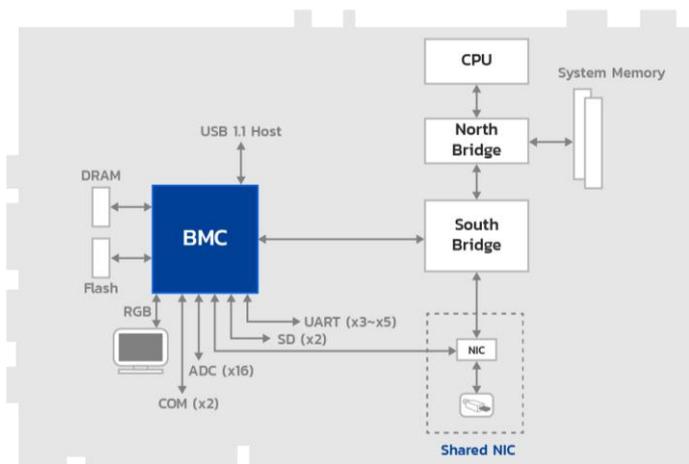
- No S/W development, upgrade, maintenance and protection efforts
- Seamlessly controlled by AST2700 series product



Differentiated Value-added features

- I3C Expansion and MCTP over I3C
- MCTP over SMBus (I2C)

The Trend of Modular Designs

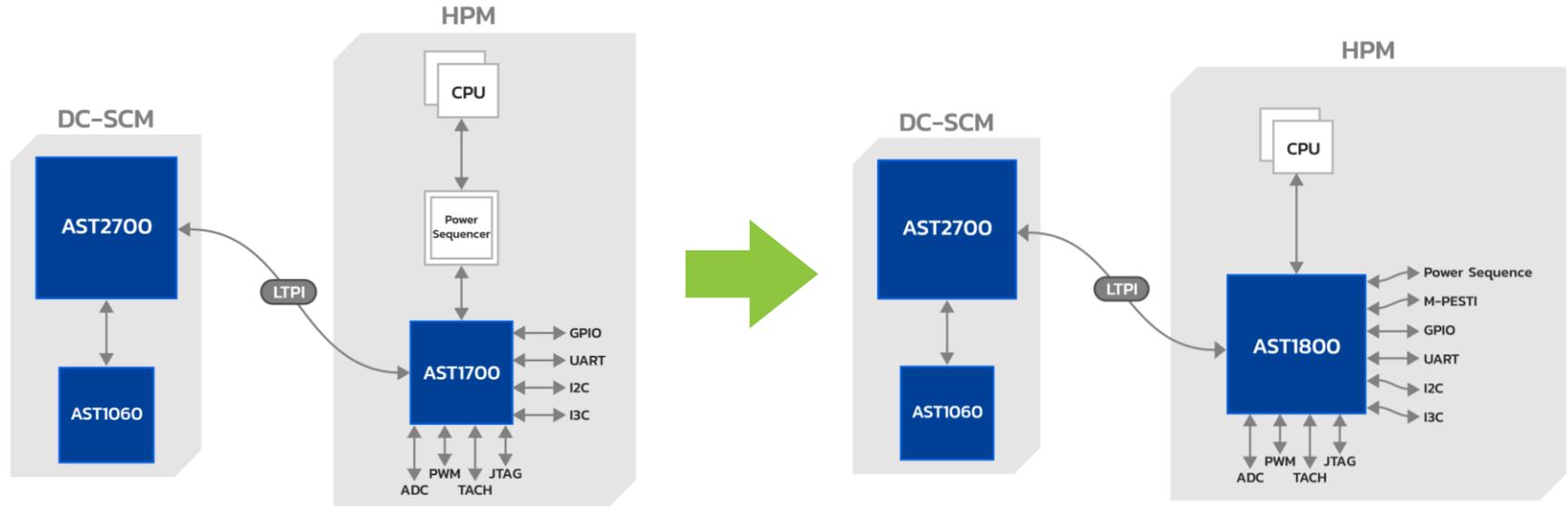


Features:

- Faster time-to-market
- Flexible to outsource & manufacture
- Create new business opportunity for **ASPEED : I/O Expander**

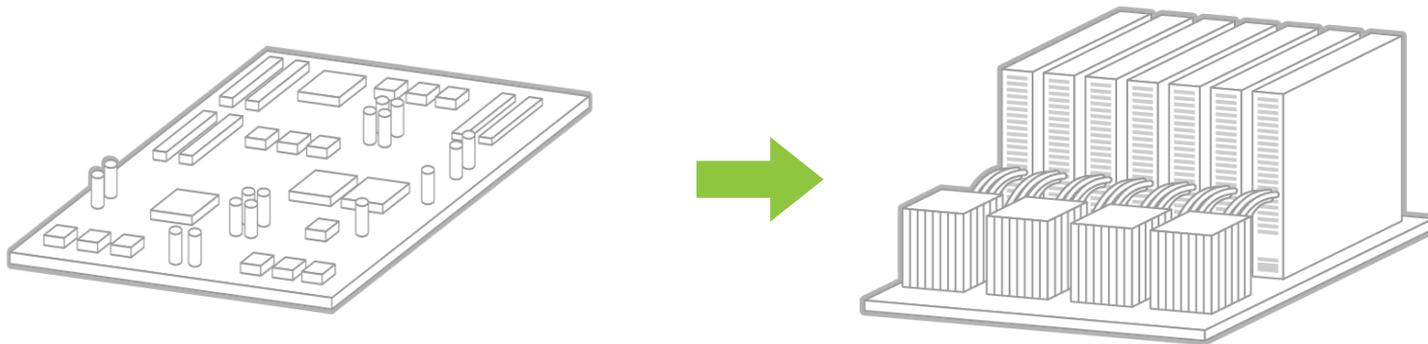
Simplify Future Server Design

- AST1800 inherits the advantages of AST1700 – more interface but simpler design.
- More versatile with embedded FPGA.
- FPGA development tools – Synthesis, Place & Route; Programming; Logic Analysis.



Further Modular Design

From general purpose to application-specific design, with add-on Modules/Cards

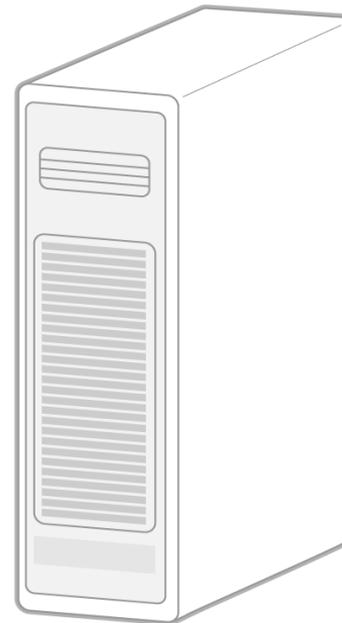
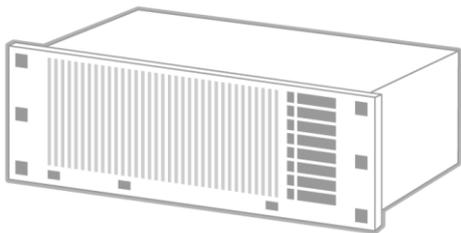


Features:

- Purpose-built with add-on modules/cards
- Higher compute density with more CPUs, GPUs, or other add-on cards
- Improved thermal and power management
- Business opportunity for **ASPEED Bridge IC**
- ASPEED Bridge IC enables **2-level management**

Ultimate Modular Design

Rack-level system design for both GPU and AI ASIC servers

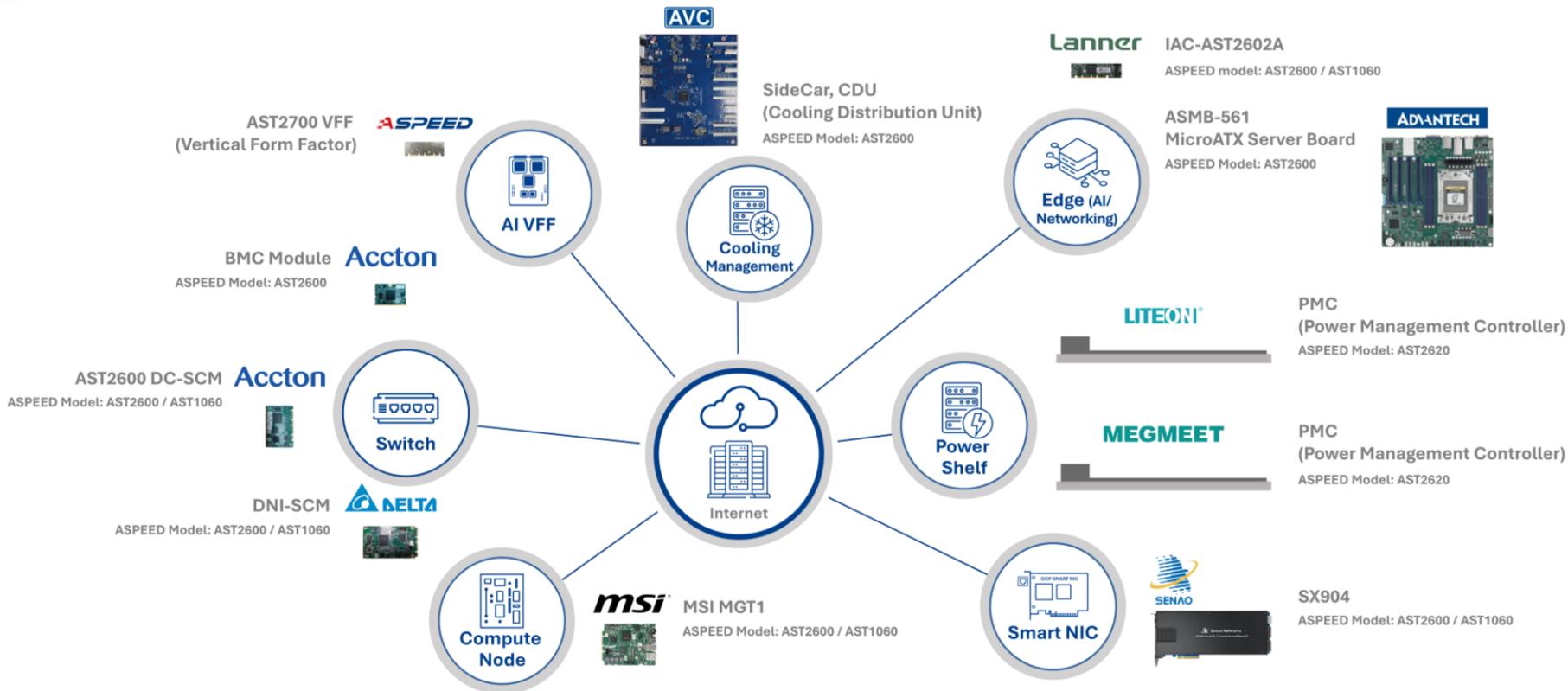


Features:

- Consolidated power, cooling, networking
- Improved resource utilization
- Ideal for large-scale data centers
- Business opportunities for **ASPEED BMC content growth** in compute trays, switch trays, power shelves, OOB switches, and CDUs, etc.

Advancing Towards Diverse Applications

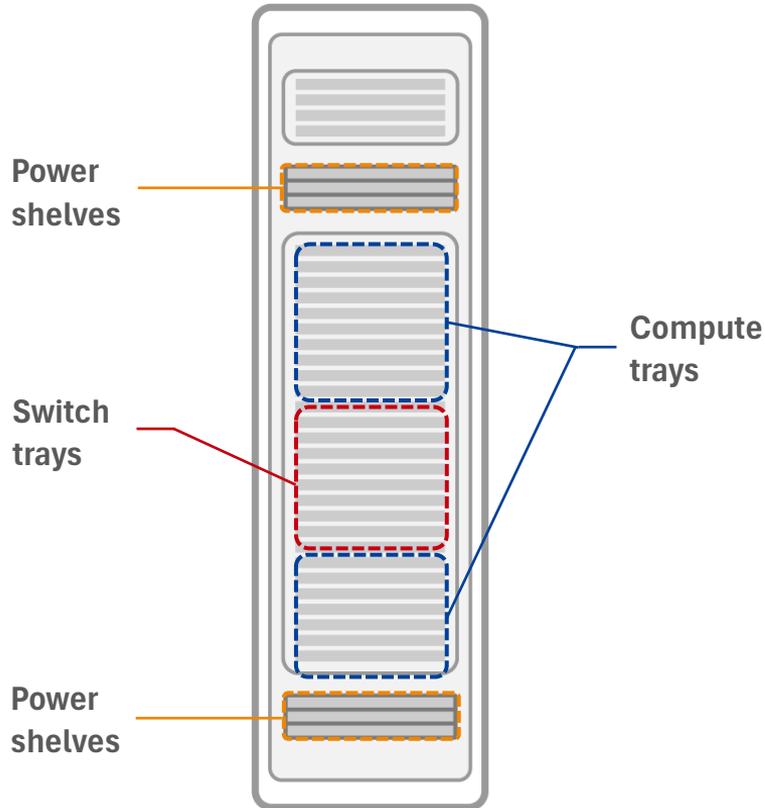
Cloud & Enterprise SoCs Enable Innovation with Comprehensive Solutions



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BMC in AI Servers

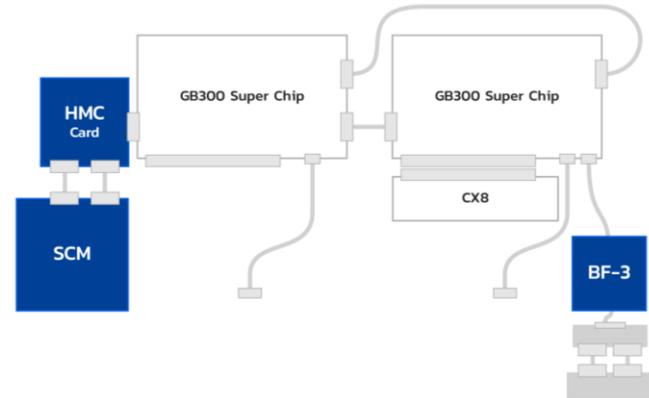
BMC Content in GPU AI Servers



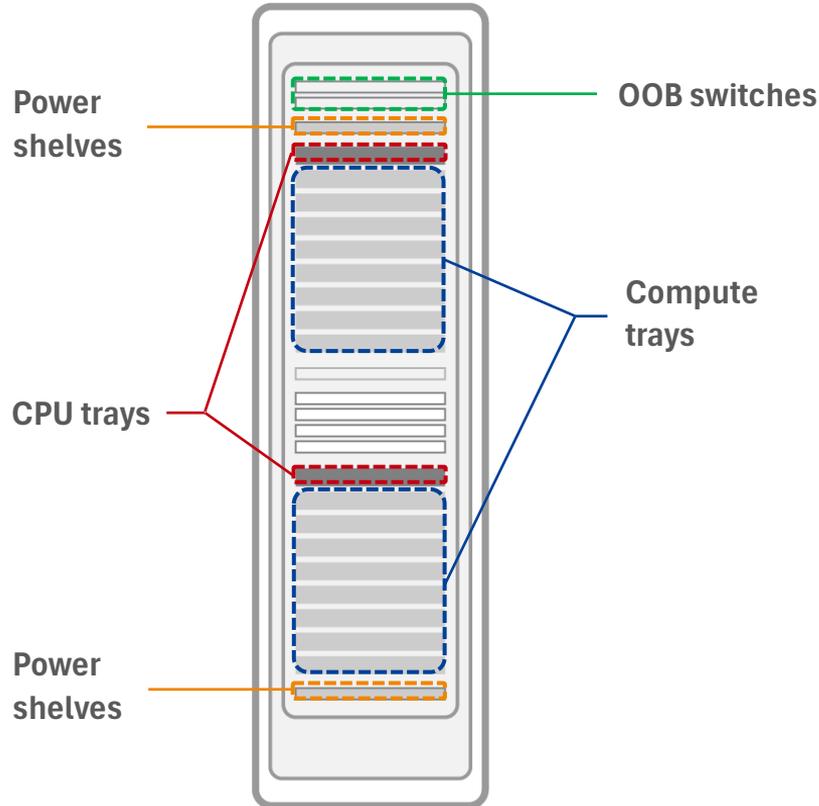
There are **71 BMCs** in GB300 NVL72

- 54 BMCs in 18 compute trays
- 9 BMCs in 9 switch trays
- 6 BMCs in 6 power shelves
- 2 BMCs in 2 out-of-band switches

Simplified layout of a compute tray



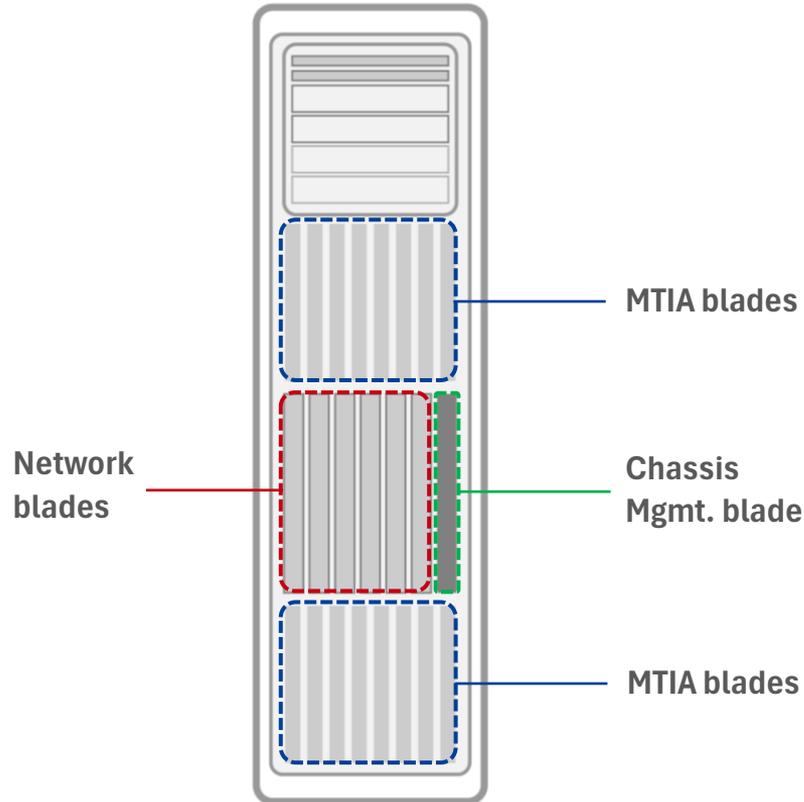
BMC Content in AI ASIC Server 1



There are **22 BMCs** in AI ASIC server 1

- 2 BMCs in 2 CPU trays
- 16 BMCs in 16 compute trays
- 2 BMCs in 2 power shelves
- 2 BMCs in 2 out-of-band switches

BMC Content in AI ASIC Server 2



There are **23 BMCs** in AI ASIC server 2

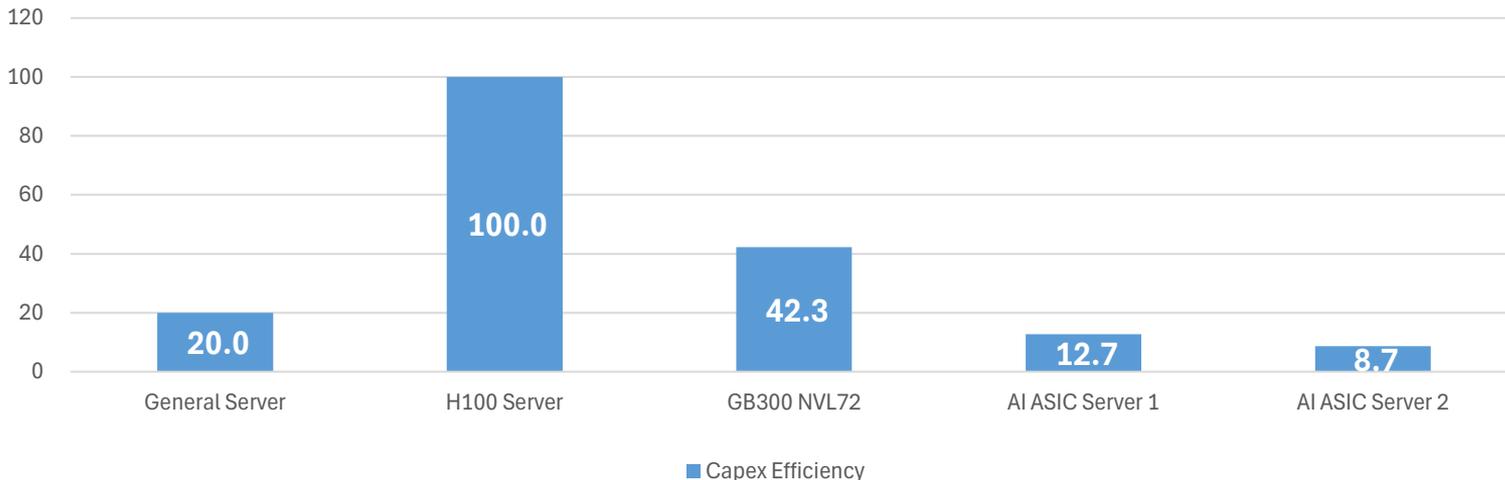
- 16 BMCs in 16 MTIA blades
- 6 BMCs in 6 Network blades
- 1 BMCs in Chassis Mgmt. blade

And **16 BICs**

- 16 BICs in 16 MTIA blades

Capex Efficiency

Thousand USD



- Note:**
1. Capex efficiency is defined as the amount of server spend that will contribute to one BMC demand.
 2. The lower capex efficiency, the better for ASPEED.
 3. Assuming the price of GB300 NVL72 is US\$3.0M and there are 71 BMCs per rack.
 4. Assuming the prices of AI ASIC Server 1 & Server 2 are US\$280K and \$200K, respectively.
 5. Assuming the BMC content for AI ASIC Server 1 & Server 2 are 22 and 23, respectively.
 6. AI ASIC Server 2 also requires 16 ASPEED Bridge ICs.

2025 Q3 Guidance



2025 Q3 Guidance

For 2025 Q3, assuming 1 USD = 29.5 TWD, we expect:

- Consolidated Revenue: Around **NT\$2.0 billion ~ 2.1 billion**
- Gross margin: **66.0% ~ 67.0%**



Q&A

ASPEED

