ARGOSY RESEARCH INC.

@LTK

COMPUTEX 2025 Observation

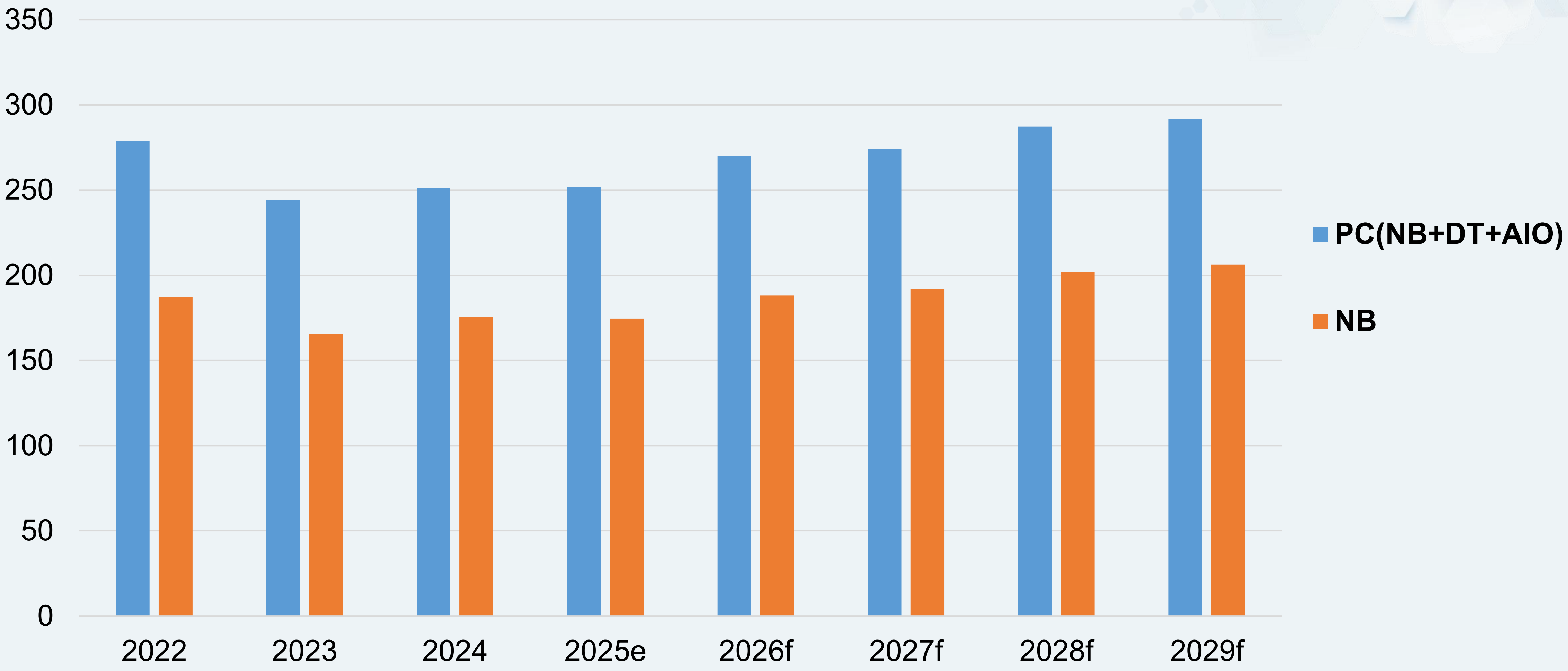
PC, Mainboard & IPC

2025.6 by Marketing Dept.

Part# 1. PC Trend

PC & NB Global shipments

Unit: KK units



Source: IDC

CPU Roadmap

	~2024	2025	2026~2027
Intel *x86*	Lunar Lake (Premium Ultra NB) LPDDR5 on-package & PCIe Gen4	Bartlett Lake (Gaming DT & Embedded COM-HPC) (Refresh of Raptor Lake) DDR5 & PCIe Gen 5	Nova Lake (Premium NB & DT) **DDR5/6 & PCIe Gen 5/6**
		Panther Lake (Premium NB & DT) LPDDR5 (NB), DDR5 (DT) & PCIe Gen 4+5	
	Arrow Lake (Gaming NB & DT) DDR5 & PCIe Gen 4	Wildcat Lake (Ultra NB & Mini PC) LPDDR5 (NB) or DDR5 (Mini PC) & PCIe Gen 4	Arrow Lake Refresh (Gaming DT) DDR5 & PCIe Gen 5
AMD *x86/Arm*	Dragon Range (Premium Gaming NB & Workstation) DDR5 & PCIe Gen 4	Krackan Point (Mainstream NB or AI PC) LPDDR5 on-package or DDR5 & PCIe Gen 4	Sound Wave (Arm) (Ultra NB) LPDDR5 & PCIe Gen 5
		Fire Range (Premium Gaming NB & Workstation) DDR5 & PCIe Gen 4	Gorgon Point (Mainstream NB) LPDDR5 & PCIe Gen 5
	Strix Point (Mainstream NB or AI PC) LPDDR5 on-package or DDR5 & PCIe Gen 4	Strix Halo (Mainstream~Premium NB, Workstation & Mini PC) LPDDR5 on-package & PCIe Gen 4	Medusa Point (Premium NB & DT) Zen 6 platform LPDDR5 (NB), DDR5 (DT) & PCIe Gen 5
Qualcomm *Arm*	Snapdragon X Plus Gen 1 (Purwa) (Mainstream NB) LPDDR5 on-package & PCIe Gen 4	NA	Snapdragon X Gen 2 (Mahua) (Mainstream NB) LPDDR5 on-package & PCIe Gen 4/5
	Snapdragon X Elite/Plus Gen 1 (Mamoa) (Premium NB) LPDDR5 on-package & PCIe Gen 4		Snapdragon X Gen 2 (Glymur) (Premium NB & DT) LPDDR5 or **LPDDR6** on-package & PCIe Gen 5
MediaTek *Arm*	Kompanio 838 (Mainstream Chromebook) LPDDR4 or DDR4 & PCIe Gen 3	Kompanio Ultra 910 (Premium Chromebook & NB) LPDDR5 & PCIe Gen 4	N1X (Premium NB) LPDDR5/**LPDDR6** & PCIe Gen 4/5
		N1 (GB10) (Mainstream NB) LPDDR5 & PCIe Gen 4	Kompanio Ultra (Premium Chromebook & NB) LPDDR5/**LPDDR6** & PCIe Gen 5

Source: Media

Information from chip design houses

	Intel	AMD	Qualcomm	MediaTek
Highlight	• Released information for Panther Lake, manufactured with Intel's 18A • Support LPDDR5/DDR5 Memory	• Mobile CPU remains Ryzen AI 300 Series (Krackan Point & Strix Point & Strix Halo) • Support LPDDR5/DDR5 Memory	• Snapdragon X Series powering over 85+ PCs • Will release Snapdragon X2 in Sep. 2025	• Launched Kompanio Ultra CPU for Chromebook in April • 50 AI TOPS
Ref.				

Panther Lake
INTEL 18A AT SCALE

Leading x86 Power Efficiency Similar to Lunar Lake	High-Performance Core Design Similar to Arrow Lake-H
Next Gen Built-In GPU Expanding 3D perf and AI	Broad Scalability Consumer, gaming, commercial & LP5/DDR5 support

On-track for production in H2'25
Consumer-ready launch with OEMs beginning early '26

intel.

NEW AMD Ryzen™ AI 300 Series Processors for Mobile
Expanding AI Leadership to Everyday Users and Enterprise

Processor model					
AMD Ryzen™ AI 7 350	8 cores 16 threads	5.0 GHz max boost	24 MB Cache	50 Peak TOPS	15-54 W cTDP
AMD Ryzen™ AI 5 340	6 cores 12 threads	4.8 GHz max boost	22 MB Cache	50 Peak TOPS	15-54 W cTDP

Available Q1 2025

Processor model					
AMD Ryzen™ AI 7 PRO 350	8 cores 16 threads	5.0 GHz max boost	24 MB Cache	50 Peak TOPS	15-54 W cTDP
AMD Ryzen™ AI 5 PRO 340	6 cores 12 threads	4.8 GHz max boost	22 MB Cache	50 Peak TOPS	15-54 W cTDP

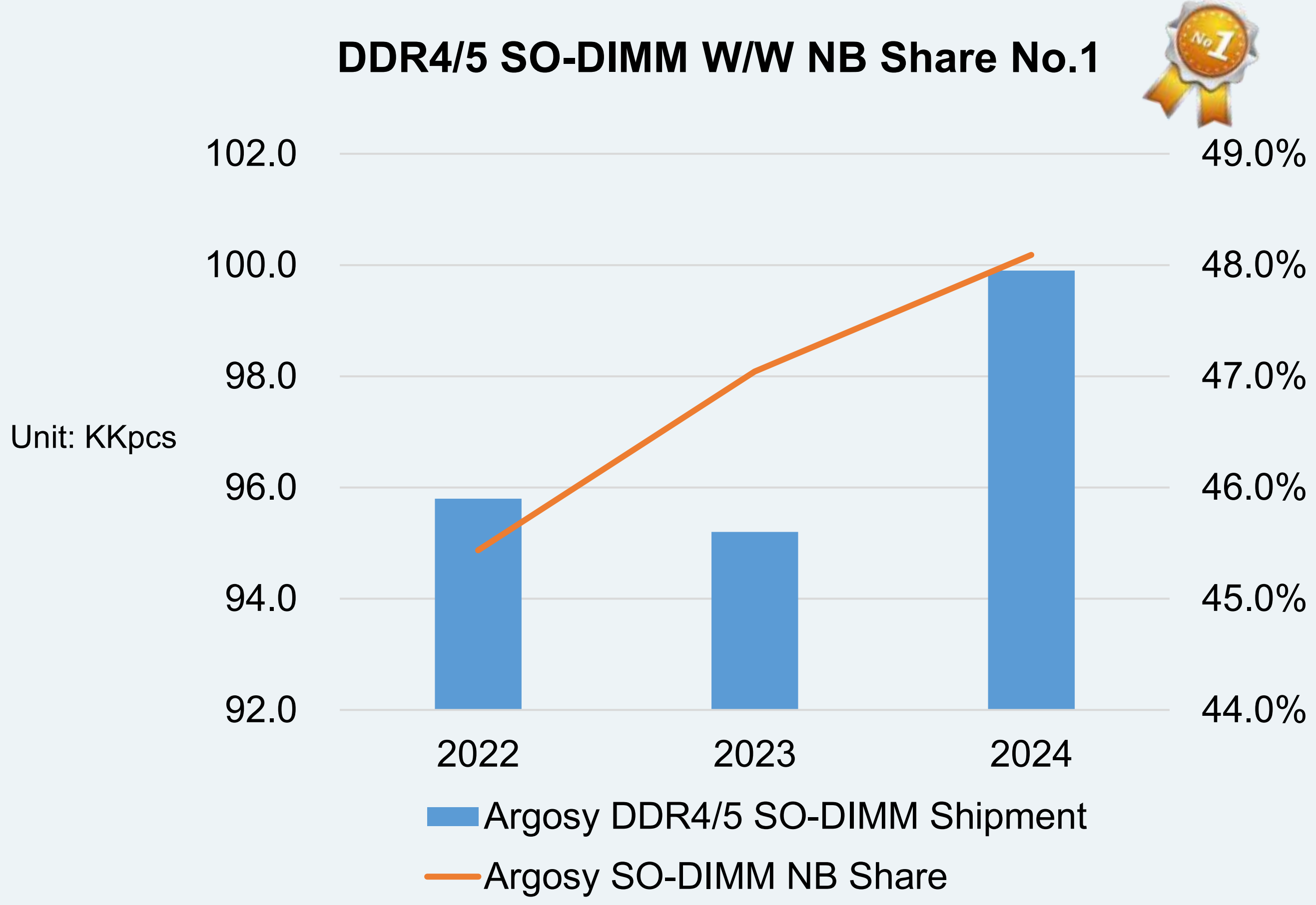
Available Q2 2025

AMD
together we advance_

DDR4/5 SO-DIMM Brand & JEDEC Award, Share No.1

DDR3/4/5/ SO-DIMM Connectors

- Join design DDR5, LPDDR5 CAMM2 and DDR6 (cont.) with JEDEC & Intel since 2018
- No.1 DDR5 SI performance among global vendors
- DDR5 SODIMM shipment exceed DDR4 SODIMM in Q3 2024



DDR4/5 SO-DIMM W/W NB Share No.1

DDR5 SO-DIMM

- Launched 10 spec, W/W NB share No.1

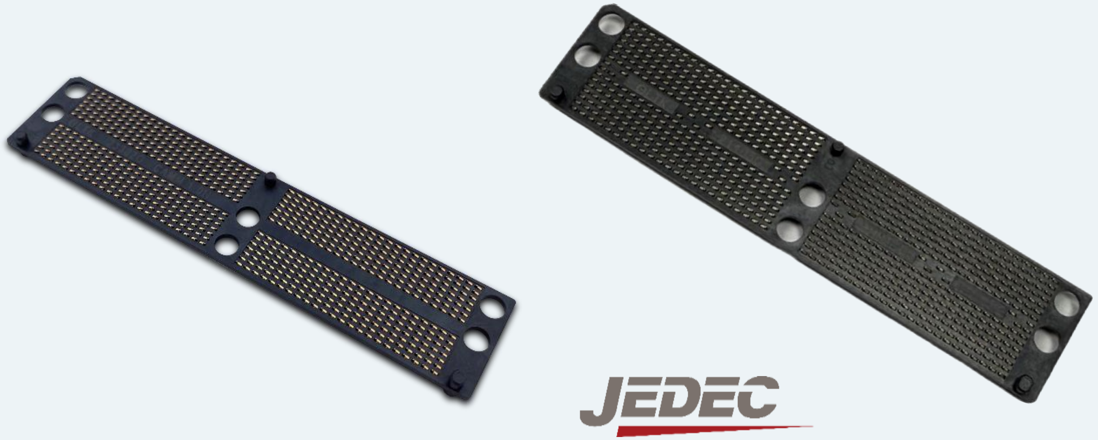
DDR4 SO-DIMM

- Launched 10 spec., W/W NB share No.1

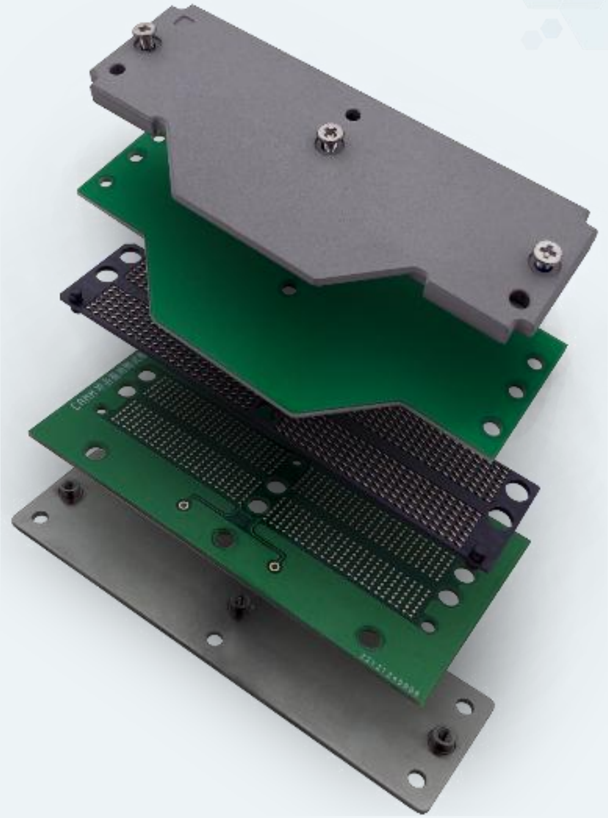
DDR3/2 SO-DIMM

- Launched 10 spec.

Argosy's LPDDR5 CAMM2 Conn.



Pin Count	644 / 666 pins
Height	1.00mm
Pitch	1.0x1.38mm
Current Rating	1.0A
Durability	25 cycles
Operation Temp.	-55 ~ 85°C



Assembly Structure:

-Top Cover (w/ screws)

-CAMM Module

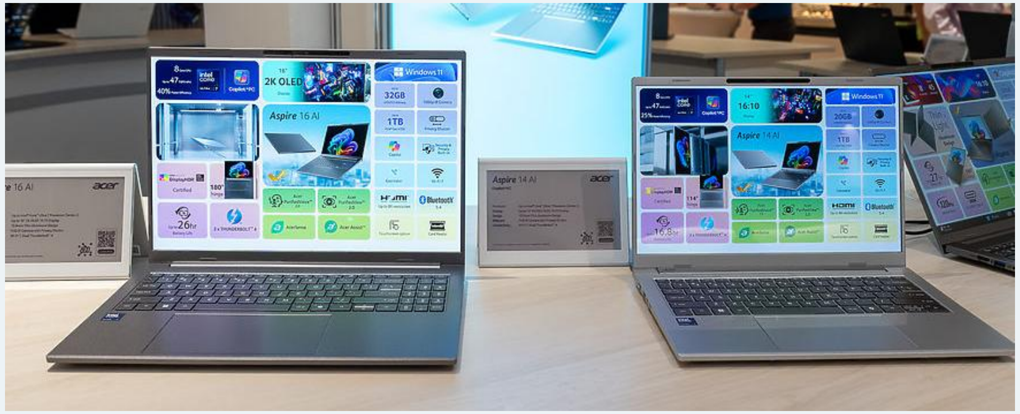
-CAMM2 Conn.

-Mother Board

-Back Plate (w/ nuts)

Acer

- Laptops with Intel Lunar Lake CPU or AMD AI300 Series CPU or Snapdragon X1 series



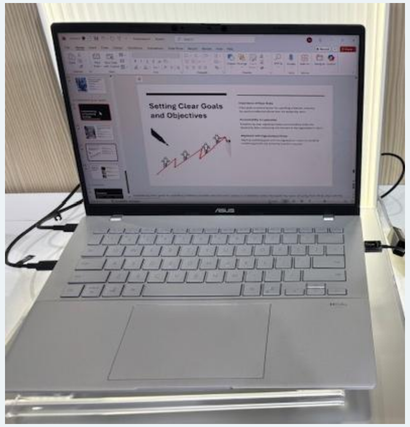
- Predator Gaming Series using Intel Arrow Lake CPU

Source: Acer

ASUS

- Laptops with Snapdragon X1 series

Zenbook A14



Vivobook S 14

Vivobook 14

- Creator and Gaming Series with AMD AI PRO 9 HX Series

ProArt P16

Zephyrus G14

Source: ASUS

NVIDIA

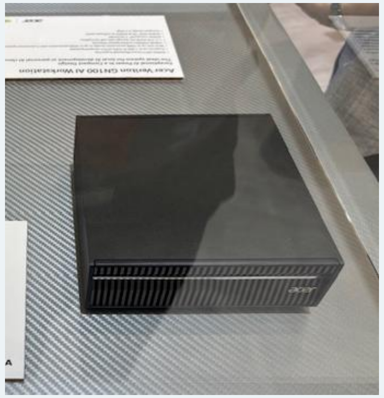
- Collaborated with MediaTek on GB10
- Ideal for AI developer, researcher and data scientists
- M.2 Gen 5 SSD, WiFi 7 (M.2-1A), USB4 Type-C (40Gbps)

CPU	Grace CPU (20 cores)
GPU	Blackwell
System Memory	128GB LPDDR5X
Storage	1TB or 4TB SSD
OS	DGX OS
Price (USD)	2999(1TB), 3999(4TB)
Tensor Performance	1000 TOPS

DGX Spark

Gigabyte AI Top Atom

MSI EdgeXpert MS-C931



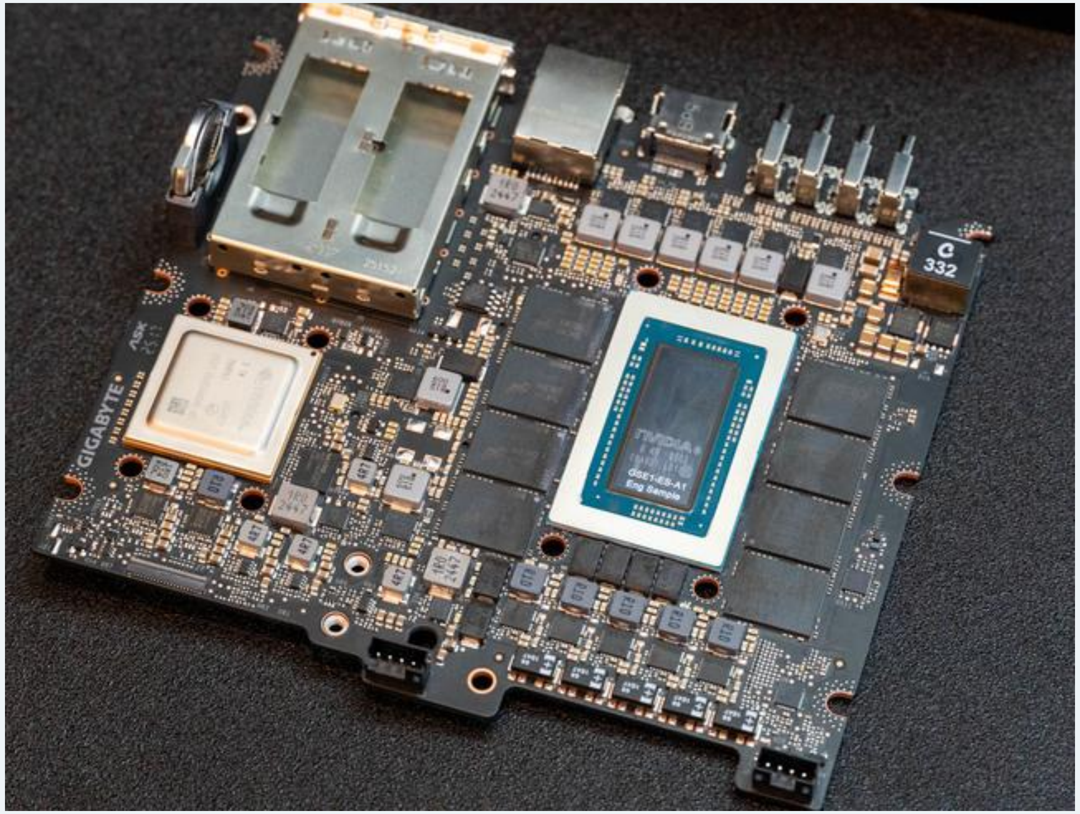
Acer Veriton GN100

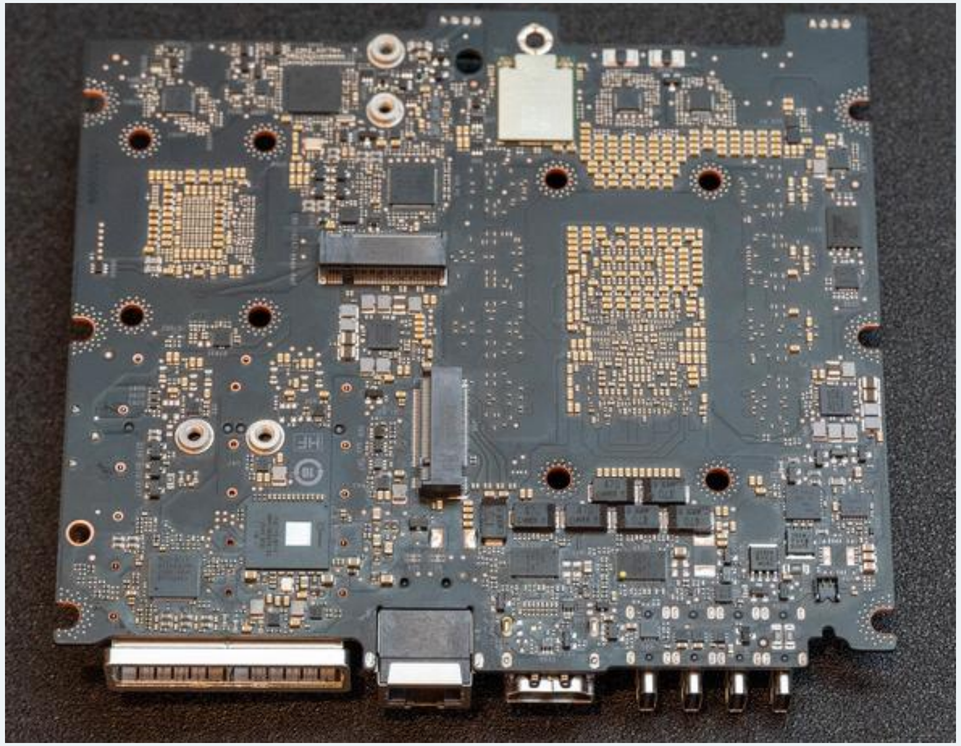
Asus Accent GX 10

Source: NVIDIA

Gigabyte

- AI TOP ATOM
- Providing additional thermal solution





Source: Gigabyte

MSI

- Gaming Series with Intel Arrow Lake CPU or AMD AI 300 series
- High-performance NVIDIA Connect-X networking enables connecting two EdgeXpert MS-C931 systems together

Cyborg 17/15

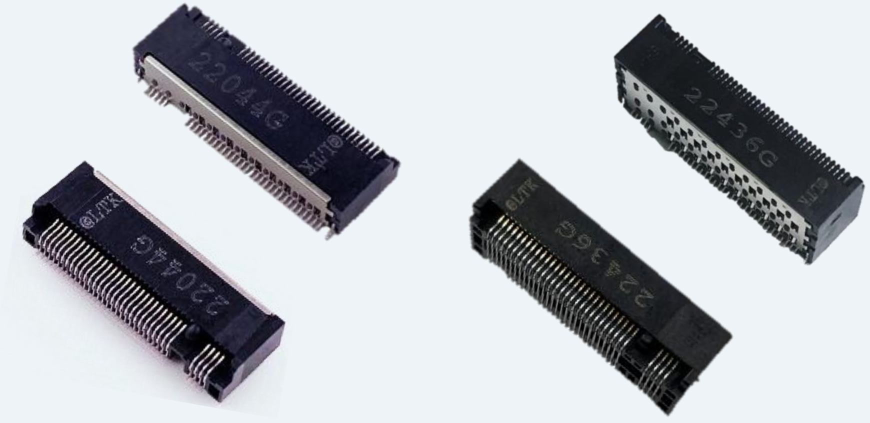
Crosshair 18 HX AI

Raider 18 HX AI

Vector 17/16 HX AI

Source: MSI

M.2 Gen 4/5 & M.2-1A, Brand Award, Share No.1



M.2 Gen 5 (M.2-1A & 0.5A)

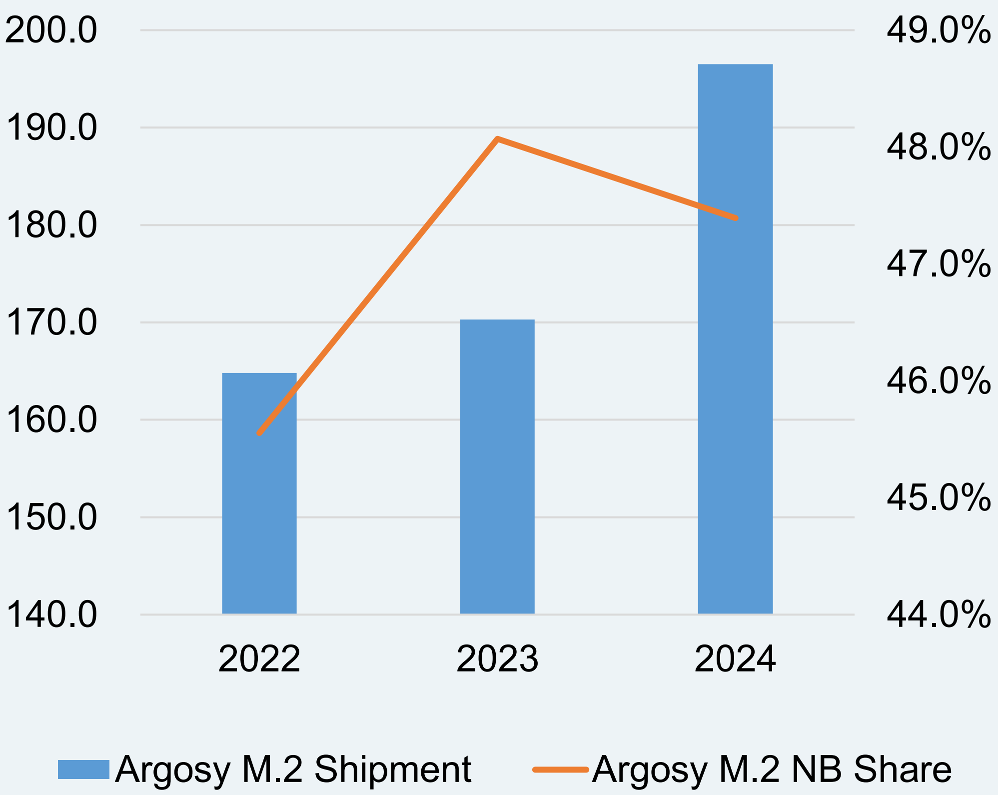
Launch >30 spec.

- 25 spec. shipped
- 3 spec. sample stage
- M.2 Gen 5 for SSD, M.2-1A for WiFi 7

M.2 Gen 4 (0.5A & M.2-1A)

Launch >60 spec., W/W NB share No.1

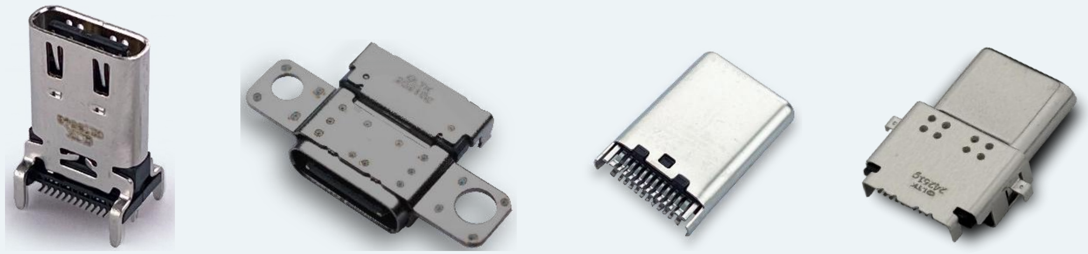
M.2 Shipment & W/W NB Share No.1



Type-C in 1st Batch of USB4 & Thunderbolt 4/5 Certified

Type-C USB4 & Thunderbolt 4/5 High Speed Con.

- World’s first batch of Thunderbolt 4 certified manufacturer (6 vendor, 11 P/Ns qualified)
- 13 P/Ns acquired Intel Thunderbolt 5/4 certification
- 17 P/Ns acquired USB4 Gen 3 (40Gbps) certification
- 26 P/Ns acquired USB 3.2 (10Gbps) certification



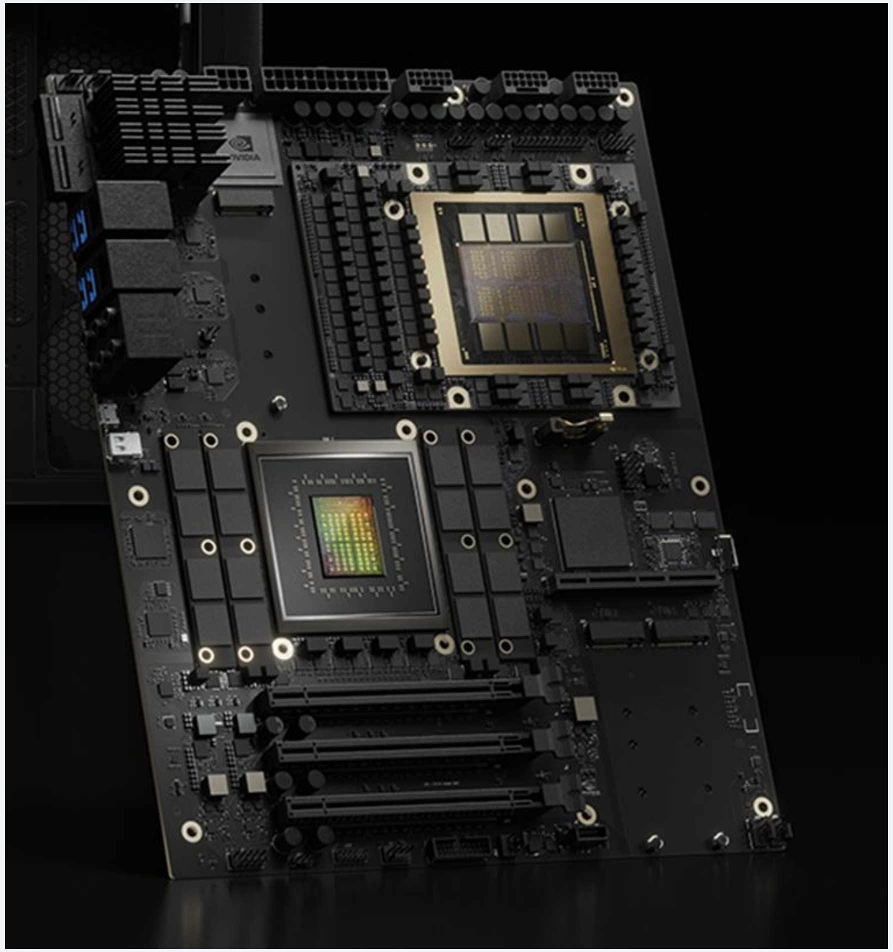
Type-C Function Connectors

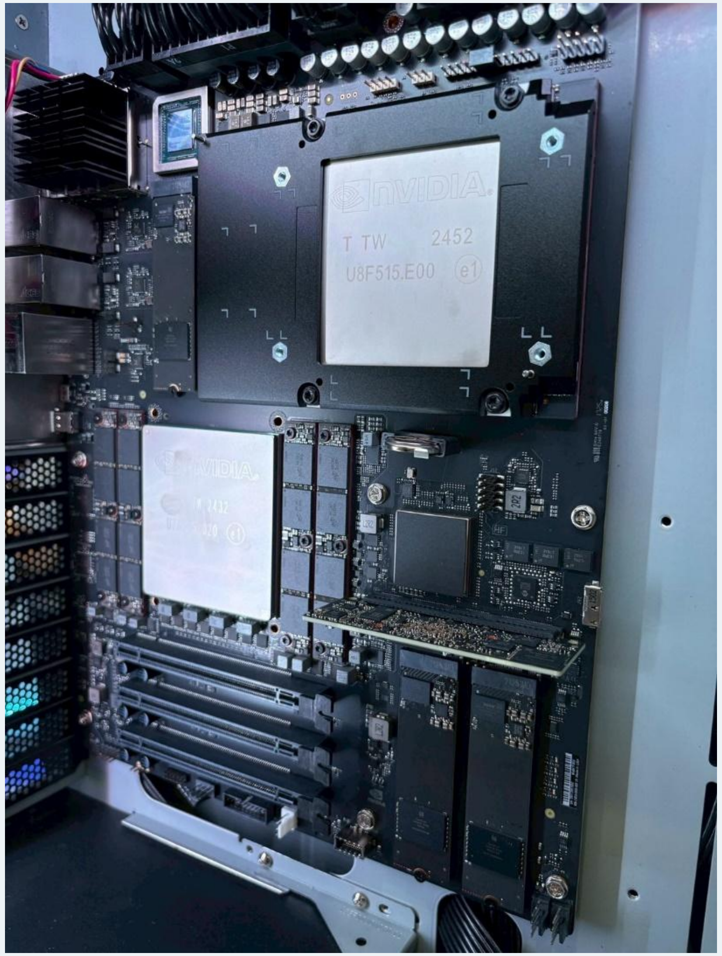
- Launched 30 spec., incl. vertical, screw locking, mid-mount and etc.

NVIDIA DGX Station

- GB300 Superchip
- Enable large-scale AI training and inferencing workloads at your desktop
- Potentially using SOCAMM for CPU Memory

CPU	Grace CPU (72 cores)
GPU	Blackwell Ultra
CPU Memory	Up to 496GB LPDDR5X
GPU Memory	Up to 288GB HBM3e
OS	DGX OS



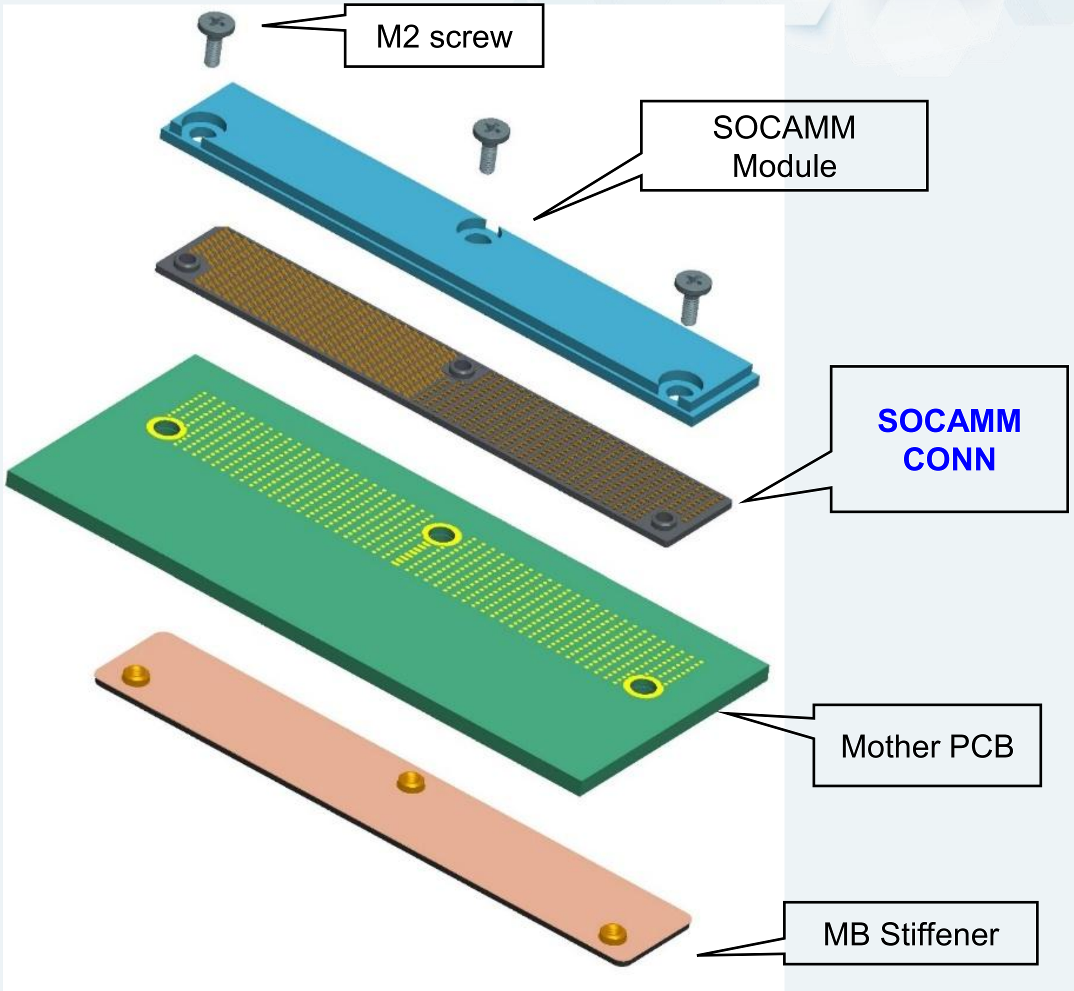


Source: ASUS, NVIDIA

Argosy's SOCAMM Connector

SOCAMM (Small Outline Compression Attached Memory Module)

Pin Count	694pins
Height	1.00mm
Pitch	0.93x1.60mm
Current Rating	1.0A
Durability	25cycles
Operation Temp.	-55 ~ 85°C
Application	Memory Module to Main Board

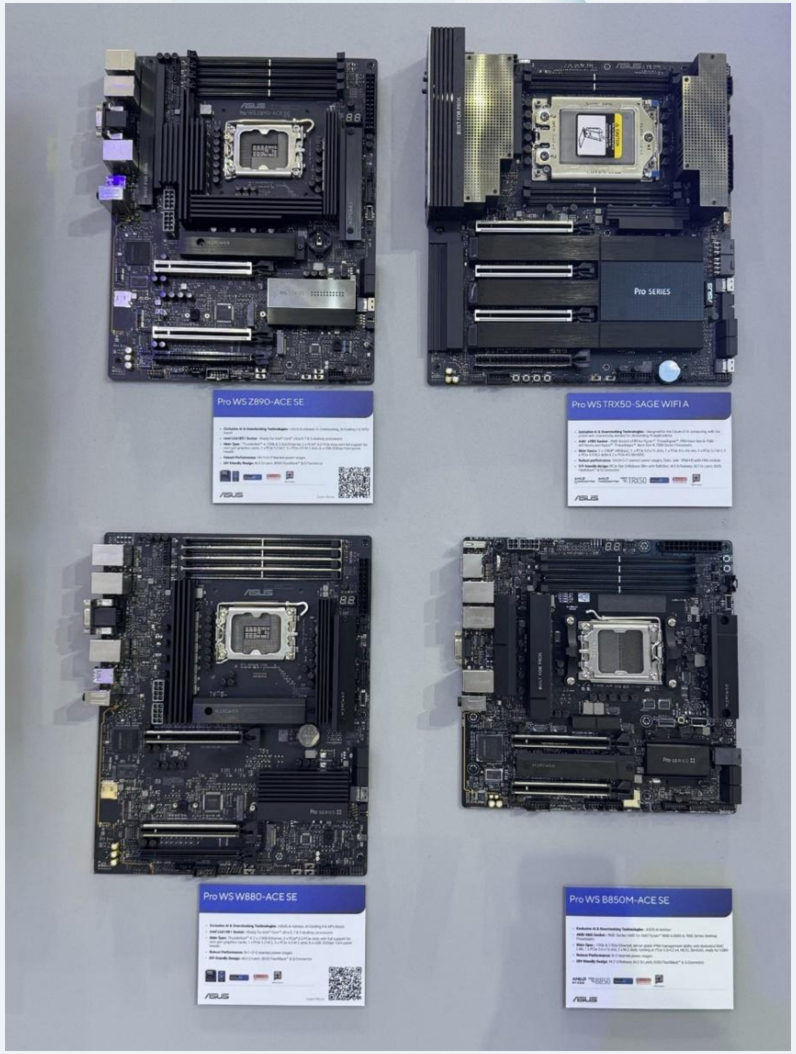


Part# 2. Mainboard

ASUS

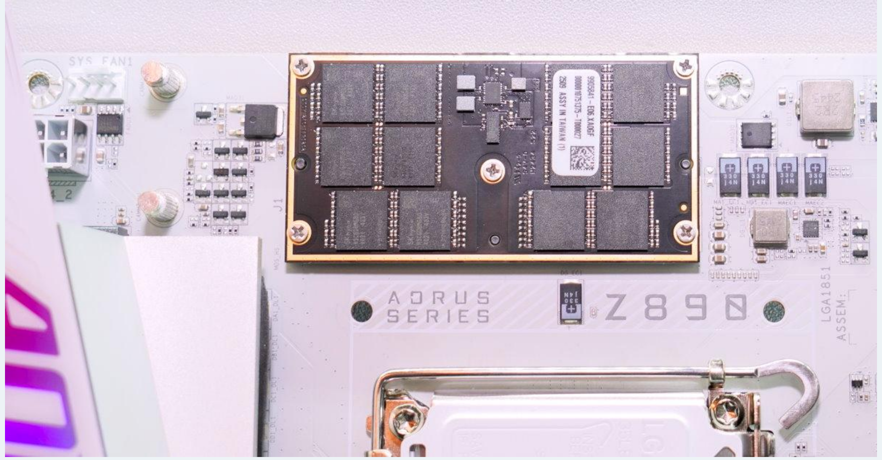
- ROG Back Connect Motherboard (support PCIe 5.0, M.2 Gen 5)

ROG CROSSHAIR X870E HERO BTF



Gigabyte

- DDR5 CAMM2 Memory
- Thunderbolt 4 Type-C
- M.2 Gen 5/4 SSD
- PCIe 5.0



Z890 AORUS TACHYON ICE C2

MSI

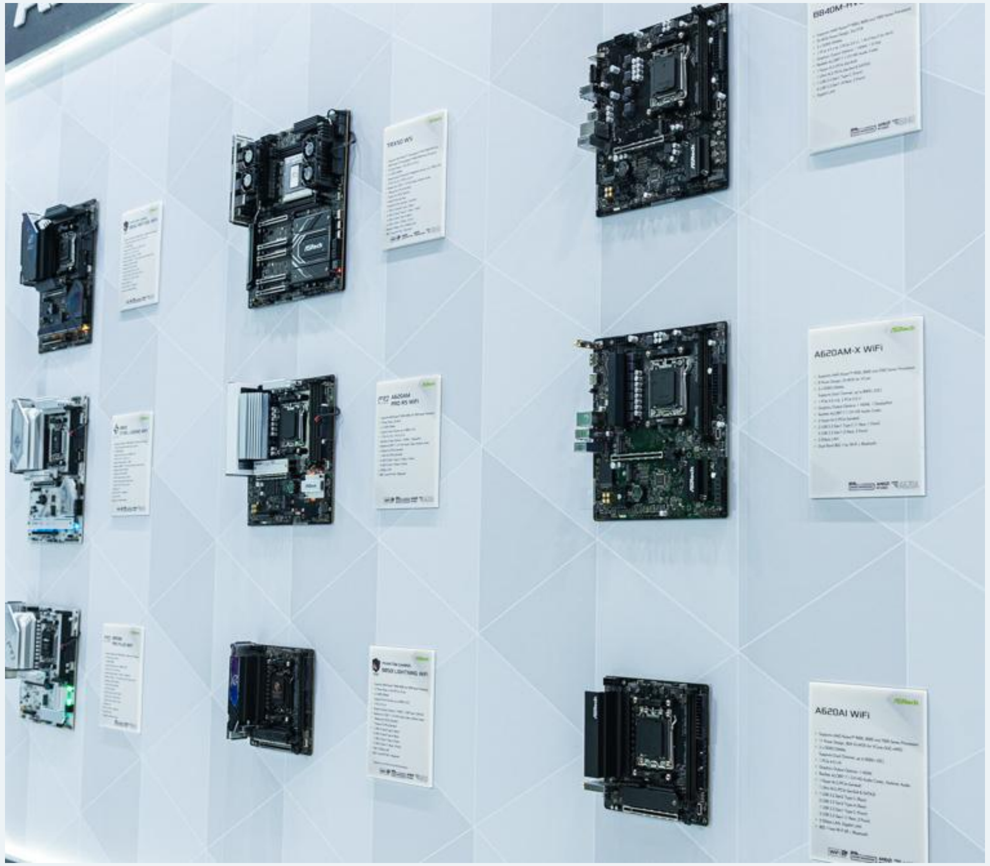
- Multi-layered structure design on the I/O graphic cover
- DDR5 UDIMM, USB4 Type-C (40Gbps), M.2 Gen 5/4 SSD, WiFi 7 (M.2-1A)

MEG X870E ACE

ASRock

New design support:

- WiFi 7 (M.2-1A)
- M.2 Gen 5/4 SSD
- USB4 Type-C (40Gbps)

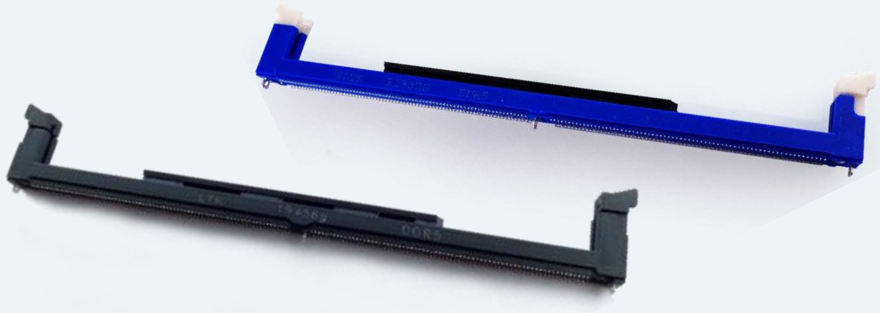


X870 NOVA WiFi

DDR5 DIMM JEDEC & Brands Certified, Performance No.1

DDR4/5 Long DIMM Connectors

- Join design DDR5 and DDR6 with JEDEC & Intel since 2018
- Intel’s HT Warpage tested No.1 in 2019 (Pass: 2/5)
- JEDEC’s SI tested No.2 in 2019 (Pass: 2/6)
- JEDEC’s HT Warpage tested No.1 in 2020 (Pass: 4/8)
- HPE’s solder joint tested “0% Defect Rate” as No.1 in 2021 (Pass 2/5)



DDR5 R-DIMM (288 & 287-pin)

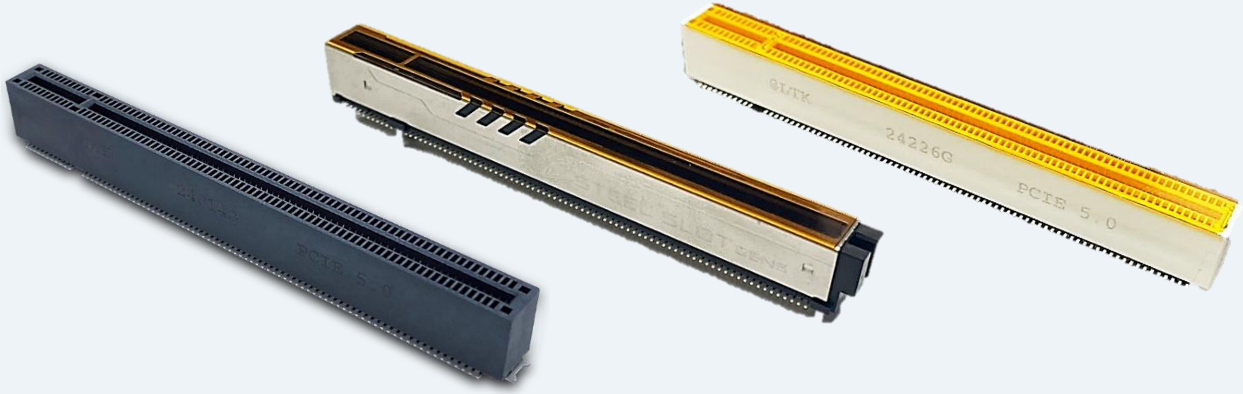
DDR5 U-DIMM

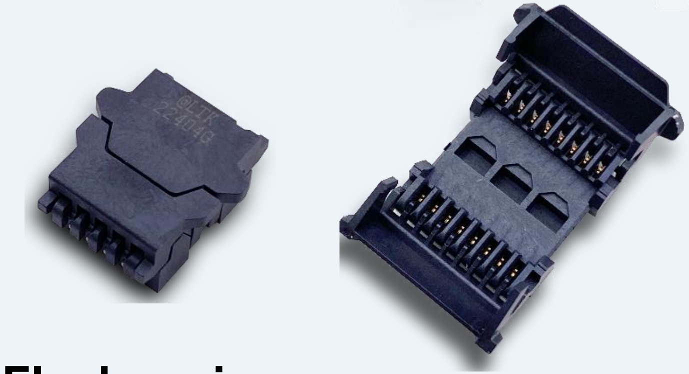
Launch >20 spec.

DDR4 DIMM SMT & DIP

Launch >40 spec

Argosy's PCIe 5.0 & SPI Conn.





PCIe CEM 5.0 NEW

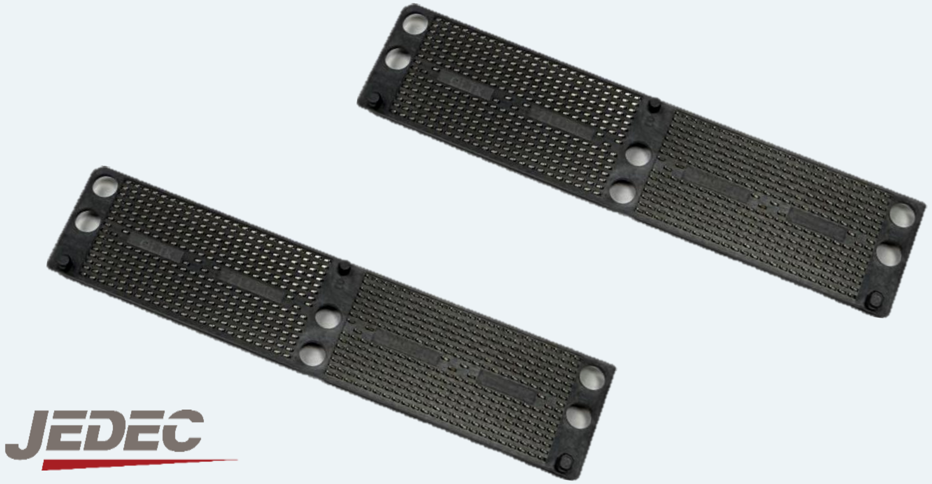
Launch >10 spec.

- Develop various spec: housing, shell, ejector & color options
- Provide slim type for SI enhanced <90.0Ω

SPI Flash series

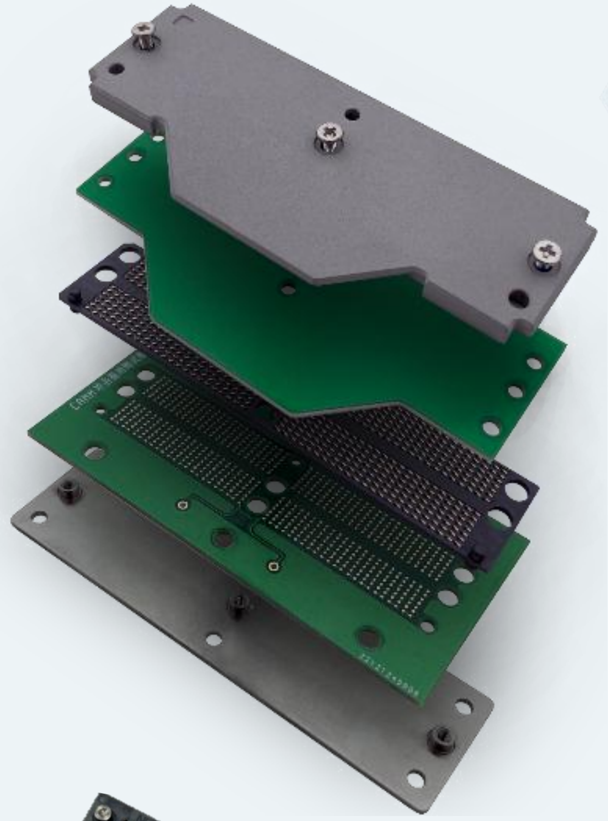
- Launch 2 spec: 8-pin & 16-pin
- Applied to chip SoC burning or debug

Argosy's Compression Attached Memory Solution



LPDDR5 CAMM2 Conn. w/ cover & back plate

- 644 & 666 pins, 1.0m height



Assembly Structure:

-Top Cover (w/ screws)

-CAMM Module

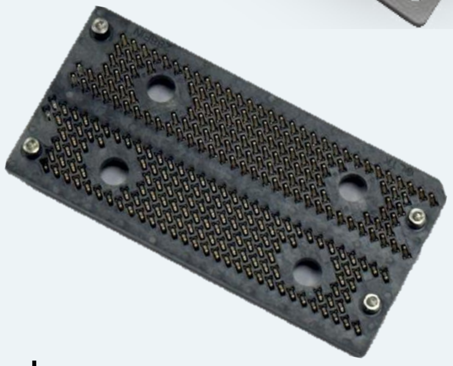
-CAMM2 Conn.

-Mother Board

-Back Plate (w/ nuts)

CA Board To Board

- 408 pins, 1.3mm height
- Interconnect btw GPU & Mainboard



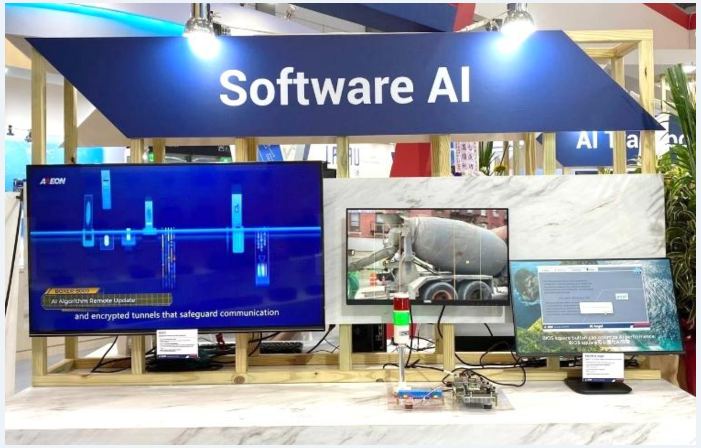
CA Board To Board

- 288 pins, 1.3mm height
- Interconnect btw Module & Mainboard

Part# 3. IPC Trend

AAEON

- Smart retail revolution: AI self-checkout & AI-powered advertisements
- Generative AI applications
- M.2 Gen 4 for WiFi & Bluetooth, LTE & SSD



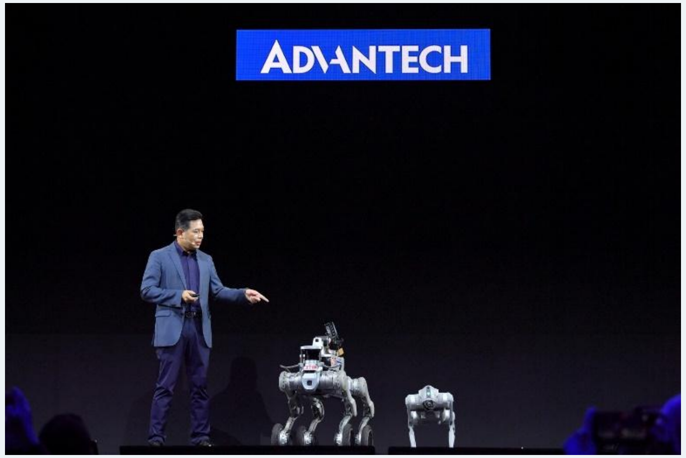
BOXER-8645AI

Advantech

Egde AI and Intelligence Solutions：

- **Automation and Robots**
- **SKYRack Edge Server**
- **WISE-Edge:** Transforms industrial hardware into intelligent, AI-powered operational systems
- M.2 Gen 4/5 for 5G Sub-6G & GNSS, SSD

MIC-743



Source: Advantech

Neousys

- Nuvo-11000 series is Neousys' flagship rugged embedded computer built on the Intel® Core™ Ultra 200 series platform
- DDR5 SODIMM, M.2 Gen 5 SSD, PCIe, Mini PCIe

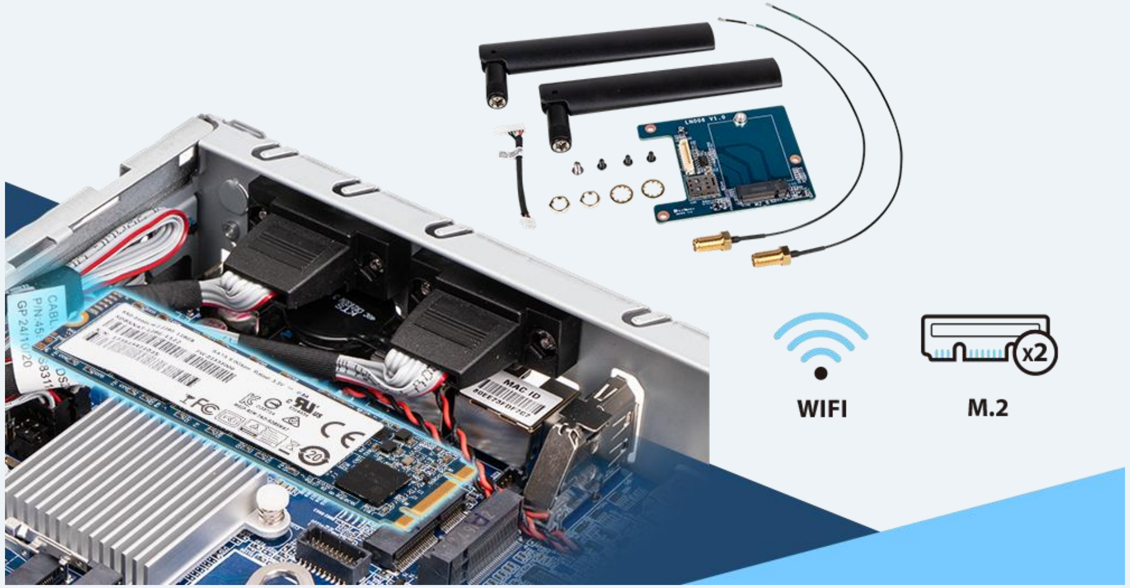
Nuvo-11000

Source: Neousys

Shuttle

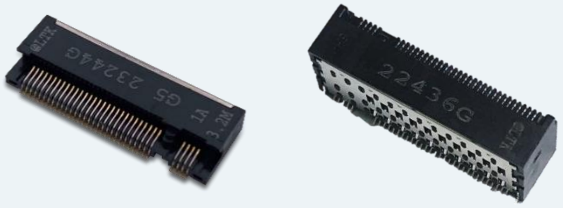
- Ideal for tasks requiring high processing power, such as data analysis and multimedia applications
- Shuttle DH810 is a 1.3L robust PC that harnesses the power of Intel® Core™ Ultra (Arrow lake-S)
- DDR5 SODIMM, M.2 Gen 4/3 for WLAN

DH810



Source: Shuttle

Argosy’s Connector Solution on IPC

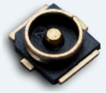


M.2 Gen 5 Connector NEW

Launch >30 spec: 8 height x 4 keys

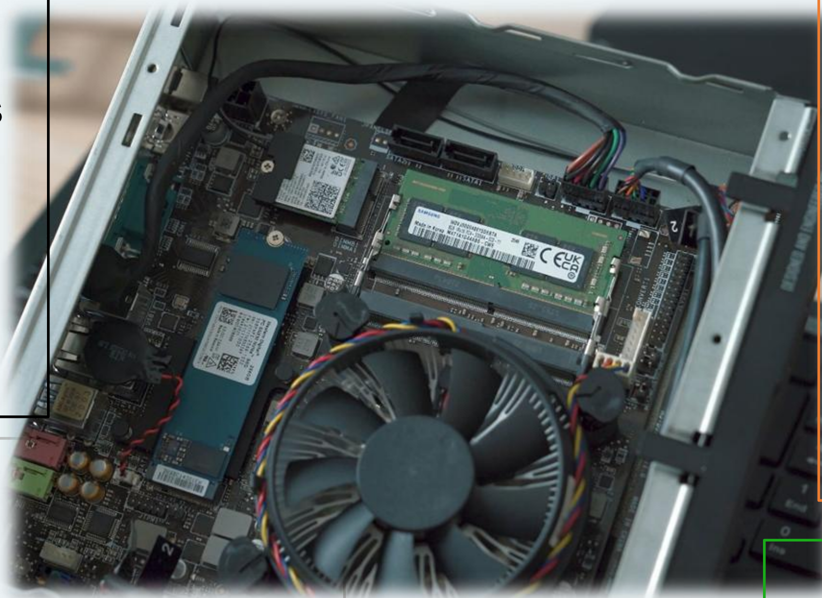
Application: SSD

M.2-1A Connector NEW **& RF**



Launch 12 spec: 3 height x 4 keys

Application: WiFi 7



PCIe 5.0 Connector NEW

Launch 5 spec: Including metal shell and slim option

Application: AI accelerator card or GPU card

Mini PCIe Connector

Launch >10 spec.

Application: SSD, WiFi & GPU card

DDR5/4 SO-DIMM Connector

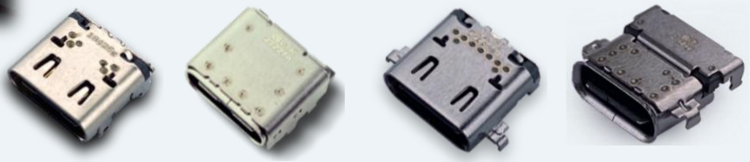
Launch 8 spec.

Application: DRAM socket

DDR5/4 DIMM Connector

Launch >20 spec.

Application: DIMM socket



USB Type-C Thunderbolt 5/4 & High Power 7A

13 part# Thunderbolt 5/4 qualified

Application: high-speed data transmission & high-power charging 140W (7A*20V)

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ARGOSY RESEARCH INC.

@LTK

Thank you for your attention!

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