



AMD EPYC™ 9004 Processors

Advancing Data Center Performance and Efficiency

General Purpose Storage / All-flash NVMe / Multi-node / GPU Barebones
Server Motherboards

Server Platform Naming Rule

GENOA2D16NQM3-2Q

Character	Representation	Options
N	CPU Type	• GENOA = AMD EPYC™ 9004 series processors
N+1	Number of CPU Supported	• 2 = Dual • NA = Single
Others	Number of DIMM Supported	• D8 = 8 DIMM • D12 = 12 DIMM • D16 = 16 DIMM • D24 = 24 DIMM
	Form Factor	• H = Half-width • UD = Deep Micro-ATX (10.4"x10.5") • T = T-shape
	Feature	• N = Non-shading side-by-side CPU • G = For GPU server • Q = OCP slot not in standard I/O area, multi-SlimSAS to the front • M3 = OCP NIC 3.0 slot • 2Q = Dual 25GbE SFP28 by Broadcom BCM57414 • 2T = Dual 10GbE RJ45 by Intel X710 • 2T/X550 = Dual 10GbE RJ45 by Intel X550 • 2T/BCM = Dual 10GbE RJ45 by Broadcom BCM57416 • 2L = Dual 1GbE RJ45 by Intel i210 • 2L+ = Dual 1GbE RJ45 by Intel i350

1U4L4E-GENOA/2T

Character	Representation	Options
1 st + 2 nd	System Height	• 1U = 1U chassis • 2U = 2U chassis • 4U = 4U chassis
Others	Drive Bay	• L = 3.5" HDD Bay • S = 2.5" HDD/SSD Bay • E = U.2 Bay • E1S = E1.S Bay
	Feature	• G = Dual-slot cards supported • X = NVIDIA HGX platform intergrated • N = Number of nodes • F = Front I/O

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1U4L4E-GENOA/2T



10Gbase-T



Storage



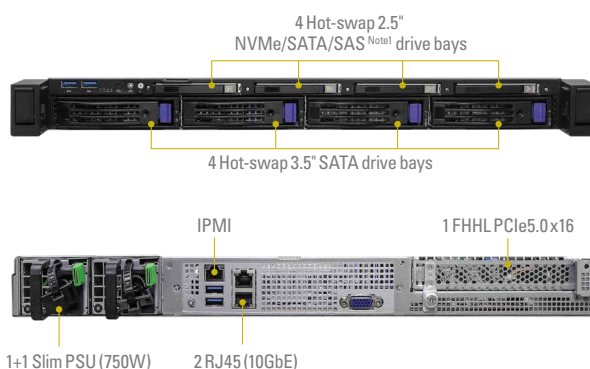
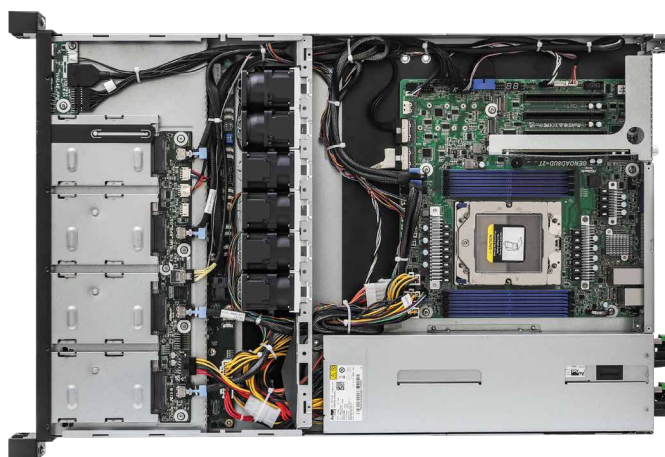
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PCI-E 5.0

Application

- Hybrid-storage Server
- Cloud Computing
- Enterprise Server



1U4L4E-GENOA/2T

CPU	Socket	1 Socket SP5 (LAG 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	676.5 x 438 x 43.4 mm (26.6" x 17.2" x 1.7")
Front Panel	Buttons	Power button w/ LED, UID button w/ LED, System reset
	LEDs	HDD Activity, LAN 1/2, System Event
	I/O	2 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (10GbE) by Intel® X550-AT2
		1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Rear	1 FHHL PCIe5.0x16 via RB1UX16R_G5 (Up to 75W)
Drive Bay/ Storage	External	4 hot-swap 2.5" NVMe/SATA/SAS ^{Note1} drive bays 4 hot-swap 3.5" SATA drive bays
	Internal	2 M-key (PCIe5.0 x4); support 2280/2260/2242/2230 form factor
Power Supply	Module	1+1, 80-PLUS Platinum, 750W Slim PSU
System Cooling	Fan	6 PWM Easy-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: SAS drive is only supported with additional RAID/HBA cards

1U4L-GENOA/2T



10Gbase-T



Storage



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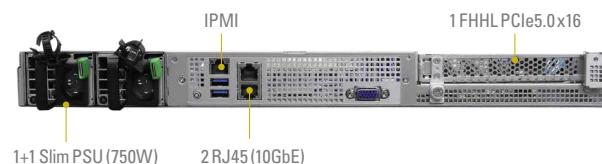
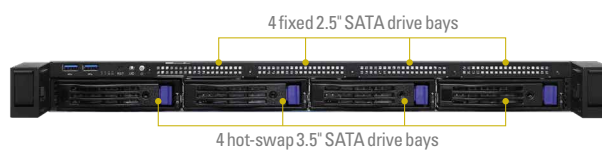


PCI-E 5.0



Application

- Enterprise Server
- General Purpose Server
- Web Hosting



1U4L-GENOA/2T

CPU	Socket	1 Socket SP5 (LAG 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	676.5 x 438 x 43.4 mm (26.6" x 17.2" x 1.7")
Front Panel	Buttons	Power button w/ LED, UID button w/ LED, System reset
	LEDs	HDD Activity, LAN 1/2, System Event
	I/O	2 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (10GbE) by Intel® X550-AT2 1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Rear	1 FHHL PCIe5.0 x16 via RB1UX16R_G5 (Up to 75W)
Drive Bay/ Storage	External	4 hot-swap 3.5" SATA drive bays
	Internal	4 fixed 2.5" SATA drive bays 2 M-key (PCIe5.0 x4); support 2280/2260/2242/2230 form factor
Power Supply	Module	1+1, 80-PLUS Platinum, 750W Slim PSU
System Cooling	Fan	6 PWM Easy-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

1U8S4E-GENOA/2T



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Storage



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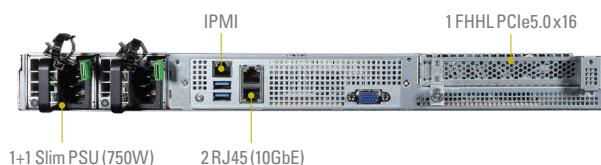
PCI-E 5.0

8 hot-swap 2.5" SATA/SAS drive bays^{Note1}

4 hot-swap 2.5" NVMe (PCIe5.0x4) drive bays

Application

- Hybrid-storage Server
- Enterprise Server



1+1 Slim PSU (750W)

IPMI

2 RJ45 (10GbE)

1 FHHL PCIe5.0x16

1U8S4E-GENOA/2T

CPU	Socket	1 Socket SP5 (LAG 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	676.5 x 438 x 43.4 mm (26.6" x 17.2" x 1.7")
Front Panel	Buttons	Power button w/ LED, ID button w/ LED, System reset, NMI button
	LEDs	HDD Activity, LAN 1/2, System Event
	I/O	1 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (10GbE) by Intel® X550-AT2 1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Rear	1 FHHL PCIe5.0x16 via RB1UX16R_G5 (Up to 75W)
Drive Bay/ Storage	External	4 hot-swap 2.5" NVMe (PCIe5.0x4) drive bays 8 hot-swap 2.5" SATA/SAS drive bays ^{Note1}
	Internal	2 M-key (PCIe5.0x4); support 2280/2260/2242/2230 form factor
Power Supply	Module	1+1, 80-PLUS Platinum, 750W Slim PSU
System Cooling	Fan	6 PWM Easy-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: SAS drive is only supported with additional RAID/HBA cards

1U12E-GENOA/2L2T



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Storage



OCP NIC 3.0



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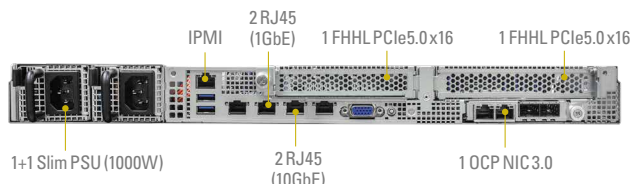


PCI-E 5.0

12 Hot-swap 2.5" NVMe (PCIe5.0 x4)
/SATA/SAS ^{Note1} drive bays

Application

- Data Center Server
- All-flash Storage Server
- SMB and Database Processing & Storage



1+1 Slim PSU (1000W)

2 RJ45
(10GbE)

1 OCP NIC 3.0

1U12E-GENOA/2L2T

CPU	Socket	1 Socket SP5 (LAG 6096)
		AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	24 DDR5 288-pin (2DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	676.5 x 438 x 43.4 mm (26.6" x 17.2" x 1.7")
Front Panel	Buttons	Power, Reset, UID
	LEDs	Power, UID, System Fail, LAN1/LAN2
	I/O	1 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (10GbE) by Broadcom BCM57416
		2 RJ45 (1GbE) by Intel® i210
		1 dedicated IPMI
Expansion Slots	Rear	2 Type-A (USB3.2 Gen1)
		1 DB15 (VGA), 1 UID w/ LED
		1 OCP NIC 3.0 (PCIe5.0 x16)
Drive Bay/ Storage	External	12 Hot-swap 2.5" NVMe (PCIe5.0 x4)/SATA/SAS ^{Note1} drive bays
	Internal	2 M-key (PCIe5.0 x4), supports 22110/2280/2260 form factor
Power Supply	Module	1+1, 80-Plus Platinum, 1000W Slim PSU
System Cooling	Fan	6 PWM Hot-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: SAS drive is only supported with additional RAID/HBA cards

1U12L4E-GENOA/2Q



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Storage



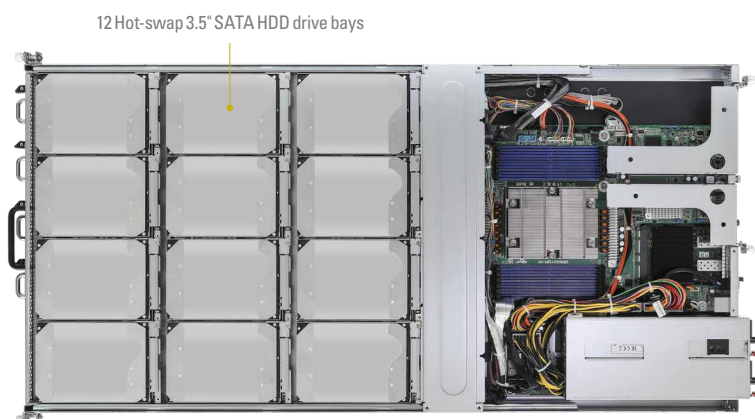
OCP NIC 3.0



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PCI-E 5.0



12 Hot-swap 3.5" SATA HDD drive bays

Application

- Cloud Datacenter Storage
- Software-defined Storage



4 Hot-swap 2.5" NVMe drive bays



1+1 Slim RPSU (1000W)

1 OCP NIC 3.0

1U12L4E-GENOA/2Q

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	12 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	955 x 438 x 43.5 mm (37.6" x 17.24" x 1.71")
Front Panel	Buttons	Power Switch, ID Switch, System reset
	LEDs	Power status, UID, HDD activity, System Fault
	I/O	NA
Rear IO	LAN	2 SFP28 (25GbE) by Broadcom BCM57414 1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 UID button
Expansion Slots	Rear	1 FHHL PCIe5.0 x16 via RB1UX16_G5 (Up to 75W)
		1 Low-profile PCIe5.0 x16 via RB1UX16_G5
		1 OCP NIC 3.0 (PCIe5.0 x16)
Drive Bay/Storage	External	4 Hot-swap 2.5" NVMe (PCIe4.0 x4) drive bays
	Internal	12 Hot-swap 3.5" SATA HDD drive bays
Power Supply	Module	2 M-key (PCIe5.0 x4 or 4 SATA 6Gb/s), supports 22110/2280/2260 form factor
System Cooling	Fan	6 PWM Hot-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

1U24E1S-GENOA/2L2T



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Storage



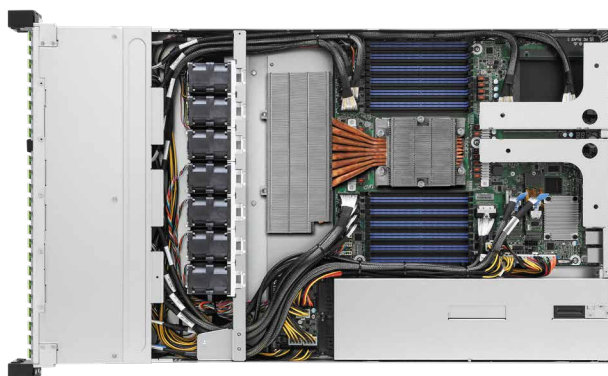
OCP NIC 3.0



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PCI-E 5.0



24 hot-swap E1.S (PCIe5.0 x4) drive bays



1+1 RPSU (1600W)

IPMI

1 FHHL PCIe5.0 x16

1 OCP NIC 3.0

Application

- All-flash Storage Server
- Data Center Server
- SMB and Database Processing & Storage

1U24E1S-GENOA/2L2T

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	24 DIMM slots (2DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	776.5 x 438 x 43.5mm (30.6" x 17.2" x 1.7")
Front Panel	Buttons	Power button w/ LED, ID button W/LED, System reset, NMI
	LEDs	HDD activity LED, LAN1/2, System fault
Rear IO	RJ45	Broadcom BCM57416: 2 RJ45 (10GbE) Intel® i210: 2 RJ45 (1GbE) 1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Rear	1 FHHL PCIe5.0 x16 1 OCP NIC 3.0 (PCIe5.0 x16)
Drive Bay/ Storage	External	24 Hot-swap E1.S (PCIe5.0 x4) drive bay, supports 9.5mm/15mm width
Power Supply	Module	1+1 ,80-PLUS Platinum, 1600W RPSU
SystemCooling	Fan	7 PWM Easy-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

4U36L6E-GENOA/2T



4800



PCI-E 5.0



10Gbase-T



Storage



Application

- Corporate Database
- Enterprise Server

20 Hot-swap
3.5" SATA/SAS
drive bays ^{Note1}



4 Hot-swap
3.5" SATA/SAS drive bays ^{Note1}
or 4 hot-swap 2.5" NVMe (PCIe3.0 x4)

2 hot-swap 2.5"
NVMe (PCIe3.0 x4) IPMI 2 RJ45
(10GbE)

1+1 PSU
(1200W)



12 Hot-swap 3.5" SATA/SAS drive bays ^{Note1}

4U36L6E-GENOA/2T

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System	Form Factor	4U Rackmount
Physical Status	Chassis Dimension	699 x 432 x 176 mm (27.52" x 17.01" x 6.93")
Front Panel	Buttons	Power button, System reset
	LEDs	Power Status, LAN1/LAN2 activity, System fail, HDD status
	I/O	2 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (10GbE) by Intel® X550-AT2
	USB	1 dedicated IPMI
	Others	2 Type-A (USB3.2 Gen1) 1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Rear	4 HHHL PCIe5.0 x16
Drive Bay/ Storage	External	Front: 20 Hot-swap 3.5" SATA/SAS drive bays ^{Note1} 4 Hot-swap 3.5" SATA/SAS drive bays ^{Note1} or 4 Hot-swap 2.5" NVMe (PCIe3.0 x4) drive bays
		Rear: 12 Hot-swap 3.5" SATA/SAS drive bays ^{Note1} 2 Hot-swap 2.5" NVMe (PCIe3.0 x4) drive bays
		2 M-key (PCIe5.0 x4); support 2280/2260/2242/2230 form factor
Power Supply	Internal	2 M-key (PCIe5.0 x4); support 2280/2260/2242/2230 form factor
Power Supply	Module	1+1, 80-PLUS Platinum, 1200W PSU
System Cooling	Fan	7 Hot-swap 80x38mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: Additional RAID/HBA card required to support the 36 Hot-swap 3.5" SATA/SAS drive bays

4U60L8E-GENOA/2T



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PCI-E 5.0



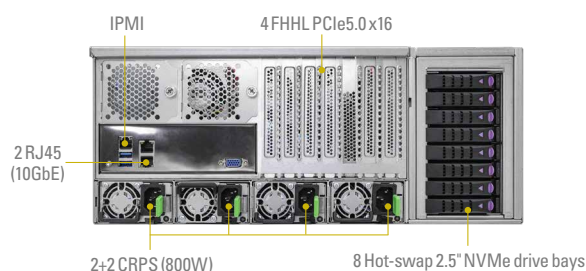
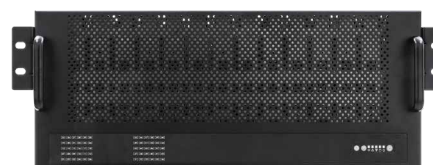
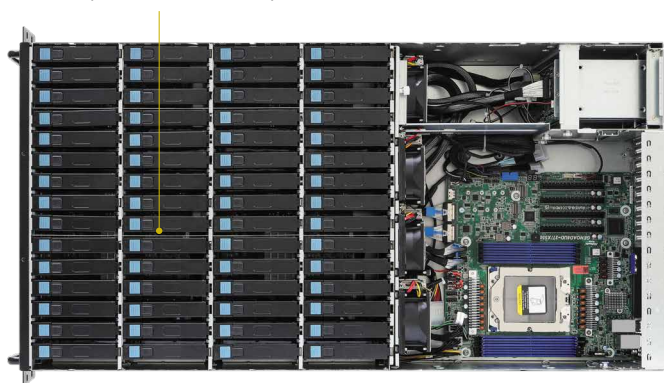
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Storage

Application

- Hyper-scale Cloud Datacenter Storage
- Software-defined Storage Applications
- Virtual Tape Library

60 hot-swap 3.5" SATA/SAS drive bays ^{Note1}

4U60L8E-GENOA/2T

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System	Form Factor	4U Rackmount
Physical Status	Chassis Dimension	853 x 434 x 176mm (33.5" x 17.1" x 6.9")
Front Panel	Buttons	System power on/off, System Reset, ID
	LEDs	Power, HDD Activity, LAN Activity, System Fault, ID
Rear IO	RJ45	2 RJ45 (10GbE) by Intel® X550-AT2
	USB	1 dedicated IPMI
	Others	2 Type-A (USB3.2 Gen1) 1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Rear	4 FHHL PCIe5.0x16
Drive Bay/	External	8 hot-swap 2.5" NVMe (PCIe5.0x4) drive bays
Storage	Internal	60 hot-swap 3.5" SATA/SAS drive bays ^{Note1}
		2 M-key (PCIe5.0x4); support 2280/2260/2242/2230 form factor
Power Supply	Module	2+2, 80-PLUS Platinum, 800W CRPS
System Cooling	Fan	4 hot-swap 80x38mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: Additional RAID/HBA card required to support the 60 x 3.5" SATA/SAS drive bays

2U12L8E-GENOA2

2U2G-GENOA2



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Storage



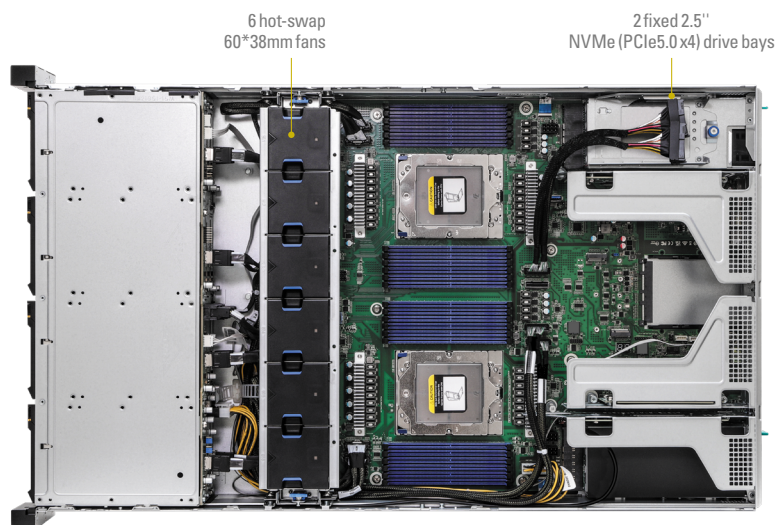
PCI-E5.0



OCP NIC 3.0

Application

- Software-defined Storage
- Data Analytics



12 hot-swap 3.5"/2.5" drive bays


 2 FHHL PCIe5.0x16 or 1 FHHL PCIe5.0x16, 2 FHHL PCIe5.0x8
 2 FHHL PCIe5.0x16 or 1 FHHL PCIe5.0x16, 2 FHHL PCIe5.0x8


1 HHHL PCIe5.0x16 or 2 HHHL PCIe5.0x8

1+1 CRPS
(2000/2700W)

IPMI

1 OCP NIC 3.0

2 RJ45
(1GbE)1+1 CRPS
(2000/2700W)

2U12L8E-GENOA2

2U2G-GENOA2

CPU	Socket	1+1 Socket SP5 (LAG 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors	
DIMM	Slot	12+12 DDR5 288-pin (1DPC)	
System	Form Factor	2U Rackmount	
Physical Status	Chassis Dimension	770.0 X 438.0 X 86.4 mm (30.3" x 17.2" x 3.4")	
Front Panel	Buttons	Power, UID, Reset	
	LEDs	Power Status, LAN Activity, HDD Activity, System status	
	I/O	1 Type-A (USB3.2 Gen1), 1 Type-A (USB2.0)	
Rear IO	RJ45	2 RJ45 (1GbE) by Intel® i350-AM2 1 dedicated IPMI	
	USB	2 Type-A (USB3.2 Gen1)	
	Others	1 DB15 (VGA), 1 RJ45 (COM), 1 UID w/ LED	
Expansion Slots	Rear	2 FHHL PCIe5.0x16 or 1 FHHL PCIe5.0x16, 2 FHHL PCIe5.0x8 [CPU0]	1 FHFL PCIe5.0x16, 1 FHHL PCIe5.0x16 [CPU0]
		2 FHHL PCIe5.0x16 or 1 FHHL PCIe5.0x16, 2 FHHL PCIe5.0x8 [CPU1]	1 FHFL PCIe5.0x16, 1 FHHL PCIe5.0x16 [CPU1]
		1 HHHL PCIe5.0x16 or 2 HHHL PCIe5.0x8 [CPU0]	1 HHHL PCIe5.0x16 or 2 HHHL PCIe5.0x8 [CPU0]
		1 OCP NIC 3.0 (PCIe5.0x16) [CPU1]	1 OCP NIC 3.0 (PCIe5.0x16) [CPU1]
Drive Bay/ Storage	External	12 hot-swap 3.5"/2.5" drive bays supports 4 SATA HDD/SSD and 8 NVMe (PCIe4.0 x4)/SATA SSD ^{Note1}	
	Internal	2 fixed 2.5" NVMe (PCIe5.0 x4) drive bays	
		1 M-key (PCIe3.0 x4), supports 2280/2260/2242/2230 form factor [CPU0] ; 1 M-key (PCIe3.0 x4), supports 2280/2242 form factor [CPU1]	
Power Supply	Module	1+1, 80-PLUS Platinum, 2000W CRPS	1+1, 80-PLUS Platinum, 2700W CRPS
System Cooling	Fan	6 PWM hot-swap 60x38 mm fans	
Management		ASPEED BMC AST2600	
Security		TPM by optional accessory	

Note1: SAS drive is only supported with additional RAID/HBA cards

2U24E-GENOA2



OCP NIC 3.0



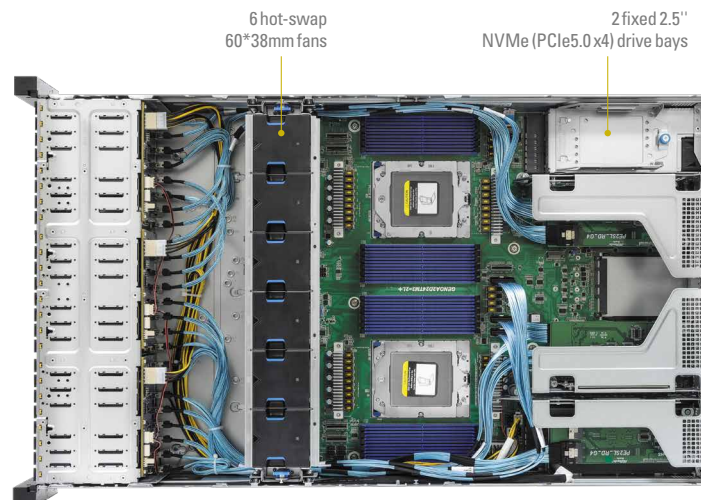
Storage



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PCI-E 5.0

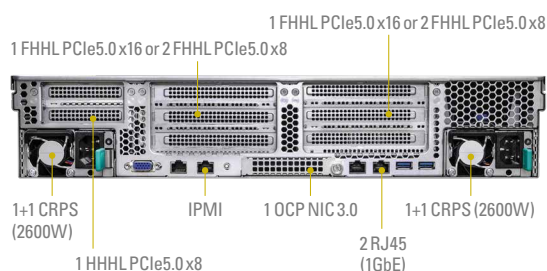


24 hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays



Application

- All-flash Storage Server
- Data Processing
- Virtualization
- Cloud Computing
- High-end Enterprise Server
- Hyperconverged Storage



2U24E-GENOA2

CPU	Socket	1+1 Socket SP5 (LAG 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	12+12 DDR5 288-pin (1DPC)
System	Form Factor	2U Rackmount
Physical Status	Chassis Dimension	770.0 X 438.0 X 86.4 mm
Front Panel	Buttons	Power, UID, Reset
	LEDs	Power Status, LAN Activity, HDD Activity, System status
	I/O	1 Type-A (USB3.2 Gen1), 1 Type-A (USB2.0)
Rear IO	RJ45	2 RJ45 (1GbE) by Intel® i350-AM2
		1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 RJ45 (COM), 1 UID w/ LED
Expansion Slots	Rear	1 FHHL PCIe5.0 x16 or 2 FHHL PCIe5.0 x8 [CPU0], 1 FHHL PCIe5.0 x16 or 2 FHHL PCIe5.0 x8 [CPU1] 1 HHHL PCIe5.0 x8 [CPU0], 1 OCP NIC 3.0 (PCIe5.0 x16) [CPU1]
Drive Bay/ Storage	External	24 hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays
	Internal	2 fixed 2.5" NVMe (PCIe5.0 x4) drive bays 1 M-key (PCIe3.0 x4), supports 2280/2260/2242/2230 form factor [CPU0]; 1 M-key (PCIe3.0 x4), supports 2280/2242 form factor [CPU1]
Power Supply	Module	1+1, 80-PLUS Titanium, 2600W CRPS
System Cooling	Fan	6 PWM hot-swap 60x38 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

1U12E-GENOA2



OCP NIC 3.0



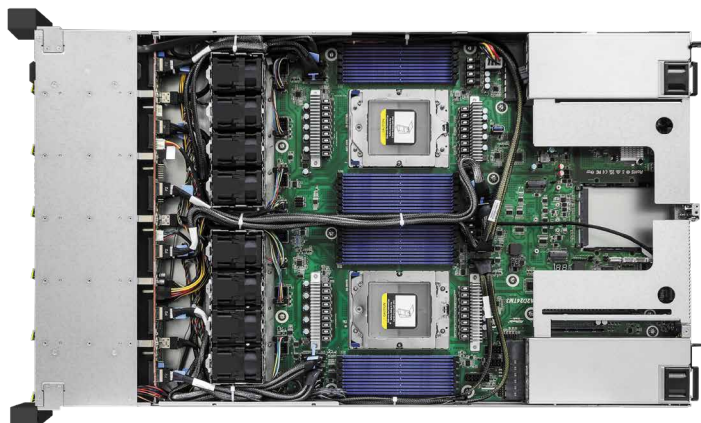
Storage



4800



PCI-E 5.0


 12 hot-swap 2.5"
 NVMe drive bays

 2 FHHL
 PCIe5.0 x16

 2 RJ45
 (1GbE)


1+1 CRPS (1600W)

IPMI

1 OCP 3.0 PCIe5.0 x16

1+1 CRPS (1600W)

Application

- All-flash Storage Server
- Database Processing
- Virtualization
- E-commerce

1U12E-GENOA2

CPU	Socket	1+1 Socket SP5 (LAG 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	12+12 DDR5 288-pin (1DPC)
System	Form Factor	1U Rackmount
Physical Status	Chassis Dimension	760 x 438 x 43.5 mm (29.9" x 17.2" x 1.7")
Front Panel	Buttons	Power button w/ LED, ID button w/ LED, System reset, NMI
	LEDs	HDD Activity, LAN 1/2, System fault
	I/O	1 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (1GbE) by Intel® i350 1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 RJ45 (COM), 1 UID w/ LED
Expansion Slots	Rear	2 FHHL PCIe5.0 x16 [CPU0] [CPU1] 1 OCP3.0 PCIe5.0 x16 [CPU0]
Drive Bay/ Storage	External	12 Hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays
	Internal	1 M-key (PCIe3.0 x4), supports 2280/2260/2242/2230 form factor [CPU0]; 1 M-key (PCIe3.0 x4), supports 2280/2242 form factor [CPU1]
Power Supply	Module	1+1, 80-PLUS Platinum, 1600W CRPS
System Cooling	Fan	8 Easy-swap 40x56 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: SAS drive is only supported with additional RAID/HBA cards

2U4N-F/GENOA-M3



2U High
Density Storage



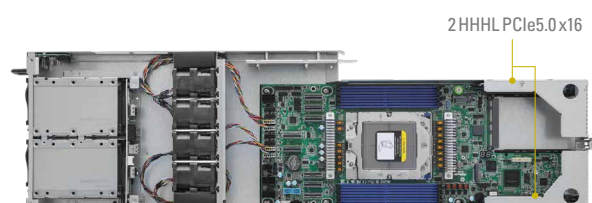
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OCP NIC 3.0



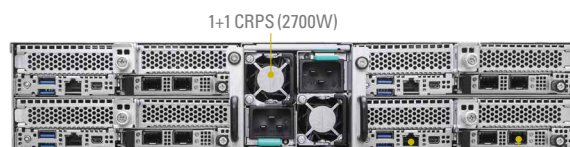
PCI-E 5.0



2 HHHL PCIe5.0x16



4 hot-swap 2.5" NVMe (PCIe5.0x4)/
SATA/SAS ^{Note1} drive bays



1+1 CRPS (2700W)

IPMI

1 OCP NIC 3.0

Application

- All-flash Storage Server
- Database Processing
- Virtualization
- E-commerce

2U4N-F/GENOA-M3

CPU (per node)	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM (per node)	Slot	8 DDR5 288-pin (1DPC)
System	Form Factor	2U Rackmount
Physical Status	Chassis Dimension	750 X 438 X 86.6mm (29.5" x 17.2" x 3.4")
Front Panel (per node)	Buttons	Power, Reset
	LEDs	System fail, UID, Power
	I/O	2 Type-A (USB3.2 Gen1)
Rear IO (per node)	RJ45	1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 mini-DisplayPort (VGA), 1 UID button w/ LED
Expansion	Rear	2 HHHL PCIe5.0x16
Slots (per node)		1 OCP NIC 3.0 (PCIe5.0x16)
Drive Bay/Storage (per node)	External	4 hot-swap 2.5" NVMe (PCIe5.0x4)/SATA/SAS ^{Note1} drive bays or 8 hot-swap 9.5mm E1.S (PCIe5.0x4) drive bays
	Internal	1 M-key (PCIe5.0x4 or SATA 6Gb/s), supports 22110/2280 form factor 1 M-key (PCIe4.0x4 or SATA 6Gb/s), supports 22110/2280 form factor
Power Supply	Module	1+1, 80-PLUS Platinum/Titanium, 2700W CRPS
System	Fan	4 PWM hot-swap dual-rotor 40x56 mm fans
Cooling (per node)		
Management (per node)		ASPEED BMC AST2600
Security (per node)		TPM by optional accessory

Note1: SAS drive is only supported with additional RAID/HBA cards

1U1G-GENOA/M3



4800



PCI-E 5.0



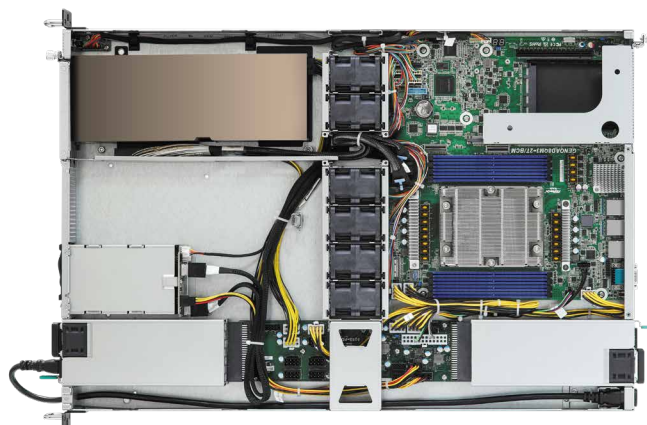
OCP NIC 3.0



GPGPU



10Gbase-T



2 Hot-swap 2.5" NVMe drive bays



1 FHFL dual-slot PCIe5.0 x16

1 CRPS (1600W)



IPMI

1 FHHL PCIe5.0 x16

1 CRPS (1600W)

2 RJ45
(10GbE)

1 OCP NIC 3.0

Application

- Rendering
- Virtualization
- Visualization
- Deep Learning

1U1G-GENOA/M3

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	1U Rackmount
	Chassis Dimension	653.5 x 438.0 x 43.5 mm (25.73" x 17.24" x 1.71")
Front Panel	Buttons	Power button w/ LED, UID button w/ LED, System Reset
	LEDs	System Fault, LAN1/LAN2 Activity
Rear IO	I/O	2 Type-A (USB3.2 Gen1)
	RJ45	2 RJ45 (10GbE) by Intel® Broadcom BCM57416
		1 dedicated IPMI
	Others	1 DB15 (VGA), 1 DB9 (COM)
Expansion Slots	Front	1 FHFL dual-slot PCIe5.0 x16
	Rear	1 FHHL PCIe5.0 x16 via RB1UX16R_G5
		1 OCP NIC 3.0 (PCIe5.0 x16)
Drive Bay/ Storage	External	2 Hot-swap 2.5" NVMe (PCIe4.0 x4) drive bays
	Internal	1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor
		1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 2280 form factor
Power Supply	Module	1+1, 1600W CRPS
System Cooling	Fan	6 PWM dual-rotor 40x56 mm fans
Management		ASPEED BMC AST2600
Security		SPI TPM by optional accessory

2U4G-GENOA/M3



4800



PCI-E 5.0



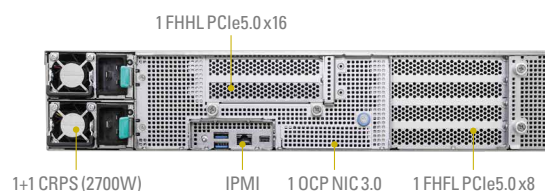
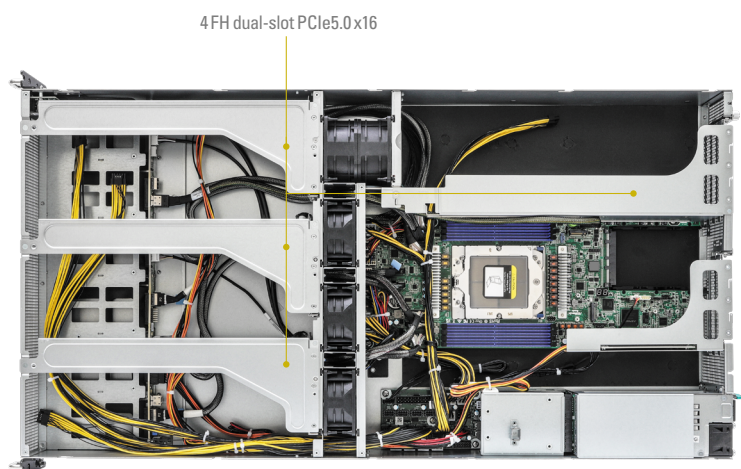
GPGPU



OCP NIC 3.0

Application

- Artificial Intelligence
- Machine Learning
- HPC
- Virtualization



2U4G-GENOA/M3

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	TDP	Up to 360W
DIMM	Slot	8 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	2U Rackmount
	Chassis Dimension	850 x 438 x 87.5 mm (33.5" x 17.2" x 3.5")
Front Panel	Buttons	Power, UID
	LEDs	System fault, UID, Power LEDs
	I/O	2 Type-A (USB2.0)
Rear IO	RJ45	1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 mini-DisplayPort (VGA), 1 UID button w/ LED
Expansion Slots	Front	3 FH dual-slot PCIe5.0 x16
	Rear	1 FH dual-slot PCIe5.0 x16 1 OCP NIC 3.0 PCIe5.0 x16 1 FHHL PCIe5.0 x16 1 FHFL PCIe5.0 x8
Drive Bay/ Storage	External	4 Hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays 2 Hot-swap 2.5" SATA drive bays
	Internal	2 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor
	Module	1+1, 80-PLUS Platinum, 2700W CRPS
Power Supply	Module	1+1, 80-PLUS Platinum, 2700W CRPS
System Cooling	Fan	1 PWM hot-swap 80x80 mm fans
	Fan	3 PWM hot-swap 80x38 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

4U4G-GENOAX/2T



4800

PCI-E 5.0

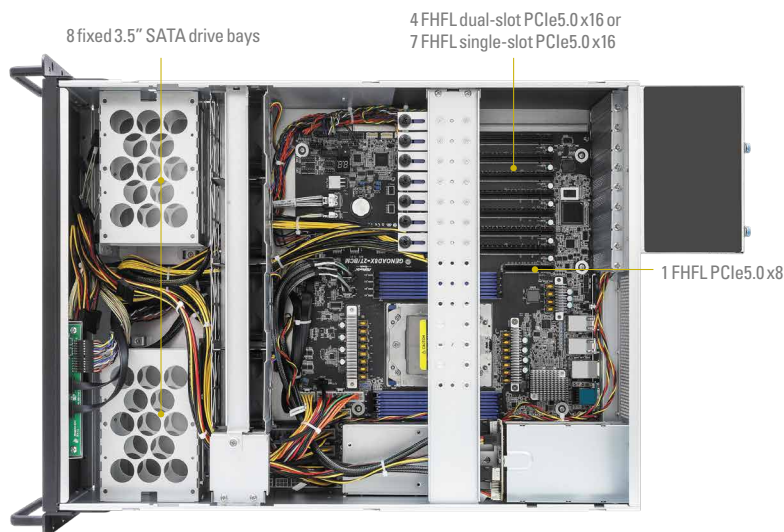


GPGPU

10Gbase-T

Application

- Data Processing
- Deep Learning
- Mainstream Workstation



2 Hot-swap 2.5" NVMe (PCIe4.0x4) drive bays



1+1 CRPS (2700W) 2 RJ45 (10GbE)

4U4G-GENOAX/2T

CPU	Socket	1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
DIMM	Slot	8 DDR5 288-pin (1DPC)
System Physical Status	Form Factor	4U Rackmount
	Chassis Dimension	596 x 430.4 x 174.8 mm (23.5" x 16.9" x 6.9", without GPU fans)
Front Panel	Buttons	Power w/ LED, ID w/ LED, System Reset, NMI
	LEDs	LAN Activity, HDD Activity, System Event
	I/O	2 Type-A (USB3.2 Gen1)
Rear IO	RJ45	2 RJ45 (10GbE) by Broadcom BCM57416 1 dedicated IPMI
	Others	2 Type-A (USB3.2 Gen1), 1 UID button w/ LED, 1 DB15 (VGA), 1 DB9 (COM)
Expansion Slots	Rear	4 FHFL dual-slot PCIe5.0 x16 or 7 FHFL single-slot PCIe5.0 x16 ^{Note1} 1 FHFL PCIe5.0 x8 ^{Note2}
Drive Bay/ Storage	External	2 Hot-swap 2.5" NVMe (PCIe4.0 x4) drive bays ^{Note1/2}
	Internal	8 fixed 3.5" SATA drive bays ^{Note2}
		1 M-key (PCIe5.0 x4 or 4 SATA 6Gb/s), supports 22110/2280 form factor
		1 M-key ^{Note1} (PCIe5.0 x4), supports 22110/2280 form factor
Power Supply	Module	1+1, 2700W CRPS
System Cooling	Fan	4 PWM Hot-swap 80x38 mm fans
		2 PWM fixed 80x38 mm GPU fans (optional)
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

Note1: SLOT1 shared lanes with MCIO4 and M2_2. SLOT1 auto-switch to PCIe5.0 x8 when either MCIO4 or M2_2 populated.

Note2: SLOT7 share lanes with MCIO1 and MCIO2. When SLOT7 occupied, MCIO1 will not function and MCIO2 can be enabled by jumper setting. When selecting MCIO2, SLOT7 will switch to PCIe4.

4U8G-GENOA2

4U10G-GENOA2



4800



PCI-E 5.0



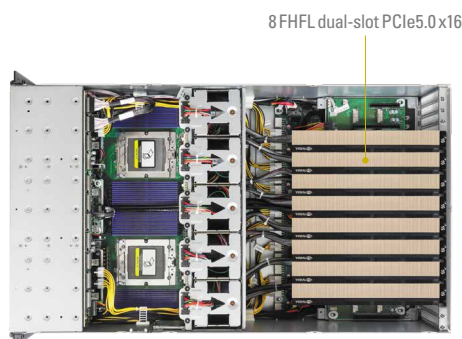
GPGPU



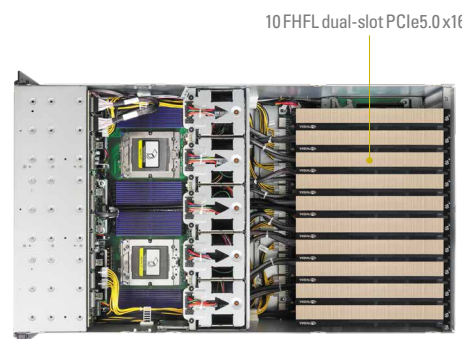
OCP NIC 3.0

Application

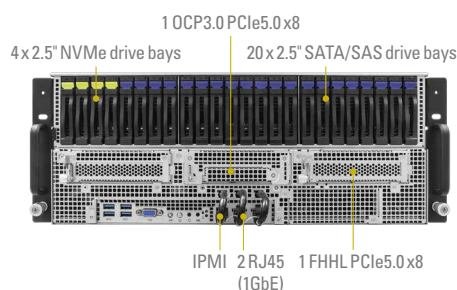
- Deep Learning
- Big Data Analytics
- HPC
- Machine Learning



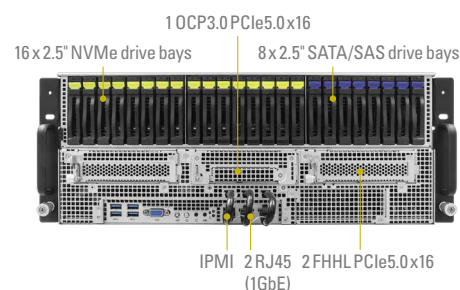
8 FHFL dual-slot PCIe5.0 x16



10 FHFL dual-slot PCIe5.0 x16

1 OCP3.0 PCIe5.0 x8
4x 2.5" NVMe drive bays 20x 2.5" SATA/SAS drive bays

IPMI 2 RJ45 (1GbE) 1 FHFL PCIe5.0 x8

1 OCP3.0 PCIe5.0 x16
16x 2.5" NVMe drive bays 8x 2.5" SATA/SAS drive bays

IPMI 2 RJ45 (1GbE) 2 FHFL PCIe5.0 x16



3+1 CRPS (1600W) 2 RJ45 (1GbE) IPMI



3+1 CRPS (2000W) 2 RJ45 (1GbE) IPMI

4U8G-GENOA2

4U10G-GENOA2

CPU	Socket	1+1 Socket SP5 (LGA 6096) AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors	
DIMM	Slot	12+12 DDR5 288-pin (1DPC)	
System	Form Factor	4U Rackmount	
Physical Status	Chassis Dimension	786 x 438 x 176.5 mm (30.9" x 17.24" x 6.95")	
Front Panel	Buttons	Power button w/ LED, Reset button, NMI button, UID button	
	LEDs	System fault LED, HDD activity LED	
Rear IO	I/O	2 RJ45 (1GbE) by Intel® i350, shares with Rear IO	
		4 Type-A (USB3.2 Gen1)	
		1 DB15 (VGA)	
		2 RJ45 (1GbE) by Intel® i350, shares with Front Panel	
Expansion Slots	Front	1 FHFL PCIe5.0 x8 1 OCP3.0 PCIe5.0 x8	2 FHFL PCIe5.0 x16 1 OCP NIC 3.0 PCIe5.0 x16
	Rear	8 FHFL dual-slot PCIe5.0 x16	10 FHFL dual-slot PCIe5.0 x16 ; 1 FHFL single-slot PCIe5.0 x16
Drive Bay/Storage	External	4 Hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays or 24 Hot-swap 2.5" SATA/SAS ^{Note1} drive bays	16 Hot-swap 2.5" NVMe (PCIe5.0 x4) drive bays or 24 Hot-swap 2.5" SATA/SAS ^{Note1} drive bays
	Internal	1 M-key (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor [CPU0] 1 M-key (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor [CPU1]	
Power Supply	Module	3+1, 80-PLUS Platinum, 1600W CRPS	3+1, 80-PLUS Platinum/Titanium, 2000W CRPS
System Cooling	Fan	5 Middle Hot-swap 80x80 mm fans	
Management		ASPEED BMC AST2600	
Security		TPM by optional accessory	

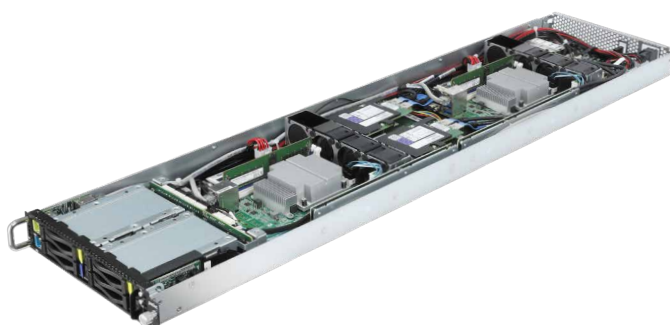
Note1: Additional RAID/HBA card required to support the 24 x 2.5" SATA/SAS drive bays

About ASRock Rack

ASRock Rack Inc., established in 2013, specialized in the field of Cloud Computing server hardware. Inheriting ASRock's design concepts, Creativity, Consideration and Cost-effectiveness, the company is dedicated bringing the Server Industry out of the box thinking with the passion to innovate. Leveraged by ASRock's growing momentum and distribution channels, this young and vibrant company targets at the booming market of cloud computing and commits to serve the market with user friendly, eco-friendly, Do-It-Yourself Server hardware, featuring flexible and reliable products.

Barebones Series

Leveraging the Versatile Portfolio, ASRock Rack Barebones Series provide the solutions for Cloud, AI, Deep Learning and 5G with high density and multi-node of computing, storage and networking with lower TCO and greater efficiency.

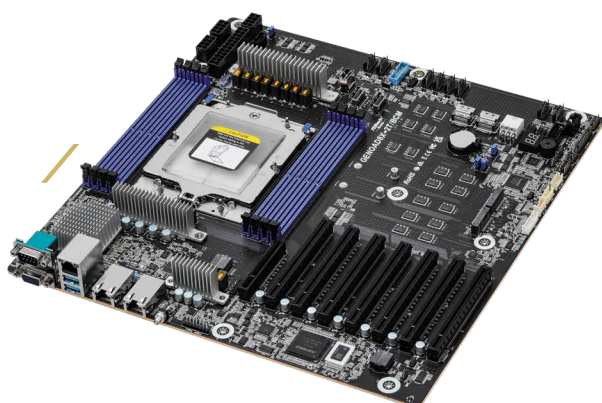
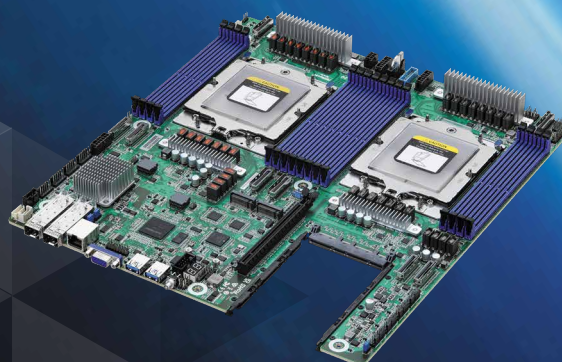


OPEN 19

The Open19 project is an industry specification that defines a cross-industry common server form factor; with the open standard technology and wide levels of adoption, the Open19 creates more flexible and economic for data center and edge solutions as well as the operators of all sizes.

Server Motherboards

With the best performance, product lifetime, and optimized resource utilization, ASRock Rack Server Motherboards are famous and popular among industry investment, especially for the flexibility and versatility.



Workstation Motherboards

Featuring reliable, quiet, and power-efficient, these workstations are best tools for the content creators.

GENOAD8UD-2T/X550



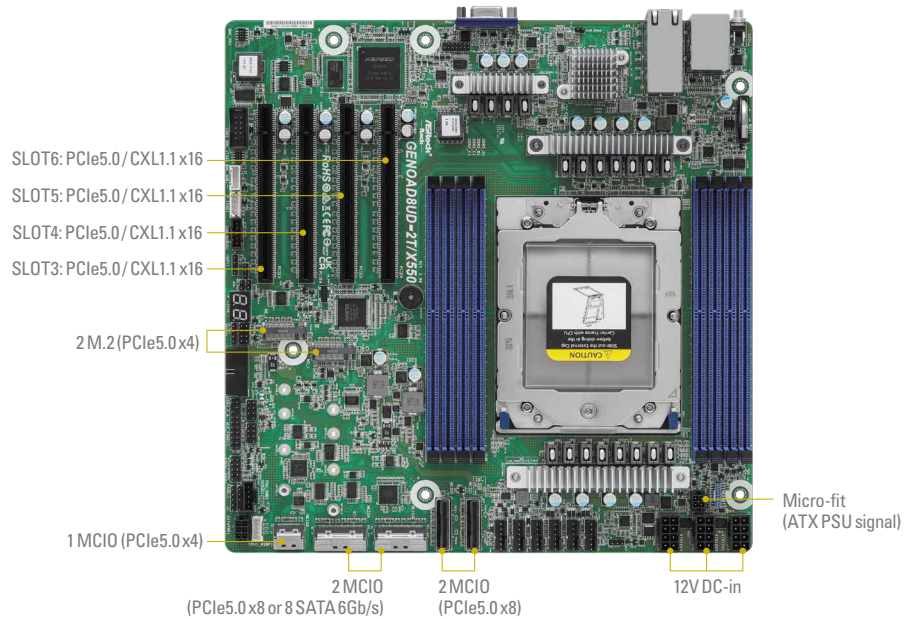
10Gbase-T



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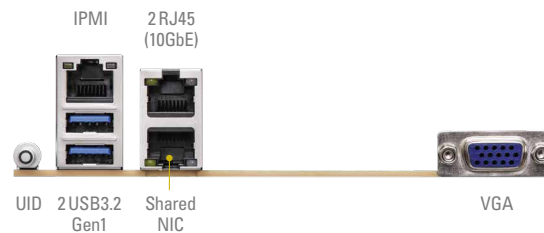


PCI-E 5.0



Application

- Compact Storage Server
- Enterprise NAS
- Compact GPU Tower



GENOAD8UD-2T/X550

Power source		Supports ATX PSU and 12V DC-in
Form Factor		10.4" x 10.5"
Processor System	CPU	1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	8 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz; 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
Expansion	PCIe slot	SLOT6: PCIe5.0/CXL1.1 x16 SLOT5: PCIe5.0/CXL1.1 x16 SLOT4: PCIe5.0/CXL1.1 x16 SLOT3: PCIe5.0/CXL1.1 x16
	Others	2 MCIO (PCIe5.0 x8) 2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s) 1 MCIO (PCIe5.0 x4)
Storage	M.2	2 M-key (PCIe5.0 x4), supports 2280/2260/2242/2230 form factor
	SATA port	16 SATA 6 Gb/s: 2 MCIO
Network	RJ45	2 RJ45 (10GbE) by Intel® X550 ^{Note1}
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header
	COM port	1 (9-pin) header
	Video	1 DB15 (VGA)
Security	TPM	Supports 13-pin (SPI) TPM modules

Note1: R1.00 for LAN chip Intel® X710, R5.00 for LAN chip Intel® X550

GENOAD8X-2T/BCM



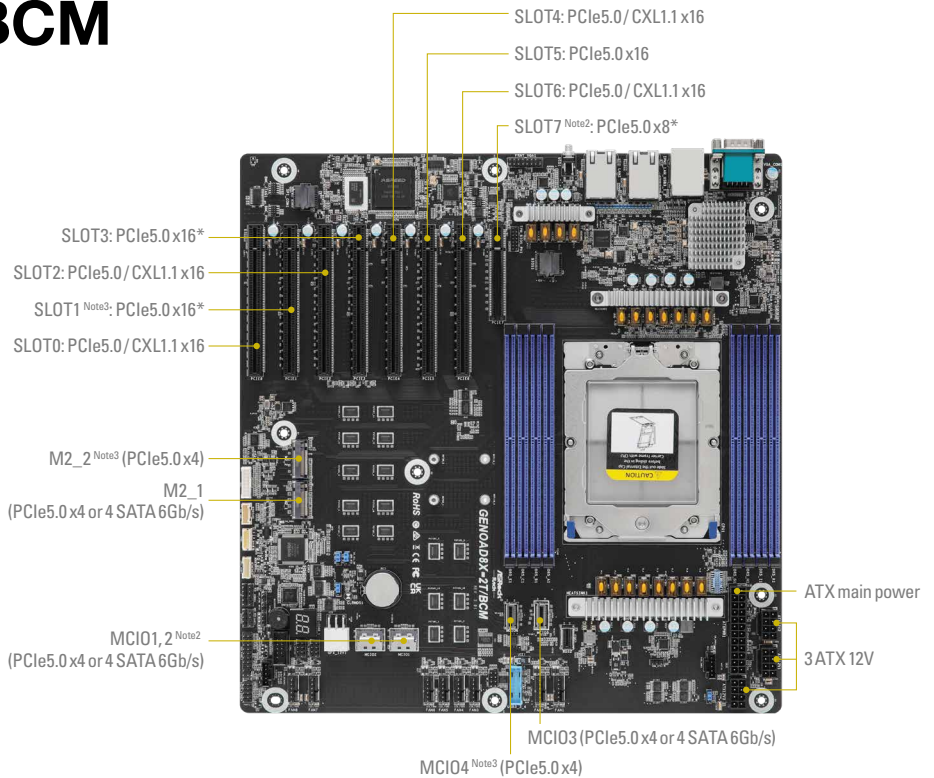
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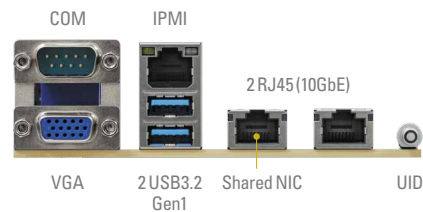


PCI-E 5.0



Application

- Mainstream Server/Workstation
- Web Hosting



GENOAD8X-2T/BCM

Form Factor		EEB (12.63" x 13") ^{Note1}
Processor System	CPU	1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	8 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS, max. 4800MHz
Expansion	PCIe slot	SLOT7 ^{Note2} : PCIe5.0 x8 SLOT6, 4, 2, 0: PCIe5.0/CXL1.1 x16 SLOT5, 3: PCIe5.0 x16 SLOT1 ^{Note3} : PCIe5.0 x16
	Others	MCI01, 2 ^{Note2} (PCIe5.0 x4 or 4 SATA 6Gb/s) MCI03 (PCIe5.0 x4 or 4 SATA 6Gb/s) MCI04 ^{Note3} (PCIe5.0 x4)
Storage	M.2	M2_1 (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor, M2_2 ^{Note3} (PCIe5.0 x4), supports 22110/2280 form factor
	SATA port	13 SATA 6Gb/s: 3 MCI0, 1 M.2
Network	RJ45	2 RJ45 (10GbE) by Broadcom BCM57416
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header
	COM port	1 DB9 (COM), 1 (9-pin) header
	Video	1 DB15 (VGA)
Security	TPM	Supports 13-pin (SPI) TPM modules

Note1: Extend 10.1mm left and 6mm right

Note2: SLOT7 share lanes with MCI01 and MCI02. When SLOT7 occupied, MCI01 will not function and MCI02 can be enabled by jumper setting. When selecting MCI02, SLOT7 will switch to PCIe4.

Note3: SLOT1 shared lanes with MCI04 and M2_2. SLOT1 auto-switch to PCIe5.0 x8 when either MCI04 or M2_2 populated.

* Via re-drivers.

BERGAMOD8-2L2T



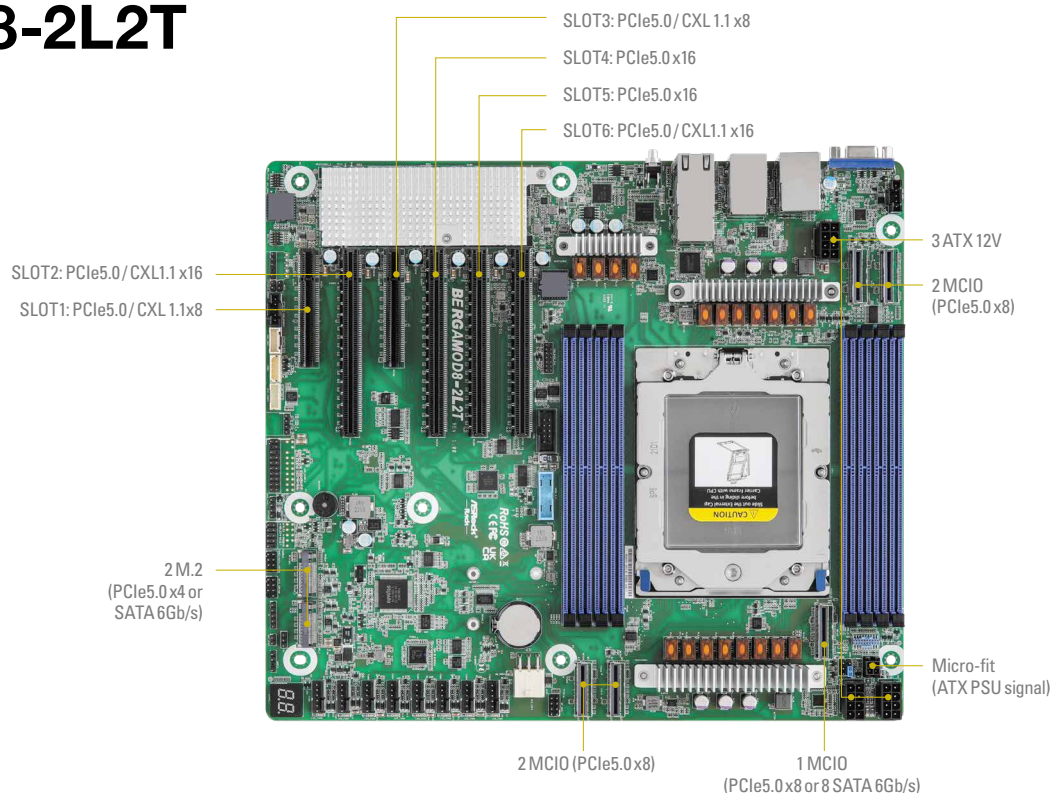
10Gbase-T



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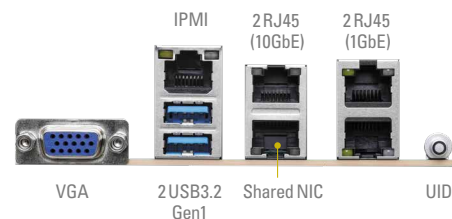


PCI-E 5.0



Application

- Mainstream Server/Workstation
- Web Hosting



BERGAMOD8-2L2T

Form Factor		CEB (12" x 10.5")
Processor System	CPU	1 Socket SP5 (SM-LGA-6096) Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	8 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS, max. 4800MHz
Expansion	PCIe slot	SLOT6, 2: PCIe5.0/CXL1.1 x16 SLOT5: PCIe5.0x16 SLOT4: PCIe5.0x16 SLOT3, 1: PCIe5.0/CXL1.1 x8
	Others	1 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s) 4 MCIO (PCIe5.0 x8)
Storage	M.2	1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 2280 form factor 1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor
	SATA port	10 SATA 6Gb/s: 1 MCIO, 2 M.2
Network	RJ45	2 RJ45 (10GbE) by Intel X710-AT2 2 RJ45 (1GbE) by Intel i210
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header
	COM port	1 (9-pin) header
	Video	1 DB15 (VGA)
Security	TPM	Supports 13-pin (SPI) TPM modules

GENOAD8QM3-2T/BCM



Storage



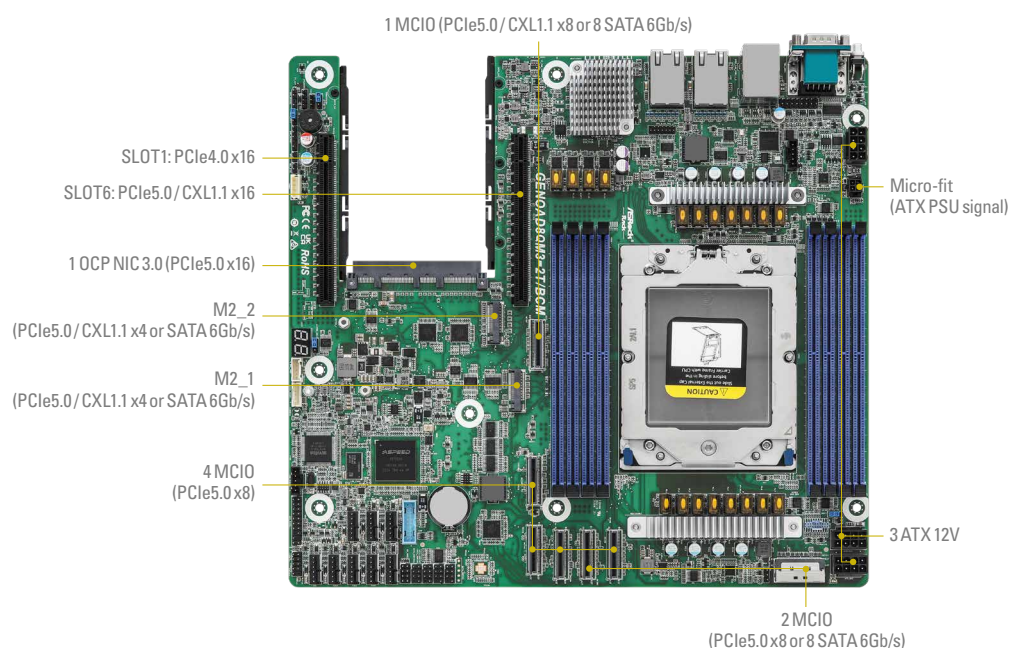
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PCI-E 5.0

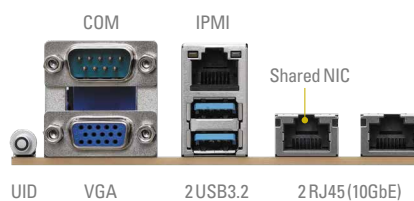


OCP NIC 3.0



Application

- NVMe Storage Server
- Web Hosting
- General Purpose Server



GENOAD8QM3-2T/BCM

Form Factor		CEB (12" x 11")
Processor System	CPU	1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	8 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz; 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
Expansion	PCIe slot	SLOT6: PCIe5.0/ CXL1.1 x16 SLOT1: PCIe4.0x16
	Others	1 MCIO (PCIe5.0/ CXL1.1 x8 or 8 SATA 6Gb/s) 2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s) 4 MCIO (PCIe5.0 x8)
Storage	M.2	M2_1 (PCIe5.0/ CXL1.1 x4 or SATA 6Gb/s), supports 22110/2280 form factor M2_2 (PCIe5.0/ CXL1.1 x4 or SATA 6Gb/s), supports 2280 form factor
	SATA port	26 SATA 6Gb/s: 3 MCIO, 2 M.2
Network	RJ45	2 RJ45 (10GbE) by Broadcom BCM57416
	OCP NIC	1 OCP NIC 3.0 (PCIe5.0 x16)
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header
	COM port	1 DB9 (COM)
	Video	1 DB15 (VGA), 1 (15-pin) header
Security	TPM	Supports 13-pin (SPI) TPM modules

GENOAD8HM3



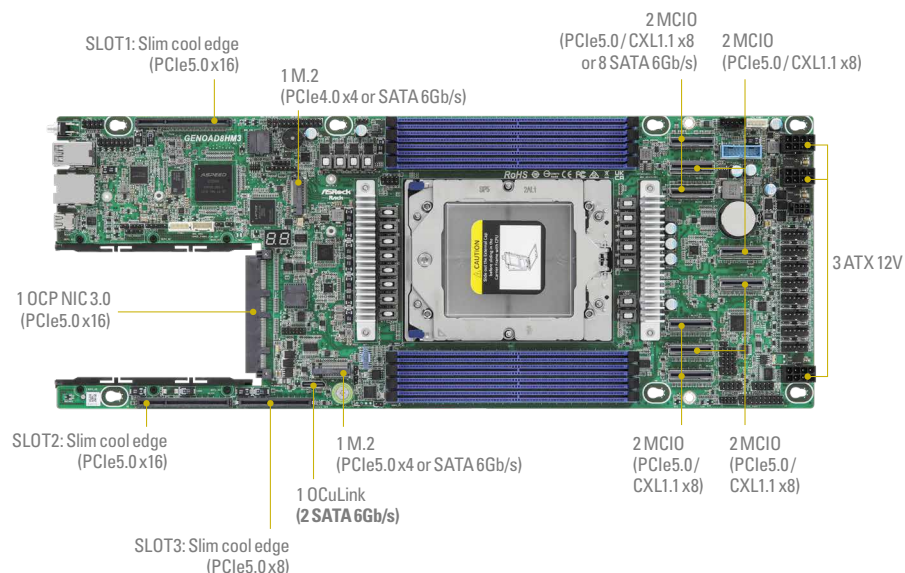
OCP NIC 3.0



PCI-E 5.0

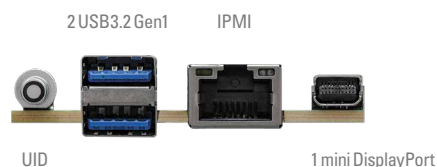


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Application

- Multi-node Server
- Edge Server



GENOAD8HM3

Form Factor		Half-Width (6.6" x 17")
Processor System	CPU	1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	8 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz; 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
Expansion	PCIe slot	SLOT3: Slim cool edge (PCIe5.0 x8) SLOT2: Slim cool edge (PCIe5.0 x16) SLOT1: Slim cool edge (PCIe5.0 x16)
	Others	2 MCIO (PCIe5.0/CXL1.1 x8 or 8 SATA 6Gb/s) 6 MCIO (PCIe5.0/CXL1.1 x8) 1 OCuLink (2 SATA 6Gb/s)
Storage	M.2	1 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor 1 M-key (PCIe4.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor
	SATA port	18 SATA 6Gb/s: 2 MCIO, 2 M.2 2 SATA 6Gb/s by ASM1061: 1 OCuLink
Network	OCP NIC	1 OCP NIC 3.0 (PCIe5.0 x16)
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header
	COM port	1 (9-pin) header
	Video	1 mini DisplayPort (VGA), 1 (15-pin) header
Security	TPM	Supports 13-pin (SPI) TPM modules

GENOAD12M3-2Q



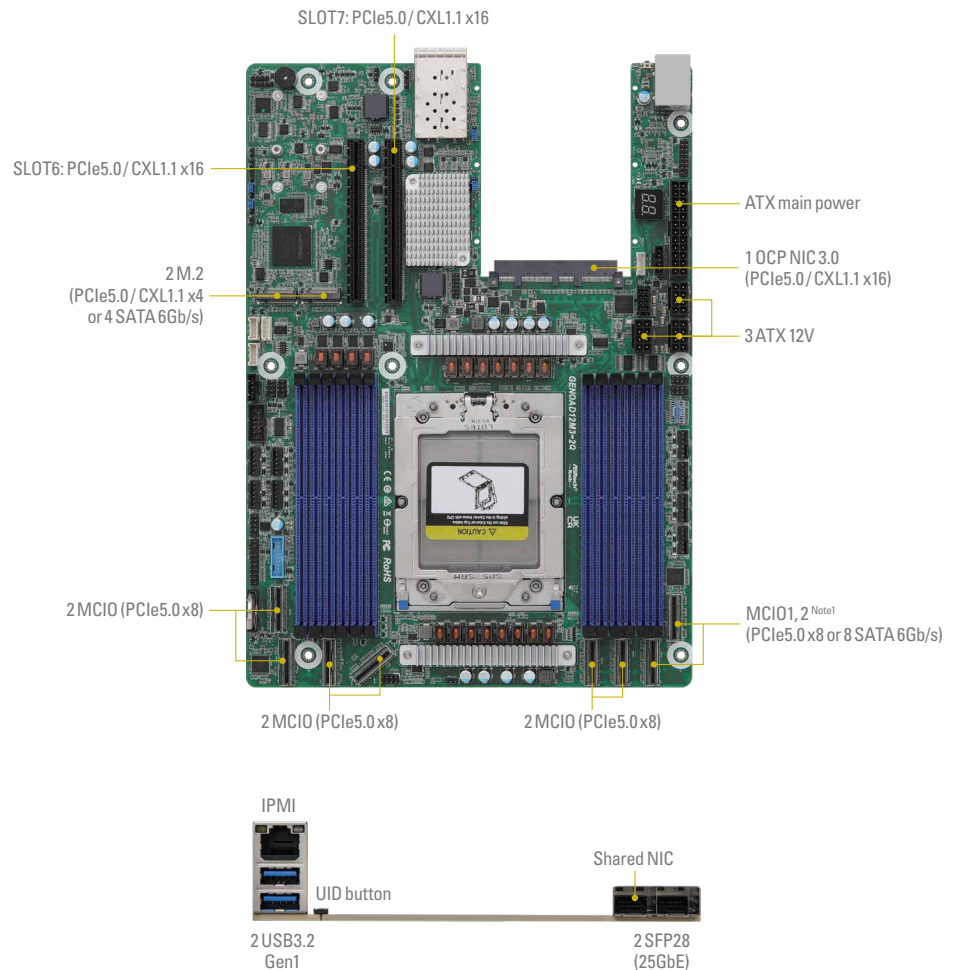
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OCP NIC 3.0



SFP28

PCI-E 5.0



Application

- All-flash Storage Server
- Cloud Computing
- CSP

GENOAD12M3-2Q

Form Factor		9.6" x 13.39"
Processor System	CPU	1 Socket SP5 (SM-LGA-6096) Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	12 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS, max. 4800MHz
Expansion	PCIe slot	SLOT7: PCIe5.0/CXL1.1 x16 SLOT6: PCIe5.0/CXL1.1 x16
	Others	6 MCIO (PCIe5.0 x8) 2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s)
Storage	M.2	2 M-key (PCIe5.0/CXL1.1 x4 or 4 SATA 6Gb/s), supports 22110/2280/2260 form factor
	SATA port	Up to 24 SATA 6Gb/s: 2 MCIO, 8 SATA via optional M2U2_HD_G4 M.2 device
Network	SFP28	2 SFP28 (25GbE) by Broadcom BCM57414
	OCP NIC	1 OCP NIC 3.0 (PCIe5.0/CXL1.1 x16)
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header
	COM port	1 (9-pin) header
	Video	1 (15-pin) header
Security	TPM	Supports 13-pin (SPI) TPM modules

GENOAD24QM3-2L2T/BCM



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10Gbase-T

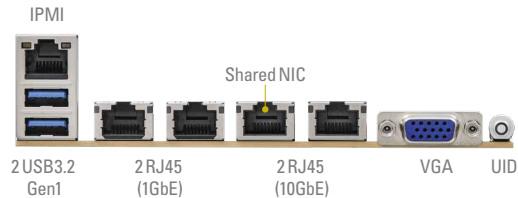
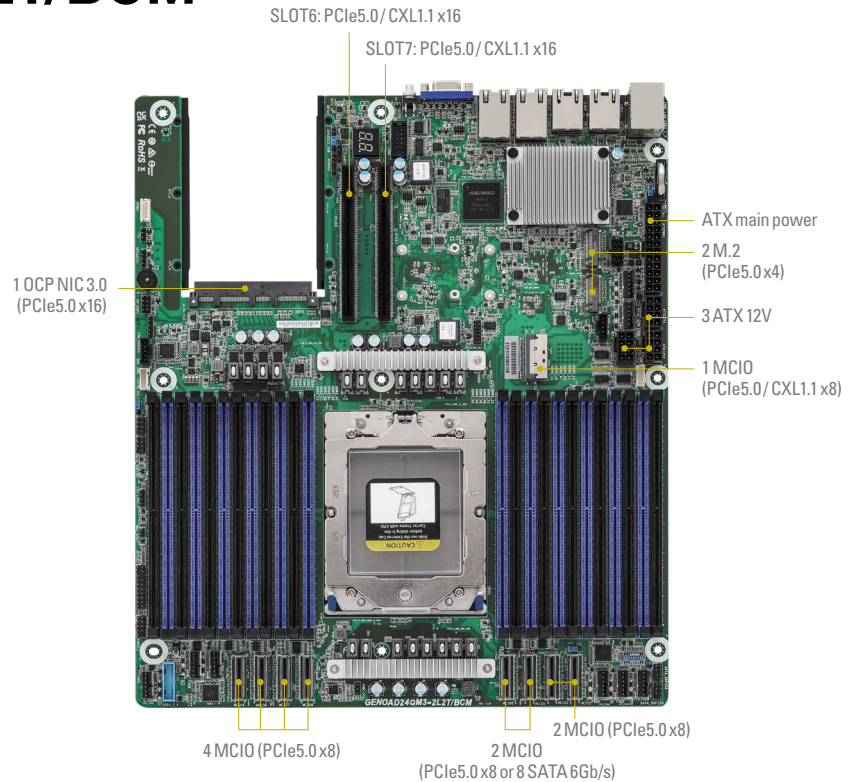


OCP NIC 3.0

PCI-E 5.0

Application

- CSP
- All-flash Storage Server
- Cloud Computing



GENOAD24QM3-2L2T/BCM

Form Factor		EEB (12" x 14")
Processor System	CPU	1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	24 DDR5 288-pin DIMM Slots (2DPC); Supports RDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz; 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
Expansion	PCIe slot	SLOT7: PCIe5.0/CXL1.1 x16 SLOT6: PCIe5.0/CXL1.1 x16
	Others	1 MCIO (PCIe5.0/CXL1.1 x8) 6 MCIO (PCIe5.0 x8) 2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s)
Storage	M.2	2 M-key (PCIe5.0 x4/CXL1.1 x4), supports 22110/2280/2260 form factor
	SATA port	16 SATA 6 Gb/s: 2 MCIO
Network	RJ45	2 RJ45 (10GbE) by Broadcom BCM57416 ^{Note1} 2 RJ45 (1GbE) by Intel® i210
	OCP NIC	1 OCP NIC 3.0 (PCIe5.0/CXL1.1 x16)
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F-CG
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 1 via 19-pin header
	COM port	1 (9-pin) header
	Video	1 DB15 (VGA)
Security	TPM	Supports 13-pin (SPI) TPM modules

Note1: R1.00 for LAN chip Intel® X710, R3.00 for LAN chip Broadcom BCM57416

GENOA2D16NQM3-2Q



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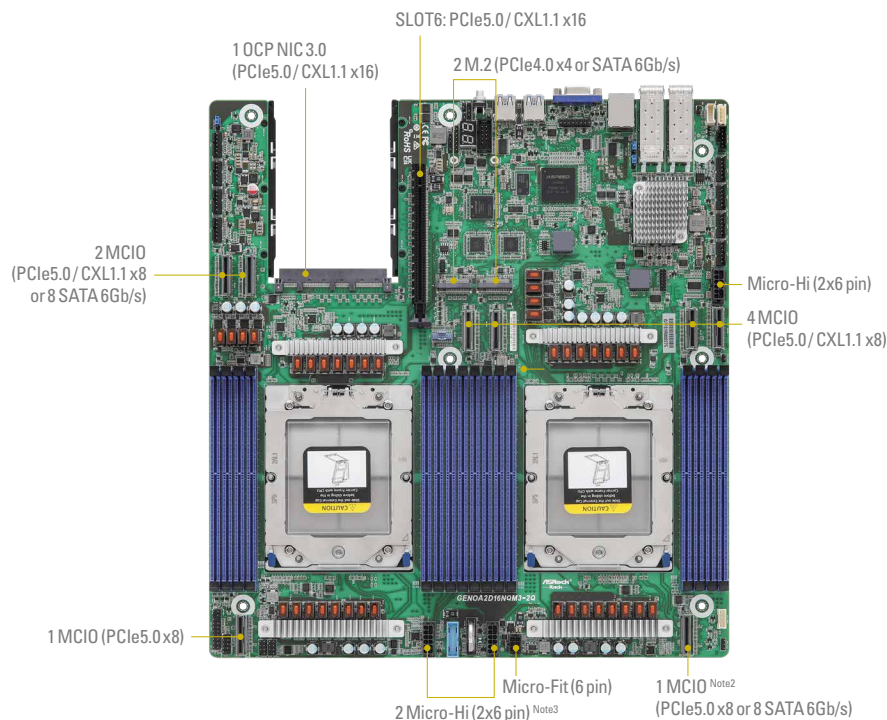
OCP NIC 3.0



SFP28



PCI-E 5.0



Application

- Software-defined application
- HCI



GENOA2D16NQM3-2Q

Form Factor		EEB (12.82" X 14") ^{Note1}
Processor System	CPU	1+1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	8+8 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
Expansion	PCIe slot	SLOT6: PCIe5.0/CXL1.1 x16 [CPU1]
	Others	4 MCIO (PCIe5.0/CXL1.1 x8) [CPU0] 1 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s) [CPU0] ^{Note2} 2 MCIO (PCIe5.0/CXL1.1 x8 or 8 SATA 6Gb/s) [CPU1] 1 MCIO (PCIe5.0 x8) [CPU1]
Storage	M.2	2 M-key (PCIe4.0 x4 or SATA 6Gb/s), supports 2280 form factor [CPU0]
	SATA port	Up to 18 SATA 6 Gb/s: 2 MCIO, 2 M.2
Network	SFP28	2 SFP28 (25GbE) by Broadcom BCM57414
	OCP NIC	1 OCP NIC 3.0 (PCIe5.0/CXL1.1 x16) [CPU1]
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 2 via 19-pin header [CPU1]
	COM port	1 (9-pin) header
	Video	1 DB15 (VGA), 1 (15-pin) header
Security	TPM	Supports 13-pin (SPI) TPM modules

Note1: Extend 10.1mm left and 10.7mm right

Note2: MCIO from CPU0 support PCIe only while installing 2 processors

GENOA2D24TM3-2L+



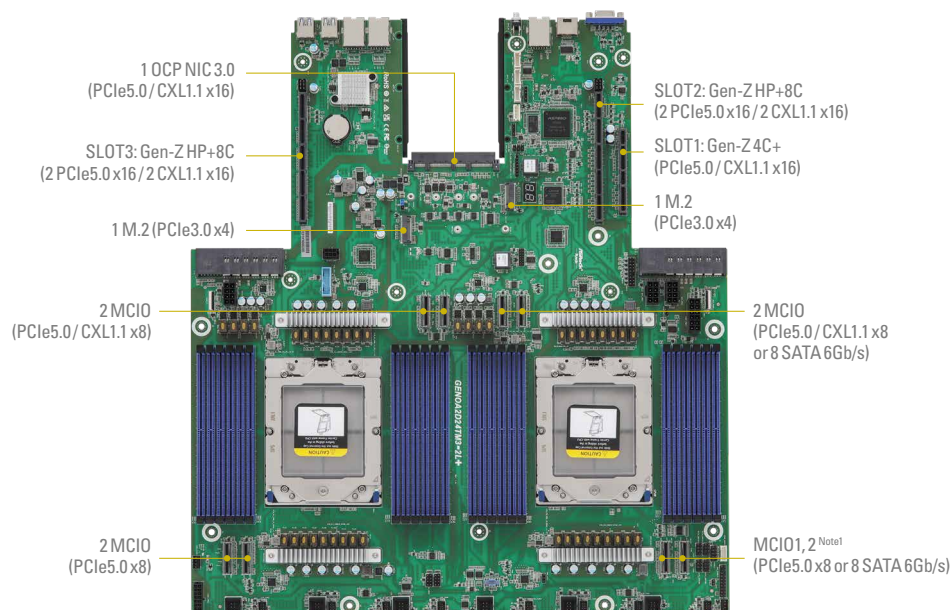
OCP NIC 3.0



PCI-E 5.0



4800



Application

- Software-defined application
- E-commerce
- HCI



GENOA2D24TM3-2L+

Form Factor		Proprietary T-shape (17.0149" x 18.8607")
Processor System	CPU	1+1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	12+12 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
Expansion	PCIe slot	SLOT3: Gen-Z HP+8C (2 PCIe5.0 x16 / 2 CXL1.1 x16) [CPU1] SLOT2: Gen-Z HP+8C (2 PCIe5.0 x16 / 2 CXL1.1 x16) [CPU0] SLOT1: Gen-Z 4C+ (PCIe5.0/CXL1.1 x16) [CPU0]
	Others	MCIO1, 2 (PCIe5.0 x8 or 8 SATA 6Gb/s) [CPU0] ^{Note1} 2 MCIO (PCIe5.0/CXL1.1 x8 or 8 SATA 6Gb/s) [CPU0] 2 MCIO (PCIe5.0/CXL1.1 x8) [CPU1] 2 MCIO (PCIe5.0 x8) [CPU1]
Storage	M.2	1 M-key (PCIe3.0 x4), supports 2280/2260/2242/2230 form factor [CPU0] 1 M-key (PCIe3.0 x4), supports 2280/2242 form factor [CPU1]
	SATA port	Up to 32 SATA 6 Gb/s: 4 MCIO
Network	RJ45	2 RJ45 (1GbE) by Intel® i350
	OCP NIC	1 OCP NIC 3.0 (PCIe5.0/CXL1.1 x16) [CPU1]
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	4 USB3.2 Gen1 ports: 2 rear Type-A, 1 via 26-pin header, 1 via 19-pin header
	COM port	1 RJ45 (COM)
	Video	1 DB15 (VGA)
Security	TPM	Supports 13-pin (SPI) TPM modules

Note1: MCIO1 and MCIO2 support PCIe only while installing 2 processors

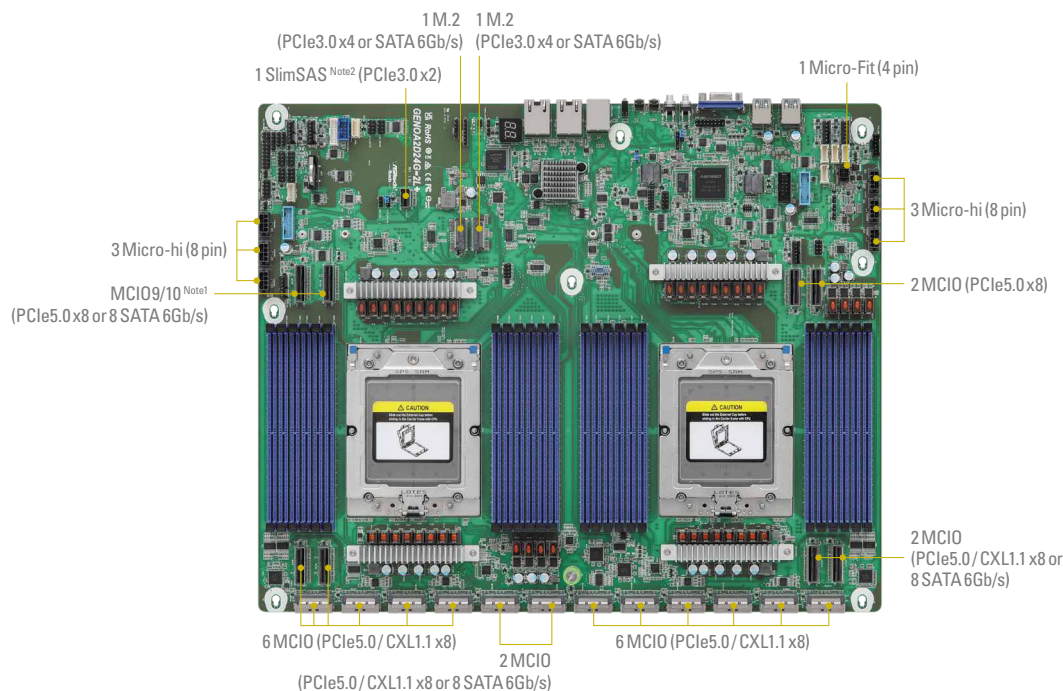
GENOA2D24G-2L+



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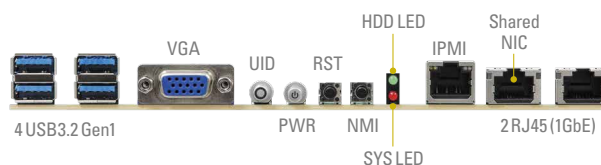


PCI-E5.0



Application

- All-flash Storage Server
- GPGPU Computing
- High-end Network Appliance



GENOA2D24G-2L+

Form Factor		Proprietary (16.93"x 13.78")
Processor System	CPU	1+1 Socket SP5 (SM-LGA-6096); Supports AMD EPYC™ 9004 (with AMD 3D V-Cache™ Technology) and 97x4 series processors
	FCH	System on chip
Memory	Capacity	12+12 DDR5 288-pin DIMM Slots (1DPC); Supports RDIMM, LRDIMM, RDIMM-3DS RDIMM: up to 64GB (2R), max. 4800MHz 3DS RDIMM: up to 512GB (2S8RX4), max. 4800MHz
	Others	6 MCIO (PCIe5.0/CXL1.1 x8) [CPU0] 2 MCIO (PCIe5.0/CXL1.1 x8 or 8 SATA 6Gb/s) [CPU0] 2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s) [CPU0] ^{Note1} 6 MCIO (PCIe5.0/CXL1.1 x8) [CPU1] 2 MCIO (PCIe5.0/CXL1.1 x8 or 8 SATA 6Gb/s) [CPU1] 2 MCIO (PCIe5.0 x8) [CPU1] 1 SlimSAS (PCIe3.0 x2) [CPU0] ^{Note2}
Storage	M.2	M2_1 (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor [CPU0] M2_2 (PCIe3.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor [CPU1]
	SATA port	32 SATA 6 Gb/s: 4 MCIO 2 SATA 6Gb/s by ASM1061: 2 M.2
Network	RJ45	2 RJ45 (1GbE) by Intel® i350
Management	BMC	ASPEED AST2600
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F
I/O	USB	8 USB3.2 Gen1 ports: 4 rear Type-A, 4 via 19-pin headers
	COM port	1 (9-pin) header
	Video	1 DB15 (VGA), 1 (15-pin) header
Security	TPM	Supports 13-pin (SPI) TPM modules

Note1: MCIO9, 10 support PCIe only while installing 2 processors

Note2: SlimSAS (by jumper setting):

PCIe3.0 x2 when M2_1 supports only PCIe3.0 x2 or SATA 6Gb/s

No function when M2_1 supports PCIe3.0 x4 or SATA 6Gb/s



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