

## AMD EPYC<sup>TM</sup> 8004 Processors Purpose-built and Energy-efficient

Server Motherboards

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### 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.





## SIENAD8UD-2L2Q /

Compact Server Board Equipped with 25GbE and 1GbE Networking

Power source		Supports ATX PSU and 12V DC-in	
Form Factor		Deep Micro-ATX (9.6" x 10.5")	
Processor System	CPU	1 Socket SP6 (SM-LGA-4844)	
		AMD EPYC 8004 Processors	
	FCH	System on chip	
Memory	Capacity	8 DDR5 288-pin DIMM Slots (2DPC/1DPC); Supports RDIMM, max. 4800MH	
Expansion	PCIe slot	SLOT7: FL PCIe5.0 / CXL1.1 x8	
		SLOT6: FL PCIe5.0 / CXL1.1 x16	
		SLOT4: HL PCIe5.0 / CXL1.1 x16	
	Others	3 MCI0 (PCIe5.0 x8)	
		2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s)	
		1 OCuLink (PCle3.0 x4)	
Storage	M.2	2 M-key (PCIe5.0 x4), supports 22110/2280 form factor	
	SATA port	16 SATA 6Gb/s: 2 MCIO	
Network	RJ45	2 RJ45 (1GbE) by Intel® i210	
	SFP28	2 SFP28 (25GbE) by Broadcom BCM57414	
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F	
I/0	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	





## SIENAD8UD2-20 /

Power source		Supports ATX PSU and 12V DC-in		
Form Factor		Deep Micro-ATX (9.6" x 10.5")		
Processor System CPU		1 Socket SP6 (SM-LGA-4844)		
		AMD EPYC 8004 Processors		
	FCH	System on chip		
Memory	Capacity	8 DDR5 288-pin DIMM Slots (2DPC/1DPC); Supports RDIMM, max. 4800MHz		
Expansion	PCIe slot	SLOT7: FL PCIe5.0 / CXL1.1 x8		
		SLOT6: FL PCIe5.0 / CXL1.1 x16		
		SLOT4: HL PCIe5.0 / CXL1.1 x16		
	Others	3 MCIO (PCIe5.0 x8)		
		2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s)		
		1 OCuLink (PCIe3.0 x4)		
Storage	M.2	2 M-key (PCIe5.0 x4), supports 22110/2280 form factor		
	SATA port	16 SATA 6Gb/s: 2 MCIO		
Network	SFP28	2 SFP28 (25GbE) by Broadcom BCM57502		
	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		

## SIENAD8UD3 / Compact Server Board Supporting up to 32 SATA for Storage

Power source		Supports ATX PSU and 12V DC-in	
Form Factor Deep Micro-ATX (9.6" x 10.5")		Deep Micro-ATX (9.6" x 10.5")	
Processor System	CPU	1 Socket SP6 (SM-LGA-4844)	
		AMD EPYC 8004 Processors	
	FCH	System on chip	
Memory	Capacity	8 DDR5 288-pin DIMM Slots (2DPC/1DPC); Supports RDIMM, max. 4800MHz	
Expansion	PCIe slot	SLOT6: FL PCIe5.0 / CXL1.1 x16	
		SLOT4: HL PCIe5.0 / CXL1.1 x16	
	Others	3 MCIO (PCIe5.0 x8)	
		2 MCIO (PCIe5.0 x8 or 8 SATA 6Gb/s)	
		2 MCIO (PCIe5.0 / CXL1.1 x8 or 8 SATA 6Gb/s)	
		1 OCuLink (PCIe3.0 x4)	
Storage	M.2	2 M-key (PCIe5.0 x4), supports 22110/2280 form factor	
	SATA port	32 SATA 6Gb/s: 4 MCIO	
Network	RJ45	2 RJ45 (1GbE) by Intel® i210	
	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	



# SIENAD8-2L2T / Intensive I/O Expansions Board Come with Dual 10GbE Networking

Form Factor		ATX (12" x 9.6")	
Processor System	CPU	1 Socket SP6 (SM-LGA-4844)	
		AMD EPYC 8004 Processors	
	FCH	System on chip	
Memory	Capacity	8 DDR5 288-pin DIMM Slots (2DPC/1DPC); Supports RDIMM, max. 4800MHz	
Expansion	PCIe slot	SLOT7: PCle5.0 / CXL1.1 x16	
		SLOT6: PCIe5.0 x8	
		SLOT5: PCIe5.0 / CXL1.1 x16	
		SLOT3: PCIe5.0 x16	
		SLOT1: PCIe5.0 / CXL1.1 x16	
	Others	2 MCI0 (PCIe5.0 x8)	
Storage	M.2	2 M-key (PCIe5.0 x4), supports 22110/2280 form factor	
Network	RJ45	2 RJ45 (1GbE) by Intel® i210	
		2 RJ45 (10GbE) by Intel® X710-AT2	
	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	





## SIENADIOHN3 / 3 OCP NIC 3.0 Slots Powered by Single EPYC8004 Half-width Board





Form Factor		Half-Width (6.6" x 17")	
Processor System	CPU	1 Socket SP6 (SM-LGA-4844)	
		AMD EPYC 8004 Processors	
	FCH	System on chip	
Memory	Capacity	10 DDR5 288-pin DIMM Slots (2DPC/1DPC); Supports RDIMM, max. 4800MHz	
Expansion PCIe slot		SLOT2: Slim cool edge (PCle5.0 x16)	
		SLOT1: Slim cool edge (PCle5.0 x16)	
	Others	1 MCIO (PCIe5.0 / CXL1.1 x8 or 8 SATA 6Gb/s)	
		OCuLink1 (2 SATA 6Gb/s)	
		OCuLink2 (PCIe3.0 x4)	
Storage	M.2	2 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form factor	
	SATA port	Up to 10 SATA 6Gb/s: 1 MCIO, 2 M.2	
		2 SATA 6Gb/s by ASM1061R: 0CuLink1	
Network	OCP NIC	1 OCP NIC 3.0 (PCIe5.0 x16)	
		2 OCP NIC 3.0 (PCle5.0 / CXL1.1 x16)	
Management	BMC	ASPEED AST2600	
	Dedicated IPMI	1 RJ45 via Realtek RTL8211F	
I/0	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	

## <u>3U16L2S-SIENA</u>

3U Storage Server Purpose-built for Data-intensive Workloads

Socket	1 Socket SP6 (LGA 4844)
	AMD EPYC™ 8004 series processors
Slot	8 DIMM slots (2DPC/1DPC)
Form Factor	3U Rackmount
Chassis Dimension	680 x 430 x 133 mm (26.7" x 16.9" x 5.2")
Buttons	Power button w/ LED, ID button w/ LED, System reset
LEDs	HDD Activity, LAN 1/2, System Event
I/0	2 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (1GbE) by Intel® i210
	1 dedicated IPMI
USB	2 Type-A (USB3.2 Gen1)
Others	1 DB15 (VGA), 1 UID button w/ LED
Front	2 FHHL PCIe5.0 x16
External	Front:
	16 Hot-swap 3.5" SATA drive bays
	Rear:
	2 Hot-swap 2.5" SATA drive bays
Internal	2 M-key (PCIe5.0 x4), supports 22110/2280 form factor
Module	1+1, 80-PLUS Platinum, 800W CPSU
Fan	3 PWM Hot-swap 80x38 mm fans
	ASPEED BMC AST2600
	TPM by optional accessory
	Slot Form Factor Chassis Dimension Buttons LEDs I/O RJ45 USB Others Front External Internal Module







2U Storage Server Purpose-built for Data-intensive Workloads







## 2U12L2S-SIENA

CPU	Socket	1 Socket SP6 (LGA 4844)
		AMD EPYC™ 8004 series processors
DIMM	Slot	8 DIMM slots (2DPC/1DPC)
System Physical Status	Form Factor	2U Rackmount
	Chassis Dimension	680 x 430 x 88 mm (26.7" x 16.9" x 3.5")
Front Panel	Buttons	Power button w/ LED, ID 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 (1GbE) by Intel® i210
		1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 DB15 (VGA), 1 UID button w/ LED
Expansion Slots	Front	2 HHHL PCIe5.0 x16
Drive Bay/ Storage	External	Front:
		12 Hot-swap 3.5" SATA drive bays
		Rear:
		2 Hot-swap 2.5" SATA drive bays, supports 7mm height
	Internal	2 M-key (PCle5.0 x4), supports 22110/2280 form factor
Power Supply	Module	1+1, 80-PLUS Platinum, 800W CPSU
System Cooling	Fan	3 PWM Hot-swap 80x38 mm fans
Management		ASPEED BMC AST2600
Security		TPM by optional accessory

## 2U4N-F/SIENA-M3 🗸 2U 4-Node Front I/O Server for High-density Cloud Deployments

CPU (per node)	Socket	1 Socket SP6 (LGA 4844)
	oonot	AMD EPYC™ 8004 series processors
DIMM (per node)	Slot	10 DIMM slots (2DPC/1DPC)
	Form Factor	211 Backmount
System Physical Status		
	Chassis Dimension	750 x 438 x 86.6mm (29.5'' x 17.2'' x 3.4'')
Front Panel (per node)	Buttons	Power On/Standby button, System reset button
	LEDs	HDD Act/Err/Locate LED, Power LED, UID LED
	I/0	2 Type-A (USB3.2 Gen1)
Rear IO (per node)	RJ45	1 dedicated IPMI
	USB	2 Type-A (USB3.2 Gen1)
	Others	1 UID button w/ LED, 1 mini-DisplayPort
Expansions Slots (per node)	Rear	2 HHHL PCIe5.0 x16
		1 OCP NIC 3.0 (PCIe5.0 x16)
Drive Bay/Storage (per node)	External	Front
		2 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 facto
Power Supply	Module	1+1, 80-PLUS Platinum, 2700W CRPS
System Cooling (per node)	Fan	4 Hot-swap dual-rotor 40x56 mm fans
Management (per node)		ASPEED BMC AST2600
Security (per node)		TPM by optional accessory















## 2003N-SIENA / Extreme Power Efficiency 20U 3-Node OCP Server Built for Data Centers

CPU (per sled)	Socket	1 Socket SP6 (LGA 4844)
		AMD EPYC™ 8004 series processors
DIMM (per sled)	Slot	10 DIMM slots (2DPC/1DPC)
System Physical Status	Form Factor	20U, Three-bay Shelf for ORv3
	Chassis Dimension	573 x 800 x 88 mm (22.56'' x 31.5'' x 3.5'', Shelf Dimensions)
Front Panel (per sled)	Buttons	Power, UID button w/ LED, reset button
	LEDs	Power, system fault LED
	I/0	1 Mini-DisplayPort (VGA), 2 Type-A (USB3.2 Gen1)
Rear Panel	Power connector	1 IT Gear connector for ORv3 50V busbar
Expansions Slots (per sled)	External	1 HHHL PCIe5.0 x16
		1 OCP NIC 3.0 (PCIe5.0 x16)
Drive Bay/Storage (per sled)	External	4 Hot-swap 2.5" NVMe (PCIe4.0 x4) drive bay
	Internal	2 M-key (PCIe5.0 x4 or SATA 6Gb/s), supports 22110/2280 form facto
Power Supply	Module	Centralized 50V busbar to OCPV3_PDB/1V distributed up to 1000W
System Cooling (per sled)	Fan	2 system fans (80 x 56 mm)
Management (per sled)		ASPEED BMC AST2600
Security (per sled)		TPM by optional accessory



Reliable Server Advancing Technology Considerable Design Knowledgeable Professional

### ASRock Rack Incorporation

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