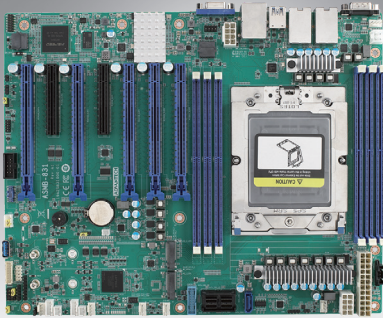


# ASMB-831

**LGA 6096 AMD® EPYC™ Embedded 9004  
ATX Server Board with 6 x DDR5,  
5 x PCIe x16 + 2 x PCIe x8, 9 x SATA3,  
7 x USB 3.2 (Gen1), Dual 10GbE, and IPMI**



CE FCC

## Features

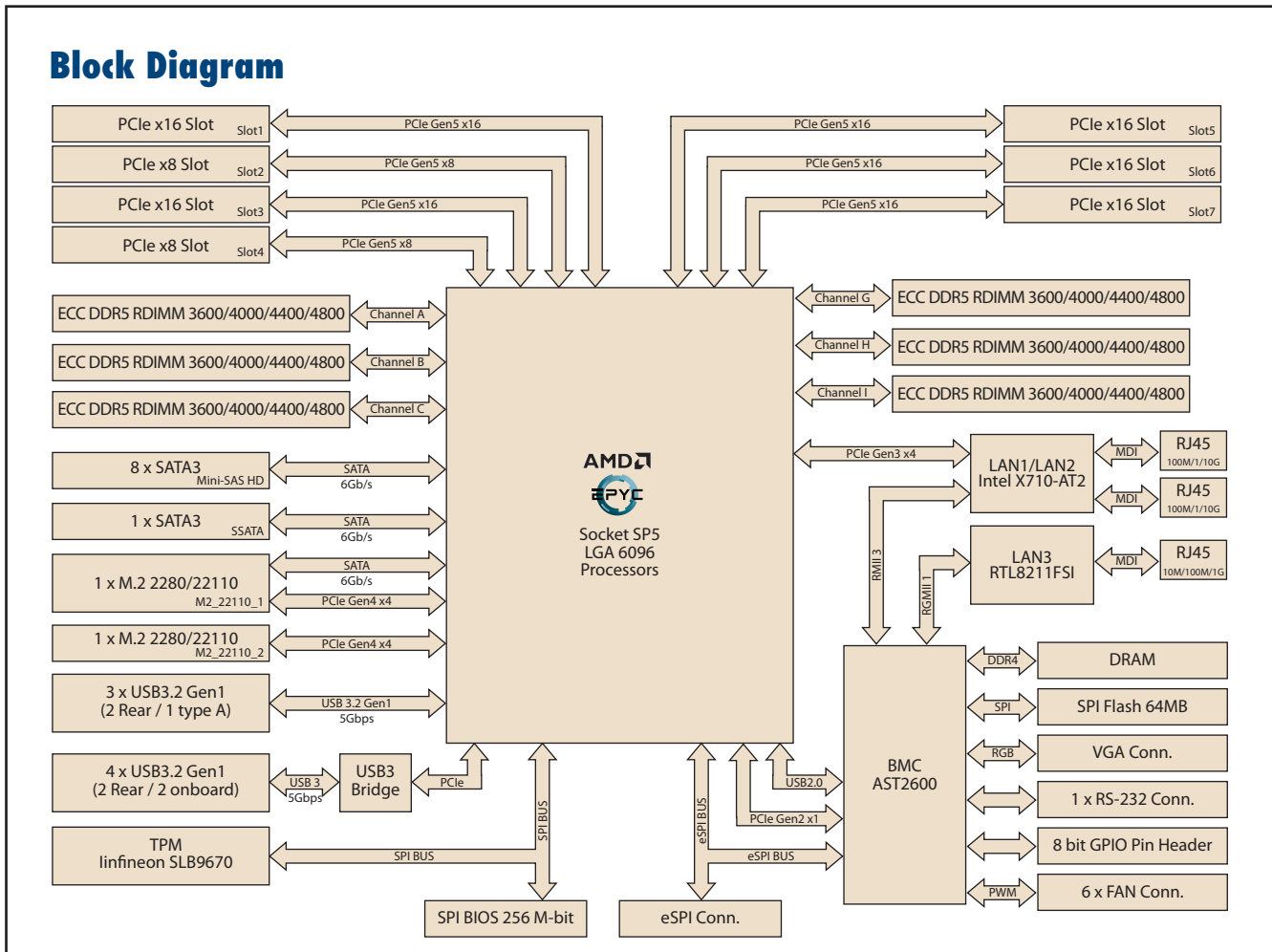
- LGA 6096 (Socket SP5) ATX server board with AMD® EPYC™ Embedded 9004 processor
- DDR5 4800 MHz RDIMM
- Five PCIe x16 (Gen5) and two PCIe x8 (Gen5) for four double-deck cards
- Intel® X710-AT2 dual 10GbE ports
- Nine SATA3 and seven USB 3.2 (Gen1) ports
- Two M.2 2280/22110 (SATA / PCIe compatible)
- 0 ~ 60 °C/ 32 ~ 140 °F ambient operating temperature range

## Specifications

Form Factor		ATX form factor					
Processor System	Socket	AMD LGA 6096 (Socket SP5)					
	CPU type	AMD EPYC™ Embedded 9004 processors (CPU cooler should be purchased separately)					
Memory	Total slots	6x (1 DIMM per channel)					
	Capacity	Maximum 384GB ECC RDIMM					
	Memory type	DDR5 ECC-REG 3600/4000/4400/4800 MHz RDIMM					
	Memory size	16 GB, 32 GB, 64 GB (RDIMM)					
Expansion Slots	Total PCI/PCI-X/PCIe slots	7					
	Slot location 1	PCIe x16 slot (Gen5 x16 link)					
	Slot location 2	PCIe x8 slot (Gen5 x8 link)					
	Slot location 3	PCIe x16 slot (Gen5 x16 link)					
	Slot location 4	PCIe x8 slot (Gen5 x8 link)					
	Slot location 5	PCIe x16 slot (Gen5 x16 link), CXL support					
	Slot location 6	PCIe x16 slot (Gen5 x16 link), CXL support					
Graphics	VGA	ASPEED AST2600					
	SATA controller	AMD EPYC™ CPU integrated: Eight (via Mini-SAS HD SFF-8643) + one SATA3					
Storage	SAS controller	-					
	Networking	GbE/10GbE LAN Intel® X710-AT2 (dual 10GbE ports)					
Onboard I/O Connector	PSU connector	24-pin SSI power connector + 2 x 8-pin SSI 12V power connector + 1 x 4-pin SSI 12V power connector					
	USB connector	2 x USB 3.2 Gen1 ports (one onboard header) + 1 x Type-A USB 3.2 Gen1 port					
	Fan header	6 x 4-pin (5 for system + 1 for CPU)					
	M.2	1 x M.2 2280/22110 (PCIe Gen4 / SATA) + 1 x M.2 2280/22110 (PCIe Gen4 only)					
	SMBus	1					
	chassis intrusion	1					
	Front LAN LED	1					
	Audio Header	-					
	PS/2 KB/Mouse header	-					
	Serial port header	-					
Rear I/O Connector	External serial port	1					
	External USB port	4 (USB 3.2 Gen1)					
	VGA port	1					
	RJ-45	3 (1 port dedicated LAN and 1 port shared LAN for IPMI function)					
	PS/2 Keyboard/Mouse	-					
Management Solution	Infiniband	-					
	Software	-					
Monitoring	Out of band remote management	Yes					
	CPU temperature	Yes					
Watchdog Timer	System Monitoring	Yes					
	Output	System reset					
Power Requirement	Interval	Programmable 1 ~ 255 sec/min					
	Power On	3.3V	5V	12V	12V_8P_1	12V_4P_1	
	(210W CPU@2.6GHz DDR5-2666 64G*6)	2.976A	3.264A	0.616A	15.72A	6.876A	
	Environment	Operating	0 ~ 60 °C/32 ~ 140 °F, depends on CPU speed and cooling solution				Non-operating
		Temperature					-40 ~ 85 °C/-40 ~ 185 °F
	Physical Characteristics	Humidity	10% ~ 95%				10% ~ 95% (Non condensing)
Dimension (L x H)		304 x 244 mm (12 x 9.6 in)					

\*CPU power design support up to 240W TDP. Please consider extended air thermal solution while using CPU > 210W TDP

## Block Diagram



## Ordering Information

Part Number	Memory	GbE/10GbE LAN	IPMI	Graphics
ASMB-831T2-00A1	6 x DDR5 ECC-REG DIMM	-/2	Yes	AST2600

## Packing List

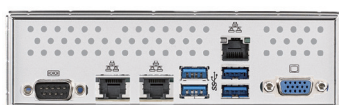
Part Number	Description	Quantity
2042083100	Startup manual	x 1
1700003194	SATA data cables	x 1
1700022749-11	SATA power cables	x 1
1700019748	CPU power cable	x 2
1930005673-11	Screw for M.2 device	x 2
1960109293T001	I/O Shield	x 1
1960109237N010	PCIe I/O support	x 1
1700031926-11	Front panel convert cable	x 1

## Optional Accessories

Part Number	Description
1970005676N001	LGA-6096 CPU cooler for 2U/4U chassis (210W)
1700028292-01	Dual port USB 3.2 Gen1 cable (30 cm/11.8 in) with bracket

Note:  
1. Select SATA cable (SFF-8643) from HPC chassis datasheet or contact sales representative.

## I/O View



ASMB-831T2-00A1