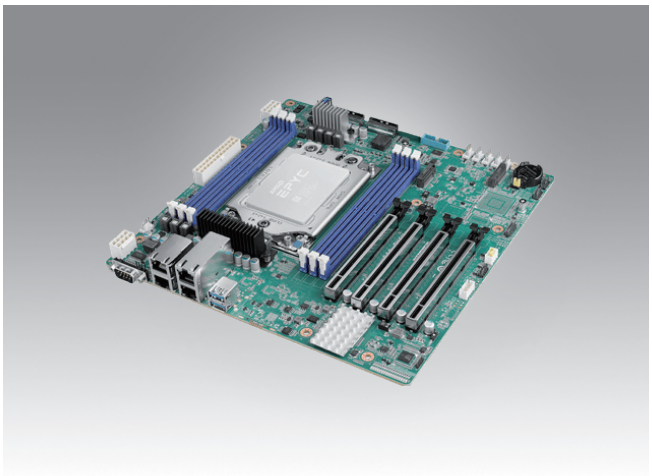
AIMB-593

Micro-ATX Motherboard
AMD EPYC 8004 Series Processor



Features

- Supports AMD EPYC 8004 processor
- Supports 576GB DDR5 4800MT/x with 6 RDIMMs
- 2 x M.2 M-Key 2280 slots (PCIe Gen5 x4) for high-speed NVMe SSDs
- Up to 5 x PCIe Gen5x16 slots, default onboard 4 x PCIe Gen5x16 slots
- 2 MCIO x8 (offer extension board for additional 2 PCIe slots)
- Intel® X710-AT2 dual 10GbE ports & I226 dual GbE ports
- WISE-DeviceOn and Embedded Software APIs

Software APIs: SMBus, H/W Monitor, Watchdog, GPIO

Utilities: BIOS flash, Monitoring

Windows 11 ubuntu WISE-DeviceOn

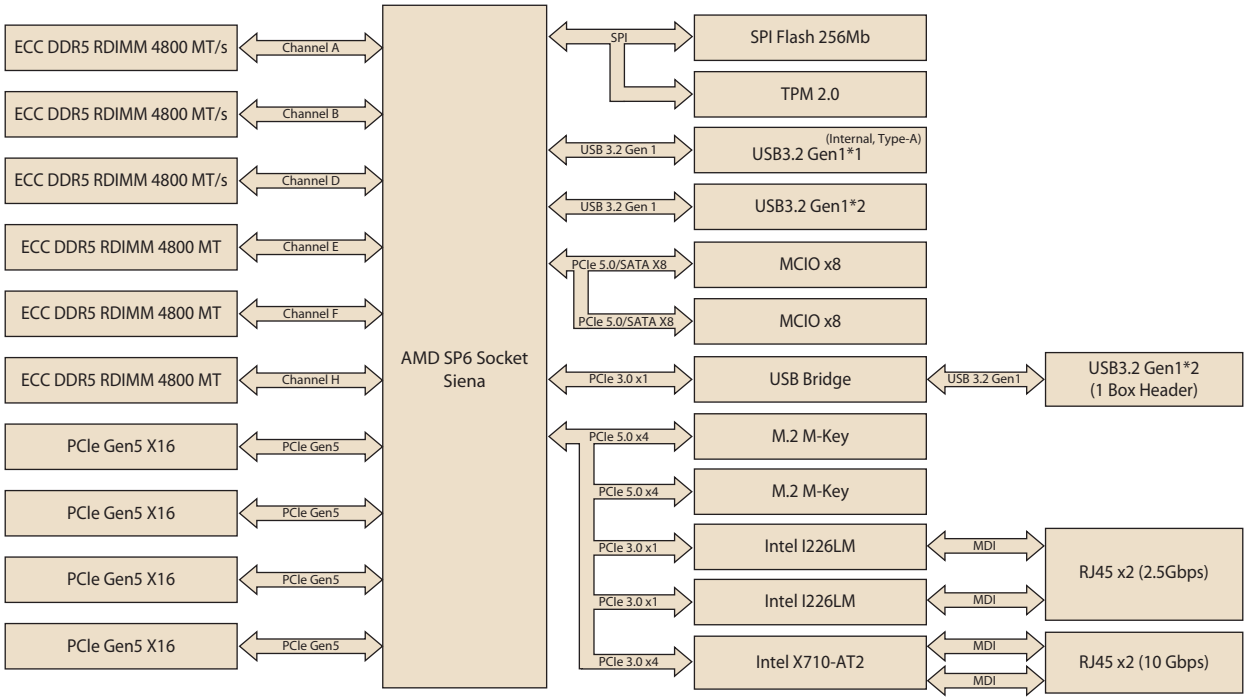
Specifications

Processors	CPU	8534P	8434P	8324P	8224P	8124P	8C24P
	Core	64	48	32	24	16	12
	Base frequency (GHz)	2.3	2.5	2.65	2.55	2.45	2.45
	Max Speed (GHz)	3.1	3.1	3	3	2.95	2.95
	L3 Cache (MB)	128	128	128	64	64	32
	TDP (W)	200	200	180	160	125	100
Processor System	BIOS	AMI EFI 256 Mbit SPI					
Memory	Technology	DDR5, 6 Channel, support RDIMM					
	Frequency	4800MT/x					
	Max. Capacity	576GB (up to 96GB per DIMM)					
	ECC Support	Yes					
	Socket	6 x 288-pin DDR5 RDIMM sockets					
TPM	IC	1 x SLB9672XU2.0					
Network	Ethernet	2 x 10/100/1000/2500/10000 Mbps and 2 x 10/100/1000/2500 Mbps					
	Controller	2 x Intel® I226LM + 2 x Intel® X710-AT2					
	Connector	4 x RJ45					
Expansion Slot	M.2	2 x M-key 2280 (PCIe Gen5x4)					
	PCIe x16	4 x PCIe x16 slot with Gen5 x16lanes (PCIe Gen5, #2 and #4 Support CXL)					
	MCIO	2 x MCIO 8i (PCIe Gen5 x8, Support CXL)					
Rear I/O	RJ45	4 x RJ45					
	USB	2 x USB 3.2 Gen1					
	COM	1 x RS232					
Internal Connector	USB	2 x USB 3.2 Gen1, box header 1 x USB3.2 Gen1, Type-A vertical					
	M.2	2 x M-key 2280					
	Intrusion Protection	1					
	CPU & System Fan Connector	1 x CPU FAN 5 x SYS FAN					
	Power Connector	ATX 24-pin(system) + ATX 8-pin(CPU)					
	GPIO	1 x 8-bit					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 (second or minute)					
Power Requirements	Input voltage	ATX					
	Connector	ATX 24-pin(system) + ATX 8-pin(CPU)					
	Operation	+5V	3.3V	12V	12V_8P		
	Configuration: Configuration: AMD EPYC 8534P 64-Core Processor 2.30GHz with RDIMM DDR5 4800 32GB*6pcs	2.79833A	1.77855A	1.52298A	9.64435A		
	Standby (5Vsb)	3A					
Environment	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution					
	Storage	Non-Operating: -40 ~ 85° C (-40 ~ 185° F)					
Physical Characteristics	Dimensions	244 x 244 x 2.4mm (9.6" x 9.6" x 0.0945")					

All product specifications are subject to change without notice.

Last updated: 18-Nov-2026

Block Diagram



Ordering Information

P/N	DDR5	PCIe x16 (Gen5)	MCIO 8i (Gen5)	10GbE LAN	2.5GbE LAN	USB 3.2 Gen 1 (Type A) (Rear I/O)	USB 3.2 Gen 1 (Type A) (internal)	USB 3.2 Gen1 (1 x box header) (internal)	RS-232	M.2 2280 Gen5 M-Key	TPM
AIMB-593-0AA1	6	4	2	2	2	2	1	2	1	2	Yes

Packing List

P/N	Description	Quality
19Z0003391T001	I/O port bracket	1
1930006770-01	M.2 device screw	2
2046059300	Startup manual for AIMB-593	1

Optional Accessories

P/N	Description
1700020277-01	USB 3.0 cable 30cm with IO bracket
1700034192-01	Serial ports cable, 50cm
1700036726-01	MCIO cable, 74Pin to 74Pin, 40cm
1700036679-01	MCIO cable, 74Pin to 8 x SATA, 60 CM
1970005652T001	AIMB-592 Cooler, for CPU TDP 225W, 119.3(W) x78.9(L) x22.6(H) mm
AIMB-59EB1-0AA1	MCIO to 1 PCIe Gen5 x16 Slot (1 x16 lanes)
AIMB-59EB1-1AA1	MCIO to 2 PCIe Gen5 x16 Slot (2 x8 lanes)

Embedded OS/API

OS/API	P/N	Description
Windows Server	20706WS25S0000	img Server Std 16Core 64b 2025 ENU
Windows11	20706WLE1S0135	img W11 24EL 64b 24H2 ENU
Windows11	20706WLH1S0135	img W11 24HL 64b 24H2 ENU
Windows11	20706WLV1S0135	img W11 24VL 64b 24H2 ENU
Ubuntu	20706U24DS0061	img Ubuntu Desktop 64b 24.04 ENU
Ubuntu	20706U24ES0018	img UbtPro-E 64b 24.04 ENU
Ubuntu	20706U24HS0018	img UbtPro-H 64b 24.04 ENU
Ubuntu	20706U24VS0021	img UbtPro-V 64b 24.04 ENU