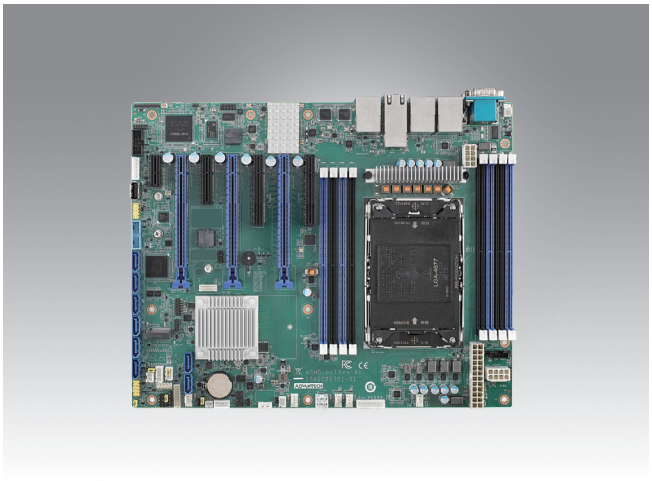
ASMB-817

5th/4th Gen Intel® Xeon® Scalable ATX Server Board with 8x DDR5, 3x PCIe x16, 8x SATA 3, 4x USB 3.2 (Gen1), Dual 10GbE, and IPMI



CE FCC

Features

- LGA4677 ATX server board with 5th/4th Gen. Intel Xeon® Scalable processor
- DDR5 5200 MT/s RDIMM up to 2TB (8 DIMMs)
- Features 3x PCIe x16, 2x PCIe x8, 1x PCIe x4, and 1x PCIe x1
- Intel® X710-AT2 dual 10GbE ports
- Eight SATA 3 and one M.2 connector (SATA/PCIe compatible)
- 0 ~ 60 °C/ 32 ~ 140 °F ambient operating temperature range

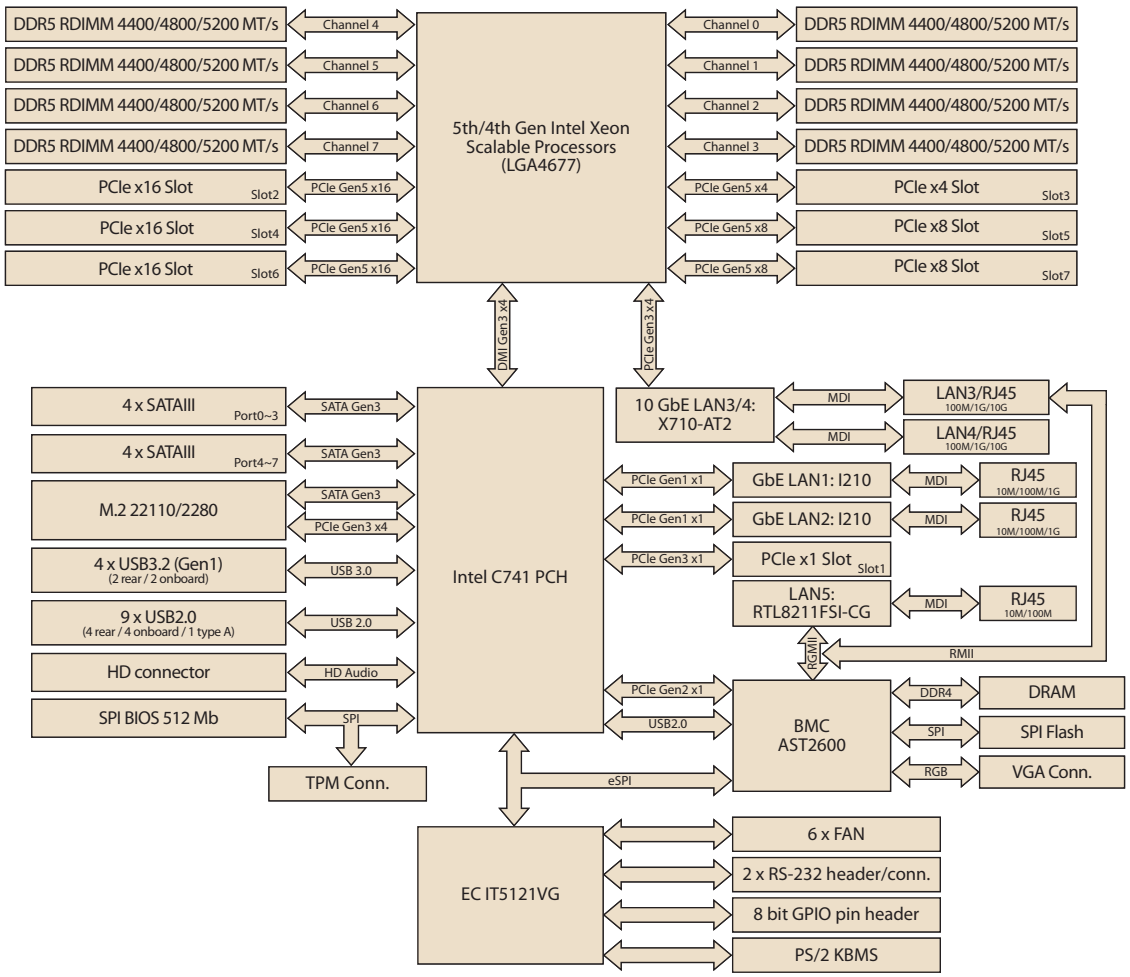
Specifications

Form Factor		ATX form factor				
Processor System	Socket	Intel® LGA4677 (Socket E)				
	CPU type	5th/4th Gen Intel Xeon Scalable processors (CPU cooler should be purchased separately*)				
Core Logic	Chipset	Intel C741 chipset				
Memory	Total slots	8x (1 DIMM per channel)				
	Capacity	Maximum 2TB ECC RDIMM				
	Memory type	DDR5 ECC-REG 4400/4800/5200 MT/s RDIMM				
	Memory size	16GB, 32GB, 64GB, 128GB, 256GB (The supported Memory Density are 16Gb and 24Gb)				
Expansion Slots	Total PCI/PCI-X/PCIe slots	7				
	Slot location 1	PCIe x1 slot (Gen3 x1 link), signal from PCH				
	Slot location 2	PCIe x16 slot (Gen5 x16 link), signal from CPU, CXL support**				
	Slot location 3	PCIe x4 slot (Gen5 x4 link), signal from CPU				
	Slot location 4	PCIe x16 slot (Gen5 x16 link), signal from CPU, CXL support**				
	Slot location 5	PCIe x8 slot open end (Gen5 x8 link), signal from CPU				
	Slot location 6	PCIe x16 slot (Gen5 x16 link), signal from CPU, CXL support**				
	Slot location 7	PCIe x8 slot close end (Gen5 x8 link), signal from CPU				
Graphics	VGA	Aspeed AST2600				
Storage	SATA controller	Intel® C741: 8 x SATA 3 (6 Gb/s), SATA0~3, SATA4~7 support software RAID 0, 1, 5 &10.				
	SAS controller	-				
Networking	GbE/10GbE LAN	2 x Intel® I210AT / Intel® X710-AT2 (dual 10GbE ports)				
Onboard I/O Connector	PSU connector	24-pin SSI power connector + 2 x 8-pin SSI 12 V power connector*** + 4-pin SSI 12 V power connector				
	USB connector	4 x USB 2.0 ports (two onboard headers) + 2 x USB 3.2 Gen1 ports (one onboard header) + 1 x Type-A USB 2.0 port				
	Fan header	6 x 4-pin (5 for system + 1 for CPU)				
	M.2	1 x M.2 2280/22110 B+M key (SATA and PCIe)				
	SMBus	1				
	Chassis Intrusion	1				
	Front LAN LED	1				
	Audio Header	1				
	PS/2 KB/Mouse	1				
	Serial port header	1				
Rear I/O Connector	External serial port	1				
	External USB port	2x (USB 3.2 Gen1) + 4x USB (2.0)				
	VGA port	1				
	RJ-45	5x (1 port dedicated LAN and 1 port shared LAN for IPMI function)				
	PS/2 KB/mouse	-				
Management Solution	Software	-				
	Out of band remote management	Yes				
Monitoring	CPU temperature	Yes				
	System Monitoring	Yes				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	5Vsb	12V	12V_8P
	(225W CPU @1.5GHz 4800 64G*8)	1.239A	1.314A	0.7A	0.052A	20.833A
Environment		Operating			Non-operating	
	Temperature	0 ~ 60 °C/32 ~ 140 °F, depends on CPU speed and cooling solution			-40 ~ 85 °C/-40 ~ 185 °F	
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)	
Physical Characteristics	Dimension (L x H)	304 x 244 mm (12" x 9.6")				

*CPU power design support up to 270W TDP.
**CXL 1.1 Type 1 and Type 2 device.
***Please connect all 8-pin CPU PWR Conn. (ATX12V1/ ATX12V2) when using CPU up to 205W TDP.

All product specifications are subject to change without notice.

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE/10GbE LAN	IPMI	Graphics
ASMB-817T2-00A1	C741	8 x DDR5 RDIMM	2/2	Yes	AST2600
ASMB-817T2-00A1U	C741	8 x DDR5 RDIMM	2/2	Yes	AST2600
ASMB-817I-00A1	C741	8 x DDR5 RDIMM	2/-	Yes	AST2600

Packing List

Part Number	Description	Quantity
2042081700	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable	x 2
1930008364	Screw for M.2 device	x 1
1960076488T001	I/O shield	x 1
1651003738-01	LGA4677 CPU carrier - E1A (XCC)	x 1
1651003739-01	LGA4677 CPU carrier - E1B (MCC)	x 1
1700031926-11	Front panel convert cable	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDB1E	HD Audio-card
PCA-TPMSPI-00A1	TPM 2.0 Module by SPI
1970005575T001	LGA-4677 narrow CPU heatsink for 1U chassis (185W)
1970005860N000	LGA-4677 narrow CPU cooler for 2U/4U chassis (270W)
1700002204	Dual port USB 2.0 cable (27 cm / 10.6 in) with bracket
1700008461	Four port USB 2.0 cable (30.5 cm / 12 in) with bracket
1700028292-01	Dual port USB 3.2 (Gen1) cable (30 cm/11.8 in) with bracket
1701090401	Single port RS-232 COM cable (40 cm / 15.7 in) with bracket
1700019268-11	Cable for onboard KBMS1 connector (35 cm/ 13.7 in)
1960063434N000	Cable bracket for 1700019268-11
1960082347T001	1U chassis I/O shield

I/O View



ASMB-817T2-00A1



ASMB-817I-00A1

Note:
1. PCA-AUDIO-HDB1E is not compatible with Advantech 3U chassis.
2. Support environment operating temperature 40°C on HPC system when using CPU TDP under 270W, operating temperature 35°C when using high freq. CPU SKUs 6544Y/5515+/6534/4516Y+/5418N/6418H/6434H/6444Y/5418Y/6426Y/6434/5412U