



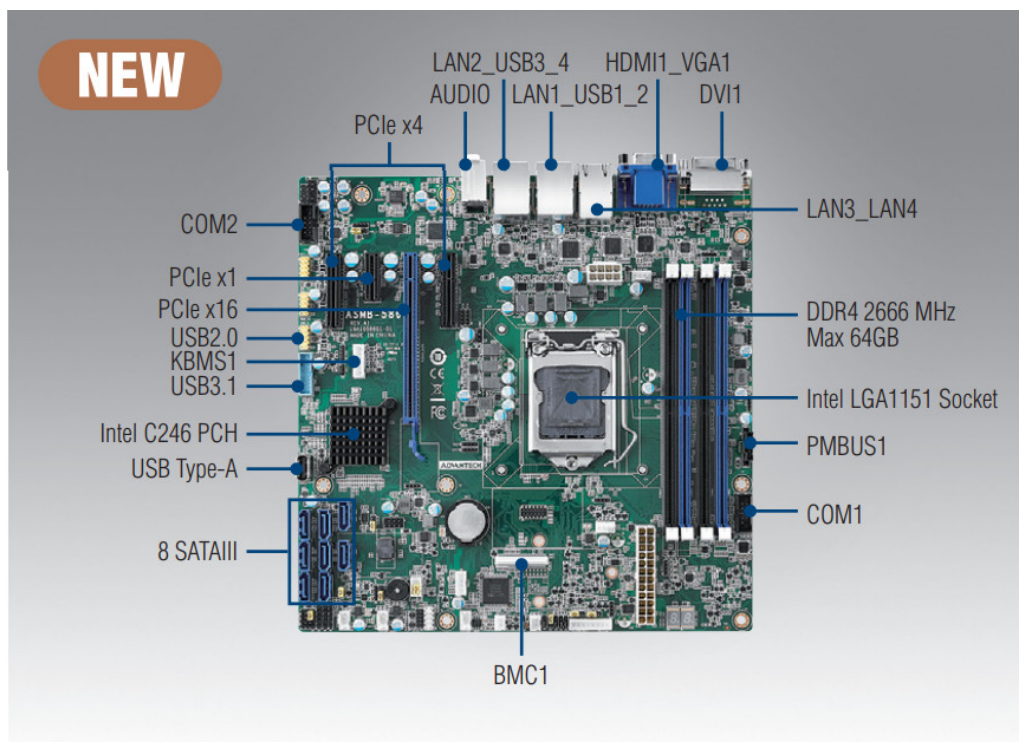
ADVANTECH MicroATX Server Board Specifications

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ASMB-586

**LGA 1151 Intel® Xeon® E & 8th/9th
Generation Core™ MicroATX Server
Board with 4 DDR4, 4 PCIe, 6 USB 3.1,
8 SATA3, Quad/Dual LANs, IPMI**





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Features

- LGA 1151 Intel® Xeon® E and 8th/9th generation Core™ i7/i5/i3 processors with C246 chipset
- DDR4 ECC/Non-ECC 2666/2400/2133 MHz UDIMM up to 128GB
- One PCIe x16, two PCIe x4 and one PCIe x1 slots
- Triple displays – DVI-D, VGA and HDMI 2.0 ports
- Eight SATA3 ports and six USB 3.1 ports
- 0 ~ 60° C ambient operating temperature range

Note: Supported OS including Windows 10 (64-bit) and Server 2016 (64-bit) have been validated.

Form Factor		Micro ATX form factor
Processor System	Socket CPU type	Intel LGA 1151 Intel® Xeon® E-21xx/E-22xx and 8th/9th Gen Core™ i3/i5/i7 series processors (TDP up to 95W)
Core Logic	Chipset	Intel C246 chipset
Memory	Total slots Capacity Memory type Memory size	4 (Dual Channel) Maximum 128 GB DDR4 ECC/Non-ECC 2666/2400/2133 MHz UDIMM (288-pin)* 4 GB, 8 GB, 16 GB, 32GB
Expansion Slots	Total PCIe slots Slot location 1 Slot location 2 Slot location 3 Slot location 4 Slot location 5 Slot location 6 Slot location 7	4 — — — PCIe x4 slot (Gen3 x4 link) PCIe x1 slot (Gen3 x1 link) PCIe x16 slot (Gen3 x16 link) PCIe x4 slot (Gen3 x4 link)

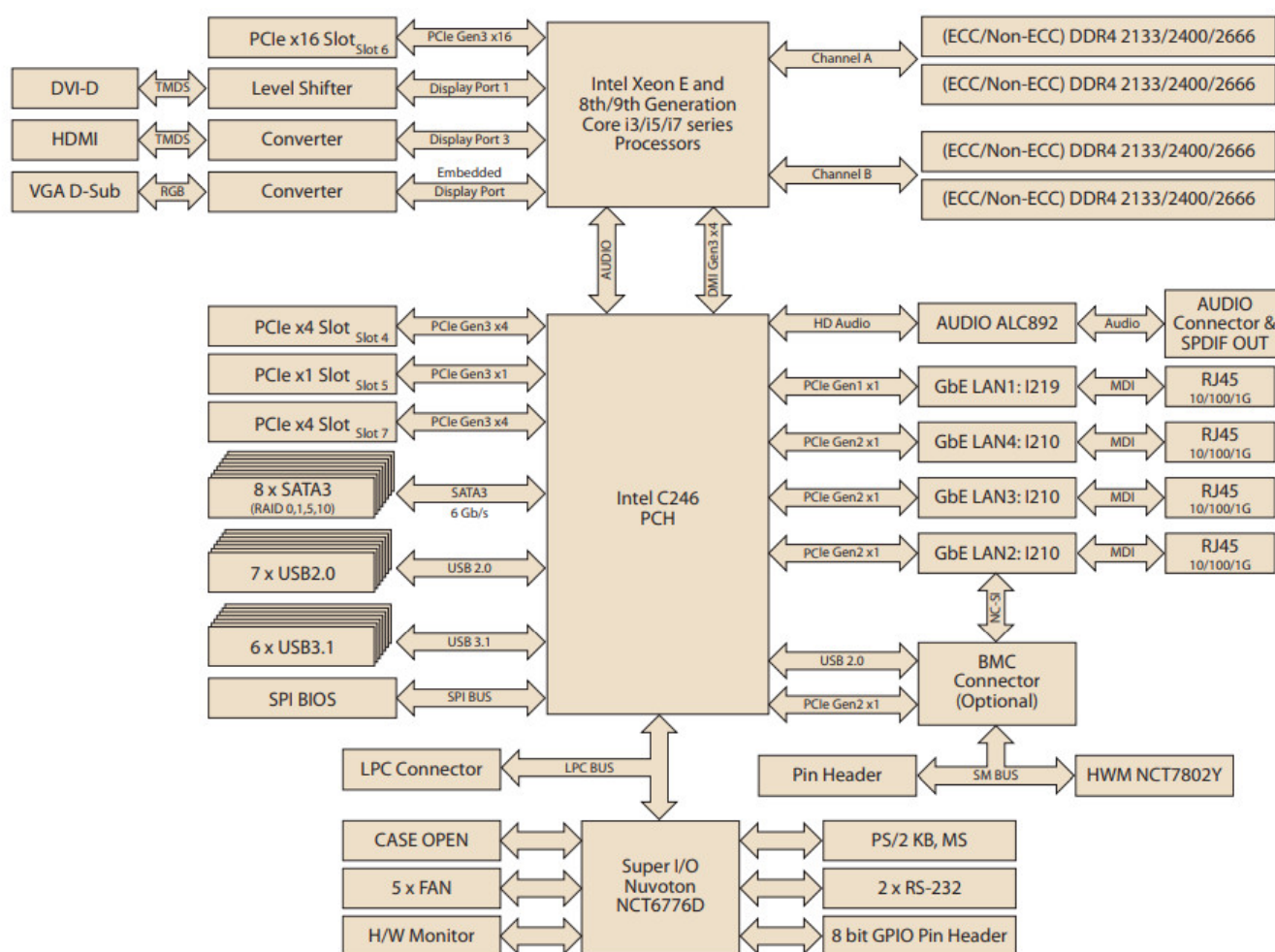
Graphics	Controller VRAM	Intel HD Graphics** 1 GB maximum shared memory with 2 GB and above system memory installed					
Storage	SATA controller SAS controller	Intel C246: 8 SATA3 6Gb/s Intel Rapid Storage Technology Enterprise (for Windows only) (Supports software RAID 0, 1, 10 & 5) –					
Networking	GbE LAN	1 x Intel I219LM + 3 x Intel I210AT					
Onboard I/O Connector	LPT connector PSU connector USB connector Fan header SMBus Chassis intruder Front LAN LED Serial port header Audio Header PS/2 KB/Mouse	– 24-pin SSI power connector + 8-pin SSI 12 V power connector 1 USB 3.1 Gen 1 (2 ports), 3 USB 2.0 (6 ports), 1 USB Type-A 5 (4-pin) 1 1 2 2 (RS-232) 1 (ALC 892) 1 (Optional PS/2 KB/Mouse cable and bracket required)					
Rear I/O Connector	External serial port External USB port VGA port DVI port HDMI RJ-45 PS/2 KB/mouse Audio	– (via COM cable in the package) 4 (USB 3.1 Gen 2) 1 (Resolution up to 1920 x 1200 @ 60 Hz) 1 (Resolution up to 1920 x 1200 @ 60 Hz) 1 (Resolution up to 4096 x 2160 @ 60 Hz) 4 -2 (Mic-in, Line-out)					
Watchdog Timer	Output Interval	System reset Programmable 1 ~ 255 sec/min					
Power Requirement	Power On (Xeon E-2176G 3.7GHz DDR4 2400 4G*4)	3.3 V 3.87A	5 V 4.11A	12 V 0.63A	12V_8 P 6.28A	5 Vsb 0.09A	-12 V 0.238A

Environment	Temperature Humidity	Operating 0 ~ 60° C, depends on C PU speed and cooler sol ution 0% ~ 95%	Non-operating -40 ~ 85° C 5% ~ 95% (Non condensing)
Physical Characteristics	Dimensions	244 x 244 mm (9.6" x 9.6")	

* ECC will not be supported when paired with Core i5/i7 processors.

** Some Xeon processors have no graphic support. Please check Intel specification for processor graphics availability.

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	LAN	SATAIII	IPMI
ASMB-586G2-00 A1	C246	DDR4 ECC/Non-ECC	VGA + DVI-D + H DMI	2	8	Optional
ASMB-586G4-00 A1	C246	DDR4 ECC/Non-ECC	VGA + DVI-D + H DMI	4	8	Optional

Packing List

Part Number	Description
2001058610	Startup manual
1700003194	SATA data cables
1700022749-11	SATA power cables
1700001788	COM1 cable
1960088021T001	I/O shield

I/O View



ASMB-586G4-00A1



ASMB-586G2-00A1

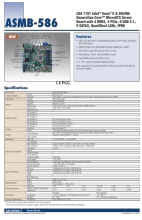
Optional Accessories

Part Number	Description
1960049408N001	LGA 1151 CPU heatsink for 1U chassis
1960052651N021	LGA 1151 CPU cooler for 2U/4U chassis
1960088060T001	1U IO bracket for ASMB-586
1700002204	Dual-port USB2.0 cable (27 cm) with bracket
1700008461	Four-port USB2.0 cable (30.5 cm) with bracket
1700020277-01	Dual-port USB3.0 cable (30 cm) with bracket
1701090401	Single port RS-232 cable (40cm) for COM2 connector
1700019268-11	Cable for onboard KBMS1 connector (35cm)
1960063434N000	Cable bracket for 1700019268-11
IPMI-1000-00A2E	IPMI 2.0 Module
PCA-COM232-00A1E	4 ports RS-232 module connect to LPC connector
PCA-COM485-00A1E	4 ports RS-422/485 module connect to LPC connector
PCA-TPM-00B1E	TPM 2.0 Module by LPC

Note: Purchasing ASMB-586's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers may NOT compatible with ASMB-586.

Online Download www.advantech.com/products

Documents / Resources



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ADVANTECH, MicroATX Server Board, LGA 1151, Intel, Xeon E 8th, 9th Generation

References

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Manuals+.