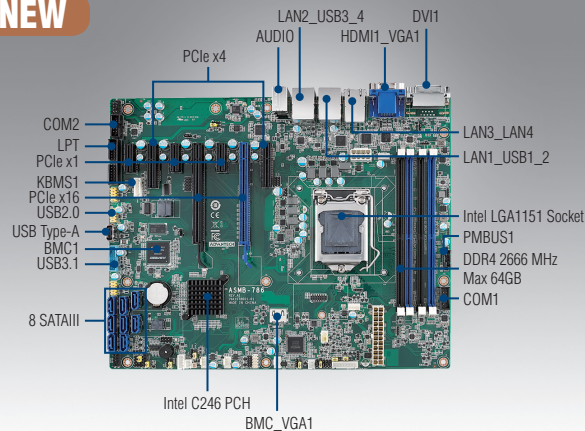


ASMB-786

LGA 1151 Intel® Xeon® E & 8th/9th Generation Core™ ATX Server Board with 4 DDR4, 7 PCIe, 6 USB 3.1, 8 SATA3, Quad/Dual LANs, IPMI

NEW



Features

- LGA 1151 Intel® Xeon® E & 8th/9th Generation Core™ i7/i5/i3 processors with C246 chipset
- DDR4 2666/2400/2133 MHz ECC/Non-ECC UDIMM up to 128 GB
- One Gen 3.0 PCIe x16 link (or two PCIe x16 slots with x8 link), two PCIe x4, and three PCIe x1 slots
- Triple displays - DVI-D, VGA and HDMI 2.0 ports
- Eight SATA3 ports and six USB 3.1 ports
- Rackmount optimized placement with positive air flow design
- 0 ~ 60° C ambient operating temperature range

Note: Supported OS including Windows 10 (64-bit) and Server 2016/2019 (64-bit) have been validated.

CE FCC

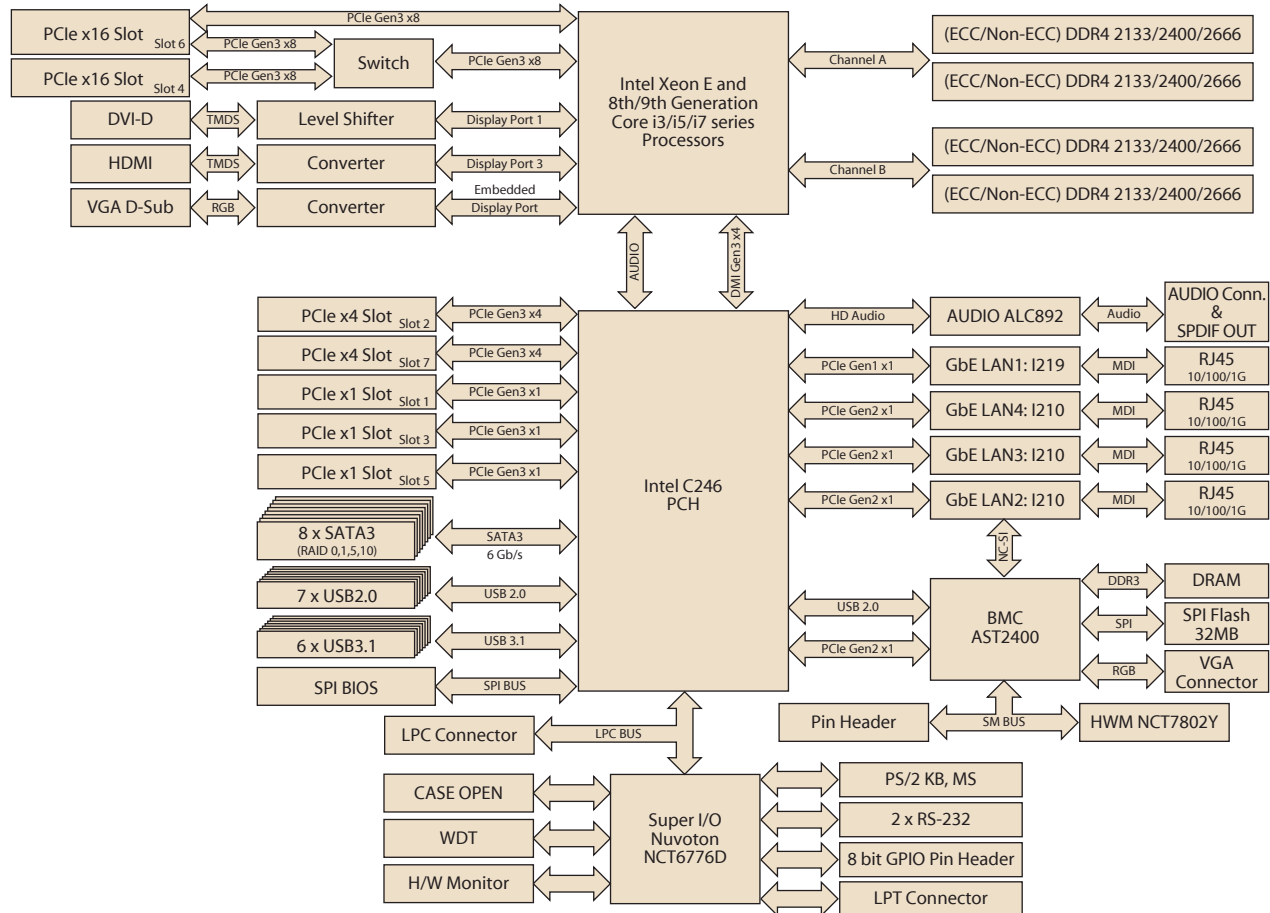
Specifications

| | | |
|--------------------------|--------------------------------------|--|
| Form Factor | ATX form factor | |
| Processor System | Socket | Intel LGA 1151 |
| | CPU type | Intel® Xeon® E-21xx/E-22xx and 8th/9th Generation Core™ i3/i5/i7 series (TDP up to 95W) |
| Core Logic | Chipset | Intel C246 chipset |
| Memory | Total slots | 4 (Dual Channel) |
| | Max. capacity | 128 GB |
| | Memory type | DDR4 ECC/Non-ECC 2666/2400/2133 MHz UDIMM (288-pin)* |
| | Memory size | 4 GB, 8 GB, 16 GB, 32GB |
| Expansion Slots | Total PCI/PCI-X/PCIe slots | 7 |
| | Slot location 1 | PCIe x1 |
| | Slot location 2 | PCIe x4 slot (Gen3 x4 link) |
| | Slot location 3 | PCIe x1 |
| | Slot location 4 | PCIe x16 slot (Gen3 x8 link) |
| | Slot location 5 | PCIe x1 |
| | Slot location 6 | PCIe x16 slot (Gen3 x8 or x16 link) |
| Graphics | Controller | Intel HD Graphics** |
| | VRAM | 1 GB maximum shared memory with 2 GB and above system memory installed |
| Storage | SATA controller | Intel C246: 8 SATA3 6 Gb/s ports with Intel Rapid Storage Technology Enterprise support (for Windows only) (Supports software RAID 0, 1, 10 & 5) |
| | SAS controller | - |
| Networking | Interface | 10/100/1000 Mbps |
| | Controller | GbE LAN1: Intel I219; GbE LAN 2-4: Intel I210-AT |
| | Connector | RJ-45 x 2 for G2 version; RJ-45 x 4 for G4 version |
| Onboard I/O Connector | Printer Port connector | 1 |
| | PSU connector | 24-pin SSI power connector + 8-pin SSI 12V power connector |
| | USB connector | 1 USB 3.1 Gen 1 (2 ports), 3 USB 2.0 (6 ports), 1 USB Type-A |
| | Fan header | 5 (4-pin) |
| | SMBus | 1 |
| | Chassis intruder | 1 |
| | Front LAN LED | 2 |
| | Serial port header | 2 (RS-232) |
| | Audio connector | 1 (ALC 892) |
| | PS/2 KB/Mouse | 1 (Optional PS/2 KB/Mouse cable and bracket required) |
| Rear I/O Connector | External serial port | - (via COM cable in the package) |
| | External USB port | 4 (USB 3.1 Gen 2) |
| | VGA port | 1 (Resolution up to 1920 x 1200 @ 60 Hz) |
| | DVI port | 1 (Resolution up to 1920 x 1200 @ 60 Hz) |
| | HDMI port | 1 (Resolution up to 4096 x 2160 @ 60 Hz) |
| | RJ-45 | 2 for G2 version; 4 for G4 version |
| | Audio connector | 2 (Mic-in, Line-out) |
| | PS/2 KB/Mouse | - |
| Watchdog Timer | Output | System reset |
| | Interval | Programmable 1 ~ 255 sec |
| Power Requirement | Power On | 3.3 V 5 V 12 V 12V_8P 5 Vsb -12 V |
| | (Xeon E-2176G 3.7GHz DDR4 2400 4G*4) | 3.44A 2.61A 1.04A 6.3A 0.09A -0.02A |
| | | |
| Environment | Operating | Non-operating |
| | Temperature | 0 ~ 60° C (32 ~ 140° F) -40 ~ 85° C (-40 ~ 185° F) |
| | Humidity | Depends on CPU speed and cooler solution 10 ~ 95% (Non-condensing) |
| Physical Characteristics | Dimensions | 304.8 x 244 mm (12" 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 | MADE IN |
|------------------|---------|------------------------|--------------------|-----|---------|------|---------|
| ASMB-786G2-00A1 | C246 | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 2 | 8 | - | China |
| ASMB-786G4-00A1 | C246 | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 4 | 8 | Y | China |
| ASMB-786G2-00A1U | C246 | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 2 | 8 | - | Taiwan |
| ASMB-786G4-00A1U | C246 | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 4 | 8 | Y | Taiwan |

Packing List

| Part Number | Description | Quantity |
|----------------|-------------------------------|----------|
| 2001S78610 | Startup manual | x 1 |
| 1700003194 | SATA data cables | x 1 |
| 1700019381 | SATA data cable (right angle) | x 1 |
| 1700022749-11 | SATA power cables | x 2 |
| 1700001788 | COM1 cable | x 1 |
| 1960088021T001 | I/O shield | x 1 |

Optional Accessories

| Part Number | Description |
|------------------|---|
| 1960052651N021 | LGA 1151/1150/1155 CPU cooler for 2U/4U and wallmount chassis |
| 1960049408N001 | LGA 1151/1150/1155 CPU heatsink for 1U chassis |
| 1960088060T001 | 1U I/O shield |
| 1700008809 | Printer port cable kit (25 cm) |
| 1700020294-01 | Printer port cable kit (42 cm) |
| 1701090401 | Single port RS-232 cable with bracket (40 cm) |
| 1700002204 | Dual port USB 2.0 cable (27 cm) with bracket |
| 1700008461 | Four port USB 2.0 cable (30.5 cm) with bracket |
| 1700020277-01 | Dual port USB 3.0 cable with bracket (30 cm) |
| 1700019268-11 | Cable for onboard KBMS1 connector (35cm) |
| 1960063434N000 | Cable bracket for 1700019268-11 (4U) |
| 1700029038-01 | BMC VGA cable with bracket (35cm, for G4 SKU) |
| PCA-COM232-00A1E | 4 ports RS-232 module to LPC connector |
| PCA-COM485-00A1E | 4 ports RS-485 module to LPC connector |
| PCA-TPM-00B1E | TPM 2.0 Module by LPC |

I/O View



ASMB-786G4-00A1



ASMB-786G2-00A1

Note : Purchasing ASMB-786's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with ASMB-786.