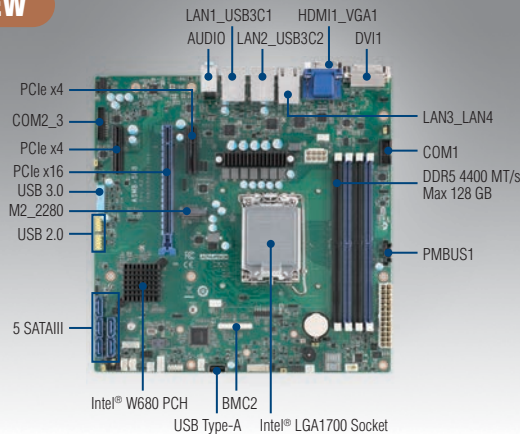


ASMB-588

**LGA 1700 Intel® 14th/13th/ 12th Gen. Core™
MicroATX Server Board with 4 x DDR5,
3 x PCIe (1 x Gen 5, 2 x Gen 4), 6 x USB 3.2,
5 x SATA3, Quad/Dual LANs, and IPMI**

NEW



CE FCC

Features

- LGA 1700 Intel® 14th/13th/ 12th Gen. Core™ i9/i7/i5/i3 processors with W680 chipset
- DDR5 ECC/Non-ECC 5600/4400/4000/3600 MT/s UDIMM up to 128 GB
- One PCIe x16 (Gen 5) and two PCIe x4 (Gen 4) slots
- Triple displays - DVI-D, VGA, and HDMI 2.0 ports
- Five SATA 3 ports and six USB 3.2 ports
- One M.2 2280 (PCIe x4)
- Rackmount optimized placement with positive air flow design
- 0 ~ 60 °C (32 ~ 140 °F) ambient operating temperature range

Note: Supported OS including Windows 10/ 11 (64-bit) and Server 2022 (64-bit) have been validated.

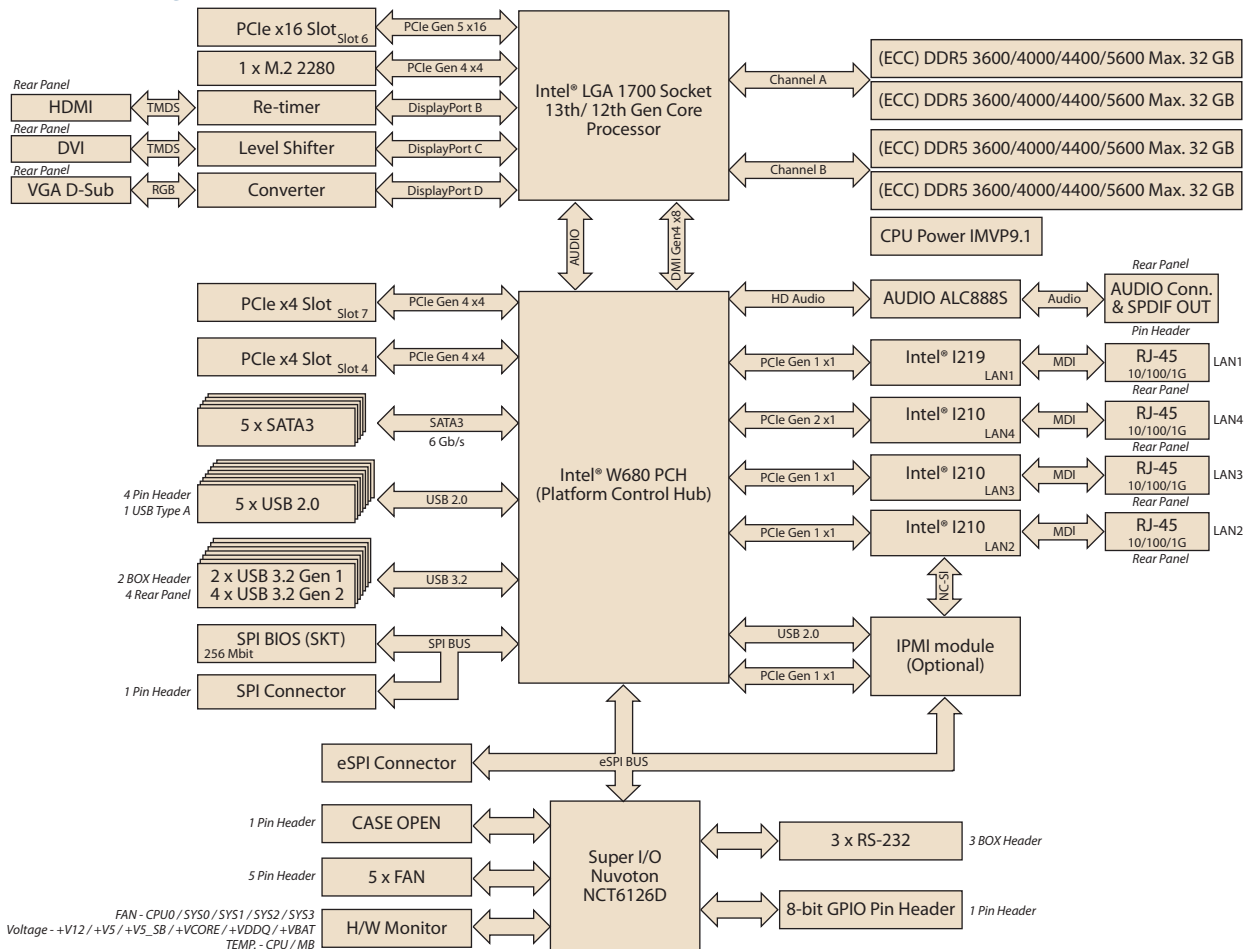
Specifications

| | | | | | | |
|--------------------------|---|---|----------------------------------|--------|---------------|-------------------------------|
| Form Factor | Micro ATX form factor | | | | | |
| Processor System | Socket | Intel® LGA 1700 | | | | |
| | CPU type | 14th/13th/ 12th Gen Intel® Core™ i9/i7/i5/i3 series processors (TDP up to 125W) | | | | |
| Core Logic | Chipset | Intel® W680 chipset | | | | |
| | Total slots | 4 (Dual Channel) | | | | |
| Memory | Capacity | Maximum 128 GB | | | | |
| | Memory type | DDR5 ECC*/Non-ECC 5600/4400**/4000/3600 MT/s UDIMM (288-pin) | | | | |
| | Memory size | 8 GB, 16 GB, 32 GB | | | | |
| | Total PCIe slots | 3 | | | | |
| Expansion Slots | Slot location 1 | - | | | | |
| | Slot location 2 | - | | | | |
| | Slot location 3 | - | | | | |
| | Slot location 4 | PCIe x4 slot (Gen 4 x4 link) | | | | |
| | Slot location 5 | - | | | | |
| | Slot location 6 | PCIe x16 slot (Gen 5 x16 link) | | | | |
| | Slot location 7 | PCIe x4 slot (Gen 4 x4 link) | | | | |
| Graphics | Controller | Intel® HD Graphics | | | | |
| | VRAM | 1 GB maximum shared memory with 2 GB and above system memory installed | | | | |
| Storage | SATA controller | Intel® W680: 5 SATA3 6Gb/s ports with Rapid Storage Technology support (for Windows only) (Supports software RAID 0, 1, 10 & 5) | | | | |
| | SAS controller | - | | | | |
| Networking | GbE LAN | 1 x Intel® I219LM + 3 x Intel® I210AT | | | | |
| Onboard I/O Connector | LPT connector | - | | | | |
| | PSU connector | 24-pin SSI power connector + 8-pin SSI 12 V power connector | | | | |
| | USB connector | 7, 1 x USB 3.2 Gen 1 (2 ports), 2 x USB 2.0 (4 ports), 1 x USB 2.0 Type-A | | | | |
| | M.2 connector | 1 x M.2 2280 (PCIe) | | | | |
| | Fan header | 5 x (4-pin) | | | | |
| | SMBus | 1 | | | | |
| | Chassis intrusion | 1 | | | | |
| | Front LAN LED | 2 | | | | |
| | Serial port header | 2, 1 x RS-232 dual-port (2 ports) | | | | |
| | Audio Header | 1 x (ALC 888S) | | | | |
| | PS/2 KB/Mouse | - | | | | |
| | Rear I/O Connector | External serial port | 1 (via COM cable in the package) | | | |
| | | External USB port | 4 x (USB 3.2 Gen 2) | | | |
| VGA port | | 1 x (Resolution up to 1920 x 1200 @ 60 Hz) | | | | |
| DVI port | | 1 x (Resolution up to 1920 x 1200 @ 60 Hz) | | | | |
| HDMI | | 1 x (Resolution up to 4096 x 2160 @ 60 Hz) | | | | |
| RJ-45 | | 4 | | | | |
| PS/2 KB/mouse | | - | | | | |
| Audio | | 2 x (Mic-in , Line-out) | | | | |
| Power Requirement | Power On | 3.3 V | 5 V | 12 V | 12V_8P | 5 V _{SS} |
| | (Core i9-12900K 3.2GHz DDR5 4800 16 GB x 4) | 0.76 A | 0.92 A | 0.03 A | 4.82 A | 0.15 A |
| Environment | Temperature | Operating | | | Non-operating | |
| | Humidity | 0 ~ 60 °C, depends on CPU speed and cooler solution | | | -40 ~ 85 °C | |
| Watchdog Timer | Output | 40 °C @ 95% RH Non-condensing | | | | 60 °C @ 95% RH Non-condensing |
| | Interval | System reset | | | | Programmable 1 ~ 255 sec/min |
| Physical Characteristics | Dimensions | Programmable 1 ~ 255 sec/min | | | | 244 x 244 mm (9.6 x 9.6 in) |
| | | 244 x 244 mm (9.6 x 9.6 in) | | | | |

* ECC will not be supported when paired with Core i3 processors.

** 4400MT/s can only be supported with 1 DIMM per channel configuration (2 DIMMs in total).

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | Display | LAN | SATAIII | IPMI |
|-----------------|---------|------------------------|--------------------|-----|---------|----------|
| ASMB-588G2-00A1 | W680 | DDR5 ECC/Non-ECC UDIMM | VGA + DVI-D + HDMI | 2 | 5 | Optional |
| ASMB-588G4-00A1 | W680 | DDR5 ECC/Non-ECC UDIMM | VGA + DVI-D + HDMI | 4 | 5 | Optional |

Packing List

| Part Number | Description | Quantity |
|----------------|----------------------|----------|
| 2042058800 | Startup manual | x 1 |
| 1700003194 | SATA data cables | x 2 |
| 1700022749-11 | SATA power cables | x 2 |
| 1700001788 | COM1 cable | x 1 |
| 1960088021T011 | I/O shield | x 1 |
| 1930005673-11 | Screw for M.2 device | x 1 |

Optional Accessories

| Part Number | Description |
|-----------------|---|
| 1970005958N001 | LGA 1700 CPU Cooler for 3U/4U Tower Cooler (CPU 230W at ambient 30°C) |
| 1970005531T001 | LGA 1700 CPU heatsink for 1U chassis |
| 1970005436T001 | LGA 1700 CPU cooler for 2U/4U chassis (CPU 125W) |
| 1970005349T000 | LGA 1700 CPU cooler for 2U/4U chassis (CPU under 65W) |
| 1960088060T011 | 1U I/O shield for ASMB-588 |
| 1700031926-11 | JFP1 cable for 1U chassis |
| 1990040376T000 | 1U air duct for ASMB-588 + HPC-7120S |
| 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 3.0 cable (30 cm / 11.8 in) with bracket |
| 1701090401 | Single port RS-232 COM cable (40 cm / 15.7 in) with bracket |
| 1700026254-01 | Dual-port RS-232 COM cable (45 cm / 17.7 in) with bracket |
| IPMI-2000E-00A1 | IPMI Module |
| PCA-TPMSPI-00A1 | TPM 2.0 Module by SPI |

I/O View



ASMB-588G4-00A1



ASMB-588G2-00A1