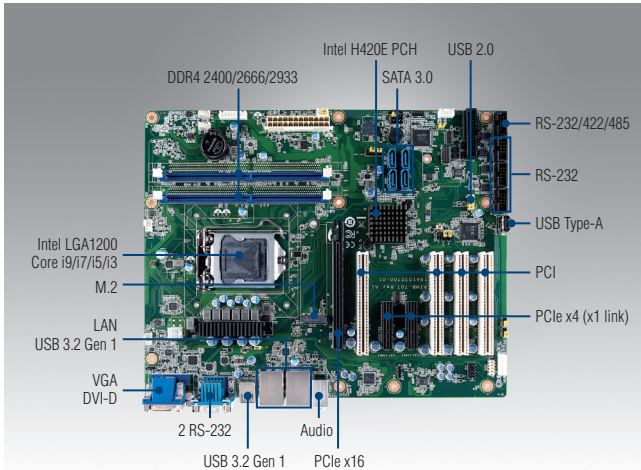


AIMB-707

LGA1200 10th Generation Intel® Core™ i9/i7/i5/i3 & Pentium®/Celeron® ATX with DVI/VGA, DDR4, USB 3.2, M.2, 6 COMs



Features

- Intel® 10th generation Core™ i9/i7/i5/i3 & Pentium®/Celeron® processor with H420E chipset
- Dual channel (Non-ECC) DDR4 2400/2666/2933 up to 64 GB
- Support VGA and DVI display
- M.2, SATA 3.0, USB 3.2, dual GbEs
- 5 RS-232 and 1 RS-232/422/485 serial ports
- 1 PCIe x16 (Gen 3) and 2 PCIe x4 (x1 Gen 3 link), and 4 PCI expansion slots

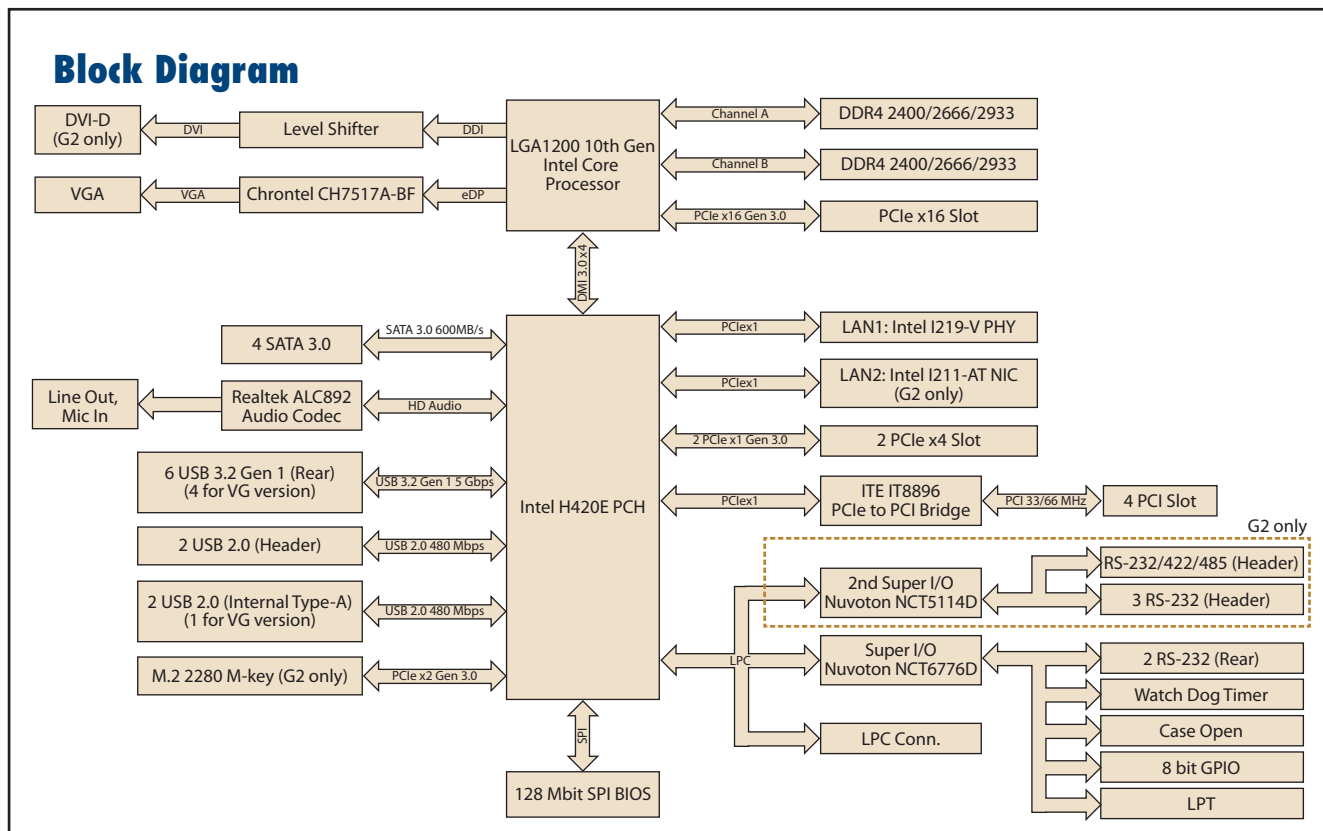
Note: Legacy platform is not supported.

Quiet Specifications



| | CPU | i9-10900E | i9-10900TE | i7-10700E | i7-10700TE | i5-10500E | i5-10500TE | i3-10100E | i3-10100TE | G6400E | G6400TE | G5900E | G5900TE | | | |
|--------------------------|------------------------|--|------------|-----------|------------|-----------|------------|-----------|------------|---------|---------|---------|---------|-------|--|--|
| Processor System | Base Frequency | 2.8 GHz | 1.8 GHz | 2.9 GHz | 2.0 GHz | 3.1 GHz | 2.3 GHz | 3.2 GHz | 2.3 GHz | 3.8 GHz | 3.2 GHz | 3.2 GHz | 3.0 GHz | | | |
| | L3 Cache | 20 MB | 20 MB | 16 MB | 16 MB | 12 MB | 12 MB | 6 MB | 6 MB | 4 MB | 4 MB | 2 MB | 2 MB | | | |
| | Cores | 10 | 10 | 8 | 8 | 6 | 6 | 4 | 4 | 2 | 2 | 2 | 2 | | | |
| | TDP | 65 W | 35 W | 65 W | 35 W | 65 W | 35 W | 65 W | 35 W | 65 W | 35 W | 65 W | 35 W | | | |
| | Socket | LGA1200 | | | | | | | | | | | | | | |
| | Chipset | Intel H420E | | | | | | | | | | | | | | |
| | BIOS | AMI 128Mbit SPI Flash | | | | | | | | | | | | | | |
| Expansion Slot | PCI | 4 (32-bit/33 MHz) | | | | | | | | | | | | | | |
| | PCIe x4 (Gen 3) | 2 (link x1) | | | | | | | | | | | | | | |
| | PCIe x16 (Gen 3) | 1 | | | | | | | | | | | | | | |
| Memory | Technology | Dual Channel(Non-ECC) DDR4 2400/2666/2933 | | | | | | | | | | | | | | |
| | Max Capacity | 64 GB | | | | | | | | | | | | | | |
| | Sockets | 2 x 288-pin DIMM | | | | | | | | | | | | | | |
| Graphics | Controller | Chipset integrated Intel HD Graphics | | | | | | | | | | | | | | |
| | VRAM | Shared system memory is subject to OS | | | | | | | | | | | | | | |
| Ethernet | Interface | 10/100/1000 Mbps | | | | | | | | | | | | | | |
| | Controller | GbE LAN1: Intel I219-V, GbE LAN2: Intel I211-AT | | | | | | | | | | | | | | |
| | Connector | 2 x RJ-45 | | | | | | | | | | | | | | |
| SATA | Max Data Transfer Rate | 600 MB/s | | | | | | | | | | | | | | |
| Rear I/O | Channel | 4 | | | | | | | | | | | | | | |
| | VGA | 1 (Resolution up to 1920 x 1200 @ 60 Hz) | | | | | | | | | | | | | | |
| | DVI | 1 for G2 version (Resolution up to 1920 x 1200 @ 60 Hz) | | | | | | | | | | | | | | |
| | Ethernet | 2 for G2 version; 1 for VG version | | | | | | | | | | | | | | |
| | USB | 6 (USB 3.2 Gen 1 for G2 version; 4 for VG version) | | | | | | | | | | | | | | |
| | Audio | 2 (Line-out, Mic-in) | | | | | | | | | | | | | | |
| | Serial | 2 (RS-232) | | | | | | | | | | | | | | |
| Internal Connectors | USB | 4 (2 x USB 2.0 via header, 2 x USB 2.0 Type-A) for G2 version; 3 (2 x USB 2.0 via header, 1 x USB 2.0 Type-A) for VG version | | | | | | | | | | | | | | |
| | Serial | 4 for G2 version (3 x RS-232, box-header; 1 x RS-232/422/485 with auto-flow control, box-header) | | | | | | | | | | | | | | |
| | SATA | 4 | | | | | | | | | | | | | | |
| | M.2 | 1 for G2 version (PCIe x2 M-key 2280 type) | | | | | | | | | | | | | | |
| | Parallel | 1 | | | | | | | | | | | | | | |
| | GPIO | 8-bit | | | | | | | | | | | | | | |
| Watchdog Timer | Output | System reset | | | | | | | | | | | | | | |
| | Interval | Programmable 1 - 255 sec | | | | | | | | | | | | | | |
| Power Requirement | Test Environment | Intel Core i9-10900E; DDR4 32 GB x 2 | | | | | | | | | | | | | | |
| | Voltage | 3.3V | | | 5V | | | 12V | | | 5Vsb | | | -12V | | |
| | Current | 0.72A | | | 1.29A | | | 6.5A | | | 0.11A | | | 0.04A | | |
| Environment | Operating | Non-Operating | | | | | | | | | | | | | | |
| | Temperature | 0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and system thermal solution | | | | | | | | | | | | | | |
| Physical Characteristics | Humidity | 40 °C @ 95% RH Non-condensing | | | | | | | | | | | | | | |
| | Dimensions (L x H) | 304.8 x 244 mm (12" x 9.6") | | | | | | | | | | | | | | |

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | Display | USB 3.2 Gen 1 | USB 2.0 | COM | GbE LAN | AMT | M.2 | SATA | SW RAID | Intelligent System Module Support |
|-----------------|---------|---------|-----------|---------------|---------|-----|---------|-----|-----|------|---------|-----------------------------------|
| AIMB-707G2-00A1 | H420E | Non-ECC | VGA + DVI | 6 | 4 | 6 | 2 | No | 1 | 4 | No | No |
| AIMB-707VG-00A1 | H420E | Non-ECC | VGA | 4 | 3 | 2 | 1 | No | 0 | 4 | No | No |

Packing List

| Part Number | Description | Quantity |
|----------------|------------------|----------|
| 1700003194 | SATA HDD cable | x2 |
| 1960097974T001 | I/O port bracket | x1 |
| 2041070700 | Startup manual | x1 |

Note: Driver CD is not provided. Please visit Advantech support website for driver download.

I/O View



AIMB-707G2-00A1



AIMB-707VG-00A1

Optional Accessories

| Part Number | Description |
|---|--|
| 1701090401 | Single COM port cable(40 cm) |
| 1701092300 | Dual COM port cable(28.5 cm) |
| 1700022749-11/ 1700022749-12/ 1700022749-13 | SATA power cable |
| 1700019268-11 | PS/2 KB/Mouse cable |
| 1960063434N000 | I/O bracket for PS/2 KB/Mouse cable |
| 1700002204 | 2-port USB 2.0 cable w/ BKT(27 cm) |
| 1960052651N021 | CPU cooler for 2U, 4U, and wallmount chassis |
| 1960049408N001 | CPU heatsink for 1U chassis |
| TBD | IO bracket for 1U chassis |
| PCA-COM232-00A1E | 4-port RS-232 LPC module |
| PCA-COM485-00A1E | 4-port RS-422/485 LPC module |
| PCA-TPM-00B1E | TPM2.0 module |

Note: Purchasing AIMB-707's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-707.

Riser Card

| Part Number | Description |
|------------------|---|
| AIMB-RP10P-01A1E | 1U riser card providing 1 PCI slot |
| AIMB-RF10F-01A1E | 1U riser card providing 1 PCIe x 16 slot |
| AIMB-RP30P-03A1E | 2U riser card providing 3 PCI slots |
| AIMB-RP3PF-21A1E | 2U riser card providing 1 PCIe x 16 and 2 PCI slots |