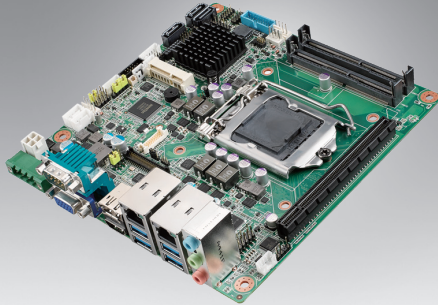


AIMB-275

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with VGA/DP⁺⁺/HDMI/LVDS(eDP), 2 COM, Dual LAN, PCIe x16, M.2, DDR4, DC Input

NEW



Features

- Supports Intel® 6th Gen Core™ i processor (LGA1151) with Intel Q170 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Supports triple display of VGA/DP/HDMI/LVDS(eDP)
- Supports PCIe x16 (Gen 3), 1 F/S miniPCIe 1 M.2 (NGFF), 6 USB 3.0 and 3 SATA III
- Support wide range 12V-24V DC Input
- Supports Intel vPro, AMT 11.0, PECC 3.0, Software RAID 0,1,5,10, TPM 1.2 / 2.0 (optional)
- Supports SUSIAccess and Embedded Software APIs

Software APIs:



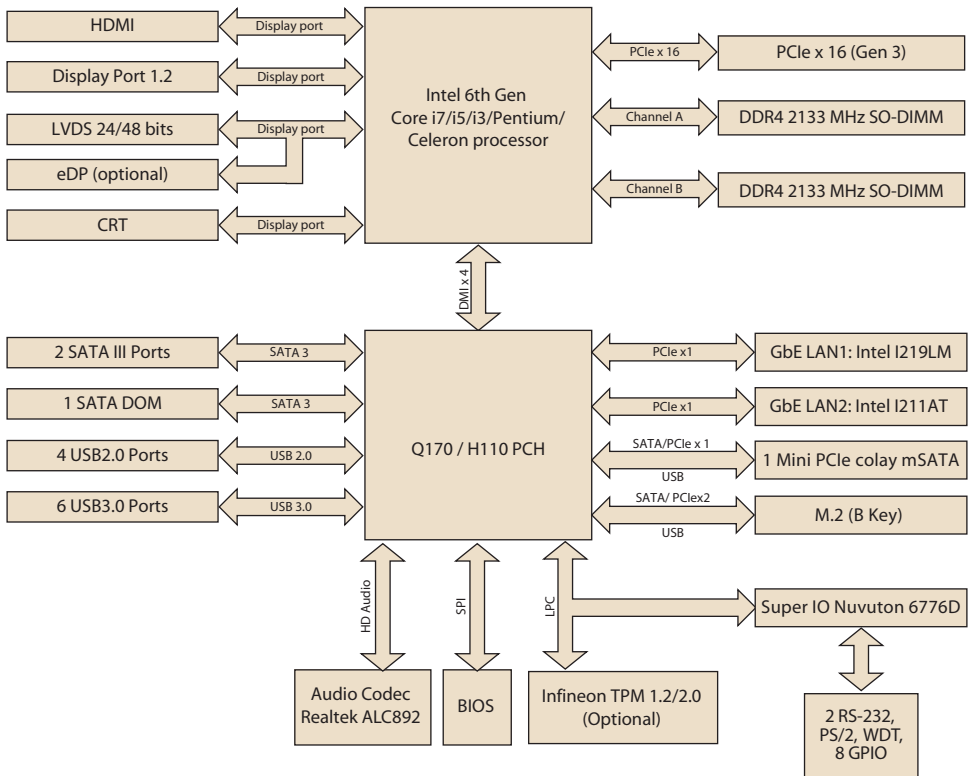
Utilities:



Specifications

| | CPU | i7-6700 | i7-6700TE | i5-6500 | i5-6500TE | i3-6100 | i3-6100TE | Pentium G4400/4400TE | Pentium G3900/3900TE | |
|--------------------------|---|---|-----------|---------|-----------|---------|-----------|----------------------|----------------------------|--|
| Processor System | Core Number | 4 | 4 | 4 | 4 | 2 | 2 | 2 / 2 | 2 / 2 | |
| | Max Speed | 3.4GHz | 2.4GHz | 3.2GHz | 2.3GHz | TBD | 2.7GHz | 3.3GHz / 2.9GHz | 2.8GHz / 2.6GHz | |
| | L3 Cache | 8M | 8M | 6M | 6M | 4M | 4M | 3M / 3M | 2M / 2M | |
| | TDP | 65W | 35W | 65W | 35W | 51W | 35W | 54W / 35W | 51W / 35W | |
| | Chipset | Q170 / H110 | | | | | | | | |
| | BIOS | AMI EFI 128 Mbit SPI | | | | | | | | |
| Expansion Slot | M.2 | 1, B key for SSD and 3G supported (Type: 2242, 2280mm) | | | | | | | | |
| | Mini-PCIe | 1, F/S miniPCIe slot (with mSATA supported) | | | | | | | | |
| | PCIe x16 (Gen3) | 16 GB/s per direction, 1 slot | | | | | | | | |
| Memory | Technology | Dual Channel DDR4 2133 MHz SDRAM | | | | | | | | |
| | Max. Capacity | 32GB (up to 16GB per SO-DIMM) | | | | | | | | |
| | Socket | 2 x 260 PIN DDR4 SO-DIMM (Non-ECC) | | | | | | | | |
| Graphics | Controller | Supports OpenGL 5.x, DirectX12, OpenCL 2.X | | | | | | | | |
| | VRAM | Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory | | | | | | | | |
| | CRT | Yes, supports max. resolution 1920 x 1200 @ 60 Hz | | | | | | | | |
| | LVDS | Supports dual channel 48-bit up to 1920 x 1200 | | | | | | | | |
| | HDMI | Yes, supports max. resolution 4096 x 2160 @60 Hz (HDMI 2.0) | | | | | | | | |
| | eDP | Yes, with internal pin header, supports max. resolution 4096 x 2160 @ 60 Hz | | | | | | | | |
| Display Port 1.2 | Yes, supports max. resolution 3840 x 2160 @ 60 Hz | | | | | | | | | |
| | Triple Display | VGA+HDMI+DP ⁺⁺ , VGA+DP ⁺⁺ +LVDS(eDP), VAG+HDMI+LVDS (eDP), DP ⁺⁺ +HDMI+LVDS (eDP) | | | | | | | | |
| Ethernet | Interface | 10/100/1000 Mbps | | | | | | | | |
| | Controller | GbE LAN1: Intel i219LM; LAN2: Intel I211AT | | | | | | | | |
| | Connector | RJ-45 x 2 | | | | | | | | |
| SATA | Max Data Transfer Rate | 600 MB/s (SATA 3.0) | | | | | | | | |
| | Channel | 3 (2 SATAIII, 1 SATA DOM) | | | | | | | | |
| Rear I/O | CRT | 1 | | | | | | | | |
| | HDMI | 1 (HDMI 2.0 or HDMI 1.2) | | | | | | | | |
| | Display Port 1.2 | 1 | | | | | | | | |
| | Ethernet | 2 | | | | | | | | |
| | USB | 4 (USB 3.0) | | | | | | | | |
| | Audio | 3 (Mic-in, Line-out, Line-in) | | | | | | | | |
| | Serial | 1 (RS-232, supports 5V/12V) | | | | | | | | |
| | Phoenix Connector | 1 | | | | | | | | |
| Internal Connector | USB | 6 (2 USB 3.0, 4 USB 2.0) | | | | | | | | |
| | LVDS/inverter | 1 | | | | | | | | |
| | Serial | 1 (RS-232/422/485) | | | | | | | | |
| | SATA | 3 (SATA 3.0) | | | | | | | | |
| | Mini-PCIe | 1 (F/S x1, mSATA supported) | | | | | | | | |
| | M.2 | 1 (B Key for SSD and 3G supported) | | | | | | | | |
| | IrDA | - | | | | | | | | |
| Watchdog Timer | GPIO | 8-bit | | | | | | | | |
| | Output | System reset | | | | | | | | |
| Power Requirements | Interval | Programmable 1 ~ 255 sec/min | | | | | | | | |
| | Input power | 12 ~ 24V DC Input | | | | | | | | |
| Environment | Win Idle | 19.28W (Intel core i7-6700 3.4GHz / DDR4 2133MHz 8GB x 2) | | | | | | | Non-Operating | |
| | Temperature | Operating 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution | | | | | | | -40 ~ 85° C (-40 ~ 185° F) | |
| Physical Characteristics | Dimensions | 170 mm x 170 mm (6.69" x 6.69") | | | | | | | | |

Block Diagram



Ordering Information

| P/N | Chipset | DP | VGA | LVDS/eDP | HDMI | GbE LAN | COM | M.2 | SATA | USB 3.0/2.0 | MiniPCIe | TPM | AMP | PClex16 |
|------------------|---------|----|-----|----------|--------------|---------|-----|-----|------------------------|-------------|-------------------|-----|-----|---------|
| AIMB-275G2-00A1E | Q170 | 1 | 1 | 1/(1) | 1 (HDMI 2.0) | 2 | 2 | 1 | 3 (1 SATA DOM support) | 6/4 | 1 (F/S) | (1) | (1) | 1 |
| AIMB-275VG-00A1E | Q170 | 1 | 1 | 0 | 1 (HDMI 1.2) | 1 | 2 | 0 | 3 | 4/4 | 1 (F/S) | (1) | (1) | 1 |
| AIMB-275L-00A1E | H110 | 1 | 1 | 0 | 1 (HDMI 1.2) | 1 | 2 | 0 | 3 | 4/4 | 1(F/S) mSATA only | (1) | (1) | 1 |

*() BOM options available on MP version.

Packing List

| Part Number | Description | Quantity |
|----------------|----------------------------------|----------|
| 1700003194 | SATA HDD cable | 1 |
| 1700018785 | SATA power cable (1 port, 25cm) | 1 |
| 1700100250 | Serial port cable | 1 |
| 1920001186T000 | I/O port bracket | 1 |
| 2006027510 | Startup manual | 1 |
| 1700025084-01 | ATX 2*10P to 1*3P-2.0 25cm cable | 1 |

Optional Chassis

| Part Number | Description |
|-----------------|--|
| AIMB-B2000-15ZE | Mini-ITX chassis with 150W ATX power supply |
| AIMB-B2000-00YE | Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor) |

I/O View



Optional Accessories

| Part Number | Description |
|-----------------|---|
| 1703100121 | USB 2.0 cable with two ports, 12 cm |
| 1703100261 | USB 2.0 cable with two ports, 26 cm |
| 1700020277-01 | Dual port USB 3.0 cable 30cm with IO bracket |
| 1703060191 | KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm |
| 1700023768-01 | 1x4P Phoenix to DC Jack 15cm cable |
| 1960053207N001 | LGA1150 CPU cooler for CPU TDP ≤ 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm |
| 1960060732N001 | LGA1150 CPU cooler for CPU TDP ≤ 45W, 80 (W) x 80 (L) x 32.2 (H) mm |
| 96PSA-A120W12P4 | ADP A/D 100-240V 120W 12V C14 TERMINAL BLOCK 4P |

Embedded OS/API

| OS/API | Part No. | Description |
|------------|------------|---|
| windows 10 | 2070014479 | Win10 IoT Enterprise x64 multi-language |
| WE8.1 | 2070014480 | WE8.1 Industry Pro x64 multi-language |

Riser Card

| Part Number | Description |
|------------------|---|
| AIMB-RF10F-01A1E | 1U riser card with 1 PCIe16 expansion |
| AIMB-RF20F-02A1E | 2U riser card for 1xPCIex16 to 2 PCIe16 (both Lane are PCIeX8 only) |

** compliant with AIMB-275G2/VG (Q170) sku only