

AIMB-285 A2

Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX with DP⁺⁺/HDMI/VGA, 2 COM, Dual LAN, PCIe x4, miniPCIe, DDR4, DC Input



Features

- Supports Intel® 7th & 6th Gen Core™ i processor (LGA1151) with Intel H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2400/2133 MHz SDRAM
- Supports Dual display of DP/HDMI/VGA
- Supports PCIe x4 (Gen 3), 1 F/S miniPCIe and 1 H/S miniPCIe
- Support 12V DC Input and low profile height
- Supports 4 USB 3.0, 4 USB 2.0, 3 SATAIII, TPM 1.2 / 2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

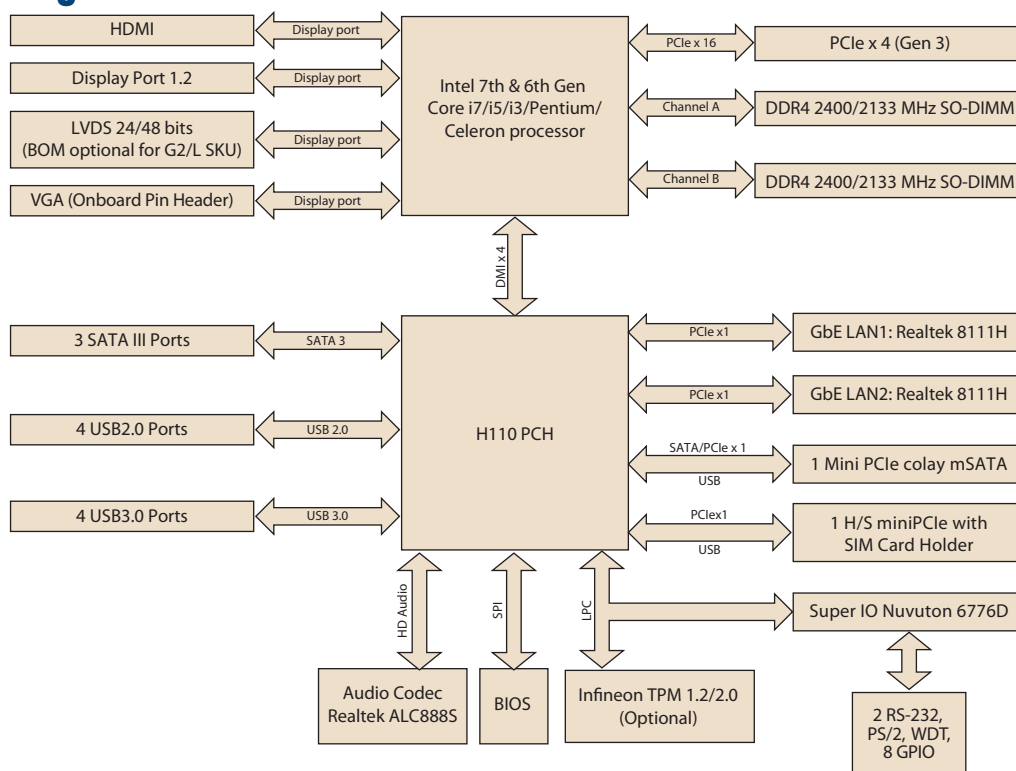
Software APIs:



Specifications

| | CPU | KBL-S SKL-S | i7-7700 i7-6700 | i7-7700T i7-6700TE | i5-7500 i5-6500 | i5-7500T i5-6500TE | i3-7101E i3-6100 | i3-7101TE i3-6100TE | - Pentium G4400/4400TE | - Pentium G3900/3900TE | |
|--------------------------|------------------------|--|---|-----------------------|--------------------|-----------------------|---------------------|------------------------|---|------------------------------|--|
| Processor System | Core Number | | 4 | 4 | 4 | 4 | 2 | 2 | 2 / 2 | 2 / 2 | |
| | Max Speed | KBL-S SKL-S | 3.6GHz 3.4GHz | 2.9GHz 2.4GHz | 3.4GHz 3.2GHz | 2.7GHz 2.3GHz | 3.9GHz 3.7GHz | 3.4GHz 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 | 54W / 51W | 35W | 54W / 35W | 51W / 35W | |
| | Chipset | | H110 | | | | | | | | |
| | BIOS | | AMI EFI 128 Mbit SPI | | | | | | | | |
| | Expansion Slot | Mini-PCIe PCIe x4 (Gen3) | 1 F/S miniPCIe slot support mSATA; 1 H/S miniPCIe slot with SIM card holder 4 GB/s per direction, 1 slot | | | | | | | | |
| Memory | Technology | Dual Channel DDR4 2400/2133 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 | | | | | | | | | |
| | VGA | Yes, supports max. resolution 1920 x 1200 @ 60 Hz | | | | | | | | | |
| | LVDS | Supports dual channel 48-bit up to 1920 x 1200 (BOM optional for G2/L sku) | | | | | | | | | |
| | HDMI | Yes, supports max. resolution 4096 x 2160 @ 24 Hz (HDMI 1.4) | | | | | | | | | |
| | Display Port 1.2 | Yes, supports max. resolution 4096 x 2160 @ 60Hz | | | | | | | | | |
| | Dual Display | DP+HDMI, DP+VGA, HDMI+VGA, DP+LVDS, HDMI+LVDS, VGA+ LVDS | | | | | | | | | |
| Ethernet | Interface | 10/100/1000 Mbps | | | | | | | | | |
| | Controller | GbE LAN: Realtek 8111H x2 | | | | | | | | | |
| | Connector | RJ-45 x 2 | | | | | | | | | |
| SATA | Max Data Transfer Rate | 600 MB/s (SATA 3.0) | | | | | | | | | |
| | Channel | 3 (SATA III) | | | | | | | | | |
| Rear I/O | HDMI | 1 (HDMI 1.4) | | | | | | | | | |
| | Display Port 1.2 | 1 | | | | | | | | | |
| | Ethernet | 2 | | | | | | | | | |
| | USB | 4 (USB 3.0) | | | | | | | | | |
| | Audio | 2 (Mac-in, Line-out) *("Mic-in" could be configured as "Line-in" under Win OS.) | | | | | | | | | |
| | DC Jack | 1 | | | | | | | | | |
| Internal Connector | USB | 4 (USB 2.0) | | | | | | | | | |
| | LVDS/ nverter | 1 (BOM optional for G2/L sku) | | | | | | | | | |
| | Serial | 2 (one support RS-232/422/485 and one support 5V/12V) | | | | | | | | | |
| | SATA | 3 (SATA III) | | | | | | | | | |
| | Mini-PCIe | 2 (1 F/S and 1 H/S) | | | | | | | | | |
| Watchdog Timer | GPIO | 8-bit | | | | | | | | | |
| | Output | System reset | | | | | | | | | |
| Power Requirements | Interval | Programmable 1 ~ 255 sec/min | | | | | | | | | |
| | Input power | ATX | | | | | | | | | |
| Environment | | Win Idle 9.3W (Intel core i7-7700 3.6GHz / DDR4 2133 MHz 16G x 2) | | | | | | | Operating | | |
| | Temperature | 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution | | | | | | | Non-Operating -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 | HDMI | GbE LAN | COM | SATA | USB 3.0/2.0 | MiniPCle | TPM | AMP | PClex4 |
|------------------|---------|----|----------------|------|--------------|---------|-----|------|-------------|-------------------|-----|-----|--------|
| AIMB-285G2-00A2E | H110 | 1 | 1 (pin header) | (1) | 1 (HDMI 1.4) | 2 | 2 | 3 | 4/4 | 2 (1 F/S & 1 H/S) | (1) | (1) | 1 |
| AIMB-285L-00A2E | H110 | 1 | 0 | (1) | 1 (HDMI 1.4) | 1 | 1 | 2 | 4/0 | 1(F/S) | (1) | 0 | 0 |
| AIMB-285G2-LVA2E | H110 | 1 | 1 (pin header) | 1 | 1 (HDMI 1.4) | 2 | 2 | 3 | 4/4 | 2 (1 F/S & 1 H/S) | (1) | (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 |
| 1700100250 | Serial port cable (1 port, 25cm) | 2 |
| 1920001209T000 | I/O port bracket | 1 |
| 2006028510 | Startup manual | 1 |

Optional Chassis

| Part Number | Description |
|-------------------|---|
| AIMB-B2000-00YE | Mini-ITX chassis (Optional external AC-DC 84W/120W Adaptor) |
| EPC-T22855A-00Y0E | EPC-T2285 barebone, w/ I5-6500TE, w/o ADP, RAM, HDD |

Rear I/O



Optional Accessories

| Part Number | Description |
|-----------------|---|
| 1700026162-01 | USB 2.0 cable with two ports, 30 cm with bracket |
| 1703060191 | KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm |
| 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 ≤ 35W, 80 (W) x 80 (L) x 32.2 (H) mm |
| 96PSA-A120W12V1 | ADP A/D 100-240V 120W 12V C14 DC Plug 180° |
| 1700023082-11 | A cable 2*10P-4.2/1*3P-2.0 15cm |
| 1700025816-01 | VGA cable (M cable 2*5P-2.0/D-SUB 15P(F) 35cm) |

Embedded OS/API

| OS/API | Part No. | 968 P/N | Description |
|---------------|----------------|------------|---|
| windows 10 | 2070014483 | 968QW10LTE | Win10 IoT Enterprise x64 multi-language (SKL-S) |
| WE8.1 | 2070014246 | 968QWE8IP1 | WE8.1 Industry Pro x64 multi-language (SKL-S) |
| Win10 | 20706WX6HS0000 | 968QW16HLE | img W10 16HL AIMB-285 64b 1709 ENU (KBL-S) |
| Win10 | 20706WX6VS0003 | 968QW16HLE | img W10 16VL AIMB-285 64b 1709 ENU (KBL-S) |
| Ubuntu20.04.4 | 20706U20DS0049 | 968MOU204D | Ubuntu20.04.4 AIMB-285 64b 2004 ENU |