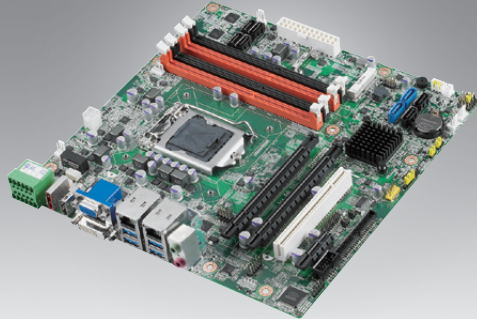


AIMB-502

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1155
MicroATX with CRT/DVI/HDMI, 6 COM,
Dual LAN, SATAIII

NEW



Features

- Supports Intel® Xeon®/ Core™ i7/i5/i3 processor with Q77/C216 chipset
- Four DIMM sockets support up to 32 GB DDR3 1333/1600 MHz SDRAM
- Supports CRT, DVI, HDMI, Phoenix connector and dual GbE LAN
- Supports Intel AMT 8.0 and Intel vPro competent
- Supports 2 SATAIII, 6 SATAII, 1 eSATA, 1 mSATA, Software RAID 0, 1, 5, 10.
- Supports PCIe Gen3, USB 3.0 x 4. TPM 1.2 (Optional)
- Supports SUSIAccess and Embedded Software APIs

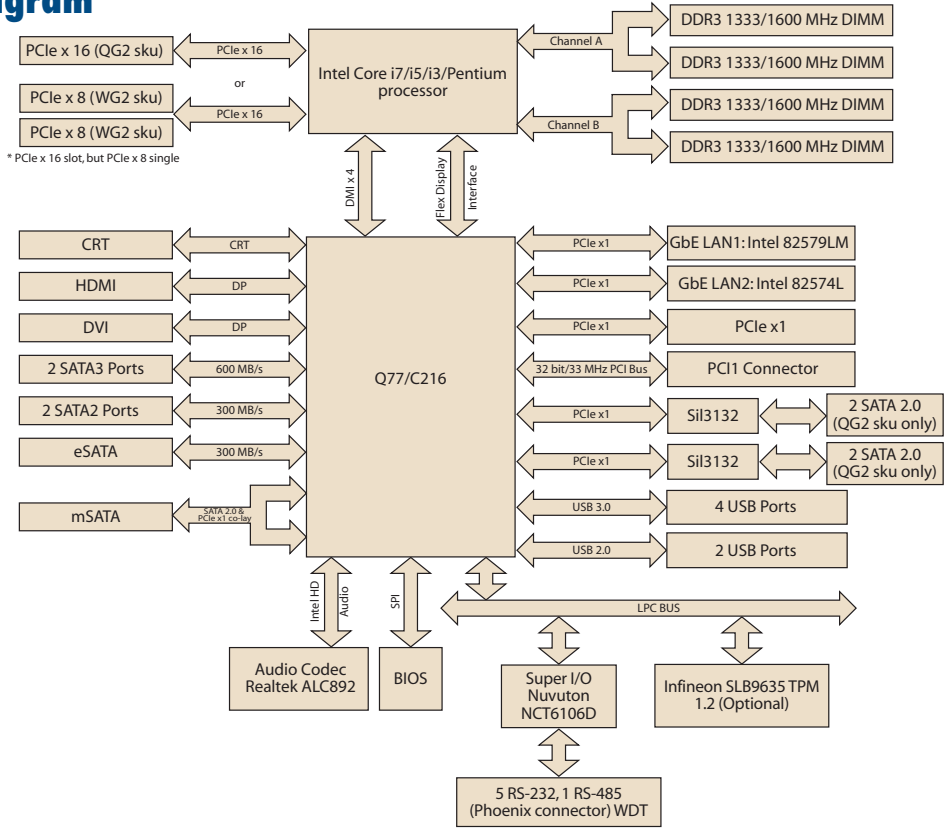
Software APIs:

Utilities:

Specifications

| | CPU | Intel Xeon E3-1275v2 | Intel Xeon E3-1275 | Intel Xeon E3-1225v2 | Intel Xeon E3-1225 | Intel Core i3-2120 | Intel Pentium G850 | Intel Core i7-3770 | Intel Core i7-2600 | Intel Core i5-3550S | Intel Core i3-3220 | Intel Core i5-2400 | Intel Celeron G540 | | | | | | |
|--------------------|------------------------|---|--------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|-------|--|--|--------|--|--|
| Processor System | Core Number | 4 | 4 | 4 | 4 | 2 | 2 | 4 | 4 | 4 | 2 | 4 | 2 | | | | | | |
| | Max. Speed | 3.5 GHz | 3.4 GHz | 3.2 GHz | 3.1 GHz | 3.3 GHz | 2.9 GHz | 3.4GHz | 3.4 GHz | 3.0GHz | 3.3 GHz | 3.1 GHz | 2.5 GHz | | | | | | |
| | Integrated Graphics | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| | L3 Cache | 8 MB | 8 MB | 8 MB | 6 MB | 3 MB | 3 MB | 8 MB | 8 MB | 6 MB | 3 MB | 6 MB | 2 MB | | | | | | |
| | Supports Model | WG2 | WG2 | WG2 | WG2 | WG2/QG2 | WG2/QG2 | QG2 | QG2 | QG2 | QG2 | QG2 | QG2 | | | | | | |
| Chipset | Q77/C216 | | | | | | | | | | | | | | | | | | |
| BIOS | AMI EFI 64 Mbit SPI | | | | | | | | | | | | | | | | | | |
| Expansion Slot | PCI | 32-bit/33 MHz, 1 slot | | | | | | | | | | | | | | | | | |
| | PCIe x1 (Gen2) | 500MB/s per direction, 1 slot | | | | | | | | | | | | | | | | | |
| | PCIe x16 (Gen3) | 16GB/s per direction, 1 slot (QG2), 2 slot (WG2: PCIe x8 single per slot only) | | | | | | | | | | | | | | | | | |
| Memory | Technology | Dual Channel DDR3 1333/1600 MHz SDRAM | | | | | | | | | | | | | | | | | |
| | Max. Capacity | 32 GB/8 GB per DIMM | | | | | | | | | | | | | | | | | |
| | Socket | 4 x 240-pin DIMM (Non-ECC) | | | | | | | | | | | | | | | | | |
| Graphics | Controller | Intel HD Graphics | | | | | | | | | | | | | | | | | |
| | VRAM | 1 GB maximum shared memory with 2 GB and above system memory installed | | | | | | | | | | | | | | | | | |
| | HDMI | Supports max resolution 1920 x 1200 (1080P) | | | | | | | | | | | | | | | | | |
| | CRT | Supports max resolution 2048 x 1536 at 60 Hz | | | | | | | | | | | | | | | | | |
| | DVI | Supports max. resolution 1920 x 1200 at 60 Hz | | | | | | | | | | | | | | | | | |
| | Triple Display | CRT+DVI+HDMI | | | | | | | | | | | | | | | | | |
| Ethernet | Dual Display | CRT+DVI, CRT+HDMI, DVI+HDMI | | | | | | | | | | | | | | | | | |
| | Interface | 10/100/1000 Mbps | | | | | | | | | | | | | | | | | |
| SATA | Controller | GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82574L | | | | | | | | | | | | | | | | | |
| | Connector | RJ-45 x 2 | | | | | | | | | | | | | | | | | |
| Rear I/O | Max Data Transfer Rate | 600 MB/s (SATA 3.0)/ 300 MB/s (SATA 2.0) / eSATA / mSATA | | | | | | | | | | | | | | | | | |
| | Channel | 2/6/1/1 | | | | | | | | | | | | | | | | | |
| Internal Connector | CRT | 1 | | | | | | | | | | | | | | | | | |
| | DVI | 1 | | | | | | | | | | | | | | | | | |
| | HDMI | 1 | | | | | | | | | | | | | | | | | |
| | Ethernet | 2 | | | | | | | | | | | | | | | | | |
| | USB | 4 (4 USB 3.0) | | | | | | | | | | | | | | | | | |
| | Audio | 2 (Mic-in, Line-out) | | | | | | | | | | | | | | | | | |
| | Serial | 1 (RS-485 from Phoenix connector) | | | | | | | | | | | | | | | | | |
| | Phoenix | 1 (1 RS-485 + 6 bit GPIO: fixed 4 in, 2 out, can't programmable) | | | | | | | | | | | | | | | | | |
| | eSATA | 1 | | | | | | | | | | | | | | | | | |
| | Watchdog Timer | USB | 2 (USB 2.0) | | | | | | | | | | | | | | | | |
| Serial | | 5 (RS-232) | | | | | | | | | | | | | | | | | |
| IDE | | - | | | | | | | | | | | | | | | | | |
| SATA | | 2 x 600 MB/s (SATA 3.0)/6 x 300 MB/s (SATA 2.0) / 1 x eSATA / 1 x mSATA | | | | | | | | | | | | | | | | | |
| IrDA | | - | | | | | | | | | | | | | | | | | |
| GPIO | | 14 bit GPIO (6 bit non-programmable GPIO via Phoenix connector on rear side and 8 bit programmable GPIO by pin header on board) | | | | | | | | | | | | | | | | | |
| Power Requirements | Output | System reset | | | | | | | | | | | | | | | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | | | | | | | | | | | | | | | |
| Environment | Power On | Intel Core i7-3770 3.4 GHz, 8 GB DDR3 1600 MHz x 4pcs | | | +5 V | | | 3.3 V | | | 12 V | | | 5 Vsb | | | -12 V | | |
| | Operating | 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution | | | 2.69 A | | | 0.93 A | | | 5.3 A | | | 0.0 A | | | 0.52 A | | |
| | Dimensions | 244 mm x 244 mm (9.6" x 9.6") | | | | | | | | | | | | | | | | | |

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | USB 2.0/ 3.0 | CRT | HDMI | DVI | SATA 3.0/ 2.0 | eSATA/ mSATA | COM | TPM | GbE LAN | PCIe | Mini PCIe |
|-------------------|---------|-------------|--------------|-----|------|-----|---------------|--------------|-----|-----|---------|--|-------------------------|
| AIMB-502QG2-00A1E | Q77 | Non-ECC | 2/4 | Yes | 1 | 1 | 2/6 | 1/1 | 6 | (1) | 2 | PCIe 16 x 1 (Gen 3) PCIe 1 x 1 (Gen 2) | 1 (co-layer with mSATA) |
| AIMB-502WG2-00A1E | C216 | ECC/Non-ECC | 2/4 | Yes | 1 | 1 | 2/2 | 1/1 | 6 | (1) | 2 | PCIe 8 x 2 (Gen 3, PCIe 16 connector) PCIe 1 x 1 (Gen 2) | 1 (co-layer with mSATA) |

*() BOM options available on MP version.

Riser Card

| Part Number | Description |
|------------------|---|
| AIMB-RP10P-01A1E | 1U riser card with 1 PCI expansion |
| AIMB-RP30P-03A1E | 2U riser card with 3 PCI expansion |
| AIMB-RF10F-01A1E | 1U riser card with 1 PCI e x 16 expansion |

Packing List

| Part Number | Description | Quantity |
|----------------|-------------------------|----------|
| 1700003194 | SATA HDD cable | 2 |
| 1703150102 | SATA power cable | 2 |
| 1960059180T000 | IO Bracket for AIMB-502 | 1 |
| 2002050200 | Startup manual | 1 |
| 2062050200 | Driver CD | 1 |

Optional Accessories

| Part Number | Description |
|----------------|--|
| 1700002204 | Dual port USB cable (27 cm) with bracket |
| 1960047669N001 | LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 95W, 4.72" (W) x 4.72" (L) x 3.03" (H) |
| 1960047831N001 | LGA1156 CPU cooler for 2U and backplane version of chassis, for CPU TDP ≤ 65W, 3.27" (W) x 3.27" (L) x 2.17" (H) |
| 1960049408N001 | LGA1156 CPU cooler for 1U and wallmount chassis, for CPU TDP ≤ 65W, 3.35" (W) x 3.35" (L) x 1.02" (H) |
| 1700000447 | 1-to-4 serial ports cable kit, 45cm |
| 1701400181 | 1-to-4 serial ports cable kit, 18cm |

Note: Purchasing AIMB-502's proprietary CPU cooler from Advantech is a must, other brand's CPU cooler are NOT compatible with AIMB-502.

The complete thermal solution is composed of CPU cooler and system fans to support the CPU TDP as above.

I/O View



AIMB-502QG2-00A1E
AIMB-502WG2-00A1E

Embedded OS/API

| OS/API | Part No. | Description |
|--------|----------|--|
| WES 7 | | Image WES7E 32 bit AIMB-502 ENG/TC/SC/JPN Image WES7E 64 bit AIMB-502 ENG/TC/SC/JPN |