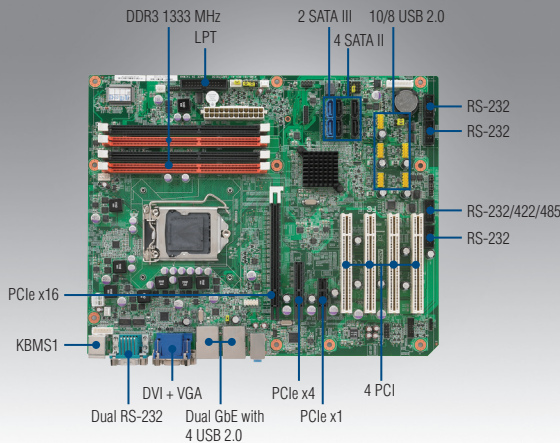


AIMB-781

**LGA1155 2nd generation Intel® Core™ i7/i5/i3/
Pentium ATX with DVI/VGA, Dual Gigabit LAN,
DDR3, SATA III**



Features

- Supports Intel® Core™ i7/i5/i3/Pentium processor with Q67/B65 chipset
- Four DIMM sockets support up to 32 GB DDR3 1066/1333
- Supports dual display VGA/DVI and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, AMT7.0
- Supports Advantech LPC modules of TPM and additional RS-232/422/485 ports

Software APIs:



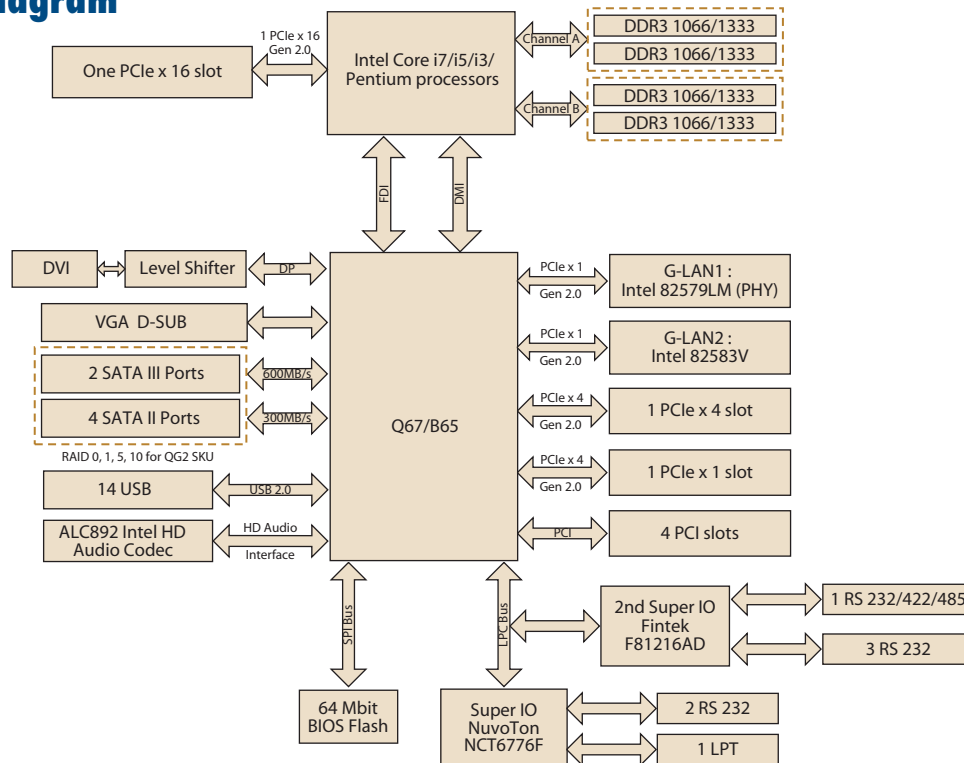
Utilities:



Specifications

| | | | | | |
|--------------------------|------------------------|--|--------------|---|--------------|
| Processor System | CPU | Core i7 2xxx | Core i5 2xxx | Core i3 2xxx | Pentium G8xx |
| | Speed | 3.4 GHz | 3.3 GHz | 3.3 GHz | 2.9 GHz |
| | L3 Cache | 8MB | 6MB | 3MB | 3MB |
| | Socket | LGA1155 | | | |
| | Chipset | Q67 for QG2 version; B65 for QVG version | | | |
| Expansion Slot | BIOS | AMI 64 Mbit SPI | | | |
| | PCI | 32-bit/33 MHz, 4 slots | | | |
| | PCIe x 1 (Gen2) | 500 MB/s per direction, 1 slot | | | |
| | PCIe x 4 (Gen2) | 2.0 GB/s per direction, 1 slot | | | |
| Memory | PCIe x16 (Gen2) | 8 GB/s per direction, 1 slot | | | |
| | Technology | Dual Channel DDR3 1066/1333 | | | |
| | Max. Capacity | 32 GB | | | |
| Graphics | Socket | 4 x 240-pin DIMM | | | |
| | Controller | Intel HD Graphics | | | |
| Ethernet | VRAM | 1 GB maximum shared memory with 2 GB and above system memory installed | | | |
| | Interface | 10/100/1000 Mbps | | | |
| | Controller | GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V for QG2 version | | | |
| SATA | Connector | RJ-45 x 2 for QG2 version | | | |
| | Max Data Transfer Rate | 600 MB/s | | | |
| | Channel | 2 for QG2 version (SATA1-2); 1 for QVG version (SATA1) | | | |
| | Max Data Transfer Rate | 300 MB/s | | | |
| Rear I/O | Channel | 4 for QG2 version (SATA3-6); 5 for QVG version (SATA2-6) | | | |
| | VGA | 1 | | | |
| | DVI | 1 for QG2 version | | | |
| | Ethernet | 2 for QG2 version; 1 for QVG version | | | |
| | USB | 4 | | | |
| | Audio | 2 (Mic-in, Line-out) | | | |
| | Serial | 2 (RS-232) | | | |
| Internal Connectors | PS/2 | 2 (1 x keyboard and 1 x mouse) | | | |
| | USB | 10 for QG2 version; 8 for QVG version (USB 2.0 compliant) | | | |
| | Serial | 4 for QG2 (3 x RS-232, 1 x RS-232/422/485 with auto-flow control) | | | |
| | SATA | 6 (QG2 version: SATA II x4 and SATA III x2; QVG version: SATA II x5 and SATA III x1) | | | |
| | Parallel | 1 | | | |
| | IrDA | 1 | | | |
| Watchdog Timer | GPIO | 8-bit | | | |
| | Output | System reset | | | |
| Power Requirement | Interval | Programmable 1 ~ 255 sec | | | |
| | Power On | Intel Core i5 2400 3.1 GHz; DDR3 4 GB x 4 | | | |
| | | 3.3 V | 5 V | 12 V | 5 Vsb |
| Environment | | 1.02 A | 2.89 A | 5.88 A | 0.5 A |
| | Temperature | Operating 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution | | Non-Operating -40 ~ 85° C (-40 ~ 185° F) | |
| Physical Characteristics | Dimensions | 304.8 x 244 mm (12" x 9.6") | | | |

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | Display | USB | COM | GbE LAN | AMT | SATA III | SW RAID |
|-------------------|---------|--------------|-----------|-----|-----|---------|------|----------|---------|
| AIMB-781QG2-00A1E | Q67 | Non-ECC DDR3 | VGA + DVI | 14 | 6 | 2 | Yes | 2 | Yes |
| AIMB-781QVG-00A1E | B65 | Non-ECC DDR3 | VGA | 12 | 2 | 1 | None | 1 | None |

Riser Card

| Part Number | Description |
|-------------------|---|
| AIMB-R4104-01A1E | 1U riser card with 1 PCIe x4 expansion |
| AIMB-R430P-03A2E | 2U riser card with 3 PCI expansion |
| AIMB-R4301-03A1E* | 2U riser card with 3 PCIe x1 expansion |
| AIMB-R431F-21A1E* | 2U riser card with 1 PCIe x16 & 2 PCIe x1 expansion |
| AIMB-R43PF-21A1E | 2U riser card with 1 PCIe x16 & 2 PCI expansion |

* When installing AIMB-R4301-03A1E and AIMB-R431F-21A1E, please set PCIE STRAP as "4 PCIE x1" in chipset sector's south bridge page of BIOS menu.

Bracket View



AIMB-781QG2-00A1E



AIMB-781QVG-00A1E

Packing List

| Part Number | Description | Quantity |
|----------------|------------------|----------|
| 1700003194 | SATA HDD cable | x 2 |
| 1703150102 | SATA power cable | x 2 |
| 1960050472T000 | I/O port bracket | x 1 |
| 2002078110 | Startup manual | x 1 |
| 2062078100 | Driver CD | x 1 |

Optional Accessories

| Part Number | Description |
|----------------|--|
| 1700002204 | Dual port USB cable (27 cm) with bracket |
| 1960047669N001 | LGA1155/1156 CPU cooler for 4U and wallmount chassis |
| 1960047831N001 | LGA1155/1156 CPU cooler for 2U and wallmount chassis |
| 1960049408N001 | LGA1155/1156 CPU cooler for 1U and wallmount chassis |
| 1700020294-01 | Printer port cable kit |
| 1701092300 | COM port cable kit |
| 1960055954T000 | I/O port bracket for 1U chassis |

Note 1: Purchasing AIMB-781's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-781.

Note 2: 1960049408N001 is design to be used with Advantech 1U chassis and supports up to 73W processor, user needs to conduct thermal test before using this cooler with other brand chassis.



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