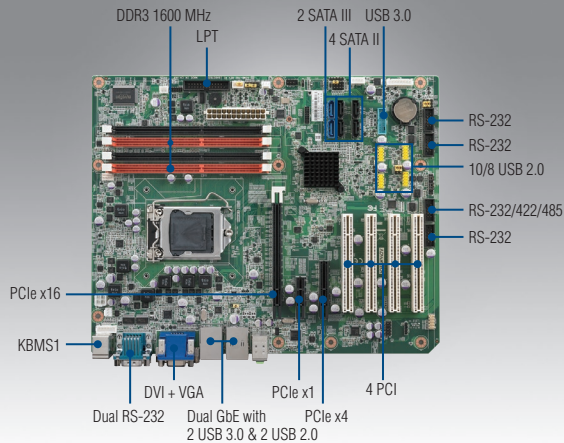


# AIMB-782

LGA1155 3rd generation Intel® Core™ i7/i5/i3/  
Pentium ATX with DVI/VGA, DDR3, SATA III



## Features

- 3rd generation Intel® Core™ processor-based platform
- Supports Intel® Core™ i7/i5/i3/Pentium processor with Q77 chipset
- Four DIMM sockets support up to 32 GB DDR3 1066/1333/1600
- Supports dual display VGA/DVI-D and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, AMT8.0, USB 3.0
- Supports Advantech LPC modules of TPM

### Software APIs:



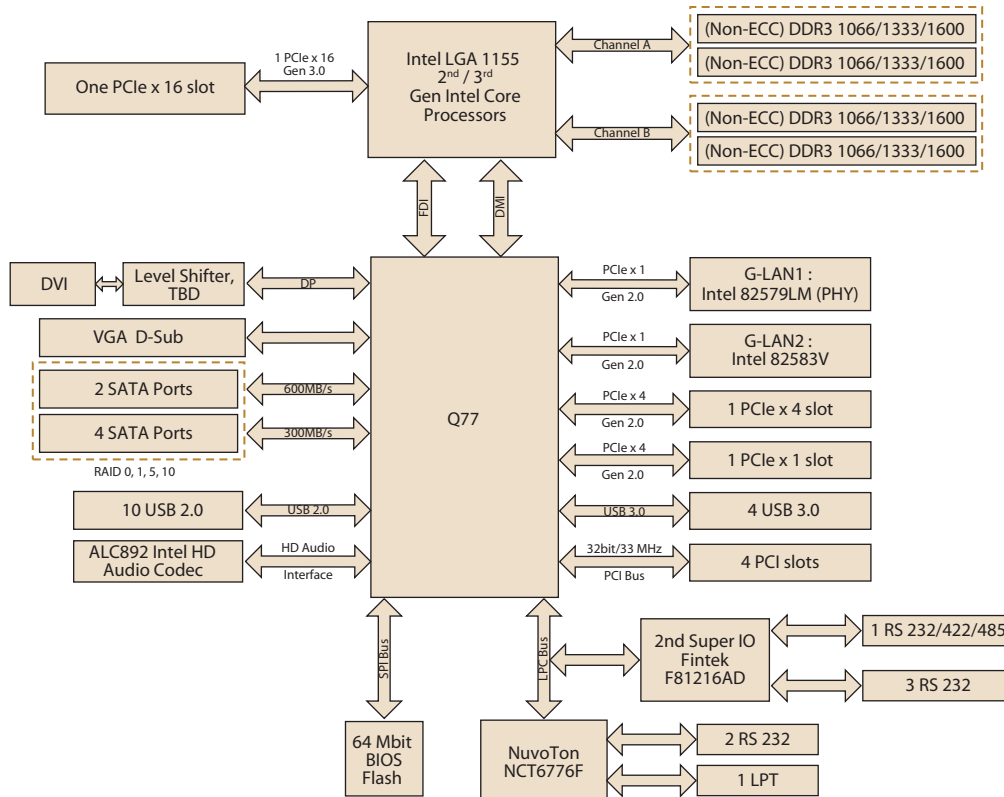
### Utilities:



## Specifications

|                          |                        |  |         |         |         |         |         |   |         |         |  |
|--------------------------|------------------------|--|---------|---------|---------|---------|---------|---|---------|---------|--|
| Processor System         | CPU                    | Core i7  | Core i7 | Core i5 | Core i5 | Core i3 | Core i3 | Pentium                                     | Pentium | Celeron |  |
|                          | Speed                  | 3.4 GHz  | 3.4 GHz | 3.0 GHz | 3.1 GHz | 3.3 GHz | 3.3 GHz | 3.1 GHz                                     | 2.9 GHz | 2.5 GHz |  |
|                          | L3 Cache               | 8 MB   | 8 MB    | 6 MB    | 6 MB    | 3 MB    | 3 MB    | 3 MB  | 3 MB    | 2 MB    |  |
|                          | Socket                 | LGA1155  |         |         |         |         |         |   |         |         |  |
|                          | Chipset                | Q77  |         |         |         |         |         |   |         |         |  |
|                          | BIOS                   | AMI 64 Mbit SPI  |         |         |         |         |         |   |         |         |  |
| Expansion Slot           | 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   |         |         |         |         |         |   |         |         |  |
|                          | PCIe x16 (Gen3)        | 16 GB/s per direction, 1 slot  |         |         |         |         |         |   |         |         |  |
| Memory                   | Technology             | Dual Channel DDR3 1066/1333/1600 (1600 only supported by Core i7/i5/i3 3xxx series processors) |         |         |         |         |         |   |         |         |  |
|                          | Max. Capacity          | 32 GB  |         |         |         |         |         |   |         |         |  |
|                          | Socket                 | 4 x 240-pin DIMM   |         |         |         |         |         |   |         |         |  |
| Graphics                 | Controller             | Intel HD Graphics 2000/2500/3000/4000 (Depends on processor)                                   |         |         |         |         |         |   |         |         |  |
|                          | VRAM                   | 1 GB maximum shared memory with 2 GB and above system memory installed                         |         |         |         |         |         |   |         |         |  |
| Ethernet                 | Interface              | 10/100/1000 Mbps   |         |         |         |         |         |   |         |         |  |
|                          | Controller             | GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V  |         |         |         |         |         |   |         |         |  |
|                          | Connector              | RJ-45 x 2  |         |         |         |         |         |   |         |         |  |
| SATA                     | Max Data Transfer Rate | 600 MB/s   |         |         |         |         |         |   |         |         |  |
|                          | Channel                | 2  |         |         |         |         |         |   |         |         |  |
|                          | Max Data Transfer Rate | 300 MB/s   |         |         |         |         |         |   |         |         |  |
| Rear I/O                 | Channel                | 4  |         |         |         |         |         |   |         |         |  |
|                          | VGA                    | 1  |         |         |         |         |         |   |         |         |  |
|                          | DVI                    | 1  |         |         |         |         |         |   |         |         |  |
|                          | Ethernet               | 2  |         |         |         |         |         |   |         |         |  |
|                          | USB                    | 4 (Two USB 3.0)  |         |         |         |         |         |   |         |         |  |
|                          | Audio                  | 2 (Mic-in, Line-out)   |         |         |         |         |         |   |         |         |  |
|                          | Serial                 | 2 (RS-232)   |         |         |         |         |         |   |         |         |  |
| Internal Connectors      | PS/2                   | 2 (1 x keyboard and 1 x mouse)   |         |         |         |         |         |   |         |         |  |
|                          | USB                    | 10 (Two USB 3.0)   |         |         |         |         |         |   |         |         |  |
|                          | Serial                 | 4 (3 x RS-232, 1 x RS-232/422/485 with auto-flow control)                                      |         |         |         |         |         |   |         |         |  |
|                          | SATA                   | 6 (SATA II x4 and SATA III x2)   |         |         |         |         |         |   |         |         |  |
|                          | Parallel               | 1  |         |         |         |         |         |   |         |         |  |
|                          | IrDA                   | 1  |         |         |         |         |         |   |         |         |  |
|                          | GPIO                   | 8-bit  |         |         |         |         |         |   |         |         |  |
| Watchdog Timer           | Output                 | System reset   |         |         |         |         |         |   |         |         |  |
|                          | Interval               | Programmable 1 ~ 255 sec   |         |         |         |         |         |   |         |         |  |
| Power Requirement        | Power On               | Intel Core i5 3550 3.0 GHz; DDR3 8G x 4  |         |         |         |         |         |   |         |         |  |
|                          |                        | 3.3 V  | 5 V     | 12 V    | 5 Vsb   |         |         |   |         |         |  |
| Environment              |                        | 0.77 A   | 2.23 A  | 3.56 A  | 0.46 A  |         |         |   |         |         |  |
|                          | Temperature            | Operating<br>0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution                 |         |         |         |         |         | Non-Operating<br>-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 3.0 | USB 2.0 | COM | GbE LAN | AMT | SATA III | SW RAID |
|-------------------|---------|--------------|-----------|---------|---------|-----|---------|-----|----------|---------|
| AIMB-782QG2-00A1E | Q77     | Non-ECC DDR3 | VGA + DVI | 4       | 10      | 6   | 2       | Yes | 2        | Yes     |

## Riser Card

| Part Number      | Description                                     |
|------------------|---|
| AIMB-R430P-03A2E | 2U riser card with 3 PCI expansion              |
| AIMB-R43PF-21A1E | 2U riser card with 1 PCIe x16 & 2 PCI expansion |

## Packing List

| Part Number    | Description      | Quantity |
|----------------|------------------|----------|
| 1700003194     | SATA HDD cable   | x 2      |
| 1700022749-11  | SATA power cable | x 1      |
| 1960050472T000 | I/O port bracket | x 1      |
| 2002078210     | Startup manual   | x 1      |
| 2062078200     | Driver CD        | x 1      |

## Optional Accessories

| Part Number    | Description  |
|----------------|--|
| 1700002204     | Dual port USB 2.0 cable (27 cm) with bracket         |
| 1700020277-01  | Dual port USB 3.0 Cable 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 |
| 1700008809     | Printer port cable kit (25 cm)                       |
| 1700020294-01  | Printer port cable kit (42 cm)                       |
| 1701092300     | COM port cable kit                                   |
| 1960055954T000 | I/O port bracket for 1U chassis                      |

Note 1: Purchasing AIMB-782's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-782.

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.

## Bracket View



AIMB-782QG2-00A1E