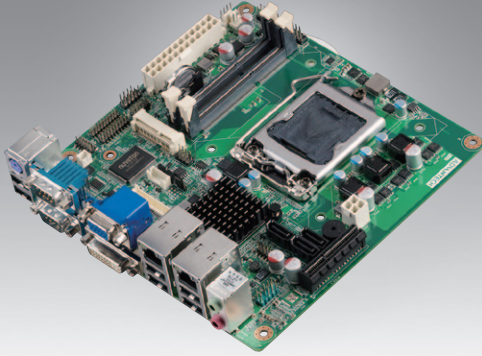


# AIMB-281

Intel® Core™ i7/i5/i3/Celeron LGA1155  
Mini-ITX with CRT/DVI/LVDS, 6 COM,  
Dual LAN, PCIe x4

NEW



## Features

- Support Intel Core i7/i5/i3/ Pentium / Celeron desktop processor (LGA) with Intel H61 chipset
- Supports dual display for VGA, DVI, LVDS
- Support PCIe x4 (Gen 2) and mini PCIe
- Support 8 USB, 6 COMs, 3 SATA II, 8 bit GPIO
- Support embedded software APIs and Utilities
- Two 204-pin SO-DIMM up to 8GB DDR3 1066/1333/1600 MHz SDRAM

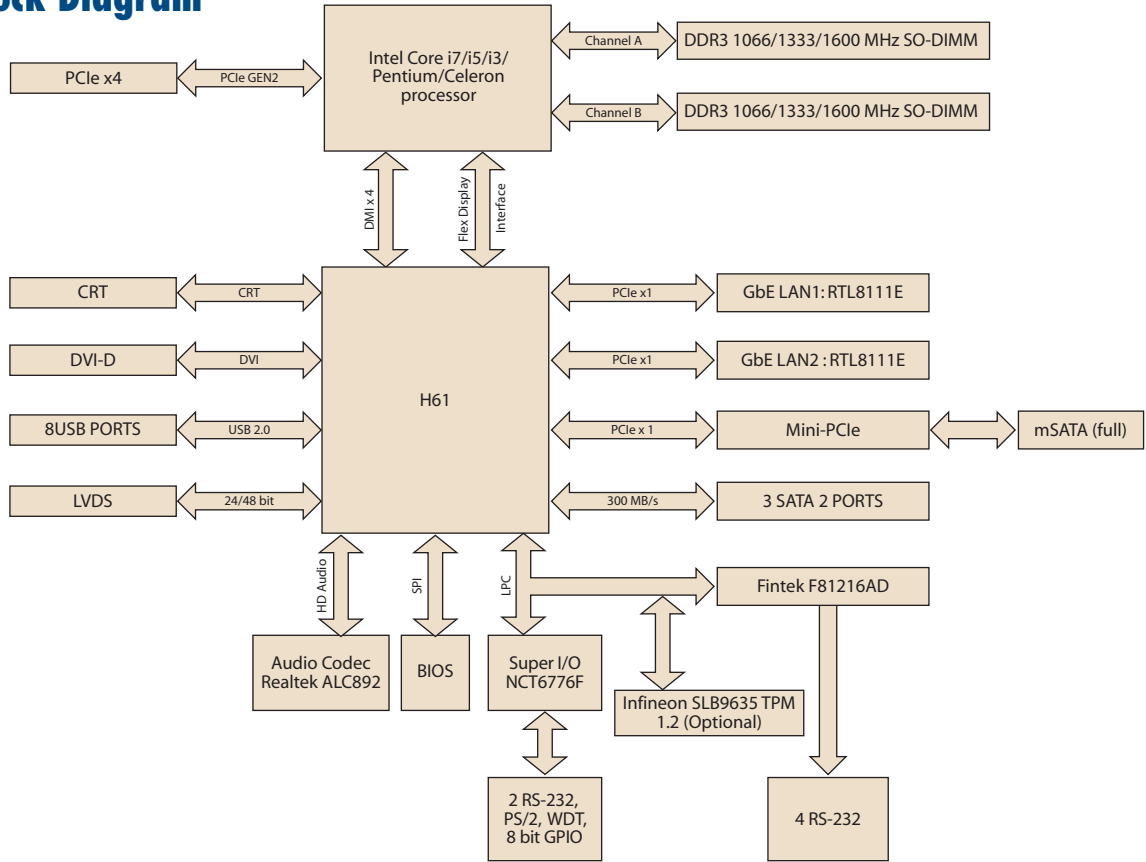
Software APIs:

Utilities:

## Specifications

|                          |                        |   |               |              |               |                           |
|--------------------------|------------------------|---|---------------|--------------|---------------|---------------------------|
| Processor System         | CPU                    | Core i7-3770  | Core i5-3550S | Core i3-3220 | Pentium G2120 | Celeron G1620             |
|                          | Core Number            | 4   | 4             | 2            | 2             | 2                         |
|                          | Max Speed              | 3.9 GHz   | 3.7 GHz       | 3.3 GHz      | 3.1 GHz       | 2.7 GHz                   |
|                          | L3 Cache               | 8 MB  | 6 MB          | 3 MB         | 3 MB          | 2 MB                      |
|                          | Chipset                | H61   |               |              |               |                           |
|                          | BIOS                   | AMI EFI 32 Mbit SPI   |               |              |               |                           |
| Expansion Slot           | PCI                    | -   |               |              |               |                           |
|                          | Mini-PCIe              | 1   |               |              |               |                           |
|                          | PCIe x4 (Gen2)         | 8 GB/s per direction, 1 slot  |               |              |               |                           |
| Memory                   | Technology             | Dual Channel DDR3 1066/1333/1600 MHz SDRAM  |               |              |               |                           |
|                          | Max. Capacity          | 8 GB/4 GB per SO-DIMM   |               |              |               |                           |
|                          | Socket                 | 2x 204 PIN DDR3 SO-DIMM (Non-ECC)   |               |              |               |                           |
| Graphics                 | Controller             | Intel HD P3000/ 4000 graphics engine supports up to DirectX 11, Shader Model 4.1 and OpenGL 3.0 |               |              |               |                           |
|                          | VRAM                   | Share memory up to 256MB  |               |              |               |                           |
|                          | CRT                    | Yes, supports max. resolution 2048 x 1536   |               |              |               |                           |
|                          | LVDS                   | Support Dual channel 48 bit and up to 1920 x 1200   |               |              |               |                           |
|                          | DVI                    | Yes, supports max resolution 1920 x 1200  |               |              |               |                           |
|                          | Dual Display           | CRT+LVDS, CRT+DVI, DVI+LVDS   |               |              |               |                           |
| Ethernet                 | Interface              | 10/100/1000 Mbps  |               |              |               |                           |
|                          | Controller             | 2 x RTL8111E  |               |              |               |                           |
|                          | Connector              | RJ-45 x 2   |               |              |               |                           |
| SATA                     | Max Data Transfer Rate | 300 MB/s (SATA 2.0)   |               |              |               |                           |
|                          | Channel                | 3   |               |              |               |                           |
| Rear I/O                 | VGA                    | 1   |               |              |               |                           |
|                          | DVI                    | 1   |               |              |               |                           |
|                          | Ethernet               | 2   |               |              |               |                           |
|                          | USB                    | 6 (USB2.0)  |               |              |               |                           |
|                          | Audio                  | 2 (Mic-In, Line-out)  |               |              |               |                           |
|                          | Serial                 | 2 (1 x RS232, 1 x RS232/422/485)  |               |              |               |                           |
|                          | PS/2                   | 1   |               |              |               |                           |
| Internal Connector       | USB                    | 2 (USB 2.0)   |               |              |               |                           |
|                          | LVDS/ inverter         | 1/1   |               |              |               |                           |
|                          | Serial                 | 4 (RS-232)  |               |              |               |                           |
|                          | IDE                    | -   |               |              |               |                           |
|                          | SATA                   | 3 (SATA 2.0)  |               |              |               |                           |
|                          | Mini-PCIe              | 1   |               |              |               |                           |
|                          | Parallel               | 1   |               |              |               |                           |
|                          | IrDA                   | -   |               |              |               |                           |
| Watchdog Timer           | GPIO                   | 8-bit   |               |              |               |                           |
|                          | Output                 | System reset  |               |              |               |                           |
| Power Requirements       | Interval               | Programmable 1 ~ 255 sec/min  |               |              |               |                           |
|                          | Power On               | Intel Core i7-2700K 3.5GHz, 4GB DDR3 1333MHz SDRAM  |               |              |               |                           |
|                          |                        | +12V  | +5V           | +3.3V        |               |                           |
| Environment              |                        | 13.35A  | 3.74A         | 2.19A        |               |                           |
|                          | Temperature            | Operating   |               |              |               | Non-Operating             |
| Physical Characteristics |                        | 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution                               |               |              |               | -20 ~ 70° C (-4 ~ 158° F) |
|                          | Dimensions             | 170 mm x 170 mm (6.69" x 6.69")   |               |              |               |                           |

**Block Diagram**



**Ordering Information**

| Part Number      | Chipset | CRT | DVI | LVDS | GbE LAN | COM |
|------------------|---------|-----|-----|------|---------|-----|
| AIMB-281G2-00A1E | H61     | Yes | Yes | Yes  | 2       | 6   |

**Optional Accessories**

| Part Number        | Description                                   |
|--------------------|---|
| 17AD14GS0300046A92 | USB 2 Port Cable w/o bracket PH=2.00mm L=25cm |
| 19AD13GS0700149C13 | CPU Cooler (for standard chassis)             |
| AIMB-OCLR-0005E    | CPU cooler solution (for AIMB-B2000)          |
| 1700013714         | LPT(parallel) cable                           |

**Packing List**

| Part Number        | Description                   | Quantity |
|--------------------|-------------------------------|----------|
| 1700020939-01      | SATA HDD cable (180° ~ 90°)   | 1        |
| 1700020946-01      | SATA HDD cable (180° ~180°)   | 1        |
| 17AD14GS0000073V04 | 1-to-4 serial ports cable kit | 1        |
| 1960062821T000     | I/O port bracket              | 1        |
| 2006028110         | Starup manual                 | 1        |
| 2066028100         | Driver CD                     | 1        |
| 2006028100         | User manual                   | 1        |

**Embedded OS/API**

| OS/API  | Part Number | Description        |
|---------|-------------|--------------------|
| Win XPE | 2070012450  | WES2009            |
|         | 2070012451  | WES7E x64 Embedded |
| WES7    | 2070012462  | WES7E x86 Embedded |
|         | 2070012514  | WES7P x86 Embedded |
| WES8.1  | TBD         | Win 8.1 Embedded   |

**I/O View**

