

**AIMB-273****Intel® Core™ i7/i5/i3/Celeron uFC-PGA988 Mini-ITX  
with 2 DP/HDMI/LVDS/CRT, 2 COM, Dual LAN, PCIe x16  
Startup Manual****Packing List**

Before you begin installing your card, please make sure that the following items have been shipped:

1. AIMB-273 Intel® Core™ i7/i5/i3 Celeron® uFC-PGA988 Mini-ITX motherboard
2. SATA HDD cable x 2
3. SATA Power cable x 2
4. CPU cooler x1
5. Cable kit for serial ports x 2
6. I/O port bracket x 1
7. Startup manual x 1
8. Driver CD x 1
9. Warranty card x 1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

**Note:** Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: [www.adobe.com/Prodindex/acrobat/readstep.html](http://www.adobe.com/Prodindex/acrobat/readstep.html) (Acrobat is a trademark of Adobe).

For more information on this and other Advantech products, please visit our website at:

<http://www.advantech.com>

<http://www.advantech.com/eplatform>

For technical support and service, please visit our support website at:

<http://www.advantech.com/support>

This manual is for the AIMB-273 series Rev.A1.

Part No. 2002027310

1st Edition,

Printed in China

June 2011

**Specifications****Standard SBC functions**

- **CPU:** Supports Intel® Core™ i7/i5/i3 Celeron® uFC-PGA988 CPU
  - **BIOS:** AMI EFI 64 Mbit SPI
  - **Chipset:** Intel® QM77 Chipset
  - **System memory:** Up to 16 GB in two 204-pin SODIMM sockets. Supports DDR3 1333/1600 MHz SDRAM
- Note:** Due to the inherent limitations of PC architecture, the system may not fully detect 16 GB RAM when 16 GB RAM is installed.
- **SATA3 Interface:** Two on-board Serial ATA3 connectors with a data transmission rate of up to 600 MB/s supporting Advanced Host Controller Interface (AHCI) technology
  - **SATA2 Interface:**
    - Two on-board Serial ATA2 connectors with a data transmission rate of up to 300 MB/s supporting Advanced Host Controller Interface (AHCI) technology
    - One miniPCIe slot with data transmission rate of up to 300 MB/s support cFast storage module.
  - **Serial ports:** Four serial ports
  - **Keyboard/mouse connector:** Supports standard PS/2 keyboard and mouse
  - **Watchdog timer:** 1~255 level timer intervals
  - **USB 2.0:** Supports up to four USB 2.0 ports
  - **USB 3.0:** Supports up to four USB 3.0 ports

**Graphic Interface**

- **Chipset:** Supports Intel HD Graphics, Intel mobile Core i7-3610QE, Core i7-2710E, Core i5-3610ME, Core i5-2510E Core i3-2330E, Celeron B810 CPUs are embedded with integrated graphics
- **Display Memory:** 1GB maximum shared memory with 2GB and above system memory installed
- **Resolution:** Supports VGA up to resolution 2048 x 1536 @ 75Hz refresh rate and single channel 18/24-bit/Dual channel 36/48-bit LVDS. Supports max resolution 1920 x 1200, compliant with HDMI 1.4a specifications, up to resolution of 1920 x 1200 MHz, HDTV 12-bit color depth at 1080p (progressive scan), supports optional protocol enhancements such as 3D graphics at resolutions demanding a pixel rate up to 250MHz

**Ethernet Interface**

- **Interface:** 10/100/1000 Mbps
- **Controller:** LAN1: Intel 82579LM; LAN2: Intel® 82583V

**Mechanical and Environmental**

- **Dimensions (L x W):** 170 x 170 mm
- **Power supply voltage:** +3.3 V, +5 V, ±12 V, 5 Vsb

## Specifications (cont.)

- **Power requirements:**  
Intel Core i7-2710QE 2.1 GHz, 6 MB L3 cache, 2 pcs 4 GB DDR3 1333 MHz, +5V @ 3.42A, +3.3V @ 1.1A, +12 V @ 1.19A, 5VSB @ 0.5A, -12 V @ 0.08A; Measure the maximum current value which system under maximum load (CPU: Top speed, RAM & Graphic: Full loading)
- **Operating temperature:** 0 ~ 60° C
- **Weight:** 0.365 kg (weight of board)

## Jumpers and Connectors

The board has a number of connectors and jumpers that help configure the system to suit your application requirements. The tables below list the functions of the connectors and jumpers.

| Label                  | Function                                       |
|------------------------|--|
| SATA1 ~ SATA4          | SATA Signal Connector                          |
| ATX12V_1               | ATX 12V Power Supply Connector                 |
| USB56, USB78           | USB Header                                     |
| LVDS1                  | LVDS Panel Connector                           |
| INV1                   | LVDS Backlight Inverter Power Connector        |
| PCIEX16_1              | PCI-E x16 Slot                                 |
| CF1                    | CFast Socket                                   |
| Bottom of DP+HDMI1     | HDMI Connector                                 |
| VGA1                   | VGA Connector                                  |
| LAN1_USB12, LAN2_USB34 | RJ45+USB 3.0 Stack Connector                   |
| COM1, COM2             | COM Port                                       |
| MINIPICIE1             | MINIPICIE & mSATA Connector                    |
| CPUFAN1                | CPU FAN Power Connector                        |
| SYSFAN1, SYSFAN2       | SYSTEM FAN Power Connector                     |
| JFP2                   | Power LED and Keyboard Lock Pin Header         |
| KBMS1                  | PS/2 Keyboard and Mouse Connector              |
| BAT1                   | Battery Holder                                 |
| CPU1                   | CPU Socket                                     |
| JFP1                   | Power Switch/HDD LED/SMBUS/ Speaker Pin Header |
| DIMMA1, DIMMB1         | DDR3 SO-DIMM Socket                            |
| GPIO1                  | General Purpose I/O Pin Header                 |
| SPDIF_OUT1             | HD Digital Audio Interface                     |

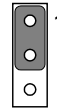
## Jumpers and Connectors

|                      |   |
|----------------------|---|
| AUDIO1, FPAUD1       | HD Analog Audio Interface                           |
| ATXPWR1              | ATX Power Supply Connector                          |
| SPI1                 | SPI BIOS Flash Socket                               |
| SPI_CN1              | SPI Programming Pin Header                          |
| DEBUG1               | EC F/W Programming Debug Port                       |
| LPC1                 | Low Pin Count Header                                |
| Top of DP+HDMI1, DP1 | Display Port Connector                              |
| JHDMI1               | Display Port to HDMI Converter F/W Programming Port |

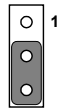
### CMOS1: Clear CMOS

| Pins | Result          |
|------|-----------------|
| 1-2* | Keep CMOS data* |
| 2-3  | Clear CMOS data |

\* Default



Keep CMOS data



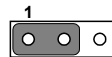
Clear CMOS

### PSON1: ATX, AT Mode Selector

#### Closed Pins Result

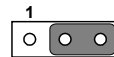
|      |           |
|------|-----------|
| 1-2  | AT Mode   |
| 2-3* | ATX Mode* |

\* Default



AT Mode

1-2 closed



ATX Mode

2-3 closed

### JWDT1: Watchdog Timer Output Option

#### Closed Pins Result

|      |  |
|------|--|
| 1-2  | NC (Watchdog Timer Disabled)                               |
| 2-3* | System reset* (Reset System when Watchdog Timer Triggered) |

\* Default



NC 1-2 Closed



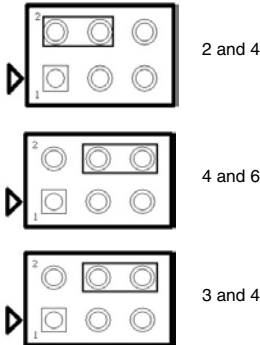
System Reset 2-3 Closed

## Jumpers and Connectors

### JLVDS1: Voltage 3.3 V / 5 V / 12 V Selector Connector

| Closed Pins | Result               |
|-------------|----------------------|
| JLVDS1      |                      |
| 4-6*        | For 3.3 V LVDS Panel |
| 2-4         | For 5 V LVDS Panel   |
| 3-4         | For 12 V LVDS Panel  |

\* Default



## Installation Note

|      |   |   |   |    |   |
|------|---|---|---|----|---|
|      | 3 | 6 | 9 | 12 |   |
| JFP1 | 2 | 5 | 8 | 11 |   |
|      | 1 | 4 | 7 | 10 |   |
| JFP2 | 1 | 2 | 3 | 4  | 5 |

| JFP1+JFP2 |         |
|-----------|---------|
| Pin.3     | #PWR_SW |
| Pin.6     | GND     |
| Pin.9     | #RST_SW |
| Pin.12    | GND     |

\*Power button pins are numbers 3 & 6 of front panel connector.

## Declaration of Conformity

The device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference;
2. This device must accept any interference received, including interference that may cause undesired operation.

## Software Installation

The CD disc contains a driver installer program that will lead you through the installation as various device drivers are needed to take full advantage of your motherboard.

## CAUTION

The computer is supplied with a battery-powered real-time clock circuit. There is a danger of explosion if the battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.

## Board Diagram

