AIMB-701 LGA1155 Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA, Dual GbE LAN
Startup Manual

Packing List

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

- 1 AIMB-701 Startup Manual
- 1 Driver CD (user's manual is included)
- 2 Serial ATA HDD data cables
- 2 Serial ATA HDD power cables
- 1 I/O port bracket
- 1 Warranty card

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 http://www.adobe.com/downloads/ (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/service/

This manual is for the AIMB-701 series Rev. A1.

Part No. 2006070110 1st Edition
Printed in China August 2012

Specifications

Standard SBC Functions

- **CPU:** LGA1155 Intel® 2nd/3rd generation Core™ i7/i5/i3/Pentium®
- **BIOS:** AMI 64 Mb SPI BIOS
- **Chipset:** Intel H61 PCH
- **System memory:** Up to 16 GB with two 240-pin DIMM sockets. Supports dual channel DDR3 1066/1333/1600 SDRAM
- **SATA interface:** Four on-board Serial ATAII connectors support data transmission rate up to 300 MB/s. All four SATAII ports support Advanced Host Controller Interface (AHCI) technology
- **Serial ports:** Up to six serial ports: COM1, COM2 and COM4 ~ 6 are RS-232; COM3 is RS-232/422/485 with auto flow control support.
- **Parallel port:** One parallel port, which supports SPP/EPP/ECP modes
- **Keyboard/mouse connector:** Supports standard PS/2 keyboard and mouse
- **Watchdog timer:** 255 timer level intervals
- **USB 2.0:** Supports ten USB 2.0 ports

VGA Interface

- **Chipset:** CPU integrated Intel HD graphics controller
- **Display Memory:** 1 GB maximum shared memory with 2 GB and above system memory installed
- **Resolution:** Supports DVI up to 1920 x 1200 resolution@ 60 Hz refresh rate (G2 version)
  Supports RGB up to 2048 x 1536 resolution @ 75 Hz refresh rate

Ethernet interface

- **Interface:** 10/100/1000 Mbps
- **Controller:** LAN1: Intel® 82579V; LAN2: Intel® 82583V (G2 version only)

Mechanical and Environmental

- **Dimensions (L x W):** 304.8 x 244 mm (12" x 9.6")
- **Power supply voltage:** +3.3 V, +5 V, +12 V, 5 Vsb
- **Power consumption:** Maximum: +5 V at 1.80A, +3.3 V at 1.01 A, +12 V at 5.48 A, +5 VSB at 1.76 A (Intel i7 2600 3.4 GHz processor, 4 GB UNB DDR3 Memory x2pcs)
- **Operating temperature:** 0 ~ 60° C (Depends on CPU speed and cooler solution)
- **Weight:** 0.5 kg (weight of board)

Jumpers and Connectors

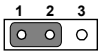
The board has a number of jumpers that allow you to configure your system to suit your application. The table below lists the function of each jumper and connector.

Connector / Jumper List	
Label	**Function**
JWDT1	Watchdog Reset
LPT1	Parallel port supports SPP/ EPP/ECP mode
LAN1_USB12	LAN1 / USB port 1, 2
LAN2_USB34	LAN2 / USB port 3, 4
VGA1	VGA connector
DVI1	DVI Connector (G2 version only)
COM1 COM2 COM4 COM5 COM6	Serial port: RS-232
COM3	Serial port: COM3; RS-232/422/485 (9-pin connector)
JSETCOM3	COM3 RS-232/422/485 Jumper Setting
KBMS1	PS/2 Keyboard and Mouse connector
KBMS2	External Keyboard and Mouse connector (6-pin)
JIR1	Infrared connector
JFP3	Keyboard Lock and Power LED Suspend: Fast flash (ATX/ AT) System On: ON (ATX/ AT) System Off: OFF (AT) System Off: Slow flash (ATX)
JFP2	External speaker / HDD LED con-nector / SM Bus connector
JFP1	Power Switch / Reset connector
JCASE1	Case Open
PSON1	AT(1-2) / ATX(2-3)
VOLT1	Voltage Display
JOBS1	Close: Enable OBS Alarm Open: Disable OBS Alarm
CPUFAN1	CPU FAN connector (4-pin)
SYSFAN1	System FAN connector (3-pin)
SYSFAN2	System FAN connector (3-pin)
LANLED1	LAN1/2 LED extension connector
AUDIO1	Audio connector
FPAUD1	HD Audio Front Panel Pin Header
USB56	USB port 5, 6

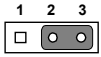
Jumpers and Connectors

USB78	USB port 7, 8
USB910	USB port 9, 10 (USB Type A)
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
ATX12V1	ATX 12V Auxiliary power connector (for CPU)
EATXPWR1	ATX 24 Pin Main power connector (for System)
SPDIF_OUT1	SPDIF Audio output pin header
SPI_CN1	SPI flash card pin header
JCMOS1	CMOS and ME clear
JUSBPWR1	USB port 1~4 and PS/2 KB/MS power source switch between +5 VSB and +5 V
JUSBPWR2	USB port 5~10 power source switch between +5 VSB and +5 V
GPIO1	8 bit GPIO from super I/O
SMBUS1	SM Bus from PCH

JCMOS1: CMOS and ME clear function	
Pins	**Result**
1-2	Keep CMOS and ME data*
2-3	Clear CMOS and ME data
* Default	



*Keep CMOS data

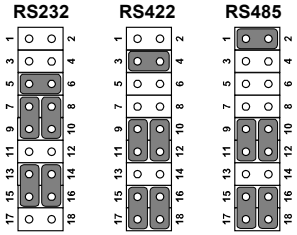


Clear CMOS data

Jumpers and Connectors

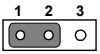
JSETCOM3: COM3 RS-232/422/485 Mode Selector

Users can use JSETCOM3 to select RS-232, RS-422 or RS-485 mode for COM3. The default setting is RS-232.

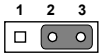


JWDT1: Watchdog timer output option

Closed Pins	Result
1-2	NC
2-3	System reset*
* Default	



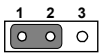
NC 1-2 Closed



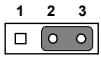
*System Reset 2-3 Closed

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

Software Installation

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

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

Declaration of Conformity

This 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.

Board Layout

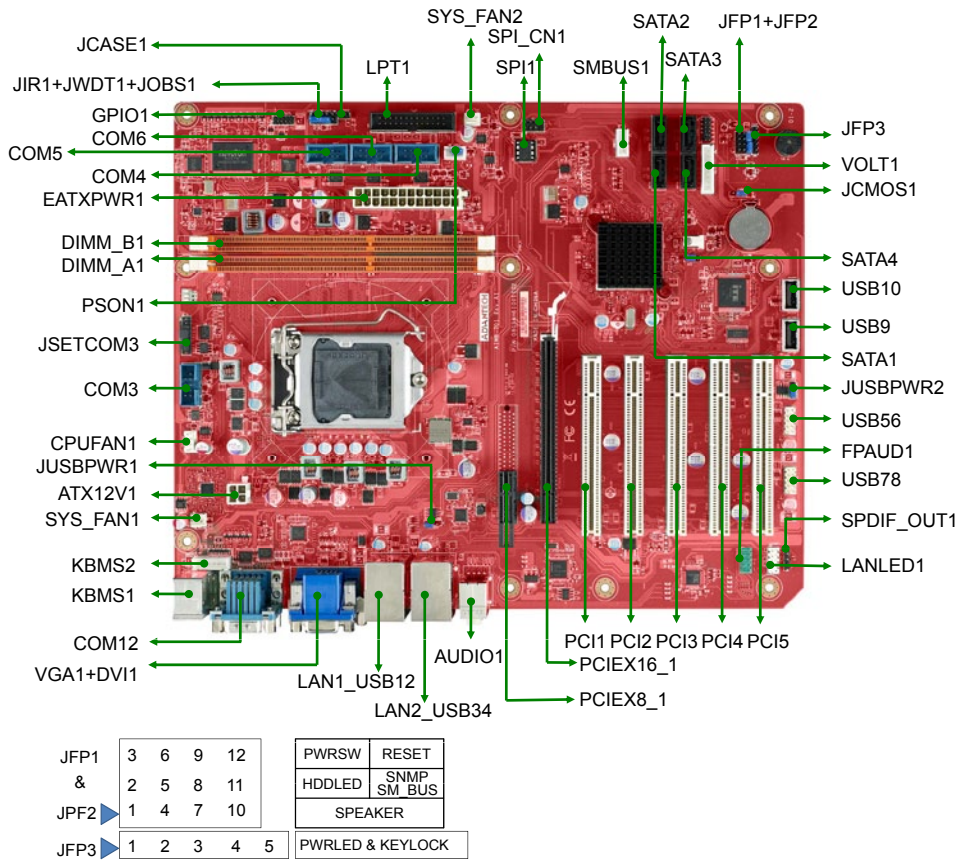


Figure 1: Board Layout: Jumper and Connector Locations