AIMB-766 Socket LGA 775 Intel® Core™ 2 Quad / Core 2 Duo / Intel Pentium Dual Core / Celeron FSB 1333 MHz Processor-based ATX Motherboard with PCIe, DDR2, and Dual GbE

Startup Manual

Packing List

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

- AIMB-766 Socket LGA 775 Intel® Core™ 2 Quad / Core 2 Duo / Intel Pentium Dual Core / Celeron FSB 1333 MHz Processor-based ATX Motherboard with PCIe, DDR2, and Dual GbE
- 1 AIMB-766 Startup Manual
- 1 Driver CD (user's manual is included)
- 1 FDD cable
- 1 Ultra ATA 66/100 HDD cable
- 2 Serial ATA HDD data cables
- 2 Serial ATA HDD power cables
- 2 COM Port cables (2 to 2,1 to 1)
- 1 I/O port bracket
- 1 jumper package
- 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: www.adobe.com/Products/acrobat/readstep2.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-766 series Rev. A1

Part No. 2006076610 1st Edition,
Print in Taiwan August 2008

Specifications

Standard SBC Functions

- **CPU:** LGA775 Intel Core 2 Quad/Core 2 Due/Pentium Dual Core/Celeron
- **BIOS:** AMI 32 Mb SPI BIOS
- **FSB:** 800/1066/1333 MHz
- **Chipset:** Q35 with ICH9DO
- **System memory:** Up to 8 GB four 240-pin DIMM sockets. Supports dual channel DDR2 800/1066/1333 SDRAM.

Note: Due to the inherent limitations of PC architecture, the system may not fully detect 8 GB RAM when 8 GB RAM is installed.

- **SATA2 Interface:** Six on-board serial ATA2 connectors with a data transmission rate of up to 300 MB/s supporting Advanced Host Controller Interface (AHCI) technology. VG version only support four on board serial ATA2.
- **IDE Interface:** Supports PIO mode 4 (16.67 MB/s data transfer rate) and ATA 33/66/100 (33/66/100 MB/s data transfer rate) BIOS enabled/disabled.
- **FDD interface:** Supports one FDD
- **Serial ports:** Four serial ports, COM1,COM3 and COM4 are RS-232; COM2 is RS-232/422/485
- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
- **Keyboard/mouse connector:** Supports standard PS/2 keyboard and mouse
- **Watchdog timer:** 255 level timer intervals
- **USB 2.0:** Supports up to twelve USB 2.0 ports

VGA Interface

- **Chipset:** Chipset integrated VGA controller
- **Display Memory:** Dynamically shared system memory up to 256 MB
- **Resolution:** Up to 2048 x 1536 @ 75 Hz refresh rate

Ethernet interface

- **Interface (Bold):** 10/100/1000Base-T
- **Controller:** LAN1: Intel 82566DM; LAN2: Intel 82573L, LAN2 is for G2 sku

Specifications

Mechanical and Enviromental

- **Dimensions (L x W):** 304.8 x 228.6 mm
- **Power supply voltage:** +3.3 V, +5 V, ±12 V, 5 Vsb
- **Power requirements:** Maximum: +5 V at 3.58 A, +3.3 V at 2.86 A, +12 V at 3.52 A, +5 Vsb at 0.74 A, -12 V at 0.02 A (Intel Core 2 Quad 9300 2.5 Ghz (1333 MHz FSB), 4 x 1 GB DDR2 800 SDRAM)
- **Operating temperature:** 0 ~ 55° C (depending on CPU)
- **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 of the jumpers and connectors.

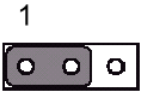
Connector / Jumper List	
Label	**Function**
COMS1	Clear CMOS
JWDT1	Watchdog Reset
IDE1	Primary IDE connector (one channel)
FDD1	FDD connector
LPT1	Parallel port, Parallel port x 1, supports SPP/ EPP/ECP mode
LAN1_USB12	LAN1 / USB port 1, 2
LAN2_USB34	LAN2 / USB port 3, 4
VGA1	VGA connector
COM1, COM3, COM4	Serial port: RS-232
COM2	Serial port: COM2; RS-232 (9-pin connector)
JSETCOM2	COM2 RS-232/422/485 Jumper Setting
KBMS1	PS/2 Keyboard and Mouse connector
KBMS2	External Keyboard 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 / SATA HDD LED connector / SM Bus connector
JFP1	Power Switch / Reset connector
JCASE1	Case Open

Jumpers and Connectors

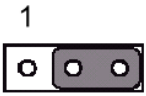
PSON1	AT(1-2) / ATX(2-3)
VOLT1	Voltage Display
JOBS1	Close: Enable OBS Alarm (HW monitor)
	Open: Disable OBS Alarm
CPUFAN1	CPU FAN connector (4-pin)
SYSFAN1	System FAN connector (4-pin)
SYSFAN2	System FAN connector (4-pin)
LANLED1	LAN1/2 LED extension connector
AUDIO1	Audio connector
CDIN1	CD_IN Connector
FPAUD1	HD Audio Front Panel Pin Header
USB56	USB port 5, 6
USB78	USB port 7, 8
USB910	USB port 9, 10
USB1112	USB port 11,12
SATA1	Serial ATA1
SATA2	Serial ATA2
SATA3	Serial ATA3
SATA4	Serial ATA4
SATA5	Serial ATA5
SATA6	Serial ATA6
ATX1	ATX 12V Auxiliary power connector (for CPU)
EATXPWR1	ATX 24 Pin Main power connector (for System)
SPDIF_OUT1	SPDIF Audio out pin header
TPM_SLOT	TPM2.0 Module connector
SPI_CN1	SPI flash card pin header

Jumpers and Connectors

CMOS1: CMOS clear function	
Pins	Result
1-2	Keep CMOS data*
2-3	Clear CMOS data
*: Default	



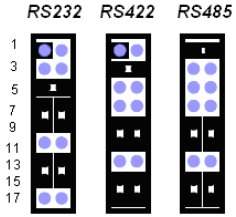
Keep CMOS data



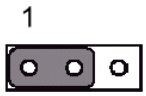
Clear CMOS data

JSETCOM2: CMO2 RS-232/422/485 Mode Selector

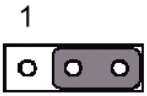
Users can use JSETCOM2 to select RS-232, RS-422 or RS-485 mode for COM2. The default setting is RS-232.



JWDT1: Watchdog timer output option	
Closed Pins	Result
1-2	NC
2-3	System reset*
*: Default	

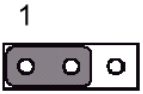


NC 1-2 Closed

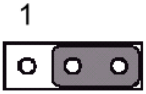


System Reset 2-3 Cclosed

EATXPWR1: ATX, AT mode selecor	
Closed Pins	Result
1-2	AT Mode
2-3	ATX Mode*
*: Default	



AT Mode 1-2 closed



ATX Mode 2-3 closed

Software Installation

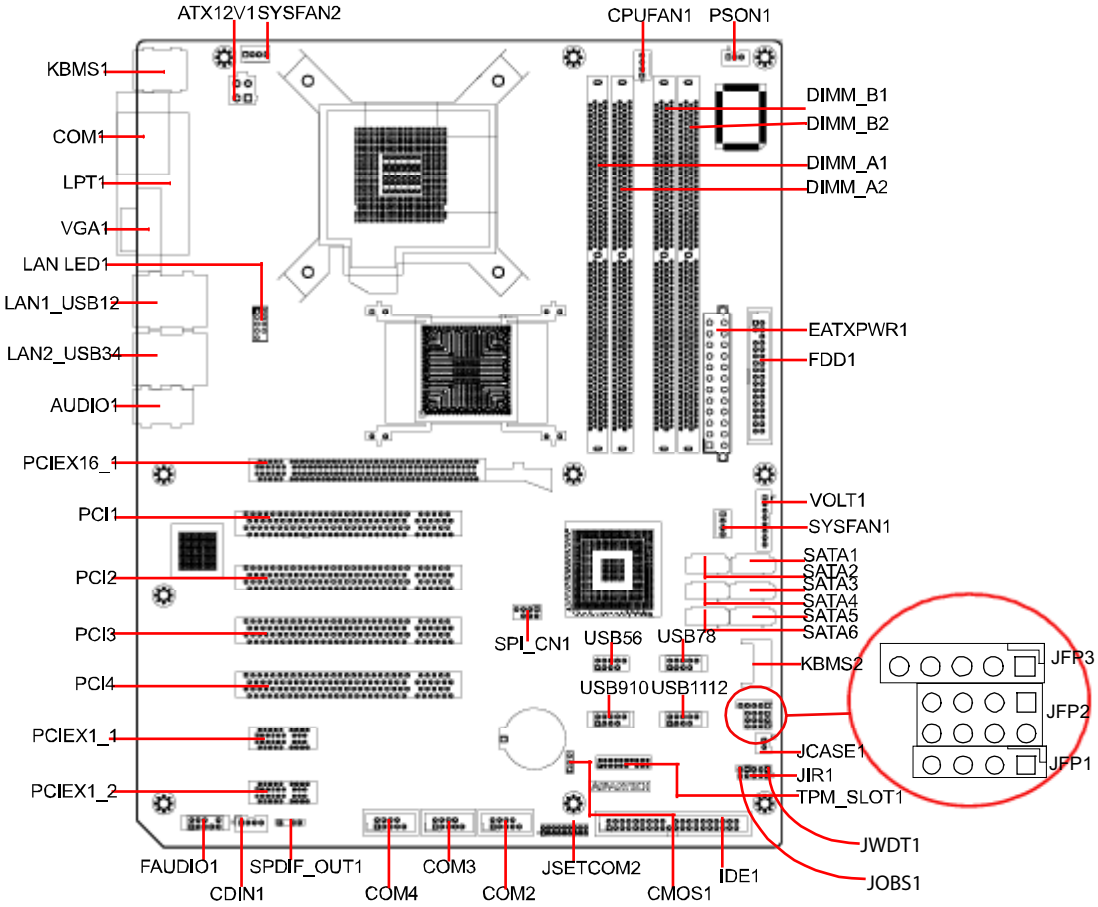
The CD disc contains a driver installer program that will lead you through the installation of various device drivers needed to take full advantage of your motherboard.

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: Jumper and Connector Locations