

AIMB-764 Socket LGA 775 Intel® Core™ 2 Duo/ Pentium D/ Pentium 4/ Celeron D FSB 1066 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 materials have been shipped.

- AIMB-764 Socket LGA 775 Intel® Core™ 2 Duo/
Pentium D/ Pentium 4/ Celeron D FSB 1066 MHz
Processor-based ATX Motherboard with PCIe,
DDR2, and Dual GbE
- 1 AIMB-764 Startup Manual p/n: 2002076410
- 1 CD with driver Utility p/n: 2066000E10
- 1 FDD cable p/n: 1700340640
- 1 Ultra ATA 66/100 HDD cable p/n: 1701400452
- 2 Serial ATA HDD data cables p/n: 1700003194
- 2 Serial ATA HDD power cables p/n: 1703150102
- 1 COM port cable kit p/n: 1701090401
- 1 I/O port bracket p/n: 1962015680
- 1 jumper package p/n: 9689000068
- 1 warranty card p/n: 2190000902

If any of these items are missing or damaged, 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 (Acrobat is a trademark of Adobe).

Specifications

Standard SBC Functions

- **CPU:** LGA775 Intel® Core™ 2 Duo/ Pentium® 4/ Pentium® D/ Celeron D
- **BIOS:** Award 16 Mb SPI BIOS
- **FSB:** 533/ 800/ 1066 MHz
- **Chipset:** Intel Q965 with ICH8DO
- **System memory:** Up to 8 GB four 240-pin DIMM sockets. Supports dual channel DDR2 533/667/800 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:** Five on-board serial ATA2 connectors with a data transmission rate of up to 300 MB/s supporting Advanced Host Controller Interface (AHCI) technology.
- **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:** Two serial ports, COM1 is 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 ten 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

Mechanical and Environmental

- **Dimensions (L x W):** 304.8 x 228.6 mm
- **Power supply voltage:** +3.3 V, +5 V, ±12 V
- **Power requirements:** Maximum: +5 V at 3.10 A, +3.3 V at 1.54 A, +12 V at 9.90 A (Intel Pentium D 3.2 GHz (800 MHz FSB), 4 x 1 GB DDR2 667 SDRAM)
- **Operating temperature:** 0 ~ 55° C (depending on CPU)
- **Weight:** 0.5 kg (weight of board)

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-764 Series Rev. A1.

Part No. 2002076410

1st Edition
October 2007

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

JWD11	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	Serial port: COM1; 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(Key-board Lock and Power LED)	Power LED
JFP2	Suspend: Fast flash (ATX/ AT) System On: ON (ATX/ AT) System Off: OFF (AT) System Off: Slow flash (ATX)
JFP1	External speaker / SATA HDD LED connector / SM Bus connector
JCASE1	Power Switch / Reset connector
JCASE1	Case Open
PSON1	AT(1-2) / ATX(2-3)
VOLT11	Voltage Display
JOBS1	HW monitor
CPUFAN1	Close: Enable OBS Alarm Open: Disable OBS Alarm CPU FAN connector (4-pin)
SYSFAN1	System FAN connector (4-pin)
CHAFAN1	Chassis FAN connector (4-pin)
LANLED1	LAN1/2 LED extension connector
AUDIO1	Audio connector
CDIN1	CD_IN Connector
HD1	HD Audio Front Panel Pin Header
USB56	USB port 5, 6
USB78	USB port 7, 8
USB910	USB port 9, 10
SA1	Serial ATA1
SA2	Serial ATA2
SA3	Serial ATA3
SA4	Serial ATA4
SA5	Serial ATA5
ATX1	ATX 12V Auxiliary power connector (for CPU)
ATX2	ATX 24 Pin Main power connector (for System)

Jumpers and Connectors

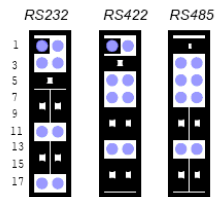
J1: CMOS clear function

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



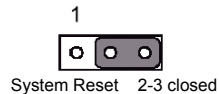
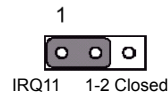
JP1: COM2 RS-232/422/485 Mode Selector

Users can use JP1 to select RS-232, RS-422 or RS-485 mode for COM2. The default setting is RS-232.



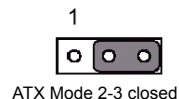
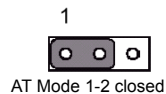
J2: Watchdog timer output option

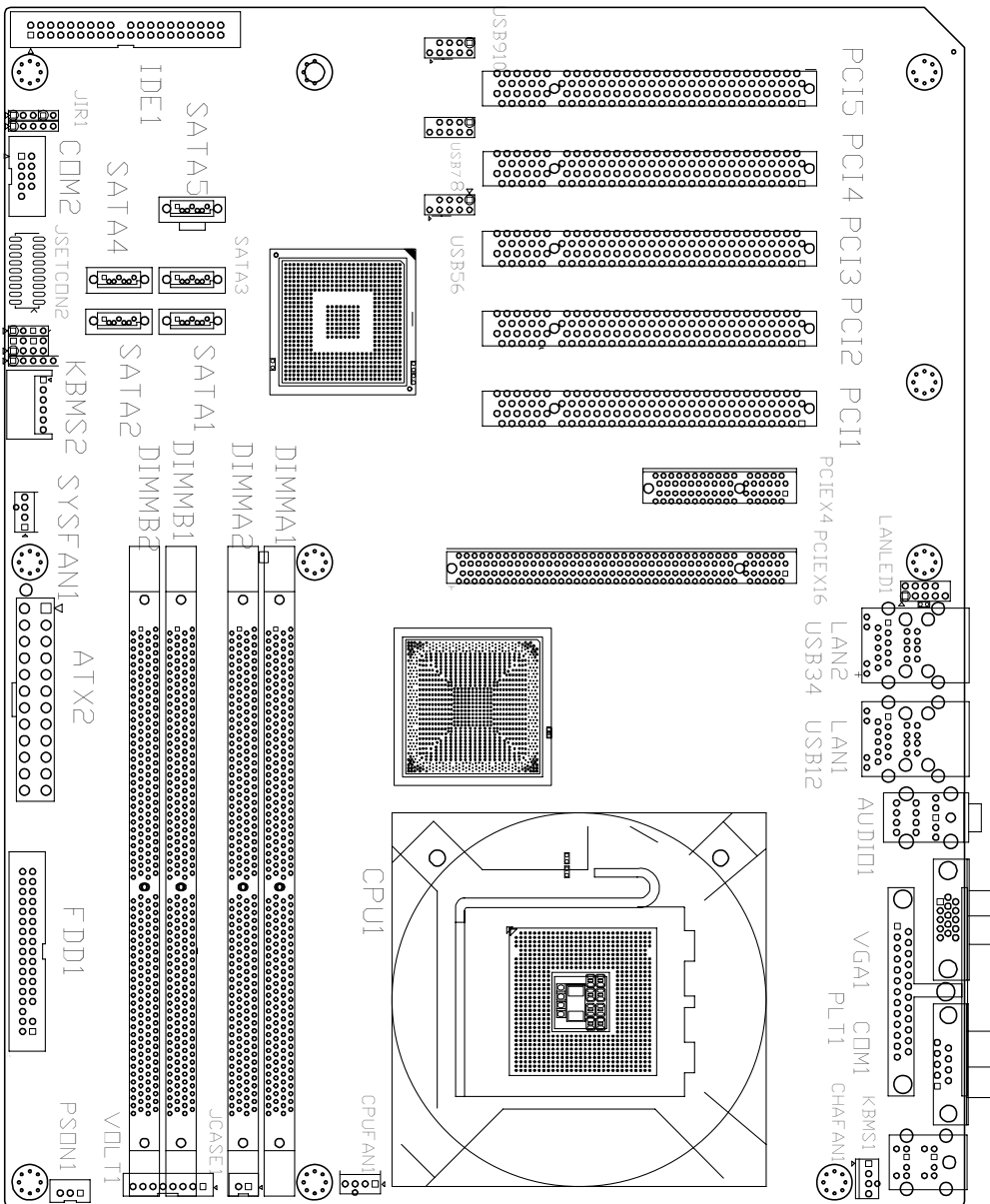
Closed Pins Result	
1-2	IRQ11
2-3	System reset*



J12: ATX, AT mode selector

Closed Pins Result	
1-2	AT Mode
2-3	ATX Mode





Board Layout: Jumper and Connector Locations

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.

Software Installation

The computer is supplied with a battery-powered Real-time 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.

Specifications

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.