AIMB-742 Socket 478 Intel® Pentium® 4/Celeron® Industrial ATX Motherboard with DDR/AGP/Dual GbE/ 800 MHz FSB

Packing List

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

AIMB-742 Pentium® 4/Celeron® processor-based industrial motherboard

1 AIMB-742 Startup Manual

1 CD with driver utility and manual (in PDF format)

1 FDD cable	p/n: 1700340640
2 Ultra ATA 66/100 HDD cables	p/n: 1701400452
2 Serial ATA HDD data cable	p/n: 1700071000
2 Serial ATA HDD power cable	p/n: 1703150102
1 ATX 12V power converter cable	p/n: 170304015K
1 COM port cable kit	p/n: 1701090401
1 I/O port bracket	p/n: 1962015680
Warranty certificate	

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

Note 1:   For detailed contents of the AIMB-742, please refer to the enclosed CD-ROM (in PDF format).

Note 2:   Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: www.adobe.com/Prodindex/acrobat/read-step.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/nc

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

http://service.advantech.com.tw/eservice/

This manual is for the AIMB-742 series Rev. A1.

Specifications

Standard Motherboard Functions

CPU: Intel® socket 478 Celeron® (Northwood) 2.0~2.8 GHz, Celeron-D 2.4~2.8 GHz, Pentium® 4 (Northwood) up to 3.4 GHz, FSB 400/533/800 MHz; suppports Intel Hyper-Threading technology. Not supporting CPU with 1.75V core voltage (Willamete)

L2 Cache: CPU built-in 128/256/512/1024 KB full-speed L2 cache

BIOS: Award 4 Mb Flash memory BIOS

Chipset: Intel 865G/865GV with ICH5

System Memory: Dual Channel; Four 184-pin DIMM sockets accepts up to 4 GB DDR 266/333/400 SDRAM (PC 2100/2700/3200)

SATA/IDE interface: Supports up to two independent Serial ATA hard drives (up to 150MB/s) and two IDE hard disk drives or four enhanced IDE devices. BIOS enabled/disabled

FDD interface: Supports up to two FDDs

Serial ports: Two serial RS-232 ports

Parallel port: One parallel port, supports

Keyboard/mouse connector: Supports one standard PS/2 keyboard and mouse

Watchdog timer: 255 level timer intervals

USB (2.0): Maximum up to 8 Universal Serial Bus ports

VGA Interface

Chipset: Intel 865G/865GV integrated

Interface: Intel Extreme Graphics Architecture

Display memory: Share system memory up to 64 MB, BIOS selectable

Resolution: up to 1800x1440 @ 85Hz

AGP Interface (For AIMB-742-00A1 only)

AGP port: One 8x/4x slot, 0.8V and 1.5V

Ethernet Interface

Chipset: Single 10/100Base-T: Intel 82562EZ
Dual 10/100Base-T: Intel 82562EZ and 82551QM (PCI)
Single 10/100/1000Base-T:Intel 82547GI (CSA)
Dual 10/100/1000Base-T: Intel 82547GI (CSA) and 82541GI (PCI)

Connector: On-board RJ-45 connector x 2

Mechanical and Environmental

Dimensions (L x W): 304.8 x 228.6 mm (12" x 9")

Power supply voltage: +5 V ± 12 V

Power requirements: Typical: +3.3V : 4.23A, +5V: 1.35A, +12V: 4.17A (Intel Pentium® 4 2.4GHz, 512MB DDR 333)

Operating temperature: 0 ~ 60 C (depending on CPU)

Weight: 0.7 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.

Label	Function
J1	CMOS clear
J2	Watchdog timer output selection

Label	Function
CN1	Primary IDE connector
CN2	Secondary IDE connector
CN3	Floppy drive connector
CN4	Parallel port
CN6	USB port 4, 5
CN7	VGA connector
CN9	Serial port: COM1
CN10	Serial port: COM2
CN11	PS/2 keyboard and mouse connector
CN12	External keyboard connector
CN14	CPU FAN connector
CN15	System FAN connector 1
CN16	Power LED and Keyboard Lock
CN17	External speaker
CN18	Reset connector
CN19	HDD LED connector
CN21	ATX soft power switch (PS_ON)
CN22	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
CN29	SM BUS Connector PIN1: SMB_DATA PIN2: SMB_CLOCK
CN31	USB port 0, 1 & LAN1
CN32	USB port 2, 3 & LAN2
CN37	System FAN connector 2
CN44	CF socket (Optional), Master mode only
CN55	Line Out, MIC IN connector
CN56	CD IN (Audio input from CD-ROM)
CN57	AUX IN connector
CN58	MDM IN connector
CN59	FP AUDIO connector
CN62	8-pin Alarm Board Connector
CN63	USB port 6, 7
CN64	Case Open
SA0	SerialATA 0
SA1	SerialATA 1
ATX1	ATX 12V Auxiliary power conn
ATX2	ATX power connector

J1: CMOS clear function	
Pins	Result
1-2 (closed)	Keep CMOS data*
2-3 (closed)	Clear CMOS data
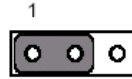
*default setting

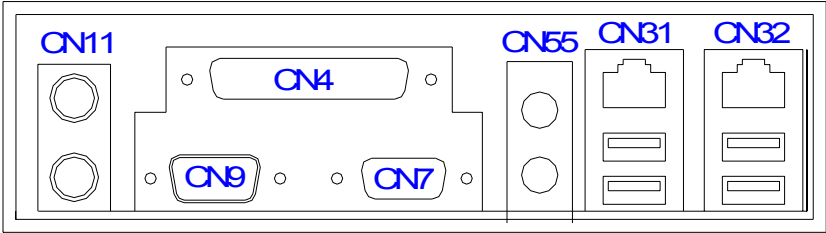| J2: Watchdog timer output option	
Closed pins	Result
1-2	IRQ11
2-3	System reset *
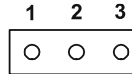
Software Installation

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 provided 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
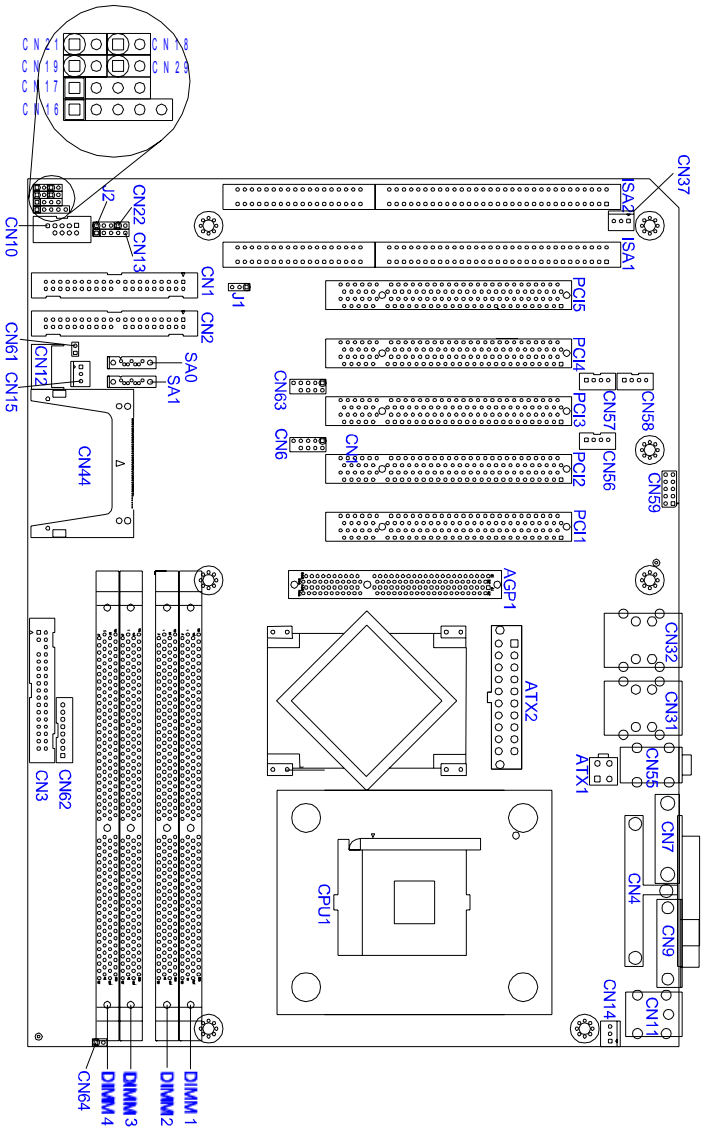
Board Layout: Jumper and Connector Locations

I/O Connectors