

AIMB-740-6CB1 Socket 478 Pentium®4/Celeron-D/ Mobile Pentium® 4-M Industrial ATX Motherboard

Packing List

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

- AIMB-740-6CB1 Pentium® 4/Celeron-D/Mobile Pentium 4-M processor-based industrial motherboard
- 1 FDD cable P/N: 1700340640
- 1 Startup Manual
- 1 CD with driver and manual
- 2 Ultra ATA 100 HDD cables P/N: 1701400452
- 1 Single COM port cable kit P/N: 1701090401
- 2 Dual COM ports cable kit P/N: 1701092300
- 1 I/O port bracket P/N: 1960004027
- Warranty certificate P/N: 2190000902
- EMI Sponge P/N: 2130000037

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

Note 1: For detailed contents of the AIMB-740-6CB1, 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-740-6CB1 series Rev. B1.

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Specifications

Standard Motherboard Functions

- **CPU:** Socket 478 for Pentium® 4/Celeron-D/Mobile Pentium 4-M, FSB 400/533 MHz
 - **L2 Cache:** CPU built-in 512KB/256KB/512KB full-speed L2 cache
 - **BIOS:** Award 4 Mb Flash memory BIOS
 - **Chipset:** Intel® 845GV
 - **System Memory:** Two 184-pin DIMM sockets accepts up to 2 GB DDR 200/266/333
 - **Enhanced IDE interface:** Supports up to four EIDE devices. BIOS auto-detect, PIO Mode 4, Ultra ATA 100/66/33 transfer
 - **FDD interface:** Supports up to two FDDs
 - **Serial ports:** 6 serial ports, 2 of RS 232/422/485; 4 of RS 232
- Note: Please refer page 3 of this start up manual for COM port IRQ and I/O address assignment; inappropriate assignment may cause unexpected resource conflict.
- **GPIO:** 2 8-bit GPIO onboard headers
 - **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
 - **Keyboard/mouse connector:** Supports one standard PS/2 keyboard and mouse
 - **Watchdog timer:** 255 level timer intervals
 - **USB (2.0):** Maximum up to six Universal Serial Bus ports

VGA Interface

- **Chipset** Integrated VGA controller, shared system memory 8 to 64 MB

Ethernet Interface

- **Chipset:** Intel® 82562
- **Ethernet interface:** Single 10/100 Mbps Ethernet, IEEE 802.3U protocol compatible
- **Connection:** On-board RJ-45 connector x 1

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.

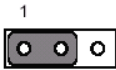
The tables below list the function of each of the jumpers and connectors.

Jumpers

Label	Function
J1	CMOS clear
J2	Watchdog timer output selection
J13	RS 232/422/485 selection for CN10 (COM2)
J14	RS 232/422/485 selection for CN70 (COM6)
J15	Serial port pin-out selection signal(R1) power(5V or 12V)

J1: CMOS clear function

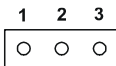
Pins	Result
1-2 (closed)	Keep CMOS data*
2-3 (closed)	Clear CMOS data



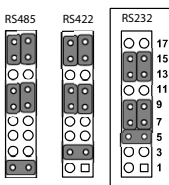
*default setting

J2: Watchdog timer output option

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



J13 & J14: RS 232/422/485 selection

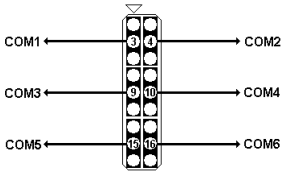


Connectors

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 (only for AIMB-740)
CN9	Serial port: COM1
CN10	Serial port connector : COM2 (RS 232/422/485)
CN23	Serial port connector : COM3 (RS 232)
CN26	Serial port connector : COM4 (RS 232)
CN67	Serial port connector : COM5 (RS 232)
CN70	Serial port connector : COM6 (RS 232/422/485)
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
CN38	Serial port: COM2 (only for AIMB-741)
CN44	CF socket (Optional)
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
CN64	Case Open Connector (only for AIMB-741-B)
CN65	Front Panel LAN LED Connector (AIMB-741-B)
CN93	8-bit GPIO header
CN94	8-bit GPIO header
ATX1	ATX 12V Auxiliary power conn
ATX2	ATX power connector

J15: Serial port pin-out selection-signal (RI) / power (5V or 12V)

User can use jumper settings to change pin outs of the RI pins of COM1~COM6.)



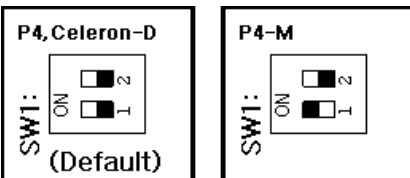
J15 Setting and RI Pin Out

Setting	RIA	NRI2	NRI3	NRI4	NRI5	NRI6
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* The current is up to 0.8 mA.

SW1 CPU Type Selection



COM Port IRQ Assignment

COM Port	IRQ
COM 1	IRQ 3 / IRQ 4
COM 2	
COM 3	IRQ 5 / IRQ 10 / IRQ 11
COM 4	
COM 5	
COM 6	

COM Port I/O Address Assignment

COM Port	I/O Address
COM 1	3F8h / 3E8h / 2F8h / 2E8h
COM 2	
COM 3	
COM 4	
COM 5	4F8h / 4E8h
COM 6	

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

Caution

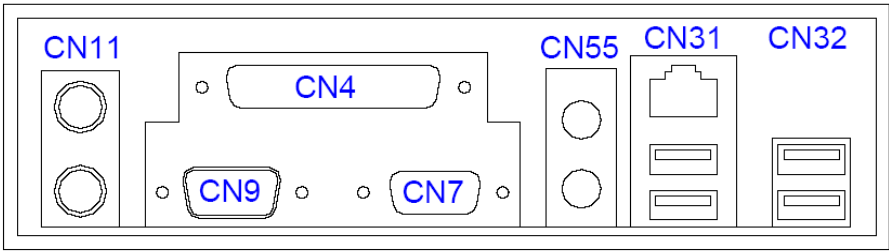
- Danger of explosion if battery is incorrectly replaced. The battery doesn't need to be charged. Replace only with Advantech-specified batteries.

FCC

This device complies with the requirements in part 15 of the FCC rule.

Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.



I/O Connectors