

# AIMB-640 Socket 478 Advanced Micro ATX for Kiosk Applications Startup Manual

## Packing List

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

- 1 AIMB-640 SBC
  - 1 Startup manual
  - 1 Utility CD
  - 2 IDE HDD cable p/n:1701400452
  - 1 ATX 12V power converter cable p/n:170304015K
  - 1 COM port cable kit p/n:1701090401
  - 1 Jumper pack p/n:9689000068
  - 1 I/O port bracket p/n:1962015680
- Optional Accessories
- 1 USB cable (2.54mm) p/n: 1700000719
  - 1 FDD cable p/n: 1700340640
  - 2 Serial ATA HDD cable p/n: 1700071000
  - 2 Serial ATA HDD power p/n: 1703150102

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

- Note 1: For detailed contents of the AIMB-640, please refer to the enclosed CD Disc or disk (in PDF format).
- Note 2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at:  
<http://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/epc>

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

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

This manual is for the AIMB-640 Series Rev. A1.

Part No. 2006064000

1st Edition  
Mar. 2005.

## Specifications

### Standard SBC Functions

- **CPU:** 478 support Celeron D/Intel® Pentium 4
- **System Memory:** DDR DIMM \*2, Max.2 Gb
- **2nd Cache Memory:** Depends 256KB on the Celeron D 335 processor/512KB on the Pentium 4 processor
- **System Chipset:** Intel 852GME/ ICH4 chipset
- **BIOS:** 4 Mbit Flash BIOS
- **Watchdog Timer:** 255 levels timer interval
- **Expansion Interface:** 3 x PCI slots, 1 x miniPCI socket
- **Battery:** Lithium 3V/220 mA/H
- **Power management:** Supports Advanced Power Management, ACPI compliant.
- **IDE interface:** One channel supports up to two IDE devices. PIO mode 3, 4 with Bus Mastering up to 14MB/sec, supports UDMA 100 mode up to 100MB/sec
- **Serial ports:** Six serial RS-232 ports, COM1,3-6: RS-232, COM2: RS-232/422/485
- **Parallel port:** One parallel port, supports SPP/EPP/ECPmode
- **Keyboard/mouse connector:** 6-pin wafer box connector for PS/2 Keyboard/Mouse connector
- **Audio:** Support AC97 Audio stereo sound
- **USB:** Six USB 2.0 compliant universal serial bus ports  
-4 port on board (external)  
-2 ports pin header (internal, front-end panel)
- **Optional SATA Interface:** Supports two SATA HDD

### Solid State Disk

- Supports one 50-pin socket for CFC type I/II

### VGA/LVDS Interface

- **Chipset:** Intel 855GME GMCH/ICH4
- **Memory Size:** Optimized Shared Memory Architecture, support up to 64MB frame buffer using system memory
- **Resolution:**
  - **CRT display Mode:** pixel resolution up to 1600 x 1200 @85-Hz and 2048 x 536 @75Hz
  - **LVDS display mode:** up to UXGA panel resolution with frequency range from 25-MHz to 112-MHz
- **Dual Independent Display:** CRT/LVDS/DVI
- **LVDS:** support 2 channel 18/24 bits LVDS Panel
- **Combination:** CRT+LVDS,DVI+LVDS,CRT+DVI

### Ethernet interface

- **Chipset supports:**
  - 10/100Mbps - Intel 82551ER
  - 10/100/1000Mbps - Intel 82541 Gi(Optional)
- **Ethernet interface:** IEEE 802.3u (100 BASE-T) protocol compatible or IEEE 802.3 z/ab (1000BASE-T) (Optional)

### Audio Function

- **Chipset:** Intel® 82801DB I/O Controller Hub 4 (ICH4)
- **Audio controller:** Support AC97 3D Audio stereo sound

- **Audio interface:** line out, Microphone in, Line-in(optional)

## Mechanical and Environmental

- **Dimensions:** 244 x 180 mm  
Mechanical Drawing (dxf file) is available.
- **Power Supply Type:** ATX
- **Power Requirement:** +5V  $\pm 5\%$ ,  $\pm 12V \pm 5\%$ (Optional),  
5V standby for ATX mode
- **Power Consumption:** Typical :+ 5V @ 2.91A, +12V @ 0.09A
- **Operating temperature:** 0 ~ 60°C (32 ~ 140°F)
- **Weight:** 0.56 kg (reference weight of single board)

## Jumpers

Label	Function
JP4	LVDS/LCD Power Select
JP1	COM Port 1-6 Voltage Select Connector
JP5	Com2 (RS232/422/485) Select Connector
JP3	Clear CMOS Jumper

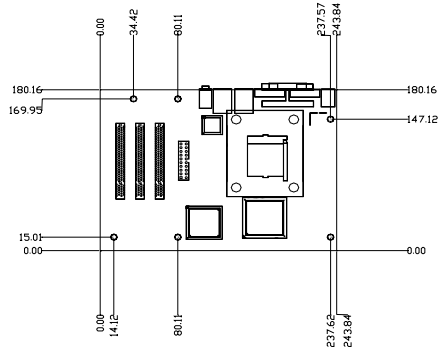
## Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application.

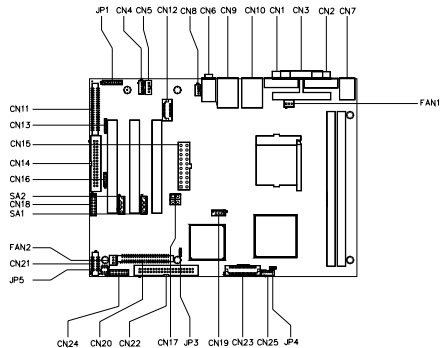
The table below lists the function of each of the jumpers and connectors.

### Connectors

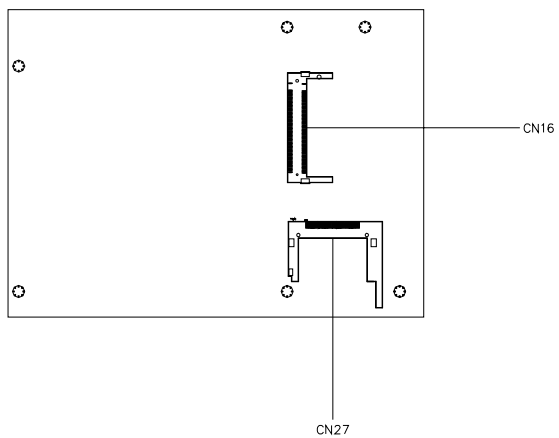
Label	Function
CN1	CRT Connector
CN2	COM1 Connector
CN3	LPT Connector
CN4	TV-OUT Connector
CN6	Audio Connector
CN7	KB/MS Connector
CN9	LAN2+USB 3/4 Connector
CN10	LAN1+USB 1/2 Connector
CN25	Panel Inverter Connector
CN5	CD-In Connector
CN8	Internal Speaker Connector
CN12	DVI Connector
CN19	Internal USB 5/6 Port Connector
CN16	SIR Connector
CN27	Compact Flash Connector
CN22	Primary IDE Connector
CN20	Secondary IDE Connector
CN14	Floppy Connector
CN21	COM 2 Connector
CN11	COM 3-6 Connector
CN18	Digital IO Connector
CN26	Mini PCI Connector
SA1	SATA 1 Connector
SA2	SATA 2 Connector
CN15	ATX Power Connector
CN17	ATX12V Power Connector
CN23	LVDS Connector
CN24	Front Panel Connector
FAN2	SYSTEM FAN
FAN1	CPU FAN
PCI1	PCI SLOT
PCI2	PCI SLOT
PCI3	PCI SLOT



*AIMB-640 Mechanical Drawing  
(component side)*



*AIMB-640 Connectors (component side)*



***AIMB-640 Connectors (solder side)***