

# PCI-6881 PCI Pentium® M Half-sized SBC with VGA/LCD/LVDS/Giga Ethernet/USB2.0 and SSD Startup Manual

## Packing List

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

1 PCI-6881 Series Half-sized SBC	
1 Startup manual	
1 Utility disk/CD driver	
1 Y cable for PS/2 Keyboard, PS/2 Mouse	p/n:1700060202
1 EIDE (HDD) cable	p/n:1701400452
1 FDD cable (600mm)	p/n:1701340603
1 Parallel port cable	p/n:1700260250
1 Power cable	p/n:1700000265
1 ATX feature cable	p/n:1700001276
Mini jumper	p/n:1653302122

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

Note1: For details about the PCI-6881 Series, please refer to the enclosed CD-ROM or disk (in PDF format).

Note2: 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/eplatform>

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

<http://www.advantech.com/support>

This manual is for the PCI-6881 Series Rev.A2.

Part No.200K688102

3rd. Edition  
Jan, 2006.

## Specifications

### Standard SBC Functions

- **CPU:** Supports Intel® Embedded Pentium® M (Banias) LV/ULV or Dothan Processor, up to 2.0 GHz
- **BIOS:** Award 4 Mbit Flash BIOS
- **System Chipset:** Intel 855GME + ICH4
- **System memory:** 200 pin SODIMM x 2, supports ECC double data rate (DDR) 128 MB to 2 GB, accepts 128/256/512 bit technologies DDR 200/266/333 DRAM
- **2nd Cache Memory:** 1 MB on the Pentium M (Banias)
- **Enhanced IDE Interface:** Supports two enhanced IDE channels. Primary channel supports ATA-100 mode; Secondary channel only supports ATA-33 and PIO mode. CFC card occupies secondary IDE master.
- **Serial Ports:** Four serial ports: COM1, COM3, COM4: RS232; COM2: RS232/422/485
- **Parallel Ports:** one parallel port, supports SPP/EPP/ECP
- **Keyboard/Mouse Connector:** Supports standard PC/AT Keyboard and a PS/2 Mouse
- **Power Management:** Supports Power Saving Mode including Normal/Standard/Suspend modes. APM 1.2 compliant.
- **FDD interface:** Supports up to two FDD devices
- **USB:** 4 USB ports, USB 2.0 compliant
- **DI/O Interface:** 8-bit general purpose input/output
- **SSD:** Supports CompactFlash Card Type I/II
- **Watchdog timer:** 0 ~ 255 sec. System reset or IRQ11
- **Expansion Interface:** 32-bit PCI slot

### Display

- **Chipset:** Intel 855GME
- **Memory Size:** Shared up to 32 MB, supports DVMT
- **Resolution:**
  - CRT Modes:**  
2048 x 1536@75 Hz
  - LCD/Simultaneous Modes:**  
up to UXGA panel resolution with frequency range from 25-MHz to 112-MHz
- **LVDS Interface:** supports 2 channel (36-bit) LVDS LCD panel (up to 48-bit by optional)

### Ethernet interface

- **Chipset:** Intel 82541PI (Gigabit) Intel 82551ER/82551QM (optional)
- **Ethernet interface:** IEEE 802.3 z/ab (1000Base-T) or IEEE 802.3u (100Base-T) protocol compatible
- **Connection:** On-board RJ-45 connector

## Mechanical and Environmental

- **Size/Weight:** 185mm x 122mm (7.3" x 4.8"), 0.27 kg (0.59 lb)
- **Power Supply Voltage:** +5V, +12V  $\pm$ 5%  
**Power requirements:**  
**Max**  
 6A @5V, 0.5A @12V  
**Typical**  
 5.2A @5V (w/Pentium M 1.6 G +512 MB)  
 0.25A @12V (w/Pentium M 1.6 G +512 MB)
- **Environment:** 0 ~ 60°C (32 ~ 140°F), operation
- **Operating Humidity:** 0%~90% relative humidity, non-condensing

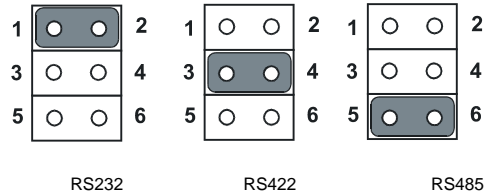
### JP1: Clear CMOS

Pin	Function
1-2	Clear CMOS



### JP2: COM2 232/422/485 SEL

Pin	Function
1-2(default)	RS232
3-4	RS422
5-6	RS485



## Jumpers and Connectors

Connectors on the board link it to external devices, such as hard disk drives, a keyboard or expansion bus connectors. In addition, 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.

### Jumpers

Label	Function
JP1	Clear CMOS
JP2	COM2 232/422/485 SEL
JP3	PCI_VIO Power Select
JP4	LVDS Panel Power Select

### Connectors

Label	Function
CN1	Primary IDE Connector
CN2	Floppy Connector
CN3	Printer port Connector
CN4	Secondary IDE Connector
CN5	ATX Power Connector
CN6	COM port 3,4
CN7	USB port 1,2
CN8	USB port 3,4
CN9	HDD LED/Reset/Power Button
CN10	D-SUB VGA Connector
CN11	LAN RJ45 Connector
CN12	COM port 1
CN13	COM port 2
CN14	LVDS Connector
CN15	AC'97 interface Connector
CN16	DI/O Connector
CN17	MINI Keyboard Connector
CN18	External Keyboard Connector
CN19	LCD Inverter power Connector
CN20	CompactFlash Socket
CN21	ATX Feature Connector
CN22	-12V Power Connector

### JP3: PCI\_VIO Power Select

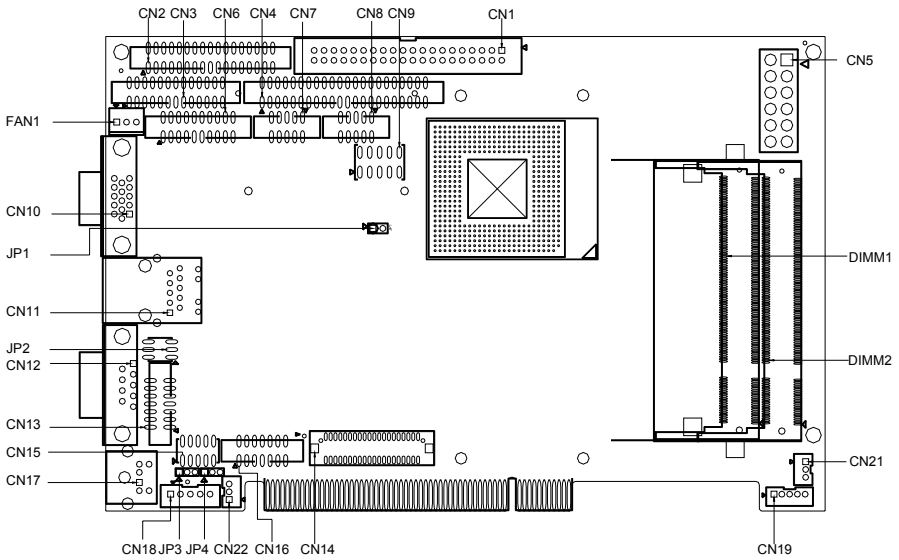
Pin	Function
1-2(default)	+5V
2-3	+3.3V



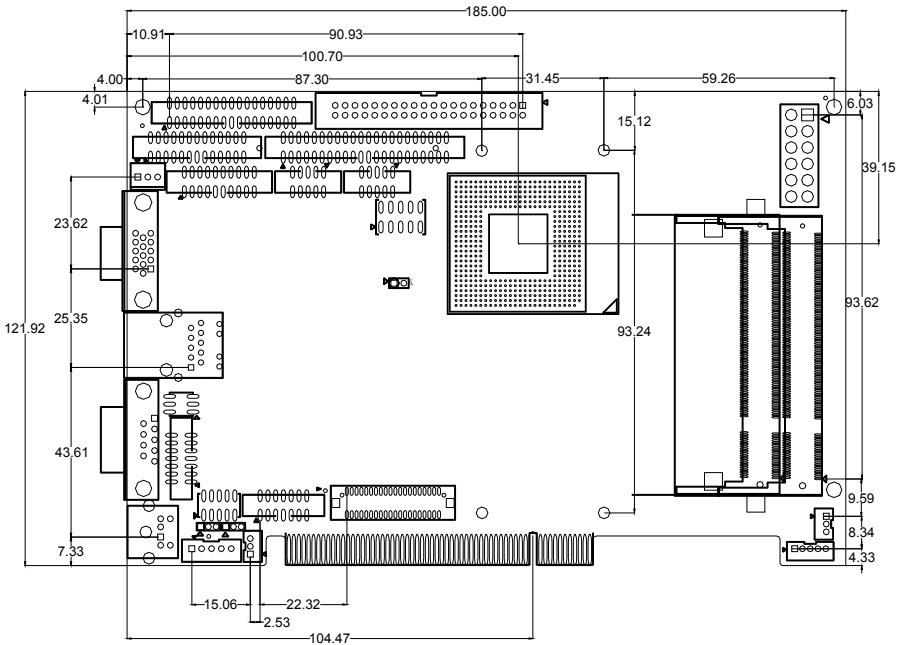
### JP4: LVDS Panel Power Select

Pin	Function
1-2(default)	+5V
2-3	+3.3V

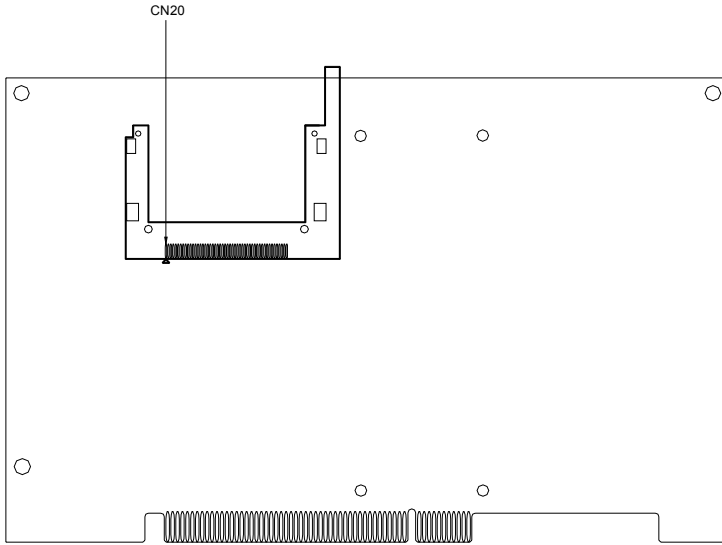




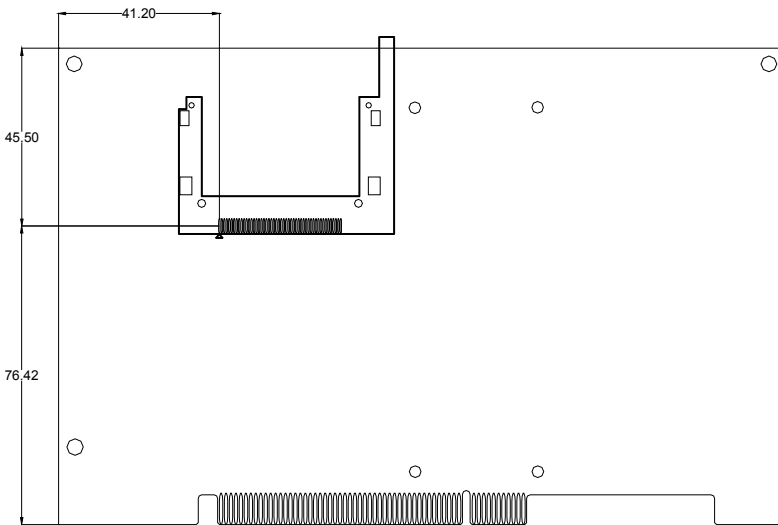
***PCI-6881 Location Connectors and Jumpers (Component side)***



***PCI-6881 Dimensions (Component side)***



***PCI-6881 Location Connectors (Solder side)***



***PCI-6881 Dimensions (Solder side)***