PCI-6882 PCI Intel® Pentium® 4/Celeron® D/ Celeron® Half-sized SBC with VGA/LVDS/LAN/ USB2.0/TV-out/SSD/SATA Startup Manual

Packing List

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

1 PCI-6882 Series Half-sized SBC	
1 Startup manual	
1 Utility disk/CD driver	
1 Y cable for PS/2 Key-board, PS/2 Mouse	p/n:1700060202
1 E-IDE(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
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-6882 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-6882 Series Rev.A1.

Part No.200K688200 1st. Edition
Dec. 2005

Specifications

Standard SBC Functions

- **CPU:** Intel® Pentium® 4 processor, up to 3.06GHz Celeron® D and Celeron® processor, up to 2.8GHz
- **BIOS:** Award 4Mbit Flash BIOS
- **System Chipset:** Intel 852GME + ICH4
- **System memory:** 200 pin DDR SODIMM x 2, supports non-ECC DDR up to 2GB
- **2nd cache Memory:** 512KB on Pentium® 4 processor, 256KB on Celeron® D processor, 128KB on Celeron® processor
- **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 master
- **SATA:** Chip Sil 3512, two COMAX C504C connectors, supports data transfer rate up to 150MB/s, Software RAID 0,1 supported (Depend on Adapter)
- **Serial Ports:** Four serial ports, COM1, COM3, COM4: RS232; COM2: RS232/422/485
- **Parallel Port:** One parallel port, supports SPP/EPP/ ECP.
- **Keyboard/Mouse Connector:** One 6-pin socket on bracket for standard PS/2 Mouse and Keyboard, one 5-pin wafer box connector for external Keyboard only.
- **Power Management:** Supports Power Saving Mode including Normal/Standard/Suspend modes. APM 1.2 compliant. ACPI 1.0b, ACPI 2.0 supported.
- **FDD interface:** Supports up to two FDD devices
- **USB:** 4 USB ports, USB 2.0 compliant
- **GPIO Interface:** 8-bit general purpose input/output (optional)
- **SSD:** Supports CompactFlash Card Type I/II
- **Watchdog timer:** 0 ~ 255sec. System reset.
- **Expansion Interface:** PCI interface, compatible with PCI Rev 2.2
- **IrDA:** 115Kbps, IrDA1.1 compliant
- **Audio:** Supports AC'97 for external Audio CODEC

TV-out (optional)

- **Chipset:** Chrontel CH7009
- Supports NTSC and PAL video standards
- Supports composite, s-video or AV output
- Supports graphic resolutions up to 1024 x 768 pixels

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

Display

- **Chipset:** Intel 852GME chip integrated.
- **Memory Size:** Optimized Shared Memory Architecture, supports up to 64MB frame buffer using system memory
- **Resolution: CRT Modes:**
  1920 x 1440 @ 60Hz
  1600 x 1200 @ 85Hz
  LCD Modes:
  up to 1280 x 1024 @ 36bpp
- **LCD Interface:** 2 Channel LVDS (2 x 18-bit)
- **LVDS Interface:** Hirose connector supports dual channel LVDS panel, up to UXGA panel resolution with frequency range from 25MHz to 112MHz
- **Dual Display:** CRT + LVDS, LVDS + TV-out, CRT + TV-out, LVDS +LVDS (under Windows, Linux)

Mechanical and Environmental

- **Size/Weight:** 185mm x 122mm(7.3" x 4.8")
- **Power Supply Voltage:** +5 V, +5 V STB and +12 V
- **Power Requirements:**
  Max
  7.8 A@+12 V, 2.4 A@+5 V
  (with Pentium4 3.06GHz+1GB);
  Typical
  2.3 A@+12 V, 2.3 A@+5 V
  (with Pentium4 3.06GHz+1GB);
- **Environment:** 0 ~ 60°C (32 ~ 140°F), operation
- **Operating Humidity:** 0~90% relative humidity, non-condensing

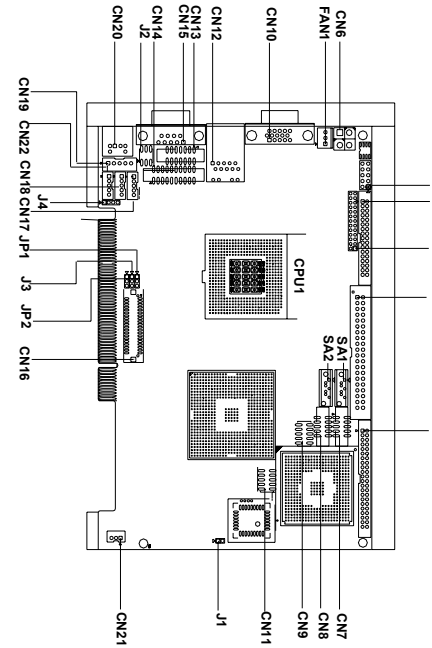
Jumpers and Connectors

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.

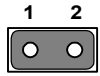
Jumpers	
Label	**Function**
J1	CMOS setting
J2	COM2 RS232/422/485 setting Connector
J3	LCD voltage setting
J4	SMBus Connector
JP1	CPU FSB setting Connector
JP2	PCI VIO setting Connector
BT1	Battery socket

Connectors	
Label	**Function**
CN1	Front Panel Connector
CN2	Floppy Connector
CN3	Secondary IDE Connector
CN4	Primary IDE Connector
CN5	Parallel Connector
CN6	+12V Connector
CN7	USB port 0,1
CN8	USB port 2, 3
CN9	DI/O Connector
CN10	D-SUB VGA Connector
CN11	AC'97 interface Connector
CN12	LAN Connector
CN13	COM2 (RS232/422/485)
CN14	COM3, COM4(RS232)
CN15	COM1 Connector
CN16	LVDS Connector
CN17	IrDA Connector
CN18	TV-out Connector
CN19	AT keyboard Connector
CN20	PS/2 Mouse/Keyboard Connector
CN21	ATX Connector
CN22	LCD Backlight Connector
CN23	CompactFlash Socket
FAN1	FAN Connector

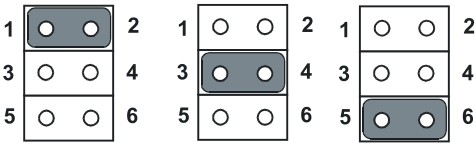


PCI-6882 Location Connectors and Jumpers (Component side)

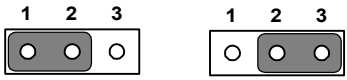
J1: Clear CMOS	
Pin	**Function**
1-2	Clear CMOS



J2: COM2 RS232/RS422/RS485 setting connector	
Pin	**Function**
1~2(default)	RS232
3~4	RS422
5~6	RS485



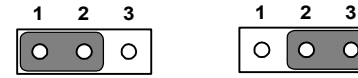
J3: LCD voltage setting	
Pin	**Function**
1-2(default)	+5 V
2-3	+3.3 V

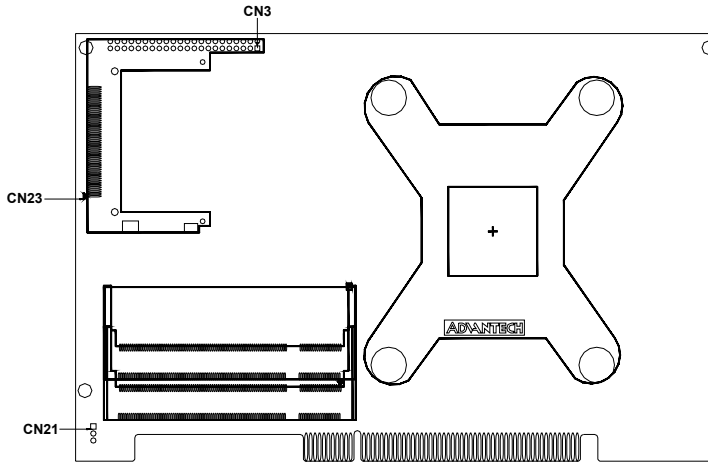


J4: SMBus connector	
Pin	**Function**
1	+5V
2	SM_CLOCK
3	SM_DATA
4	GND

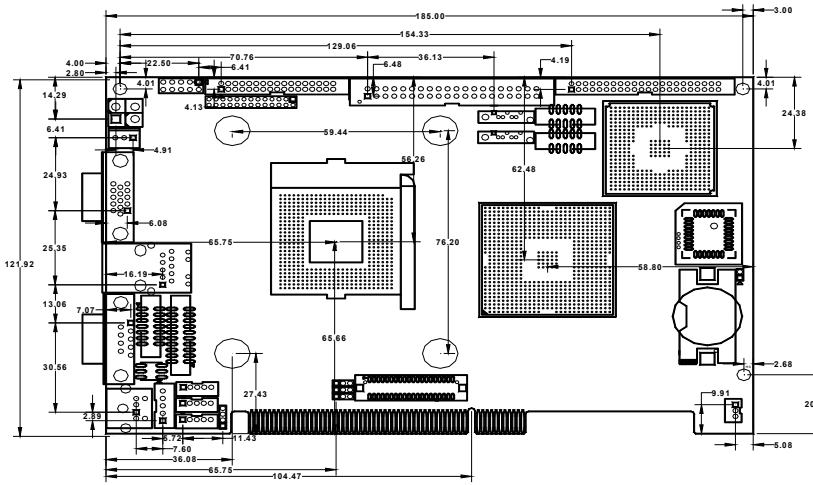
JP1: CPU FSB select connector	
Pin	**Function**
1~2(default)	Auto detect
2~3	100MHz
Empty	133MHz

JP2: PCI VIO	
Pin	**Function**
1~2(default)	+5 V
2~3	+3.3 V

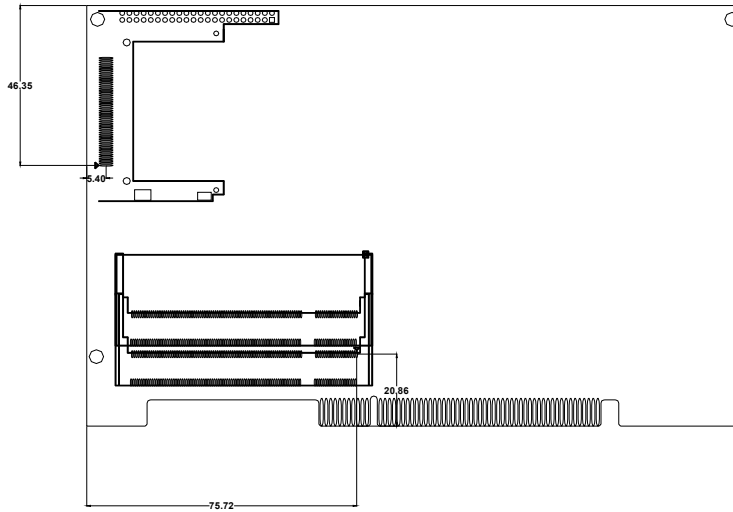




PCI-6882 Location Connectors (Solder side)



PCI-6882 Dimensions (Component side)



PCI-6882 Dimensions (Solder side)