

PCM-9381 Pentium®M 3.5" SBC with PCI-104/ VGA/LCD/LVDS 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 PCM-9381 SBC
- 1 Startup manual
- 1 Utility CD
- 1 Mini jumper pack p/n: 9689000002
- 1 Audio cable p/n: 1703100152
- 1 IDE 44 pin p/n: 1701440351
- 1 USB 2 port cable p/n: 1703100121
- 1 Parallel port cable p/n: 1700260250
- 1 Keyboard/Mouse cable p/n: 1700060202
- 1 second serial port cable p/n: 1701140201
- 1 ATX power cable 20P-12P cable p/n: 1700000265

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

Note 1: For detailed contents of the PCM-9381, 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 of our products, please visit our website at:

<http://www.emacinc.com>

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

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

This manual is for the PCM-9381 Series Rev. A1.

Part No. 2006938101

2nd Edition
Oct. 2005

Specifications

Standard SBC Functions

- **CPU:** Embedded Intel Pentium M (Banias/Dothan) /LV/ ULV Celeron M Processor supporting Front Side Bus (FSB) 400MHz
 - Onboard Celeron M 600 (512K) PCM-9381F-M0A1
 - Onboard Pentium M 1.1G PCM-9381F-S1A1
 - Socket 478(*), Ethernet PCM-9381F-00A1
 - Optional:
 - Pentium M 745 1.8GHz
 - Pentium M 1.6GHz
 - Pentium M 738 1.4GHz
 - Celeron M 320 1.3GHz
 - *: socket 478 for Intel uFCPGA2
- **System Memory:** 1x SODIMM socket, support ECC Double Data Rate (DDR) 128 MB to 1GB, DDR200/266/333 DRAM
- **2nd Cache Memory:** Depends on CPU type from 512KB to 2 MB
- **System Chipset:** Intel 855GME GMCH/ICH4 chipset
- **BIOS:** Award 4Mbit Flash BIOS
- **Watchdog Timer:** 255 levels timer interval
- **Expansion Interface:** PCI-104
- **Battery:** Lithium 3V/196 mAH
- **Power management:** Supports power saving modes including Normal/Standby/Suspend modes. APM 1.2, ACPI compliant, Supports Enhanced Intel Speed Step Technology.
- **Enhanced IDE interface:** One channel supports up to two EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4, supports UDMA 33 mode
- **Serial ports:** Two serial RS-232 ports, COM1: RS-232, COM2: RS-232/422/485
- **Parallel port:** One parallel port, supports SPP/EPP/ECPmode
- **Keyboard/mouse connector:** Supports one standard PC/AT keyboard and a PS/2 mouse
- **Audio:** Supports AC97 Audio stereo sound
- **USB:** Three USB 2.0 compliant universal serial bus ports

Solid State Disk

- Supports one 50-pin socket for CFC type I

VGA/LVDS Interface

- **Chipset:** Intel 855GME GMCH
- **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
- **LVDS:** support 2 channel 36-bits LVDS LCD Panel
- **Dual Independent Display:** CRT+LVDS
 CRT+DVI
 LVDS+DVI

Ethernet interface

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

Audio Function

- **Chipset:** Intel 82801DB I/O Controller Hub 4 (ICH4) and ALC202 codec
- **Audio controller:** Support AC97 3D Audio stereo sound
- **Audio interface:** line in, line out, Microphone in

Mechanical and Environmental

- **Dimensions** 145 x 102 mm (5.9"x 4.2")
 Mechanical Drawing (dxf file) is available.
- **Power Supply Type:** AT/ATX
- **Power Requirement:** +5V $\pm 5\%$, +12V $\pm 5\%$ (Optional), 5V standby for ATX mode or supports single +5V only
- **Power Consumption:** Typical: + 5V@3.0A, +12V@0.04A
 Max: +5V@ 4.26A, +12V@ 0.13A
 (Pentium M 1.8GHz, 256MB, DDR266)
- **Operating temperature:** 0 ~ 60°C (32 ~ 140°F)
- **Weight:** 0.85 kg (reference weight of total package)

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.

Jumpers

Label	Function
J1	Audio Power Source
J2	COM2 Auto Flow Setting
JP1	PCI VIO
J6	LCD Power Setting
J8	AT/ATX Power Setting
JP1	PCI VIO
S1	Clear CMOS
S2	Reset Button

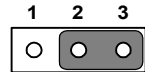
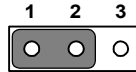
Connectors

Label	Function
CN1	LVDS Connector
CN2	Audio Connector
CN3	AT/ATX power connector
CN5	Internal USB Connector (Channel USB0/1)
CN6	Primary IDE Connector
CN7	GPIO
CN8	COM2 Connector
CN9	USB2 Connector
CN10	HD LED & Power LED Connector
CN11	SIR Connector
CN12	LAN Connector
CN13	Print Port Connector
CN14	KB/MS Connector
CN15	Fan Power Connector
CN16	Power Switch Connector
CN17	Inverter Power Connector
CN18	CRT Connector
CN19	COM1 Connector
CN21	CF Connector
CN22	PCI-104 Connector
CN23	DVI Connector

J1: Audio Power Source

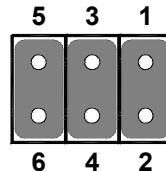
Description	PIN HEADER 3*1P 180D (M) SQUARE 2.0mm
Setting	Function
1-2(*)	Audio Power form 12V-input & 5V-output LDO
2-3	Audio Power from 5V

*: Default



J2: COM2 Setting

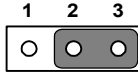
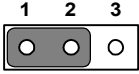
Description	PIN HEADER 3*2P 180D SMDMALE SQUARE PIN 2.0mm
Setting	Function
1-2(Default)	RS232
3-4	RS485
5-6	RS422



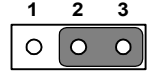
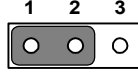
J6: LCD Power

Pin	Signal
1-2	+5V
2-3(*)	+3.3V

*: Default

**JP1: PCI VIO**

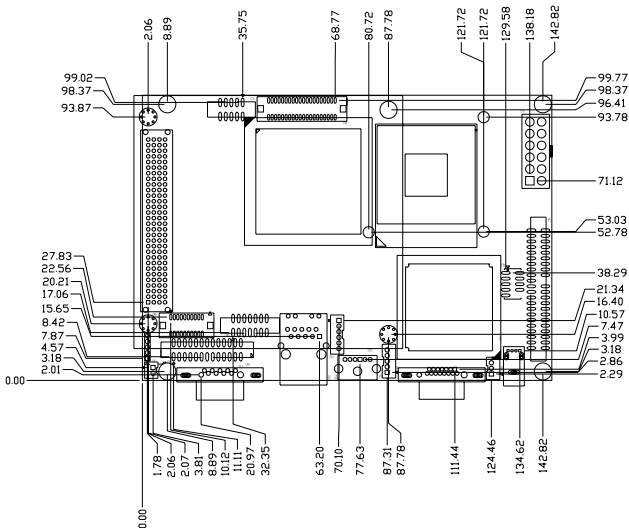
Description	PIN HEADER 2*1P 180D (M) SQUARE 2.0mm
Setting	Function
1-2	5V
2-3	3.3V

**J8: AT/ATX Power Setting**

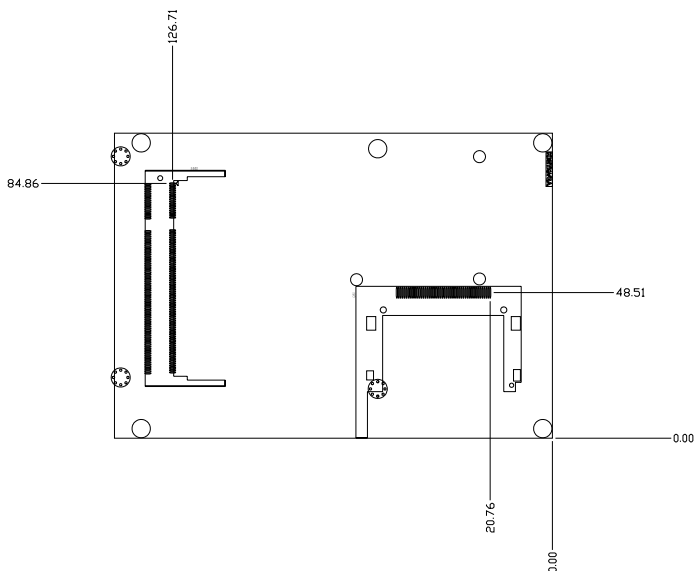
Setting	Function
J8(1-2)	AT Power (**)
None(*)	ATX Power

*: Default

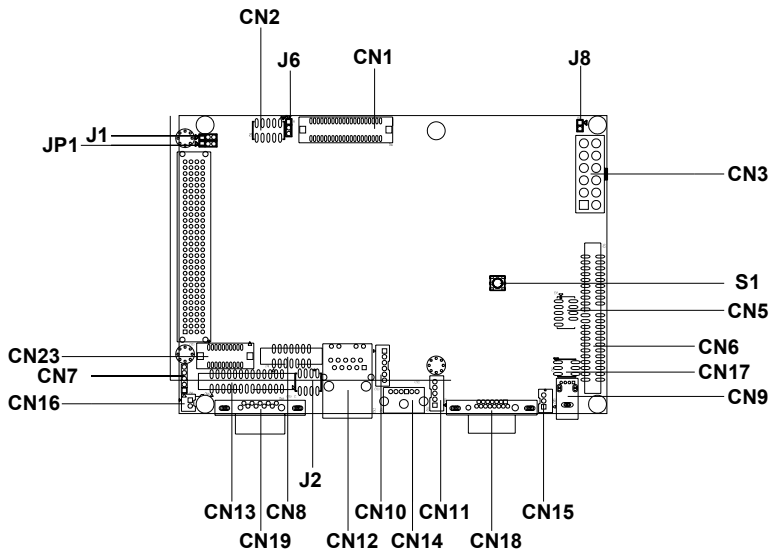
**:. While use AT power, the standby power connector should be connected to 5V(Please refer to user's manual Appendix D).



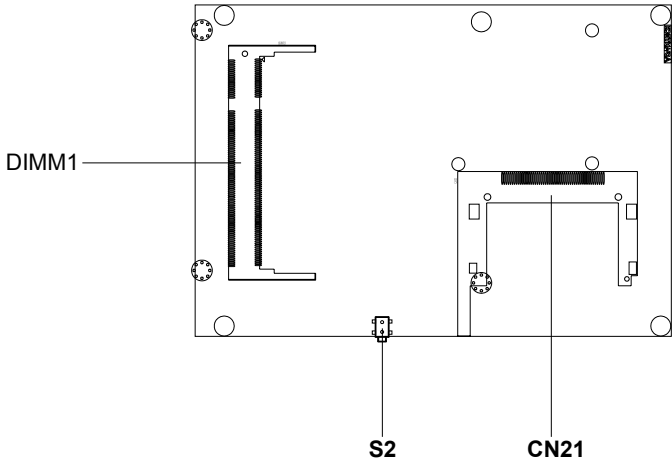
PCM-9381/9387 Mechanical Drawing (component side)



PCM-9381/9387 Mechanical Drawing (solder side)



PCM-9381/9387 Jumper and Connectors (component side)



PCM-9381/9387 Jumper and Connectors (solder side)