

# PCM-9380 Pentium®M 3.5" SBC with MIO/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-9380 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 26-34 pin FDD adapter p/n: 9681000044
- 1 FDD Cable for Slim FDD p/n: 1701260125
- 1 Flat cable 34 pins for FDD p/n: 1701340700
- 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-9380, 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/eplatform>

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

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

This manual is for the PCM-9380 Series Rev. A1.

Part No. 2006938001

2nd Edition  
Oct. 2005.

### Specifications

#### Standard SBC Functions

- **CPU:** Embedded Intel Pentium M (Banias/Dothan) /LV/ULV Celeron M Processor supported at Front Side Bus (FSB) 400MHz
  - on board Celeron M 600 (512K) PCM-9380F-M0A1
  - on board Pentium M 1.1G PCM-9380F-S1A1
  - socket 478(\*), Ethernet PCM-9380F-00A1
  - socket 478, Gigabit Ethernet PCM-9380FG-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:** MIO interface, integrated PCI 2.0, LPC, USB2.0, SMBus, AC97 and DVO bus.
- **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 channels supports up to two EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4, supports UDMA 33 mode
- **Optional FDD Interface:** Supports one FDD
- **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:** Support 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/II

#### 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 (w/MIO-254)  
LVDS+DVI (w/MIO-254)

## Ethernet interface

- **Chipset supports:**  
10/100Mbps - Intel 82551ER  
10/100Mbps - Intel 82551QM (Optional)  
10/100/1000Mbps - Intel 82541GI
- **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:** IntelR 82801DB I/O Controller Hub 4 (ICH4)
- **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 single +5V power only.
- **Power Consumption:** Typical:+ 5V@ 2.91A, +12V@ 0.09A(Pentium M 1.6G, 256MB DDR333 with MPEG1)  
Max:+ 5V@ 4.54A, +12V@ 0.13A  
(Pentium M 1.6G, 256MB DDR333 with HCT9.5)
- **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
J3/J4/J5	COM2 Setting
J6	LCD Power Setting
J7	Audio Enable/Disable
J8	AT/ATX Power Setting
S1	Clear CMOS
S2	Reset Button

### Connectors

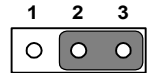
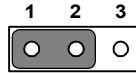
Label	Function
CN1	LVDS connector
CN2	Audio connector
CN3	ATX Power
CN4	MIO connector
CN5	Internal USB connector (Channel 0,1)
CN6	Primary IDE connector
CN7	GPIO connector
CN8	COM2 connector
CN9	External USB connector (channel 2)
CN10	HD LED & Power LED connector

### Connectors

Label	Function
CN11	SIR connector
CN12	LAN connector
CN13	Print Port connector
CN14	Keyboard/Mouse connector
CN15	Fan Power connector
CN16	Power Switch connector
CN17	Inverter Power connector
CN18	CRT connector
CN19	COM1 connector
CN20	Floppy Disk Drive (FDD) connector
CN21	CF connector

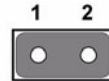
### J1: Audio Power Source

Pin	Signal
1-2(Default)	Audio Power form 12V-input & 5V-output LDO
2-3	Audio Power from 5V



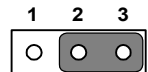
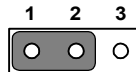
### J3/J4/J5: COM2 Setting

Pin	Signal
J3(1-2)(Default)	RS232
J4(1-2)	RS422
J5(1-2)	RS485



### J6: LCD Power

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



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**J7: Audio Enable/Disable**

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Pin	Signal
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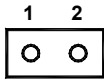
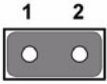
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J7(1-2)(Default)	Enable
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None	Disable
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**J8: AT/ATX Power Setting**

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Setting	Function
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J8(1-2)	AT Power (*)
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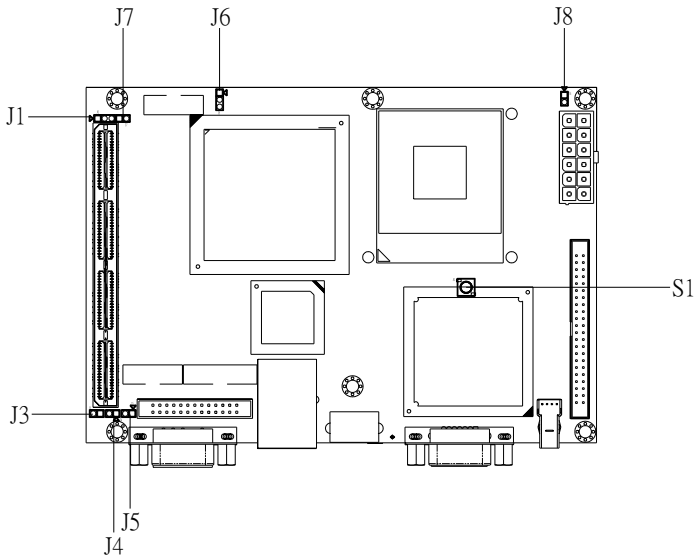
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None(Default)	ATX Power
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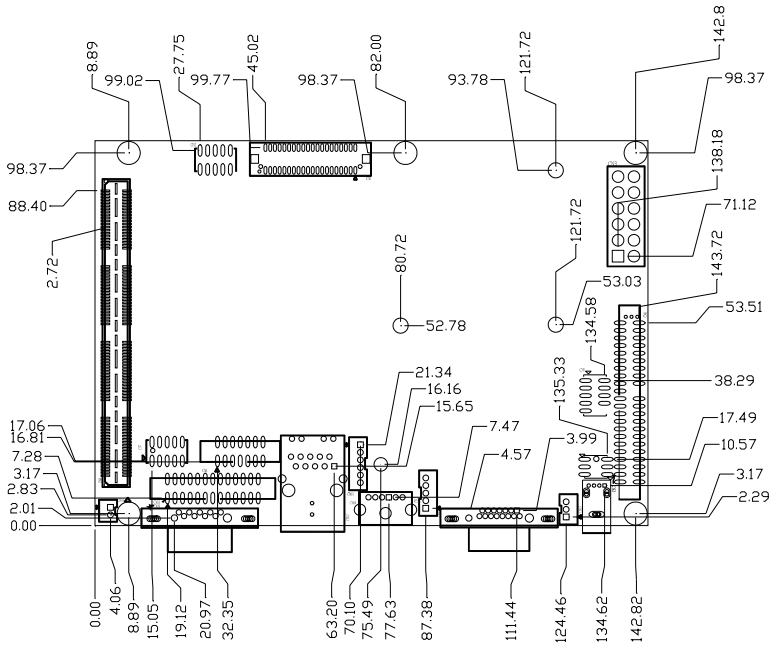
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\*:While use AT power, the standby power connector should be connected to 5V.

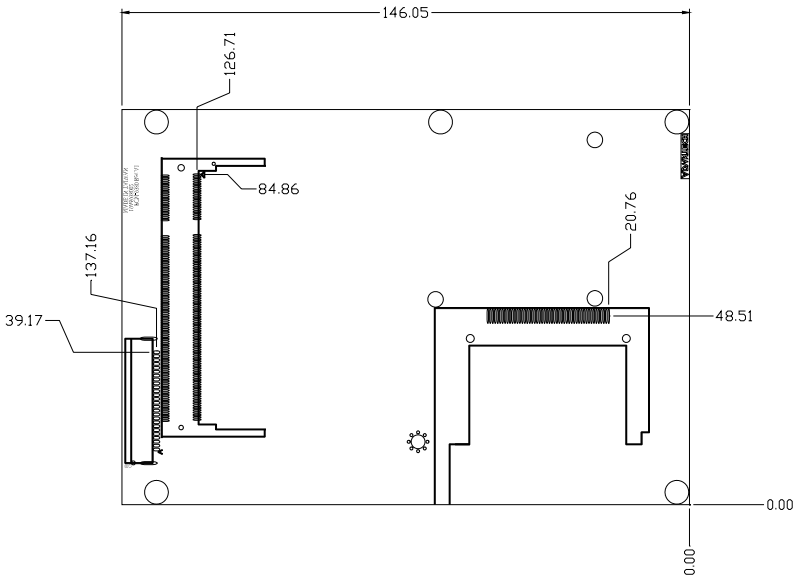
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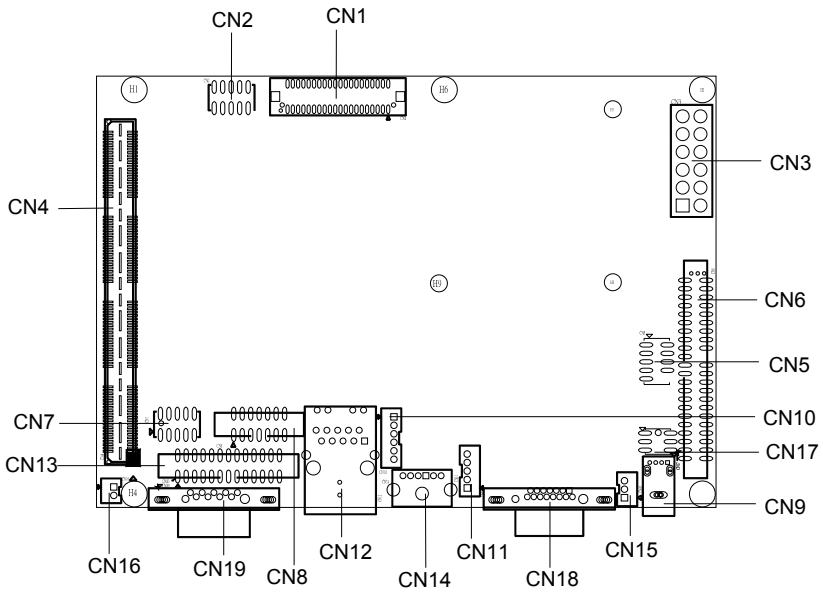
***PCM-9380 Jumper Drawing (component side)***



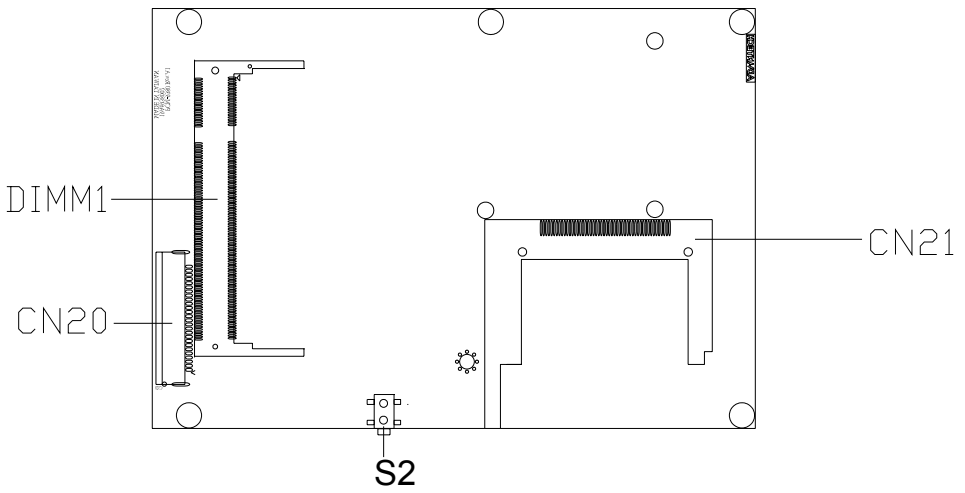
**PCM-9380 Mechanical Drawing (component side)**



**PCM-9380 Mechanical Drawing (solder side)**



**PCM-9380 Connectors (component side)**



**PCM-9380 Connectors (solder side)**