

PCM-9584 Onboard Intel® Pentium® M EBX SBC with Audio, VGA 2LVDS and LAN

Packing List

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

- 1 PCM-9584 all-in-one single board computer
- 1 Startup manual
- 1 CD disk for utility and drivers
- 1 Mini Jumper (10 pcs package) p/n: 9689000002
- 1 ATX power cable p/n: 1700001112

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

Note 1: For detailed contents of the PCM-9584, 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 PCM-9584 Series Rev. A2.

Part No. 2006958401

2nd Edition
Dec. 2007

Specifications

Standard SBC Functions

- **CPU:** Embedded Intel® Pentium® M (Banias/Dot-han)/ Celeron® M processor supported
- **BIOS:** Award® 512K byte Flash BIOS
- **System Chipset:** Intel 915GME GMCH/ICH6M Chipset
- **System Memory:** 2 x 200-pin SODIMM socket-s, supporting 128 MB to 2GB DDR2, accepts 128/256/512/1024MB DDRII up to 400/533 DRAM
- **2nd Cache Memory:** Depend on CPU from 512K to 2MB
- **Enhanced IDE interface:** One Enhanced IDE interface, supports 2 IDE devices. PIO mode 3 or mode 4 with bus mastering up to 14MB/sec, Ultra DMA 100 transfer mode up to 100MB/sec. SATA 150 x 2
- **Serial Ports:** Three serial RS-232 one serial RS-232/422/485 port
- **Parallel Port:** One parallel port, supports EPP/ECP parallel mode
- **Keyboard/Mouse Connector:** supports standard PS/2 keyboard and a PS/2 mouse
- **Power Management:** APM Rev. 1.2 compliant power management ACPI support
- **Watchdog Timer:** 255 levels timer interval, setup by software, super I/O integrated, SMSC controller
- **USB:** 6 x USB 2.0 compliant ports.
- **IrDA:** N/A
- **GPIO:** 8-bit general purpose 4 x input/4 x output
- **Expansion:** PC/104, miniPCI interface and 1 x PCI slot
- **ISA:** 8 bit ISA at PC/104

Solid State Disk

- Supports Compact Flash Card Type I/II (shared 2nd IDE Channel)/ uDOC (option)

VGA/LCD Interface

- **Chipset:** Intel 915GME chip integrated. (Extreme Graphics 2)
- **Frame Buffer:** Optimized Shared Memory Architecture, support up to 128MB frame buffer using system memory
- **Interface:** Dual channel LVDS panel supports up to UXGA panel resolution
- **Display Mode:** CRT Modes: pixel resolution up to 1600 x 1200 at 85-Hz and 2048 x 1536 at 75-Hz
- **LCD Mode:** Dual channel LVDS panel support up to UXGA panel resolution with frequency range from 25-MHz to 112-MHz
- **LVDS:** Hirose connector support up to Dual channel (48bit/36bit) LVDS LCD panel

Ethernet Interface

- **Chipset:**
- 2 x BroadCOM BCM5721
- Ethernet interface:
- IEEE 802.3u 100BASE-T
- IEEE 802.3ab 1000BASE-T
- I/O address switchless setting
- Built-in boot ROM

Audio Function

- **Chipset:** ICH6M, Audio codec ALC 650
- **Audio Controller:** AC97 3D surround stereo sound
- Supports Speaker out, CD-input, Line-in, Line-out, Microphone

Mechanical and Environmental

- **Dimensions:** (L x W)203 x 146 mm (8" x 5.75")
- Power Supply Voltage: +5V $\pm 5\%$, +12V $\pm 5\%$
- Power Requirement:
(Pentium M with 1.4GHz)
Max(HCT):2.42A @ 5V, 1.01A @ 12V
Suspend: 1.86A @ 5V, 0.48A @ 12V

(Pentium M with 2.0GHz)
Max(HCT):2.43A @ 5V, 1.65A @ 12V
Suspend: 1.87A @ 5V, 0.75A @ 12V
- **Operating Temperature:**0 ~ 60° C (32~140° F)
- **Operating Humidity:**0% ~ 90% Relative Humidity, non-condensing
- **Weight:** 0.85kg (weight of total package)

Connectors

CN1	ATX Power connector
CN2	LAN LED
CN4	PCI -5V & -12V Input
CN5	SYSTEM PANEL
CN6	LAN1 connector
CN7	SATA2 connector
CN9	SATA1 connector
CN10	LAN2 connector
CN11	CPU FAN connector
CN12	USB5/6 connector
CN13	USB3/4 connector
CN14	USB1/2 connector
CN15	KB/MS connector
CN16	GPIO connector
CN17	Print Port connector
CN18	IDE connector
CN19	COM1/2/3/4 connector
CN20	PC104+ connector
CN21	AUDIO connector
CN22	LVDS connector
CN23	LCD Backlight
CN24	CD-IN connector
CN25	48bit LVDS connector
CN26	CRT connector
CN27	SYS FAN connector
CN28	Inverter connector
CN29	SPK-OUT connector
CN30	Compact II W/Ejector
CN31	MINI PCI connector
CN32	MIO USB connector

JP1 PCI V/I/O POWER Select

1-2	With +5V
2-3	With +3.3V

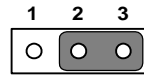
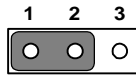
Jumpers and Connectors

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
JP1	PCIVIO POWER Select
JP2	CLEAR CMOS
JP3	COM2 RS232/422/485 Select
JP4	VDD_LVDS_PANEL POWER Select
JP5	VDD_FP POWER Select
JP6	+VCCA_PROC_IN Select
JP7	Compact Flash Master/Slave Select
J8	CPU Dothan/Banias Select
J9	ATX/AT Power Select



JP2 CLEAR CMOS

1-2	CLEAR CMOS
NONE	NORMAL

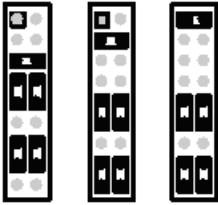


JP3	COM2 RS232/422/485 Select	
(5-6).(7-9)(8-10)(13-15)(14-16)	RS232	
(3-4)(9-11)(10-12)(15-17)(16-18)	RS422	
(1-2) (9-11)(10-12)(15-17)(16-18)	RS485	

JP3	COM2 RS232/422/485 Select		
PINS	RS-232	RS-422	RS-485
1,2	Open	Open	Close
3,4	Open	Close	Open
5,6	Close	Open	Open
7,9	Close	Open	Open
8,10	Close	Open	Open
9,11	Open	Close	Close
10,12	Open	Close	Close
13,15	Close	Open	Open
14,16	Close	Open	Open
15,17	Open	Close	Close
16,18	Open	Close	Close

COM2 jumper setting

RS232 RS422 RS485



JP4	VDD_LVDS_PANEL POWER Select
1-2	3.3V
2-3	5V



JP5	VDD_FP POWER Select
(1-2)	3.3V
(2-3)	5V



JP6	+VCCA_PROC_IN Select
(1-2)	533MHz FSB & ULV P-M CPU
(2-3)	400MHz FSB CPU



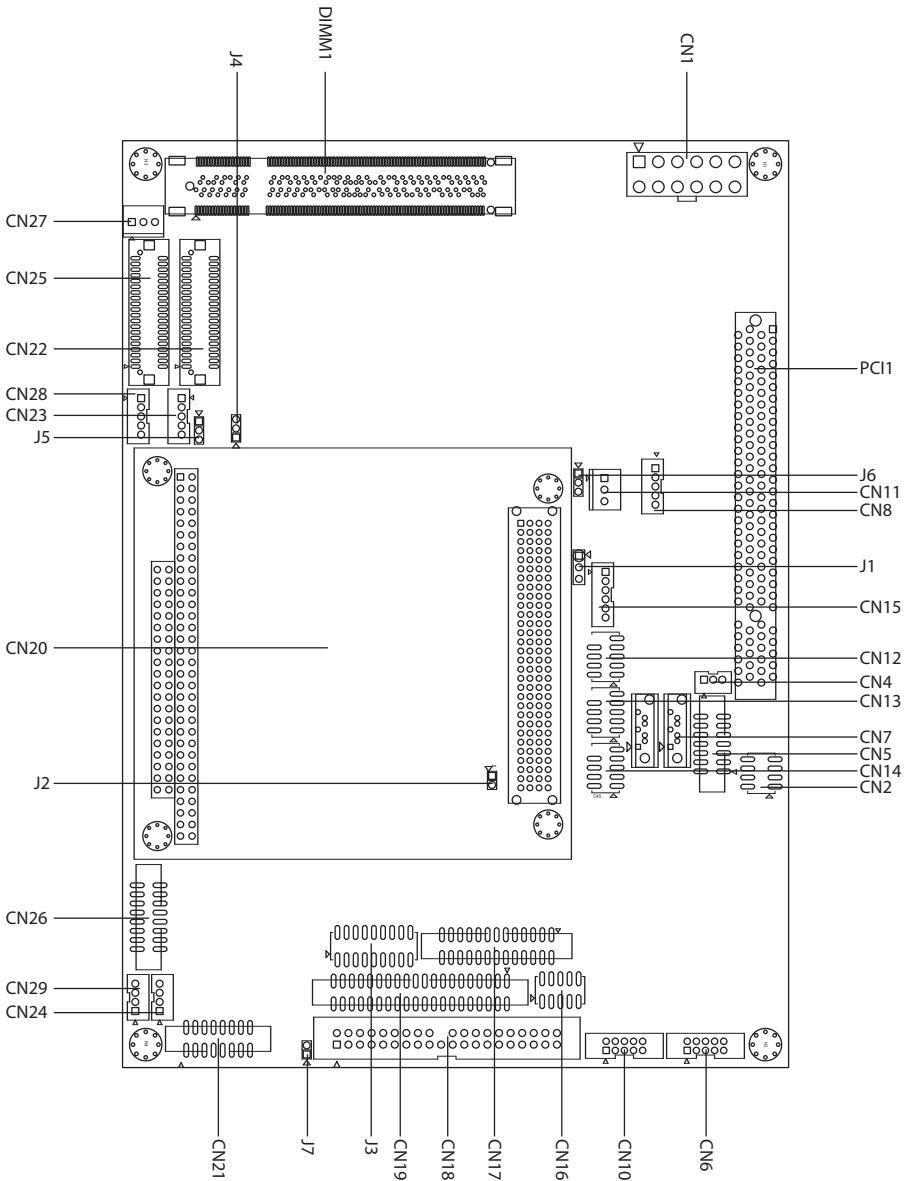
JP7	Compact Flash Master/Slave Select
(1-2)	Master
(NONE)	Slave



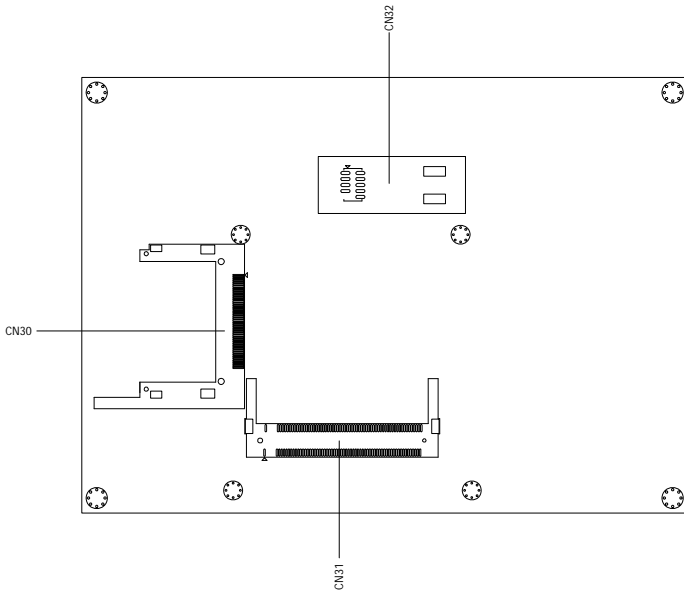
JP8	CPU Dothan/Banias Select
(1-2).(5-6)	Dothan
(1-2).(3-4)	Banias

JP9	ATX/AT Power Select
(1-2)	ATX Power
(2-3)	AT Power

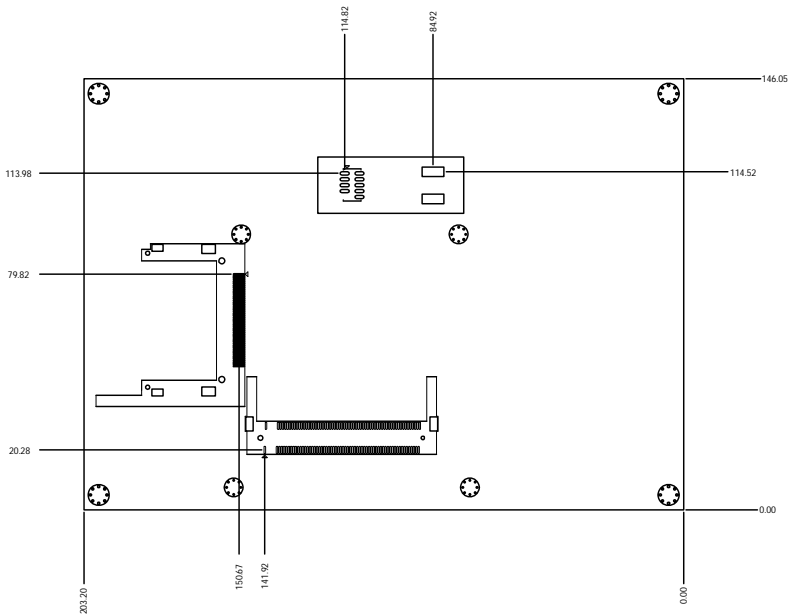




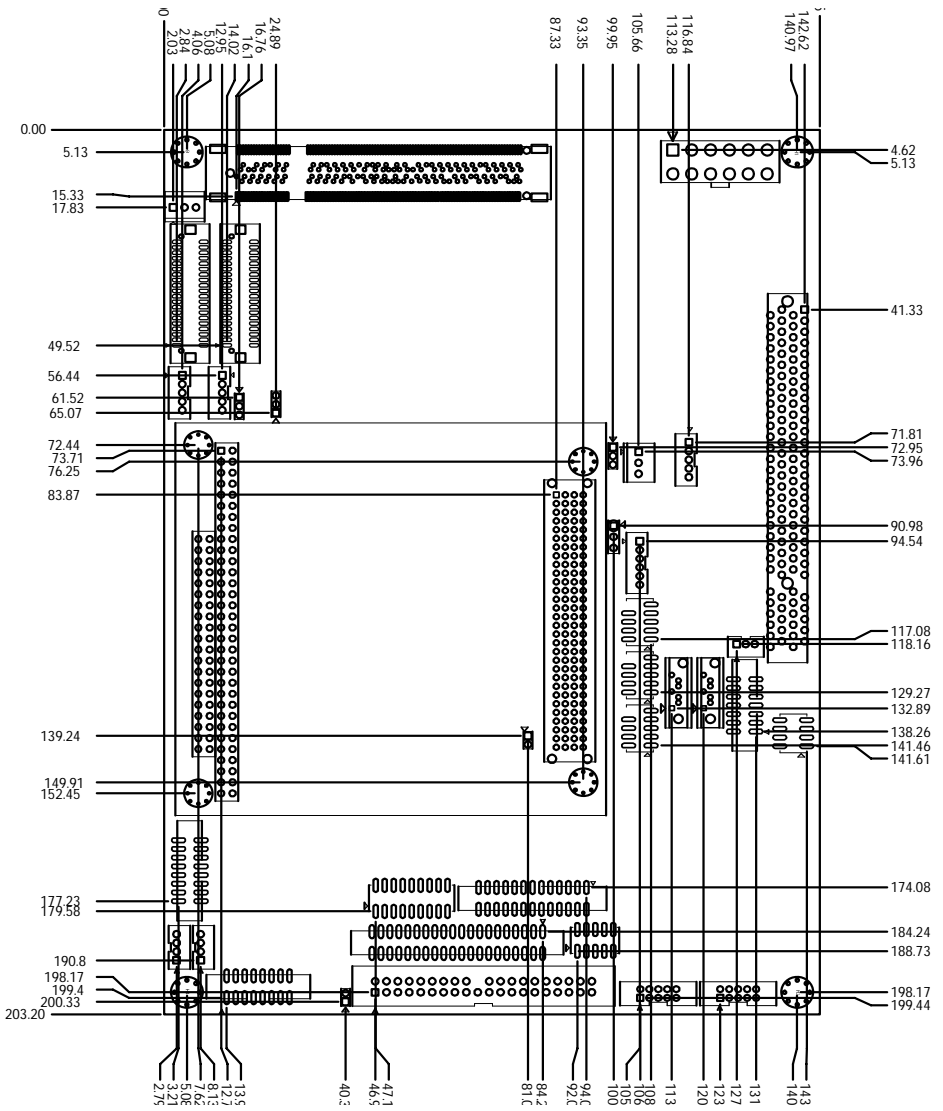
PCM-9584 Jumpers & Connectors (component side)



PCM-9584 Connectors (solder side)



PCM-9584 Mechanical Drawing (solder side)



PCM-9584 Mechanical Drawing (component side)