

PCM-9587 Onboard Intel® Celeron® M EBX SBC with Audio, VGA, LCD, SATA Startup Manual

Packing List

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

- 1 PCM-9587 all-in-one single board computer
- 1 Startup manual
- CD-ROM or disks for utility, drivers, and manual (in PDF format)
- 1 Mini Jumper pack conts: p/n: 9689000002
- 1 ATX power cable p/n: 1700001112

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

Note 1: For detailed contents of the PCM-9587, 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: www.adobe.com/Prodindex/acrobat/read-step.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>

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

<http://service.advantech.com.tw/eservice/>

This manual is for the PCM-9587 Series Rev. A1.

Part No. 2006958711
Printed in China

2nd Edition,
Aug. 2008

Specifications

Standard SBC functions

- **CPU:** Supports onboard Intel® Celeron® M processor
- **BIOS:** Award 4Mbit Flash BIOS
- **System Chipset:** Intel 852GM GMCH/ 6300ESB Chipset 400 MHz FSB
- **System memory:** One 184 pin DIMM socket, support ECC Double Data Rate (DDR)128 MB to 1GB, accept 128/256/512/1000 MB DDR 200/266 DRAM
- **Enhanced IDE interface:** One Enhanced IDE interface supports 2 IDE devices. PIO mode 3 or mode 4, Ultra DMA 100 transfer. 2 Serial ATA standard connector to support SATA 150
- **FDD interface:** Supports one FDD
- **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:** Winbond W83627, 255 levels timer interval, setup by software
- **USB:** USB host interface, 4 Universal Serial Bus ports, USB 2.0 compliant. 2 set 5x2 2.0mm Pin header w/ idiot-proof (USB1,2) (USB3,4)
- **IrDA:** N/A
- **GPIO:** 8-bit general purpose input/output
- **Expansion:** PC/104 Plus(support 8bit ISA, not support ISA DMA mode), PCI and miniPCI

Solid State Disk

- Supports one 50-pin Compact Flash Card Type I/II

VGA/LCD Interface

- **Chipset:** Intel 6300ESB
- **Frame buffer:** Optimized Shared Memory Architecture, support up to 64MB frame buffer using system memory
- **Interface:** 4x AGP VGA/LVDS interface
- **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:** support 2 channel (48bit) LVDS LCD panel

TV-Out/DVI (TV out optional by request)

- **Chipset:** Chrontel CH7009
- **Support composite, S-Video or RGB output**
- **Support both NTSC and PAL formats**

Ethernet interface

- **Chipset:** Intel 82551ER /82551QM optional
- **Ethernet interface:** IEEE 802.3u 100 BASE-T Fast Ethernet compatible
- **I/O address switchless setting**
- **Built-in boot ROM**

Audio Function

- **Chipset:** 6300ESB, 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:** ATX, with Vcore 2 phase, +5V power only can work
- **Power Requirement:** (Celeron® M 600 with 256 MB DDR266) Max: 3.08 A @ 5 V, 0.04 A @ 12 V
- **Operating temperature:** 0 ~ 60° C (32~140° F)
- **Operating Humidity:** 0% ~ 90% Relative Humidity, noncondensing
- **Weight:** 0.85kg (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.

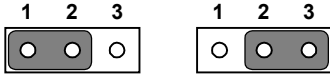
The table below lists the function of each of the jumpers Setting Function and connectors.

Jumpers	
Label	Function
JP1	LCD Voltage Select
JP2	PC104+ VIO Select
JP3	Clear CMOS function Select
JP5	COM2 RS232/422/485 function Select

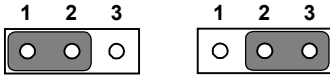
Connectors	
Label	Function
CN1	LCD Backlight connector
CN2	TV-out connector (TV out optional by request)
CN3	CD-IN connector
CN4	Audio output connector
CN5	Power input connector
CN6	-12V and -5V connector
CN7	VGA connector
CN8	LVDS connector
CN9	DVI connector
CN10	Gigabit LAN connector
CN11	10/100M LAN connector
CN12	Gigabit LAN led connector
CN13	System FAN connector
CN14	Floppy connector
CN15	Primary HDD connector
CN16	Printer port connector
CN17	PC104 and PC104+ connector
CN18	USB port 3/4
CN19	DIO connector
CN20	USB port 1/2
CN21	COM port 1/2/3/4 connector
CN22	Front panel connector
CN23	SATA connector 1
CN24	SATA connector 2
CN25	CPU FAN connector
CN26	SMBUS extension connector

Board Layout

JP1: LCD Voltage Select	
Setting	Function
1-2	+3.3 V*
2-3	+5 V



JP2: PC104+ VIO Select	
Setting	Function
1-2	VIO = +5 V *
2-3	VIO = +3.3 V



JP3: Clear CMOS function	
Setting	Function
1-2 Open	Normal*
1-2 Close	Clear CMOS



JP5: COM2 RS232/422/485 Select			
Pins	RS-232*	RS-422	RW-485
1-2	Open	Open	Closed
3-4	Open	Closed	Open
5-6	Closed	Open	Open
7-9	Closed	Open	Open
8-10	Closed	Open	Open
9-11	Open	Closed	Closed
10-12	Open	Closed	Closed
13-15	Closed	Open	Open
14-16	Closed	Open	Open
15-17	Open	Closed	Closed
16-18	Open	Closed	Closed

*: Default Setting

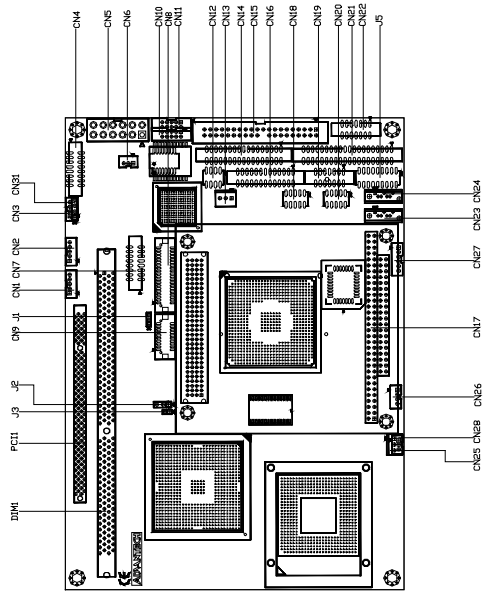


Figure 1: Jumpers & Connectors (component side)

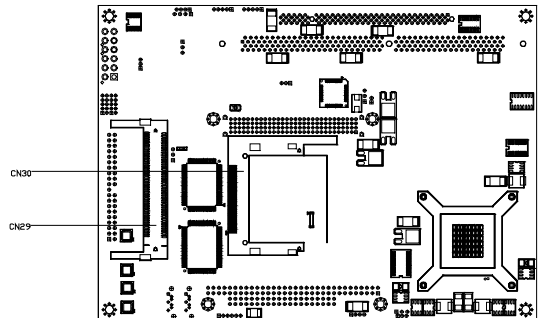


Figure 2: Jumpers & Connectors (solder side)

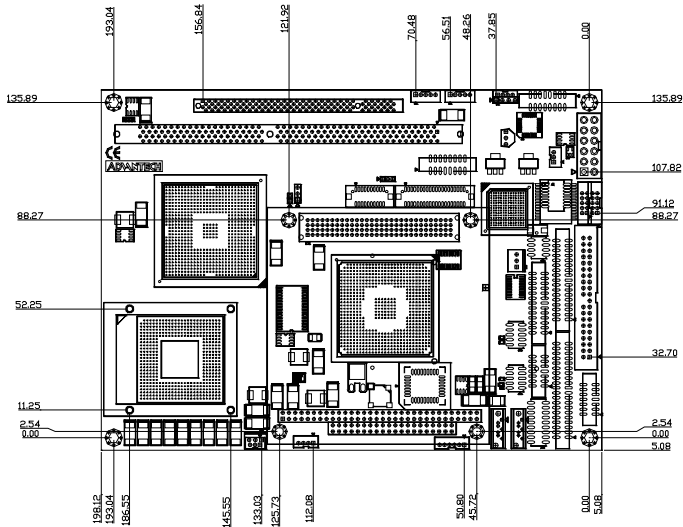


Figure 3: PCM-9587 Mechanical Drawing (component side)

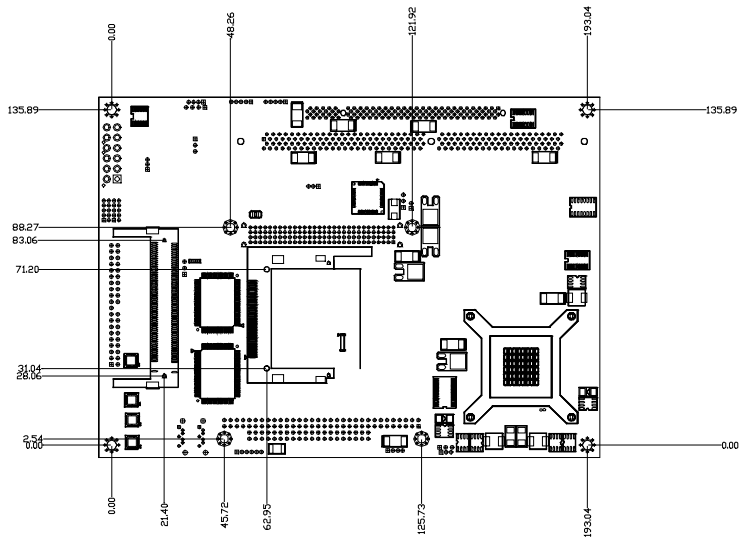


Figure 4: PCM-9587 Mechanical Drawing (solder side)