

# PCM-9581 Intel®Pentium®M SBC with Audio,VGA ,LCD

## Packing List

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

- 1 PCM-9581 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 10pcs)
- 1 ATX power 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-9581, 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/readstep.html](http://www.adobe.com/Prodindex/acrobat/readstep.html)(Acrobat is a trademark of Adobe.)

## Specifications

### Standard SBC Functions

- **CPU:** Supports onboard Intel® Pentium® M and Celeron® M or socket 478
- **BIOS:** Award 256KFlash memory
- **System Chipset:** Intel 855GME GMCH/ICH4 Chipset 400MHz FSB
- **System memory:** Two 184 pin DIMM sockets, support ECC Double Data Rate (DDR)128 MB to 2 GB, accepts 128/256/512/1000 MB DDR200/266 DRAM.
- **2nd cache memory:** 1 MB on Pentium M processor
- **Enhanced IDE interface:** Two channels supports up to four EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4, UDMA 100 transfer. Primary IDE support up to UDMA 66/100 mode
- **FDD interface:** Supports one FDD (optional)
- **Serial ports:** Three serial RS-232 ports, one serial RS-232/422/485 port
- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
- **Keyboard/mouse connector:** Supports standard PS/2 keyboard and a PS/2 mouse
- **Power management:** Supports power saving modes including Normal/Standby/Suspend modes. APM 1.2/ ACPI compliant
- **Watchdog timer:** 255-level timer interval, from 15 sec to 14835 sec, setup by software, jumperless selection, generates system reset
- **USB:** Four USB 2.0 compliant host ports
- **IrDA:** 115 Kbps, IrDA 1.1 Compliant
- **GPIO:** 8-bit general purpose input/output
- **Expansion:** Supports PCI2.2 with 32-bit/33 MHz slot and Mini-PCI interface

### Solid State Disk

- Supports one 50-pin socket for CFC type I/II

### VGA/LCD Interface

- **Chipset:** Intel 855GME, Supports a single 1.5V Accelerated Graphic port interface
- **Frame buffer:** Supports 1 MB to 8 MB frame buffer with system memory
- **Interface:** 4x AGP VGA/LVDS interface
- **Display mode:** CRT Modes: 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 (36-bit) LVDS LCD Panel, Optional up to 48-bit LVDS LCD display

### TV-Out/DVI

- **Chipset:** Chronitel CH7009
- Supports DVI orTV output
- Support NTSC and PAL formats,
- Support composite, s-video or RGB output
- DVI supports UXGA resolution display, TV output support graphics resolutions up to 1024 x 768 pixels.

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-9581 Series Rev. A2.

Part No. 2006958101

2nd Edition  
July 2004

## Ethernet interface

- **Chipset:**
- Intel 82551ER [Intel 82551QM optional] (PCM-9581F)
- Intel 82540EM (PCM-9581FG)
- **Ethernet interface:**
- IEEE 802.3u 100BASE-T Fast Ethernet compatible(PCM-9581F)
- IEEE 802.3z/ab 1000 BASE-T Gigabit Ethernet compatible (PCM-9581FG)
- **IO address switchless setting**
- **Built-in boot ROM**

## Audio Function

- **Chipset:** Intel 82801DB (ICH4)
- **Audio controller:** AC97 3D surround sereo sound
- Supports Speaker out, CD-input, Line-in, Line-out, Micro-  
phone

## 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: (Pentium M 1.6G, 25M DDR 300)  
**Max: +5V @ 3.8A, +12 @ 0.4A**  
**Average: +5V @ 3.22A, +12V @ 0.2A**
- **Operating temperature:**0 ~ 60° C (32~140° F)
- **Operating Humidity:**0% ~ 90% Relative Humidity, noncondensing
- **Weight:** 0.85 kg (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.

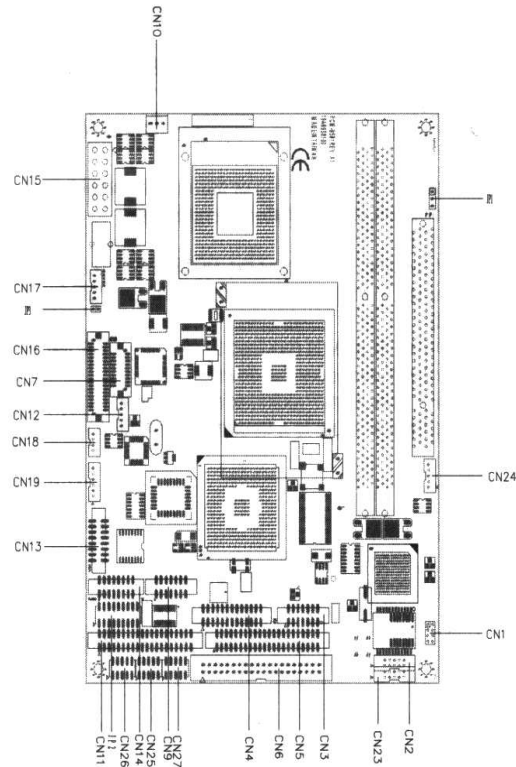
### Jumpers

Label	Function
JP1	PCI VIO Select
JP2	COM 2 RS232/422/485 Select
JP3	CMOS Charge & Discharge

### Connectors

CN1	GigaLAN LED
CN2	GigaLAN Connector
CN3	Power/LED Header
CN4	LPT Connector
CN5	IDE 44Pin Connector
CN6	IDE 40Pin Connector
CN7	DF13 20Pin TMDS Connector
CN8	FDD FPC 26Pin Connector
CN9	GPIO 14Pin Connector
CN10	CPU Fan Connector
CN11	COM1~4 Connector
CN12	TV-OUT Connector
CN13	CRT Connector
CN14	Audio Connector
CN15	ATX Power Connector
CN16	DF13 40Pin LVDS Connector

CN17	Inverter Connector
CN18	CD-IN Connector
CN19	PS2 KB/MS Connector
CN20	Compact Flash Connector
CN22	Mini PCI Connector
CN23	10/100M LAN Connector
CN24	SIR Connector
CN25	USB 0,1 Connector
CN26	USB 2,3 Connector
CN27	USB 4,5 Connector



## PCM-9581 Jumpers & Connectors (component side)

JP1	PCI VIO SELECT
Pin	Function
1-2	VCC
2-3	VCC3
Default	NULL *

\* default setting

