PCM-9575 EBX VIA Eden SBC with CPU, VGA/LCD, LVDS, Ethernet, and Audio

Startup Manual

Packing List

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

- 1 PCM-9575 all-in-one single board computer

- 1 startup manual

- CD-ROM or disks for utility, drivers, and manual (in PDF format)

- 1 power cable p/n: 1703080101

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

Note: For detailed contents of the PCM-9575, please refer to the enclosed CD-ROM or disk (in PDF format).

Specifications

- **CPU:** Onboard Ezra 800MHz MHz (PCM-9575-Q0A1)
  or
  VIA Eden 400 MHz processor (PCM-9575-J0A1 with 128KB L1 cache memory)

- **BIOS:** Award 256 KB Flash memory

- **System memory:** One DIMM socket accepts 64 MB up to 512 MB SDRAM

- **2nd cache memory:** 64 KB on the processor

- **Enhanced IDE interface:** Two channels supports up to four EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4, UDMA 33 transfer. Primary IDE support up to UDMA 66/100 mode

- **FDD interface:** Supports up to two FDDs

- **Serial ports:** Four serial RS-232 ports, COM1, 3, 4: RS-232, COM2: RS-232/422/485

- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode

- **Infrared port:** Shared with COM2. Transfer rates up to 115Kbps

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://support.advantech.com

This manual is for the PCM-9575 series Rev. A1.

- **Keyboard/mouse connector:** Supports standard PC/AT keyboard and a PS/2 mouse

- **Power management:** Supports power saving modes including Normal/Standby/Suspend modes. APM 1.2 compliant

- **Watchdog timer:** 62 level timer intervals

- **USB:** Two universal serial bus ports (4 USB port option)

- **Expansion:** One PCI slot and PC/104 plus connector for ISA and PCI control board

Solid State Disk

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

- Supports M-Systems DOC® 2000

VGA/LCD Interface

- **Chipset:** VIA Twister chip with integrated Savage4 2D/3D/Video Accelerator

- **Frame buffer:** Supports 8/16/32MB frame buffer with system memory

- **Interface:** 4X AGP VGA/LCD interface, Support for 9, 12, 15, 18, 24, 36 bit TFT and optional 16- or 24-bit DSTN panel

- **Display mode:** CRT Modes: 1280 x 1024@16bpp (60Hz), 1024 x 768@16bpp (85Hz); LCD/Simultaneous Modes: 1280 x 1024@16bpp (60Hz), 1024 x 768@16bpp (60Hz)

- **LVDS:** Supports 2 Channel (2 x 18bit) LVDS interface

TV-out (optional)

- **Chipset:** VIA VT1621

- Supports NTSC, NTSC-EIA (Japan) and PAL TV formats

- Provides Composite video and S-video outputs via RCA (composite) connector and S-video connector

- Supports 640 x 480 and 800 x 600 input resolutions

- Supports Windows® 95/98 and Windows NT drivers

- Over-scan, under-scan and position adjustable

- Auto-detection of TV presence rnet Interface

Ethernet interface

- **Chipset:** RTL 8139 (Intel 82550ER optional)

- **Ethernet interface:** IEEE 802.3u 100BASE-T Fast Ethernet compatible

- **I/O address switchless setting**

- **Built-in boot ROM**

Audio Function

- **Chipset:** VIA 82C686

- **Audio controller:** AC'97 ver. 2.0 compliant interface

- **Audio interface:** Microphone in, Line in, CD audio in, line out, Speaker L, Speaker R

Mechanical and Environmental

- **Dimensions (L x W):** EBX form factor, 203 x 146 mm (8" x 5.75")

- **Power supply voltage:** +5 V ±5%

- **Power requirements:**
  Max
  4 A @ +5 V,
  typical
  3.3 A @ 5 V, (with 256MB DRAM, Ezra 800 MHz CPU)
  2.78 A @ 5 V (with 256 MB DRAM, Eden 400 MHz CPU)

- **Operating temperature:** 0 ~ 60°C   (32 ~ 140°F)

- **Weight:** 0.64 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.

Label	Function
JP1	PCI VIO select
JP2	LAN controller power select (Rev A101only)
JP3	DOC2000 address select
JP4	CMOS clear
JP5	Watchdog timer action
JP6	COM2 RS232/422/485 setting
S1	Panel type select

Label	Function
CN1	TV-out connector
CN2	Audio CD in connector
CN3	ATX feature connector
CN4	Audio connector
CN5	EBX Main Power connector
CN6	Backlight control connector
CN8	CRT display connector
CN9	LVDS connector
CN10	Ext. flat panel connector
CN11	Flat panel connector
CN12	Ethernet connector
CN13	Power & HDD LED connector
CN14	IDE hard drive connector (secondary)
CN15	Parallel port connector
CN16	IDE hard drive connector (primary)
CN17	PC/104 plus (ISA + PCI) expansion
CN18	Floppy drive connector
CN19	COM port connector
CN20	USB channel 1, 2 connector

CN21	N/A
CN22	reset button connector
CN23	ATX power on/off switch connector
CN24	IR connector
CN25	Keyboard and PS/2 mouse connector
CN26	CFC connector
CN27	Peripheral power connector
CN28	USB channel 3, 4 connector (optional)
Fan1	CPU fan power connector
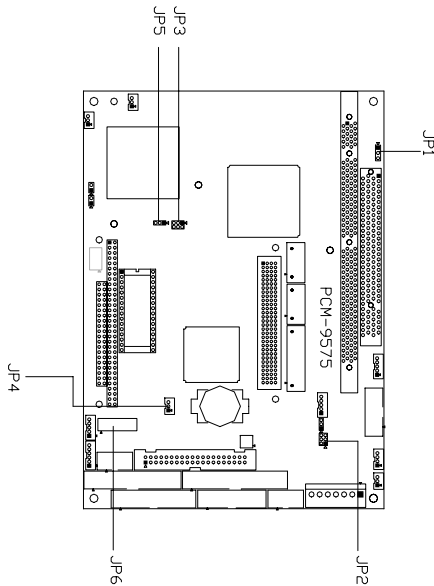
PCM-9575 Jumpers

JP1	PCI VIO select
1-2	VIO=5 V*
2-3	VIO=3 V

JP2	LAN controller power select
1-3, 2-4	3.3 V*
3-5, 4-6	ATX standby 3.3 V

JP3	DOC® 2000 address setting		
Pins			**Address**
1-2	**3-4**	**5-6**	
closed	closed	open	CC000 ~ CDFFF
*closed	open	closed	D0000 ~ D1FFF
closed	open	open	D4000~ D5FFF
open	closed	closed	D8000 ~ D9FFF
open	closed	open	DC000 ~ DDFFF
open	open	open	OFF

*default settings

JP4	CMOS clear
Closed pins	Result
1-2	Normal (3 V battery on)*
2-3	Clear CMOS

JP5	Watchdog timer action
Closed pins	Result
1-2	System reset*
2-3	IRQ11

JP6	COM2 RS-232/422/485 select		
Pins	RS-232*	RS-422	RS-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

S1				Panel Type select		
SW 1-1	SW 1-2	SW 1-3	SW 1-4	Panel type		
ON	ON	ON	ON	TFT	640x480**	18bit (H. V. Freq)
ON	ON	ON	OFF	TFT	648x480	18bit (Synthetic)
ON	ON	OFF	ON	TFT	648x480**	N/A
ON	ON	OFF	OFF	TFT	648x480**	LVDS
ON	OFF	ON	ON	DSTN	648x480**	18bit
ON	OFF	ON	OFF	TFT	800x600**	18bit (H. V. Freq)
ON	OFF	OFF	ON	TFT	800x600*	18bit (Synthetic)
ON	OFF	OFF	OFF	TFT	800x600	LVDS
OFF	ON	ON	ON	TFT	800x600**	N/A
OFF	ON	ON	OFF	DSTN	800x600**	18bit
OFF	ON	OFF	ON	TFT	1024x768**	36bit (H. V. Freq)
OFF	ON	OFF	OFF	TFT	1024x768	36bit (Synthetic)
OFF	OFF	ON	ON	TFT	1024x768**	LVDS
OFF	OFF	ON	OFF	TFT	1024x768**	N/A
OFF	OFF	OFF	ON	DSTN	1024x768**	18bit
OFF	OFF	OFF	OFF	DSTN	1024x768**	24bit

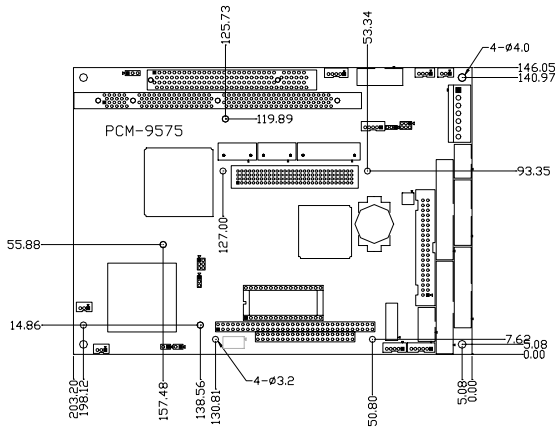* Default setting
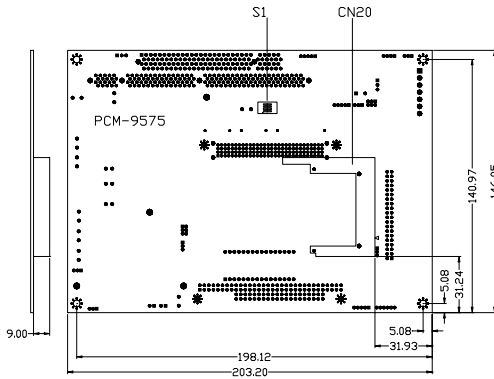** will support in the future
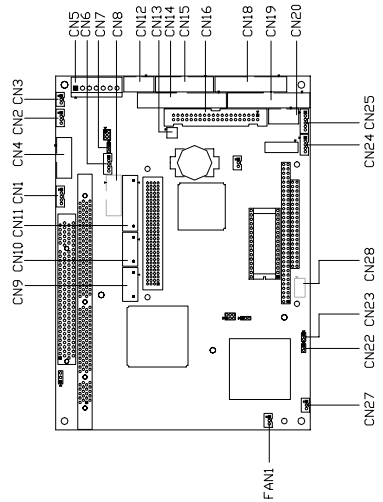
PCM-9575 Connectors (component side)
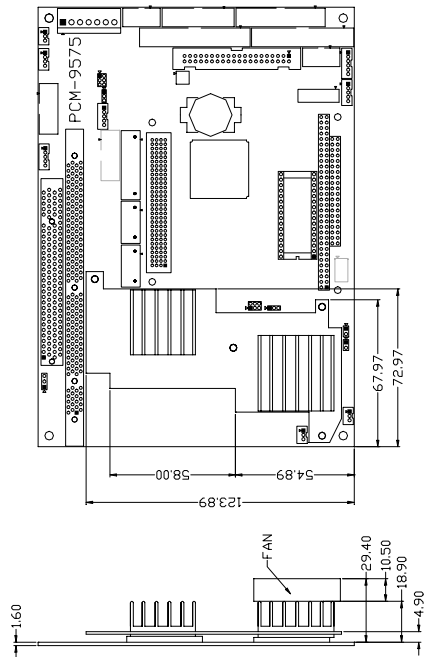
**PCM-9575 Mechanical
(Side view for PCM-9575F-Q0A1 only)**

PCM-9575 Mechanical Drawing

PCM-9575 Connectors (solder side)