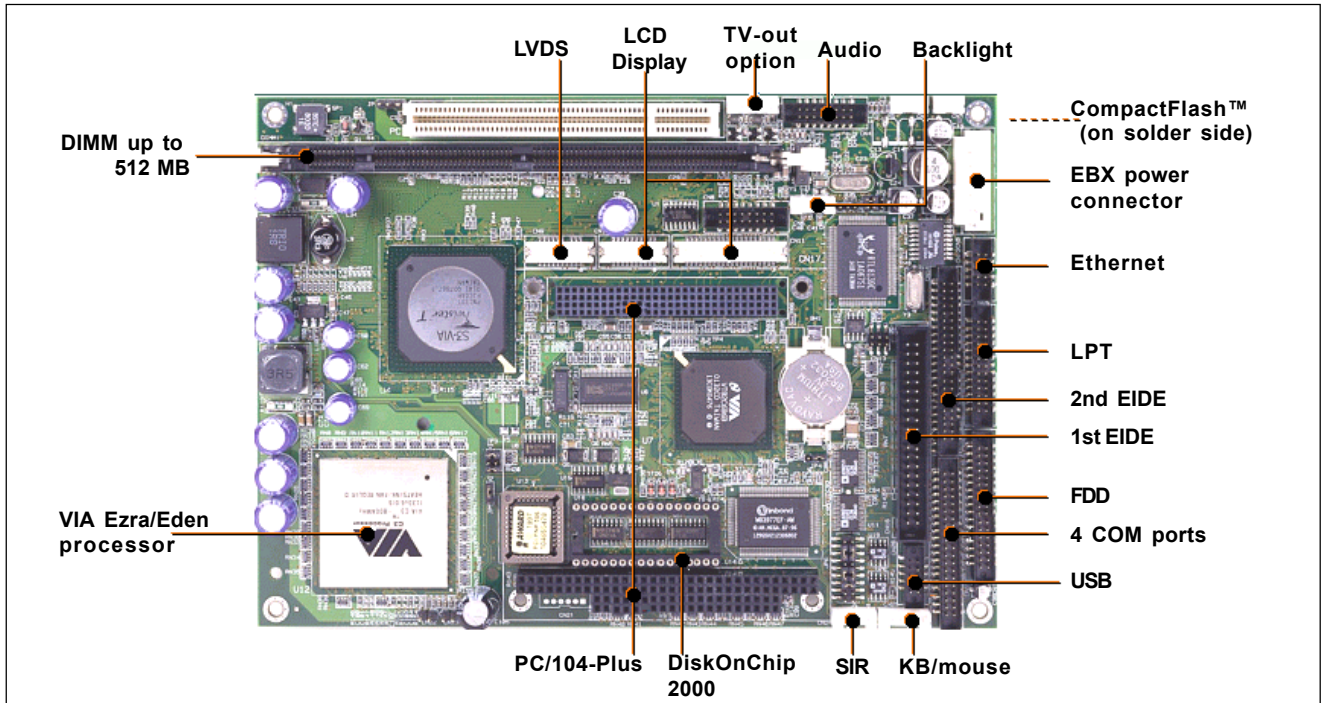


# PCM-9575

*EBX VIA Eden SBC with CPU,  
Audio, VGA/LCD, LVDS and Ethernet*



## Introduction

Advantech's new PCM-9575 is a new EBX form factor 5.25" single board computer (SBC) with an onboard new VIA Embedded low power Ezra 800/600MHz or Eden 400MHz processor. The VIA Eden processor uses advanced 0.13 $\mu$  CMOS technology with 128KB L1 cache memory and 64KB L2 cache memory on die. This board can operate without a fan at temperatures up to 60° C (140° F) and typically consumes under 14 Watts while supporting numerous peripherals. This SBC includes a 4X AGP controller, a PCI audio interface, a PCI Ethernet interface, and 2 channel LVDS interface. Its design is based on the EBX form factor that supports the PC/104-Plus interface for ISA/PCI module upgrades. Other on-board features include a PCI slot, an LPT, 2 USBs, IrDA and 4 serial ports: 3 RS-232s, and 1 RS-232/422/485. The SSD solution supports both DiskOnChip®2000 and CompactFlash™ cards.

This product uses a VIA Twister chip with Integrated Savage4 2D/3D/Video Accelerator and supports 4X AGP VGA/LCD interface and up to 32 MB frame buffer using system memory. The board is effective for use as a mini-server or gateway device, through its ability to add more ethernet ports through its fast PC/104-plus socket. This board combines well with the dual-ethernet PCM-3663 PC/104-plus module, giving integrators network flexibility. The PCM-9575's powerful, fanless processor choices and solid system chipset make it a perfect core technology for medical equipment and other long life applications. And the high quality TV-out capability makes numerous other applications available too.

## ***SBC with EBX Form Factor, PC/104-Plus, and VIA Ezra or Eden Processor***

With this board and its EBX form factor and PC/104-Plus interface, system engineers can develop their own products or buy them off the shelf for this board. Up to two ATA/66/100 EIDE devices can be supported as well as two FDDs.

## ***True multimedia SBC***

The PCM-9575 supports 3D audio and complies with the AC97 standard and 3D engine 4X AGP VGA/LCD controller which supports DVD play. The PCM-9575 combines audio, TV-out (optional), and network functions on a single board computer the same size as the EBX form factor standard. Optional TV-out supports NTSC and PAL formats through composite video connectors and S-Video connectors via the optional cable kit.

## Features

- Embedded low power VIA Ezra 800MHz or Eden 400/667 MHz processor
- Applied EBX form factor standard and supports PC/104+ bus
- Fanless operation at 60°C. (PCM-9575F-J0A1 & PCM-9575F-M0A1)
- 133MHz FSB and 4X AGP graphics for high performance applications

## Specifications

- **CPU:** Embedded VIA low power Ezra/Eden processor, 128KB L1 cache memory on die  
Ezra-800 (PCM-9575F-J0A1)  
Eden-667 (PCM-9575F-M0A1)  
Eden-400 (PCM-9575F-Q0A1)
- **BIOS:** Award 256 KB Flash memory
- **System memory:** One DIMM socket accepts 64 MB up to 512 MB SDRAM  
PC133 DIMM for PCM-9575-Q0A1 & PCM-9575F-J(M)0A1  
Option PC100 DIMM for PCM-9575F-J0A1
- **2nd cache memory:** 64KB on the Ezra/Eden processor
- **Enhanced IDE interface:** Two channels supports up to four EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4, UDMA33 transfer. Primary IDE supports up to UDMA66/100 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:** Parallel port supports SPP/EPP/ECP mode
- **Infrared port:** Shared with COM4. Transfer rates up to 115Kbps
- **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 ports optional)
- **Expansion:** 1 PCI slot, 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, S-video and SCART (optional) 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:** AC97 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")
- **Powersupplyvoltage:** +5V, +12V ±5% (PCM-9575 rev A101, A102)  
+5 V ±5% (PCM-9575 rev A103 or higher)
- **Power requirements:**  
Max:  
4.5A @ +5V, 0.55A @ +12V (Within 5ms after power on) (rev A101, A102)  
4.5A @ +5V (rev A103 or higher)  
Typical:  
3.3 A @ +5V, 0.08A @ +12V (with 256 MB DRAM, Ezra 800 MHz CPU)(rev A101, A102)  
2.78A @ +5V, 0.08A @ +12V (with 256 MB DRAM, Eden 400 MHz CPU)(rev A101, A102)  
3.4A @ +5V (with 256 MB DRAM, Ezra 800 MHz CPU) (rev A103 or higher)  
2.88A @ +5V (with 256 MB DRAM, Eden 400 MHz CPU) (rev A103 or higher)
- **Operating temperature:** 0 ~ 60° C
- **Weight:** 0.85 kg (weight of total package)

## Ordering Information

### □ PCM-9575F-Q0A2:

EBX SBC W/ VIA Ezra 800MHz CPU, VGA/LCD, LVDS, Ethernet, Audio

### □ PCM-9575F-M0A2:

Same as PCM-9575F-Q0A2, but with Eden 667 MHz CPU

### □ PCM-9575F-J0A2:

Same as PCM-9575F-Q0A2, but with Eden 400 MHz CPU

### □ PCM-10586-5A00:

PCM-9575F wiring kit

### □ I703100260:

USB cable for PCM-9574/PCM-9550F/PCM-9572F/PCM-9575

### □ I703100121:

USB cable for MBOC-300-9575

### □ PCM-200-00A2:

PC/104-Plus to PCI slot module

### □ I703200201:

ATX power cable for 5.25" SBC

### □ I703050306:

TV-out cable (S-Video & composite connectors) for PCM-9572/PCM-9575