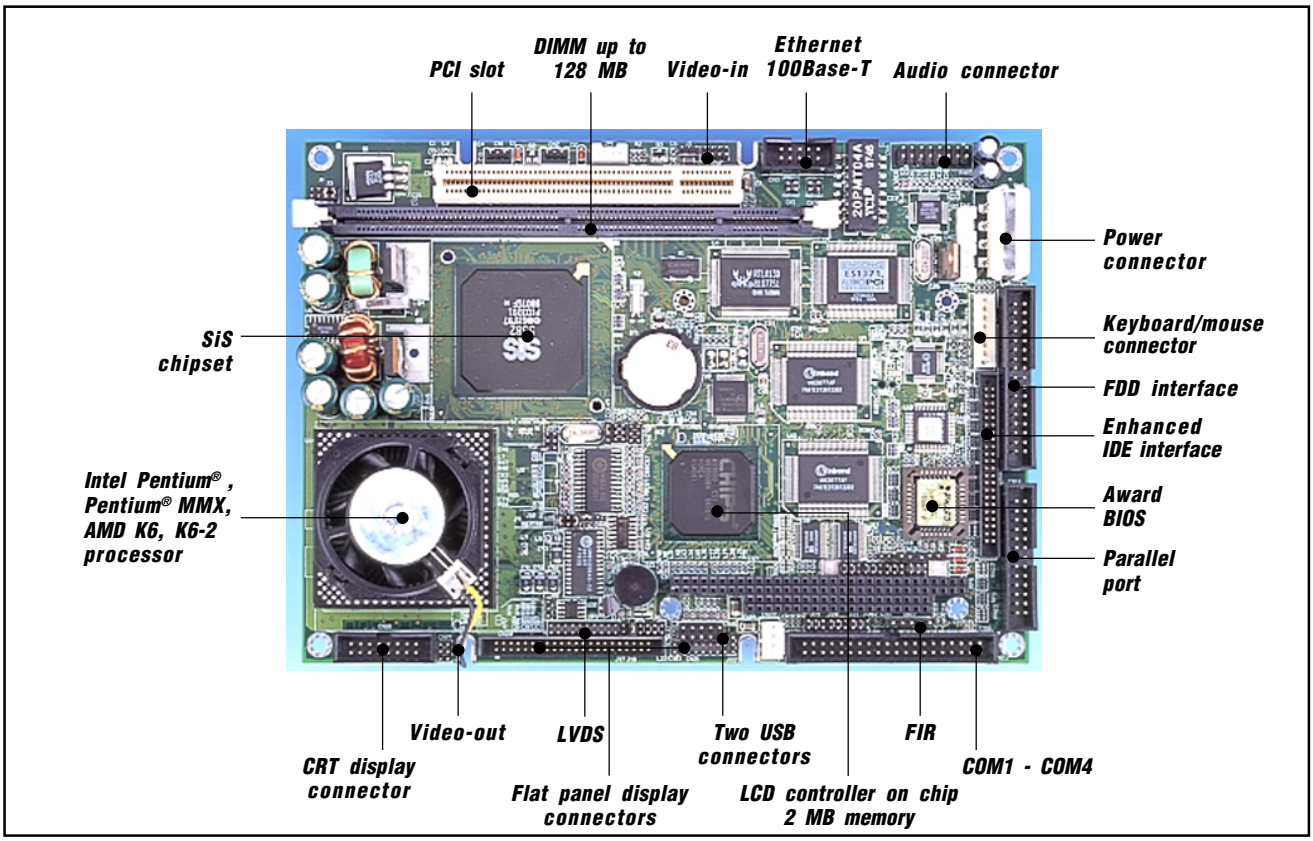
PCM-5864/L/E

Pentium® MMX SBC with Video, Audio, VGA/LCD and Ethernet



Introduction

The PCM-5864/5864L/5864E is an all-in-one true multimedia Pentium®processor-based single board computer (SBC) with a 32-bit audio controller and video input/output (PCM-5864 only), a PCI SVGA controller, a 18-bit LVDS interface, a PCI Ethernet interface and one PCI expansion slot. When using an Intel Pentium®MMX processor, the PCM-5864/L/E achieves outstanding performance that surpasses any other SBC in its class. This compact (only 5.75" x 8") unit offers all the functions of a single board industrial computer, but still fits in the space of a 5.25" floppy drive.

On-board features include 512 KB 2nd level cache, four serial ports (three RS-232, one RS-232/422/485), one multi-mode parallel (ECP/EPP/SPP) port, two USB (Universal Serial Bus) ports, an FIR (IrDA), a floppy drive controller and a keyboard/PS/2 mouse interface. The built-in high speed PCI IDE controller supports both PIO and bus master modes. Up to two IDE devices can be connected, including large hard disks, CD-ROM drives and tape backup drives.

The PCM-5864/L/E features 10/100Base-T Ethernet and supports 36-bit XGA LCD panels. A standard 2 MB of VGA memory is included on the C&T LCD controller 69000 chip. The PCM-5864/5864L also supports 24-bit LVDS interface for long distance data transmission with good EMI safeguards.

True multimedia SBC

The PCM-5864 is a highly integrated multimedia SBC that combines audio, video-in and TV-out, and network functions on a single computer board the size of a 5.25" floppy drive. It provides PCI 32-bit full-duplex, integrated 3D surround audio which complies with the AC97 standard, video capture that supports RCA connectors and S-Video connectors via optional cable kit, and video-out function which supports NTSC and PAL formats.

Features

- Accepts Intel Pentium®MMX, AMD , K6 and K6-2 processors
- 32-bit PCI-bus VGA/LCD controller supports 36-bit LCD panels
- 18-bit LVDS interface (PCM-5864 only)
- 32-bit PCI-bus 100/10 Mbps Ethernet interface
- AC97 PCI surround audio interface, video-in and video-out interface (PCM-5864/5864E only)
- 4 serial ports: three RS-232 and one RS-232/422/485
- USB interface, FIR, PCI slot, and PC/104 connector for flexible expansion capabilities
- Watchdog timer with jumperless selection

Specifications

Standard SBC functions

- **CPU:** Intel Pentium®MMX up to 233 MHz
  AMD K6-2 up to 333 MHz, IDT WinChip
- **BIOS:** Award 256 KB Flash BIOS
- **System chipset:** SiS 5582
- **2nd level cache:** 512 KB on-board Pipeline Burst SRAM
- **RAM:** One 168-pin DIMM socket accepts 8 ~ 128 MB SDRAM
- **Enhanced IDE interface:** One 44-pin header supports 2 IDE devices, supports PIO mode 3,4, Ultra PMA133 mode
- **FDD interface:** Supports up to two FDDs
- **Parallel port:** One parallel port supports SPP/EPP/ECP parallel mode
- **Serial port:** Four serial ports:
  COM1, 3, 4: RS-232
  COM2: RS-232/422/485
- **Watchdog timer:** Software enabled/disabled. 0 ~ 63 sec. selectable
- **Keyboard/mouse connector:** 10-pin header connector for keyboard and PS/2 mouse
- **USB interface:** Two USB connectors with fuse protection. Complies with USB Spec. Rev. 1.0
- **Infared port:** Supports up to 4 Mbps transfer rate (FIR)
- **PC/104 expansion:** 104-pin 16-bit

  PC/104 module connector
- **I/O bus expansion:** One 32-bit PCI bus expansion slot

PCI CRT/Flat Panel interface

- **Chipset:** C&T 69000, 64-bit graphics engine with optional C&T 69030
- **Flat panel performance:** 36-bit direct interface to mono, STN, DSTN & TFT panels. Advanced power management. Supports 3.3 V or 5 V Flat panel display
- **Display mode:**

  Flat panel:
  up to 800 x 600 @ 24 bpp
  1024 x 768 @ 16 bpp
  1280 x 1024 @ 8 bpp

  CRT display:
  up to 800 x 600 @ 24 bpp
  1080 x 768 @ 16 bpp
  1280 x 1024 @ 8bpp
- **Display memory:**

  2MB of SDRAM on C&T 69000 (standard)

  4MB of SDRAM on C&T 69030 (optional)
- **Dual Display:**

  C&T 69030 LCD controller chip supports CRT/LCD dual display under Windows 98 and Windows 2000

Audio function (PCM-5864/5864E only)

- **Chipset:** Creative ES1371
- **Audio controller:** 32-bit, Sound Blaster Pro compatible
- **Sound quality:** AC97 full-duplex, integrated 3D audio
- **Audio interface:** Mic in, Line in, CD audio in, Line out, Speaker out

Video-in/Video-out (PCM-5864 only)

- **Chipset:** Philips SDA 7111A, Analog Device 725AR
- **Connectors:** 8-pin (video-in), 6-pin (video-out) header connector via optional cable connect to S-Video and RCA connector
- **Format:** NTSC or PAL, YUV 422 quality with RGB 16 format. Supports live video capture up to 10 ~ 15 fps at 320 x 240 resolution

LVDS interface (PCM-5864 only)

- **Chipset:** TI SN75LVDS81 or NS DS90CR5803
- **Performance:** 24 low-voltage TTL data channels plus clock-in and 3 low-voltage differential data channels plus clock-out. 3.3 volt and 250 mW (typ.). Meets ANSI EIA/TIA-644
- **Data transmitting distance:** Over 10 meters

PCI Bus Ethernet Interface

- **Chipset:** Realtek RTL8139
- **Ethernet interface:** PCI 100/10 Mbps Ethernet controller. IEEE 802.3U protocol compatible

Solid State Disk

- Supports one 50-pin socket for Compact Flash card

Mechanical and environmental

- **Max. power requirements:** 7 A @ 5 V (4.75 ~ 5.25 V)
- **Typical power consumption:** 4.5 A @ 5 V with AMD K6-2/333, 64 MB DIMM
- **Operating temperature:** 0 ~ 60° C
  (32 ~ 140° F)
- **Size:** 203 mm x 146 mm (8" x 5.75")
- **Weight:** 0.27 kg (0.59 lbs) (Bare)

Ordering Information

- ❑ **PCM-5864-00A2**: Pentium® MMX SBC with Video, Audio, VGA/LCD, LVDS and Ethernet
- ❑ **PCM-5864L-00A2**: Same as PCM-5864-00A2, but without audio, video-in, video-out, LVDS functions
- ❑ **PCM-10586-3000**: PCM-5864 wiring kit
- ❑ **PCM-1700100170:** USB Cable for PCM-5864/L
- ❑ **PCM-110-00A2**: PCI Riser Card, 1 x slot
- ❑ **PCM-120-00A2**: PCI Riser Card, 2 x slot
- ❑ **PCM-5864E-00A2**: Same as PCM-5864-00A2 but without video-in, video out or LVDS
- ❑ **PCM-5864-04A2**: Same as PCM-5864-00A2 but with 4 MB VGA

Note: All features and specifications are subject to change without notice.

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