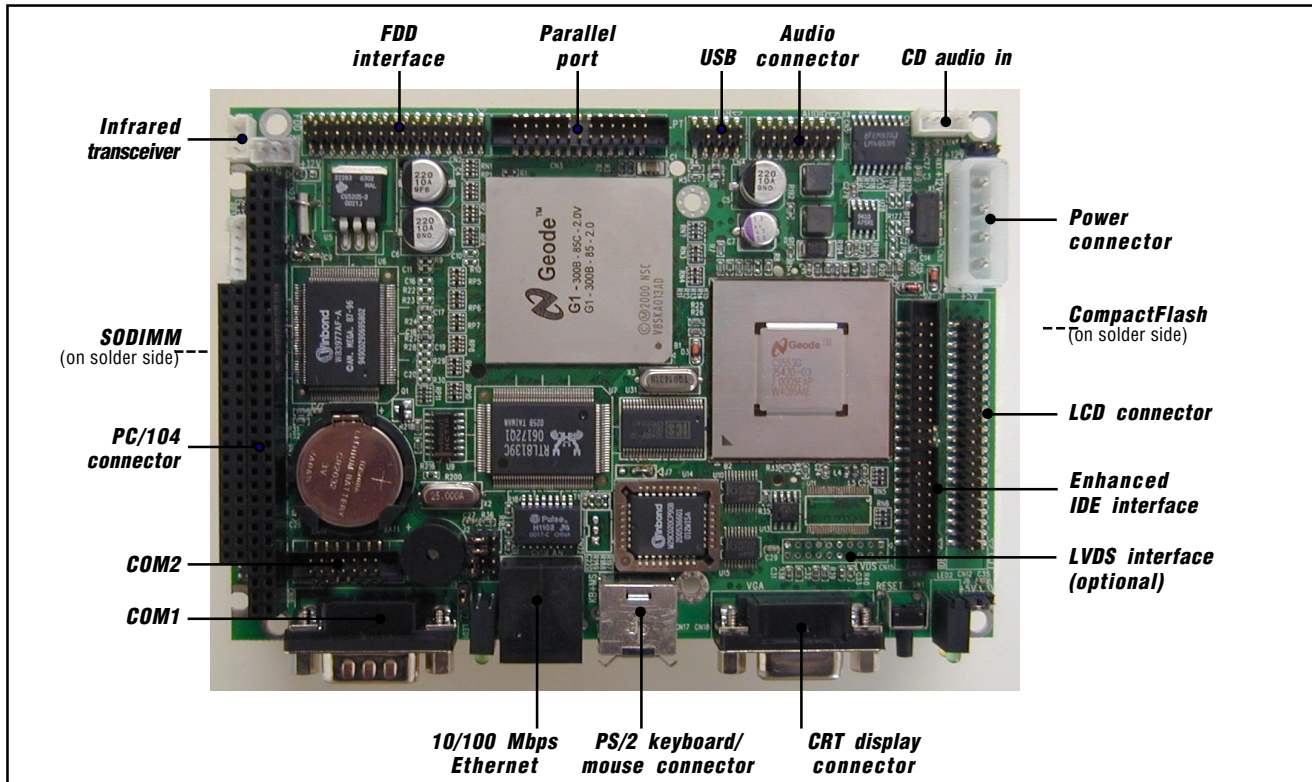


PCM-5820/L

NS Geode SBC with CPU, Audio, VGA/LCD and Ethernet



Introduction

Advantech's new PCM-5820 Rev. B1 is a 3.5" SBC with an on-board, embedded 586 class NS GX1-233, 300 processor. Other on-board features include VGA/LCD, Audio, a Compact Flash Card socket, and 10/100 Mbps Ethernet (PCM-5820 only). This board is a feature-packed, 586-level, hassle-free solution for space critical applications.

Worry-free, fanless Pentium® MMX SBC is Here

With this board, system engineers will now be able to upgrade their 486-based systems to 586-level without as many additional worries, partially because a 586-level NS GX1-233 processor is mounted directly on board. Mounting CPUs directly on board eases the configuration and installation process because there is no need to set any jumpers for speed or voltage differences between various CPUs. In addition to this ease of configuration, this CPU has been specially designed to work well in environments with temperatures of up to 60° C (140° F) without need of a fan. Eliminating the CPU fan from a system significantly reduces MTBF worries.

Features

- ◆ **Compact size:** 145 x 102 mm fits in the space of a 3½ " HDD
- ◆ ISA-bus expansion with on-board PC/104 connector
- ◆ On-board NS Geode GX1 CPU
- ◆ On-board 10/100 Mbps Ethernet (PCM-5820 only)
- ◆ On-board Audio interface
- ◆ On-board VGA/LCD display controller
- ◆ CompactFlash™ Card support
- ◆ Single +5 V power supply

The PCM-5820/L Model Comparison Table					
	GX1-300	GX1-233	Ethernet	LVDS	LCD
PCM-5820-G0B1	x		x	optional	x
PCM-5820-E0B1		x	x	optional	x
PCM-5820L-E0B1		x		optional	x

Specifications

Standard SBC functions

- **CPU:** On-board NS GX1-233 processor (PCM-5820-E0B1/5820L-E0B1)
On-board NS GX1-300 processor (PCM-5820-G0B1)
- **BIOS:** AWARD 256 KB Flash memory
- **Chipset:** Cyrix CX5530(A)
- **System Memory:** One 144-pin SO-DIMM socket. Accepts up to 128 MB SDRAM
- **Enhanced IDE HDD interface:** Supports up to two Enhanced IDE devices. Features BIOS auto-detect and Mode 3, 4 transfer, Ultra DMA 33 mode up to 33 MB/sec
- **FDD interface:** Supports up to 2 FDDs
- **Parallel port:** One parallel port supports SPP/EPP/ECP parallel modes
- **Serial ports:** One RS-232, one RS-232/422/485
- **Watchdog timer:** Software enable/disable intervals at 1.6 seconds
- **Keyboard/mouse connector:** Mini-DIN connector for keyboard and PS/2 mouse
- **USB interface:** Two USB ports, USB 1.0 compliant
- **Infrared port:** Supports up to 115 Kbps transmitting rate
- **Power management:** APM 1.1 compliant power management
- **PC/104 expansion:** 104-pin 16-bit PC/104 module connector

Local-bus flat panel/VGA interface

- **Chipset:** NS CX5530(A)
- **Display memory:** 1 ~ 4 MB shared with system memory
- **Display type:** Simultaneously supports for CRT and 18-bit TFT LCD display (supports 3.3 V LCD)
- **Resolution:**
 - Non-interlaced CRT monitor resolution up to 1024 x 768 @ 16 bpp or 1280 x 1024 @ 8 bpp
 - Panel resolutions up to 1024 x 768 @ 18 bppTFT panel

Solid State Disk

- Supports one 50-pin socket for Compact Flash card

LVDS (low voltage, differential signal) Interface (optional)

- **Chipset:** TI SN75LVDS84
- **Transmitting distance:** Over 5 meters
- 20-pin header supports 18-pin LVDS interface
- **Performance:** 18 low-voltage TTL data channels plus clock-in and 3 low-voltage data channels plus clock-out

Ethernet Interface (PCM-5820 only)

- **Chipset:** Realtek RTL8139
- **Ethernet interface:** PCI 10/100 Mbps Ethernet, IEEE 802.3U protocol compatible
- **Connection:** On-board RJ-45 connector

Audio Interface

- **Chipset:** NS 5530(A)
- **Audio controller:** Support for AC97 PCI surround audio interface
- **Audio interface:** Mic in, line in, CD audio in, line & speaker out

Mechanical and environmental

- **Power requirements:** Maximum: 5 V @ 4 A
Typical: +5 V @ 1.5 A (for GX1-300 version)
+5 V @ 1.4 A (for GX1-233 version)
- **Dimensions:** 145 mm x 102 mm
- **Weight:** 0.22 kg (0.48 lbs)
- **Power supply voltage:** +5 V (4.75 ~ 5.25 V)
- **Operating temperature:** 0 ~ 60° C (32 ~ 140° F)
- **Operating humidity:** 0% ~ 90% Relative humidity noncondensing

Ordering Information

- PCM-5820-E0B1**
NS Geode SBC with GX1-233 CPU, Audio, VGA/LCD and Ethernet
- PCM-5820L-E0B1**
Same as PCM-5820-E0B1 but without Ethernet function
- PCM-5820-G0B1**
Same as PCM-5820-E0B1 but with GX1-300 CPU.
- PCD-100-0008/0016/0032**
Compact Flash Card with 8/16/32 MB memory capacity
- 9689000064**
16 MB SDRAM SODIMM
- 9689000065**
32 MB SDRAM SODIMM
- 9689000061**
64 MB SDRAM SODIMM