

PCM-5824 NS Geode® SBC with CPU, VGA/ DSTN LCD, Ethernet & Audio Interface

Startup Manual

Packing List

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

- 1 PCM-5824 all-in-one single board computer
- 1 startup manual
- 1 utility disk/CD driver, and manual (in PDF format)
- 1 2.5" IDE flat cable, 44-pin to 44-pin (part no. 1701440351)
- 1 keyboard / PS2 mouse cable (part no. 1700060201)
- 1 secondary serial port cable (part no. 1701140201)
- 1 parallel cable (part no. 1700260250)
- 1 floppy cable, for 3.5" FDD only (part no. 1701340603)
- 1 audio cable (part no. 1700160160)
- 1 USB cable (part no. 1703100260)

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

Note 1: For detailed contents of the PCM-5824 please refer to the enclosed CD-ROM 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 (Acrobat is a trademark of Adobe.)

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-5824 Rev. A102 or higher.

Part No.2006582401 2nd Edition
Printed in Taiwan Dec. 2000

Specifications

Standard SBC Functions

- **CPU:**
Embedded NS GXLV-200 processor (PCM-5824-D0A1)
Embedded NS GX1-300 processor (PCM-5824-G0A1)
- **BIOS:** AWARD 256 KB Flash memory
- **System memory:** One 144-pin SODIMM socket accepts up to 128 MB SDRAM
- **Enhanced IDE interface:** Supports up to two EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4 transfer, Ultra DMA33 mode (ATA-4) up to 33 MB/sec
- **FDD interface:** Supports up to two FDDs
- **Serial ports:** One serial RS-232 port, one serial RS-232/422/485 port
- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
- **Infrared port:** Shared with COM2. Transfer rate up to 115 kbps
- **Keyboard/mouse connector:** Mini-DIN connector supports standard PC/AT keyboard and PS/2 mouse
- **USB interface:** Two USB ports, USB 1.0 compliant
- **Power management:** Supports power saving modes including Normal/Standby/Suspend. APM 1.1 compliant
- **Watchdog timer:** 1.6 sec. intervals

VGA/LCD Interface

- **Chipset:** Asiliant69000 2MB SDRAM on chip, optional 69030 4MB memory on chip
- **Interface:** PCI interface, 64-bit graphics engine
- **Display mode:** Flat panel displays up to 800 x 600 @ 24 bpp, 1024 x 786 @ 16 bpp. CRT monitors up to 800 x 600 @ 24 bpp, 1024 x 768 @ 16 bpp
- **Dual display:** Supports CRT and LCD display under Windows 98/ Windows 2000 (69030 only)

Audio Function

- **Chipset:** NS CX5530
- **Audio controller:** AC97 version 2.0 compliant interface
- **Audio interface:** Microphone in, Line in, CD audio in, Line out, Speaker L, Speaker R

Ethernet Interface

- **Chipset:** RTL 8139
- **Ethernet interface:** PCI 10/100 Mbps Ethernet. IEEE 802.3 U protocol compatible
- **Connection:** On-board RJ-45 connector
- **I/O address switchless setting**
- **Built-in Boot ROM**

Solid State Disk

- Supports one 50-pin socket for CompactFlash™ card

Mechanical and Environmental

- **Dimensions (L x W):** 145 mm x 102 mm (5.9" x 4.2")
- **Power supply voltage:** +5 V (4.75 V ~ 5.25 V)
- **Power requirements:**
+5 V @ 1.5 A (typical) (for PCM-5824 w/ GXLV-200)
+5 V @ 4 A (Max)
- **Operating temperature:** 0 ~ 60° C (32 ~ 140° F)
- **Weight:** 0.77 kg (weight of total package)

Jumpers and Connectors

Connectors on the board link it to external devices such as hard disk drives, a keyboard or expansion bus connectors. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

The tables below lists the function of each of the board's jumpers and connectors:

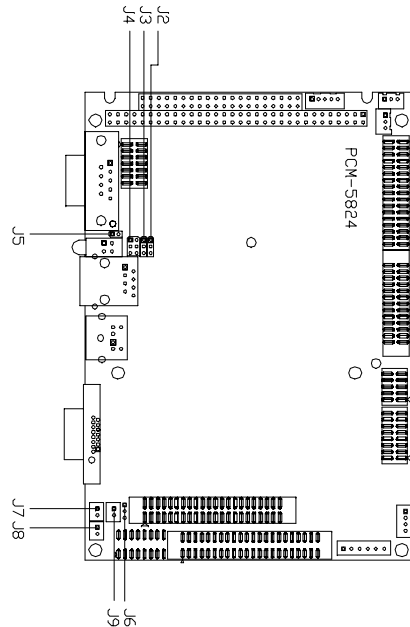
Table 2-1: Jumpers

Label	Function
J2	Clear CMOS
J3	Watchdog timer action
J4	COM2 setting
J5	Buzzer setting
J6	LCD power selector
J7	External HDD LED (pin header)
J8	External power LED (pin header)
J9	External reset pin (pin header)
SW1	LCD type select

Table 2-2: Connectors

Label	Function
CN1	CD audio input connector
CN2	Floppy disk connector
CN3	Parallel port connector
CN4	USB connector
CN5	Audio connector
CN6	CPU fan power connector (5820/L)
CN7	IR connector (infrared)
CN8	PC/104 connector
CN9	Main power connector (+5 V, +12 V)
CN10	Auxiliary power connector (-5 V, -12 V)
CN11	IDE hard disk connector
CN13	Ethernet connector
CN14	COM2 connector
CN16	COM1 connector
CN17	PS/2 keyboard + PS/2 mouse
CN18	CRT display connector
CN19	CompactFlash socket
CN20	SODIMM socket
CN21	24 bit LCD connector
CN22	External LCD connector
LED1	Ethernet LED

Locating Jumpers

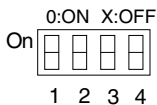


J2:	Clear CMOS
Closed Pins	Result
*1 - 2	3 V battery on
2 - 3	Clear CMOS
J3:	Watchdog timer
Closed Pins	Result
*1 - 2	Reset
2 - 3	IRQ11
J4:	COM2 selector
Closed pins	Result
*1 - 2	RS-232
3 - 4	RS-422
5 - 6	RS-485
J5:	Buzzer
Pins	Result
*closed	Enabled
open	Disabled
J6:	LCD power
Closed pins	Voltage
*1 - 2	5 V
2 - 3	3.3 V
* default setting	

SW1: Panel type select

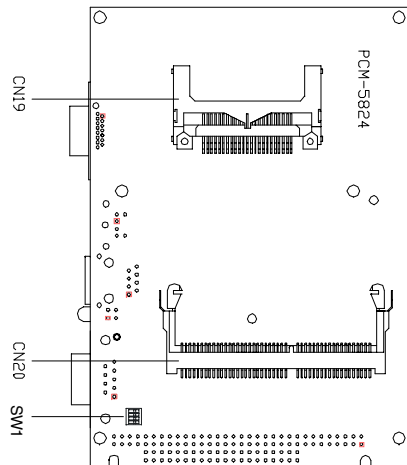
Panel #	Pin				Panel Type	
	1	2	3	4		
1	0	0	0	0	1024 x 768	Dual Scan STN Color Panel
2	x	0	0	0	1280 x 1024	TFT Color Panel
3	0	x	0	0	640 x 480	Dual Scan STN Color Panel
4	x	x	0	0	800 x 600	Dual Scan STN Color Panel
5	0	0	x	0	640 x 480	Sharp TFT Color Panel
6	x	0	x	0	640 x 480	18-bit TFT Color Panel
7	0	x	x	0	1024 x 768*	TFT Color Panel
8	x	x	x	0	800 x 600	TFT Color Panel
9	0	0	0	x	800 x 600	TFT Color Panel
10	x	0	0	x	800 x 600	TFT Color Panel
11	0	x	0	x	800 x 600	Dual Scan STN Color Panel
12	x	x	0	x	800 x 600	Dual Scan STN Color Panel
13	0	0	x	x	1024 x 768	TFT Color Panel
14	x	0	x	x	1280 x 1024	Dual Scan STN Color Panel
15	0	x	x	x	1024 x 600	Dual Scan STN Color Panel
16	x	x	x	x	1024 x 600	TFT Color Panel

* default setting

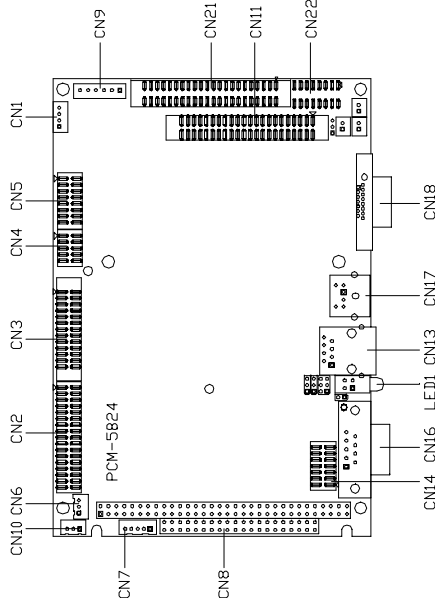


Locating Connectors

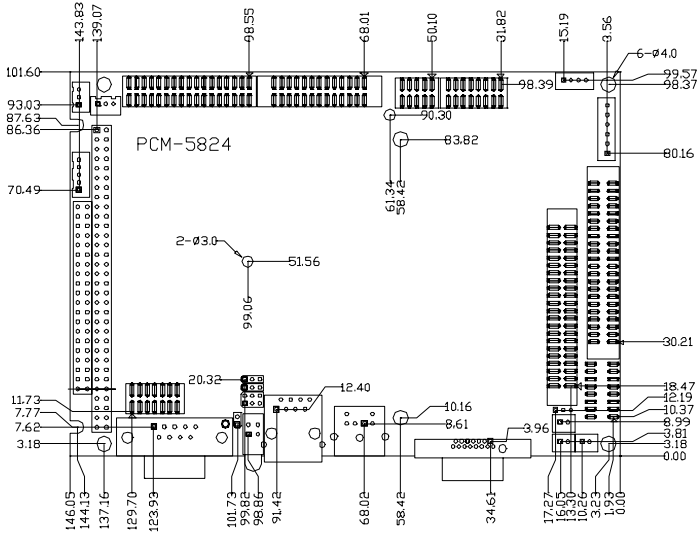
Warning: Be sure to use the correct component side. Improper installation can cause serious damage.



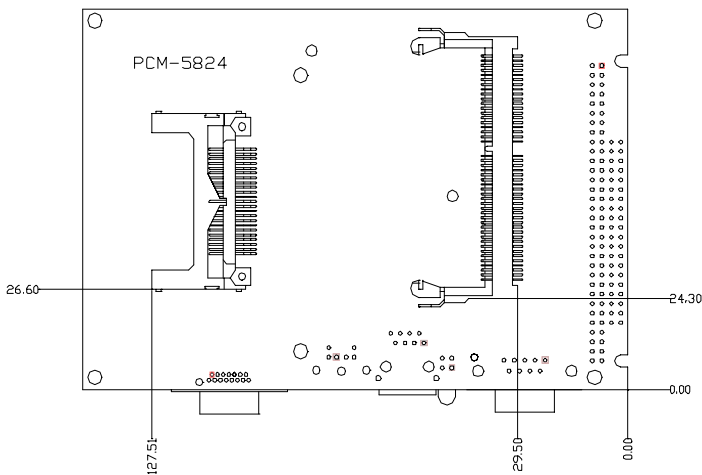
Locating connectors (solder side)



PCM-5824 Locating connectors (component side)



PCM-5824 Board Dimensions (component side)



PCM-5824 Board Dimensions (solder side)