NEW
PCN-6351/L
NLX Half-size Pentium® MMX CPU Card with VGA/LCD, Ethernet & SSD

DIMM socket for up to 128 MB EDO/SDRAM
AT Power
Pentium® CPU 75 ~ 233 MHz
5598
FDD connector
EIDE connector
USB connector

LCD connector 36-bit
LCD connector 18-bit
LVDS out 18-bit
VGA connector
10/100 Base-T Ethernet connector
Parallel port
COM1
COM2
PC/104 connector
PS/2 connector
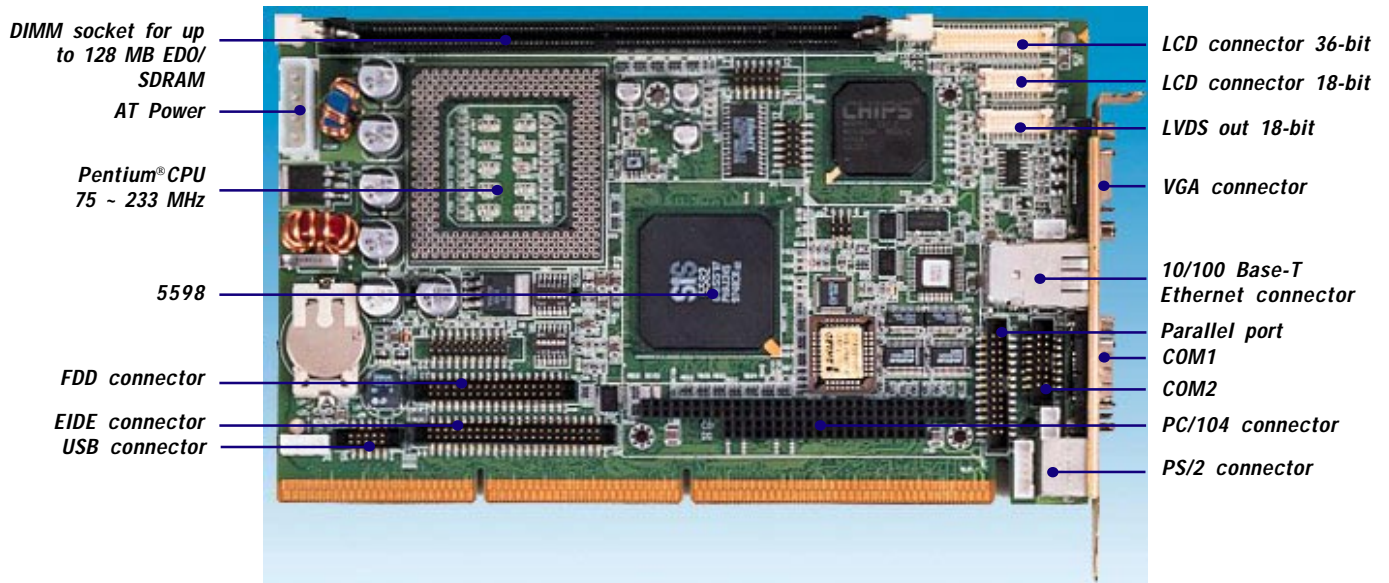
Introduction

The NLX form factor

The PCN-6351/L is Advantech's first NLX form factor half-size CPU Card. The NLX form factor is an alliance-supported mother board standard which supports both PCI and ISA cards. This provides systems with the option to upgrade to PCI bus devices while maintaining previous ISA investment.

The NLX's specification physically separates PCI and ISA buses. This greatly improves system stability and effectively eliminates signal interference from high volume PCI and ISA data transmissions.

Features

The PCN-6351/L is a powerful CPU card fit for today's industrial environment. With a wide range of features including Pentium MMX and AMD K6-2 CPUs, 512KB L2 cache memory, 36 Bit VGA/LCD, LVDS, 10/100 Base-T LAN, USB interface and one DIMM socket that supports up to a maximum of 128 MB of EDO or SDRAM. The PCN-6351 is also equipped with a watchdog timer, SSD and PC/104 socket which are important for embedded and stand alone applications.

Complete NLX solutions

Advantech can provide complete system solution for NLX applications. Other Advantech NLX products include the PCA-6106NP3 6-slot backplane with 1 NLX, 3 PCI and 2 ISA slots and the PCA-6104NP2 4-slot backplane with 1 NLX, 2 PCI and 1 ISA slots. Also the IPC-6806 is a series of 6 slot NLX chassis and the IPC-644 is a series of 4 slot NLX chassis.

Additionally, Advantech has adopted the extended dynamic burn-in testing process to produce their 8 layer board design. This creates a stable and consistent supply PCN-6351 boards while maintaining the high standard of quality that is necessary for today's industrial applications.

Features

- NLX form factor accepts both PCI and ISA bus signals
- Supports Pentium® MMX CPUs, AMD K5, K6-300, and Cyrix M1, M2
- PCI VGA/LCD interface
- 10/100 Mbps Ethernet
- 512 KB PB SRAM cache memory
- Fast IrDA up to 4 Mbps
- USB connector
- Supports Compact Flash disks

Specifications

- **CPU**: Intel Pentium® processor up to 233 MHz; AMD K5, K6,K6-2 up to 300 MHz; Cyrix M1 PR166/200 GP, M2-300; IDT WinChip C6 up to 240 MHz
- **BIOS**: AWARD 2 Mbit Flash BIOS, supports Plug&Play, APM1.2, Ethernet boot ROM, boot from CD-ROM, LS-120, ZIP drive
- **Chipset**: SiS 5582 (PCN-6351), SiS 5598 (PCN-6351L)
- **2nd level cache**: 512 KB PB SRAM
- **System memory**: One 168-pin DIMM RAM socket supports EDO/SDRAM memory modules from 8 MB to 128 MB
- **PCI IDE interface**: One Enhanced IDE interface, supports 2 IDE devices PIO mode 3,4 with bus mastering up to 14MB/sec. Ultra DMA model up to 33 MB/sec.
- **Floppy disk drive interface**: Supports up to two floppy disk drives: 3½" (720 KB or 1.44 MB) and/or 5¼" (360 KB or 1.2 MB)
- **Parallel port**: One parallel port , supports SPP/EPP/ECP
- **IR port**: Supports up to 4 Mbps transfer rate

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- **Serial ports**: One RS-232, one RS-232/422/485

- **Watchdog timer**: Can generate a system reset or IRQ 15. Software enabled/disabled. Time interval is from 1 ~ 63 seconds. Jumperless with run-time setup

- **PC/104 connector**: 16-bit PC/104 connector for PC/104 expansion module

VGA Functions

PCN-6351

- **Controller**: C&T 69000 / C&T 69030 supporting LCD and CRT displays

- **Display memory**: 2 MB SDRAM built-in (optional 4 MB with C&T 69030 chipset)

- **Display resolution**: Up to 1280 x 1024 @ 256 colors (16 million colors @ 4 MB)

PCN-6351L

- **Controller**: SiS 5598 built-in VGA supporting CRT displays

- **Display memory**: Share system up to 4 MB

- **Display resolution**: Up to 1280 x 1024 @ 256 colors (16 million colors @ 4 MB)

Ethernet Controller Functions (PCN-6351 only)

- **Controller**: RTL 8139. 10 Mbps/100 Mbps

- **I/O address switchless setting**

- **Connector type**: RJ-45

- **Boot ROM**: Built-in system (optional)

Solid State Disk

- Supports Compact Flash disk

Mechanic and Environmental Specifications

- **Max. power requirement**: +5 A @ 5 V & 100 mA @ +12 V

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

- **Size**: 204 mm x 122 mm (8.03" x 4.8")

Ordering Information

❑**PCN-6351-00A1**
  NLX Half-size Pentium® MMX CPU Card with VGA/LCD, Ethernet and SSD

❑**PCN-6351L-00A1**
  NLX Half-size Pentium® MMX CPU Card with VGA and SSD

❑**IPC-6806SNP3**
  6-slot Wallmount Half-size IPC Chassis with PCA-6106NP3 Backplane

❑**IPC-644NP2-80**
  4-slot compact IPC Chassis with PCA-6104NP2 & 80 W Power Supply

❑**PCA-6106NP3**
  6-slot NLX Passive Backplane with 1 NLX, 3 PCI and 2 ISA Slots

❑**PCA-6104NP2**
  4-slot NLX Passive Backplane with 1 NLX, 2 PCI and 1 ISA Slots

PCN-6351 Block Diagram