PCA-6154/54L

Half-size Pentium® MMX CPU Card with VGA/LAN/SSD

- VL-bus EIDE interface
- FDD interface
- Enhanced bi-directional parallel port
- Power connector
- VGA connector
- 10/100BaseT Ethernet connector
- COM2 RS-232/422/485
- COM1 RS-232
- External keyboard
- PS/2 / Keyboard connector
- Pentium® MMX processor, up to 233 MHz
- DiskOnChip® 2000
- SIMM sockets for up to 128 MB DRAM
- PC/104 connector
- Two USB connectors
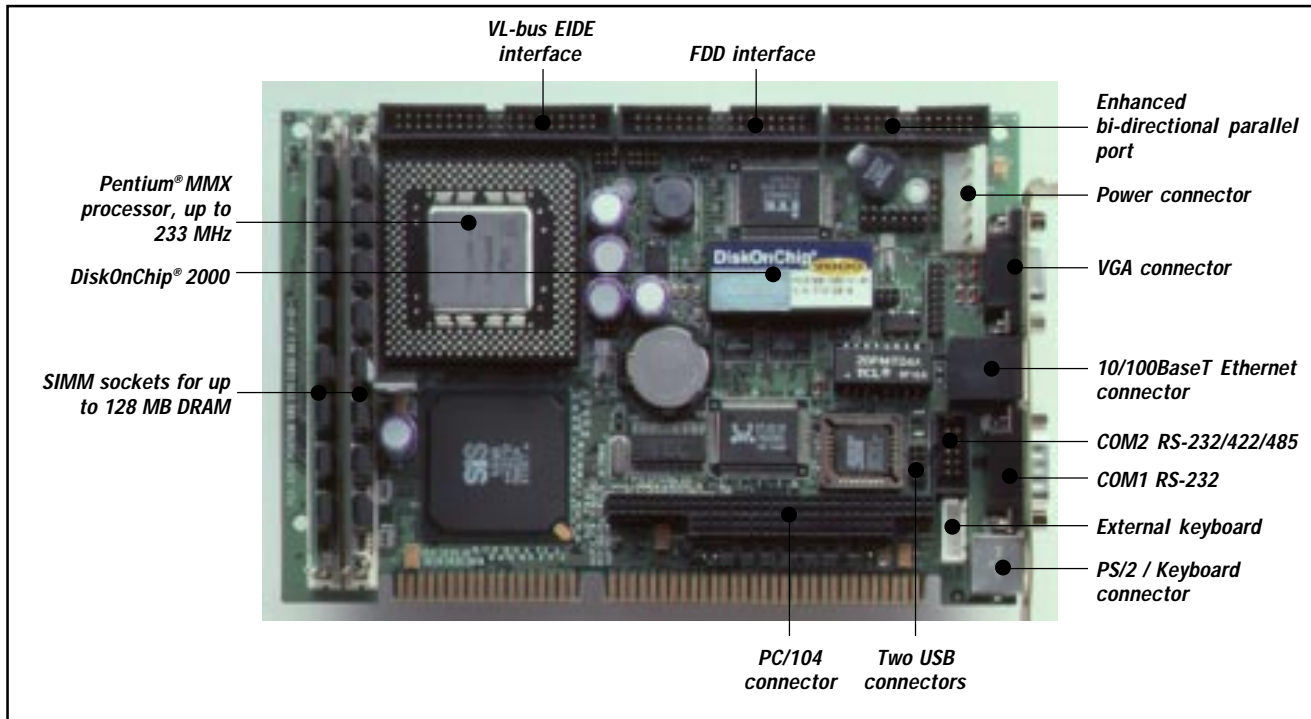
Introduction

The PCA-6154 and PCA-6154L are half-size single board CPU cards which can release the Pentium® processor's full potential and provide unprecedented performance compared to current 64-bit processor boards. The PCA-6154/54L offers all the functions of an industrial computer on a single board. For maximum performance, the PCA-6154/54L also supports on-board 2nd level cache of 512 KB PB-SRAM.

On-board features include 10/100 Mbps-based Ethernet (PCA-6154 only), one RS-232 port, one RS-232/422/485 port, one multimode parallel (SPP/EPP/ECP) port, 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, tape backup drives and other IDE devices.

The PCA-6154 also features power management to minimize power consumption. It complies with the "Green Function" standard and supports three types of power saving features: Doze mode, Standby mode and Suspend mode. A watchdog timer can automatically reset the system or generate an interrupt should the system stop due to a program bug or EMI.

Features

- Accepts Intel Pentium® processor 75 ~ 233 MHz, P55C (MMX), AMD K5, K6, Cyrix M1, M2, IDT C6 CPUs
- On-board 512 KB Pipeline Burst cache memory
- Bus-master PCI IDE controller supports two IDE devices (large hard disk, CD-ROM, tape backup, etc.)
- One enhanced multimode parallel port, SPP/EPP/ECP
- 63-level watchdog timer, jumperless with run-time setup
- Green function: supports doze, standby and suspend modes. APM 1.1 compliant
- One RS-232, one RS-232/422/485 interface
- PC/104 connection supports face-up installation
- On-board PCI SVGA supporting CRT monitor
- Supports M-Systems' DiskOnChip® 2000 Flash disk
- Ethernet adapter (100Base-T compliant) (PCA-6154 only)
- Supports two USB ports and one infrared (IrDA) port

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Specifications

Standard SBC functions

- **CPU**: Intel Pentium® processor up to 233 MHz, P55C, AMD K5, K6, Cyrix 6x86, 6x86MX, IDT C6

- **BIOS**: AWARD 256 KB Flash memory; supports plug and play

- **Chipset**: SiS 5598

- **Green function**: Features power management option via BIOS, activated by keyboard or mouse activity. Supports doze, standby and suspend modes. APM 1.1 compliant

- **2nd Level Cache**: 512 KB Pipeline Burst SRAM

- **RAM**: Two 72-pin SIMM sockets. Supports 32-bit Normal or EDO DRAM with memory capacity from 2 ~ 128 MB

- **Enhanced IDE interface**: Handles up to two IDE large HDDs or other IDE devices. Supports PIO mode 4 and Ultra-DMA mode

- **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**: Configured to LPT1, LPT2, LPT3 or disabled. Supports multimode parallel port, (SPP/EPP/ECP)

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

- **USB interface**: Two USB connectors with fuse protection. Complies with USB specification 1.0

- **Infrared port**: Fast IrDA, transfer rate up to 4 Mbps. I/O port programmable to COM1, COM2, COM3 and COM4

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

- **Keyboard & PS/2 mouse connector**: A 6-pin mini-DIN connector is located on the mounting bracket for easy connection to a keyboard or PS/2 mouse. An on-board keyboard pin header connector is also available

- **PC/104 expansion:** 104-pin, 16-bit PC/104 module connector

- **I/O Bus expansion:** ISA-bus edge (golden finger) connector

VGA function

- **Controller:** SiS 5598 built-in VGA

- **Display memory:** Share system RAM 1 MB ~ 4 MB

- **Display resolution:** Supports resolutions up to 1024 x 768. Non-interlaced CRT monitor resolutions up to 1024 x 768 @ 256 colors. True-color and Hi-color display capability

Ethernet Controller functions

- **Controller**: RTL8139, 10 Mbps (100 Mbps optional)

- I/O address switchless setting

- Software compatible with NE1000 and NE2000

- **Connector**: RJ-45

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

Solid State Disk

- Supports M-Systems' DiskOnChip® 2000 Flash disk, up to 72 MB

Mechanical and environmental specifications

- **Max. power requirements**: +5 V (4.75 to 5.25 V) @ 5 A

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

- **Size**: 185 mm x 122 mm

- **Board weight**: 0.7 lbs (0.3 kg)

Ordering Information

❑ **PCA-6154-00A1**:
All-in-one Pentium® half-size CPU card with VGA/LAN/SSD

❑ **PCA-6154L-00A1**:
All-in-one Pentium® half-size CPU card with VGA/SSD

❑ **PCD-2000-0200/0400/0800/1200/2400/4000/7200**:
2 ~ 72 MB DiskOnChip® 2000 Flash disk

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