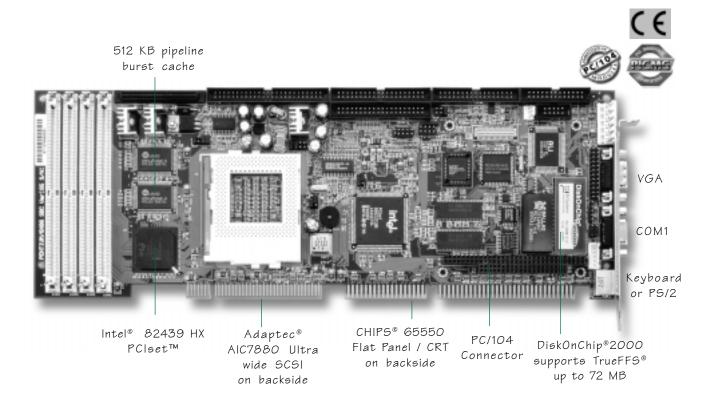# PIA-656 · · · · · · · · · · · · · · · · · · ·

Full-size PCI/ISA All-in-One Pentium CPU Card
with Flat Panel / CRT SVGA, Ultra-wide SCSI and DiskOnChip socket

512 KB pipeline burst cache

VGA

COM1

Keyboard or PS/2

Intel® 82439 HX PCIset™

Adaptec® AIC7880 Ultra wide SCSI on backside

CHIPS® 65550 Flat Panel / CRT on backside

PC/104 Connector

DiskOnChip®2000 supports TrueFFS® up to 72 MB

The PIA-656 is a full-size Pentium single board computer with onboard Adaptec® Ultra-wide SCSI interface, support for Flat-panel and CRT displays and a DiskOnChip® 2000 Flash Disk socket.

PCI ULTRA-WIDE SCSI

The Adaptec® AIC7880 Ultra-wide SCSI RISC engine speeds up transfer rates to 40 MB/sec and is capable of connecting up to 15 devices. An 8-bit PCI SCSI-II interface is optionally available.

DISKONCHIP®2000

The PIA-656's SSD socket accommodates a DiskOnChip® 2000, a new generation of high performance single-chip Flash Disks. This unique data storage solution offers a better, faster and more costeffective Flash Disk for applications with limited space and modest disk capacity requirements

FLAT PANEL / CRT SVGA

The PIA-656 includes a CHIPS® embedded SVGA controller that supports CRT and LCD panels simultaneously.

PCI EIDE, HIGH SPEED MULTI I/O

The PIA-656's PCI Enhanced IDE interface supports ATA PIO mode 3 and mode 4 devices. Also supported are two high-speed serial ports, an enhanced bi-directional Parallel Port and FDD.

WATCHDOG TIMER

The watchdog timer optionally monitors system operation. When enabled, it must be strobed by the software at designated intervals. Failure to strobe, which indicates a system failure, will generate a non-maskable interrupt to reset the system.

Specifications

- **CPU** : AMD K5 and K6, Cyrix 6x86 and M2
  Intel 75~233 MHz and Intel MMX

- **Chipset** : Intel 82439 HX, PCIset

- **BIOS** : AWARD PCI/ISA PnP Flash BIOS shared
  with VGA and Adaptec 7880 ultra wide SCSI BIOS

- **Green Function** : power saving options supported in BIOS.
  DOZE / STANDBY / SUSPEND modes

- **Secondary Cache**: 512 KB pipeline burst

- **DRAM Memory**: 8 MB up to 256 MB of FPM or EDO,
  4 sockets for 72-pin SIMM modules

- **Bus Interface** : PCI/ISA and PC/104

- **Data Bus** : 64-bit

- **Bus Speeds** : ISA - 8 MHz, PC/104 - 8 MHz, PCI - 33 MHz

- **DMA Controllers** : 8237 x 2

- **DMA Channels** : 7

- **Interrupt Controllers** : 8259 x 2

- **Interrupt Levels** : 15

- **PCI Enhanced IDE** : supports two ports and up to four
  hard drives or Enhanced IDE devices of PIO mode 4.
  BIOS enabled/disabled

- **Watchdog Timer** :
  generates a system reset or interrupt when your application
  loses control over the system. The 16-level timer interval is
  configurable from 0 to 30 seconds.

- **Real-time Clock** : Dallas DS-12887 or compatible with
  lithium battery backup for 10 years of data retention. CMOS
  data backup of BIOS setup and BIOS default.

- **Keyboard and Mouse Connectors**:
  PC/AT type mini DIN connector for PC/AT and PS/2 key-
  board or PS/2 mouse (jumper selectable).
  Onboard 5-pin header connector for keyboard.

MULTI I/O

- **Chipset** : ALi M5113

- **Serial ports**:
  one external high speed RS-232 port, one internal high
  speed RS-232/422/485 ports; both with 16550 UART and
  16 byte FIFO. MIDI compatible, programmable band rate
  generator.

- **Floppy Disk Drive Interface**: supports up to two floppy
  drives, 5¼" (360 KB or 1.2 MB) and 3½" (720 KB, 1.44 MB
  or 2.88 MB). BIOS enabled/disabled

- **Bi-directional Parallel Port**: IRQ 5/7/9 or disabled
  supports SPP, EPP and ECP mode. BIOS enabled/disabled

ONBOARD PCI ULTRA-WIDE SCSI

- **Chipset** : Adaptec AIC 7880 RISC engine

- **Ultra-wide SCSI Transfer Rate** :
  8 bit (narrow) : 20 MB/s, 16 bit (wide) : 40 MB/s.

- **Device Connectivity** : 15

- **Driver Support** : DOS, Windows 95, Windows NT, Novell
  Netware, SCO UNIX, OS/2 Warp 3.0, ... etc.

FLAT PANEL/ CRT PCI SVGA INTERFACE

- **Chipset** : C&T 65550

- **BIOS** : combined with system BIOS

- **Memory :** 2 MB

- **Bus** : 32-bit PCI local bus

- **Display** : CRT and Flat Panel Mono/TFT/DSTN/EL (simult.)

- **Connectors** : 15-pin external CRT connector,
  41-pin internal Panel connector

FLASH DISK DISKONCHIP®2000

- **Package** : Single Chip Flash Disk in 32-pin DIP JEDEC

- **Capacity** : 1-72 MByte capacity
  (future capacities: 144 MByte and up)

- **Data Reliability** : ECC/EDC error correction

- **Memory Window** : 8 KByte

ENVIRONMENTAL AND POWER

- **Power Requirements**: single power +5 V

- **Board Dimensions** : 340 (L) x 122 (W) mm.

- **Board Weight** : 0.36 Kg

- **Operating Temperature**: 0 to 60°C

Ordering

❑ **PIA-656VS :** Full-size PCI/ISA All-in-One Pentium CPU Card
  with Flat Panel/CRT SVGA Controller,
  DiskOnChip Flash Disk socket
  and Ultra-wide SCSI Interface

❑ **PIA-656V** : Full-size PCI/ISA All-in-One Pentium CPU Card
  with DiskOnChip Flash Disk socket
  and Flat Panel/CRT SVGA Controller

❑ **PIA-656S** : Full-size PCI/ISA All-in-One Pentium CPU Card
  with DiskOnChip Flash Disk socket
  and Ultra-wide SCSI Interface

❑ **PIA-656** : Full-size PCI/ISA All-in-One Pentium CPU Card
  with DiskOnChip Flash Disk socket