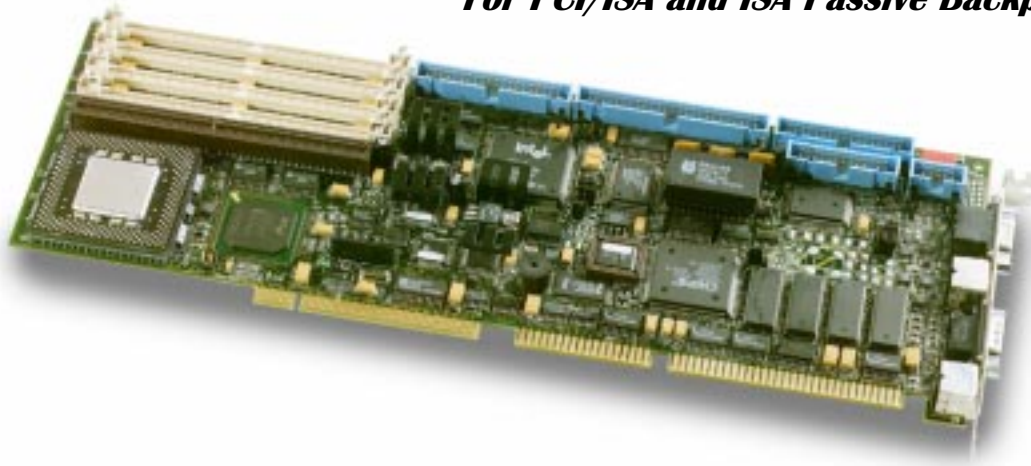# PV5000HX2(-M) Series
Single Board Computers
For PCI/ISA and ISA Passive Backplane Systems

SCALABLE PERFORMANCE & PCI VIDEO

The Texas Micro PV5000HX2(-M) series SBCs provide unparalleled, scalable, cost effective performance using Intel P54C Pentium® processors and P55C Pentium® processors with MMX™ technology. The advanced 430HX PCI chip set significantly improves PCI and ISA bus performance. Price/performance tailoring to application need is made easy through the support of Fast Page Mode (FPM) or Extended Data Out (EDO) memory, optional plug in 256KB or 512KB pipeline burst synchronous L2 cache COAST modules and CPU speeds up to 233MHz.

A highly integrated PCI flat panel/CRT SVGA controller, with 2MB DRAM video memory, provides support for a variety of flat panel and CRT displays with solid, non-interlaced images at 75Hz vertical refresh at 1280 x 1024 resolutions in 256 colors. Running the 32-bit local bus of the SVGA graphics controller at PCI speeds up to 33MHz maximizes data throughput and drawing speed for today's powerful CPU architecture.

On-board interfaces are provided for floppy, EIDE and SCSI devices. Located on the PCI bus, the Enhanced IDE controller supports two devices and includes LBA (Logical Block Addressing) and up to PIO mode 4 (16.6MB/sec throughput) performance. The Fast/Narrow SCSI-2 host adapter features true 32-bit PCI bus mastering DMA with 128-byte FIFO. This enables SCSI bus transfer speeds of up to 10MBytes/sec, maximizes DMA transfer and reduces system latencies.

Two serial ports (with baud generations to 115.2KB, 38.4KB sustained) and a Centronics® compatible Enhanced Parallel/Capabilities port (EPP/ECP) provides superior I/O throughput.

EXCEPTIONAL PCI/ISA BUS CAPABILITY

The Model PV5000HX2(-M) series supports up to 12 PCI and up to 20 ISA add-in cards. The Texas Micro enhanced Phoenix® BIOS provides CMOS and setup utilities for ISA and PCI system configurations and user definable drive parameters. Flash memory is used for BIOS and option ROMs for the on-board video and SCSI devices.

The PV5000HX2(-M) series are superior, cost effective SBCs for CTI, enhanced service applications, medical/laboratory/scientific systems, and industrial monitoring environments where visualization and operator/machine interfaces are important. They are particularly suited for multi-function, segmented backplane needs.

KEY FEATURES

- **166MHz to 233MHz P55C and 100MHz to 166MHz P54C Pentium® processors**
- **Up to 256MB FPM DRAM, parity/ECC (via chip set) or up to 32MB EDO DRAM, non-parity**
- **Optional 256KB or 512KB synchronous PB L2 cache**
- **PCI local bus Super VGA; CRT and flat panel support**
- **PCI EIDE and PCI 8-bit Fast/Narrow SCSI-2 controllers**
- **1 RS-232C and 1 configurable RS-232/422 serial port, 16550 compatible**
- **Parallel port with all IEEE 1284 protocols supported (AT compatible, bi-directional, EPP and ECP)**
- **PS/2 keyboard and PS/2 mouse mini DIN connectors**
- **Watchdog Timer (150ms and 1.2 sec timeout periods)**
- **Texas Micro enhanced Phoenix® BIOS**
- **Meets FCC Class A specifications; CISPR22 Class B**
- **Two year limited warranty**

MODEL PV5000HX2(-M) Series—Single Board Computers

SPECIFICATIONS

■ **CPU:** —P55C 166MHz, 200MHz or 233MHz Pentium® processor with MMX™ technology
—P54C 100MHz, 133MHz or 166MHz Pentium processor

■ **Cache:** Optional 256KB or 512KB Level 2 write-back cache (8ns synchronous pipeline burst COAST SRAM)

■ **Chip set:** Intel™ 430HX at 66MHz processor bus speed

■ **Memory Subsystem:**
Four 72-pin sockets organized in two banks supporting:
up to 256MB with 1/2/4/8/16MB x 36, 60/70ns, Fast Page Mode DRAM SIMMS - parity or ECC mode (single bit error correction, double bit detection) via chip set
or
up to 32MB with 1/2MB x 32 60ns, EDO (Extended Data Out) DRAM SIMMS

■ **Video:** PCI SVGA (Chips & Technology 65550)
2MB video display memory; 256 colors at 1280 x 1024, 64K colors at 1024 x 768, 16M colors at 800 x 600 and 16M colors at 640 x 480 supported

■ **Bus Interface:** AT Bus (98 pin) fully buffered (8.33MHz)
PCI Bus (120 pin) fully buffered (33MHz)

■ **Addressing:** Real and protected mode supported
Real address mode: 20-bit
Protected address mode: 16-bit on bus access

■ **Data Path:** 64-bit on board, 16-bit on bus access, 32-bit on PCI local bus

■ **Interrupts:** 11 edge sensitive and configurable
4 PCI level sensitive, configurably mapped as IRQ 5, 7, 9, 10, 11, 12, 14 or 15

■ **DMA Channels:** Four 8-bit, three 16-bit
Supports scatter/gather, F Type DMA

■ **Flash Memory:** 2Mb (256KB)

■ **Clock/Calendar:** DS1687, or equivalent, RTC accurate to +/- 12 minutes/year, at 25ºC; includes CMOS

■ **Form Factor:** 13.28" (33.73 cm) x 4.80" (12.19 cm)

■ **Power Requirements:** (w/8MB - 256MB DRAM)

	Input power	30-40W
	+5V	6.0 - 8.0A
	+12V	0.1A
	-12V	0.1A

■ **Peripheral Support:** PCI EIDE, PCI SCSI-2 (Adaptec 7850)

■ **Connectors:** (Polyfuse or ESD Protected)

Video:	*CRT*	(DB15 on slot bracket)
	Flat Panel	(50-pin condensed header)
Floppy drive		(shrouded header)
PCI EIDE		(shrouded header)
PCI SCSI-2		(50-pin shrouded header)
Serial port 1		(DB9P on slot bracket)
Serial port 2		(10-pin header)
Parallel port		(shrouded header)
AT keyboard, speaker		(8-pin header)
PS/2 mouse		(6-pin mini DIN on slot bracket)
PS/2 keyboard		(6-pin mini DIN on slot bracket)

■ **Texas Micro Enhanced Phoenix® BIOS Features:**
Watchdog Timer: 150ms and 1.2 sec time as + periods
Diskless, keyboardless, and videoless operation
System, video, and SCSI BIOS shadowing

■ **Operating Systems Compatibility:**
PC and MS-DOS®, Windows®, Windows NT®, Windows 95®, OS/2, SCO Open Server®, Interactive UNIX®, QNX®, SOLARIS® X86 and SCO UnixWare®

■ **SCSI Drivers Available** *(Call factory for additional info)*:
DOS® 5.0 thru 6.X, Windows® 3.1, Windows for Workgroups® 3.1X, Windows NT® 3.51, 4.X, Windows 95®, OS/2 2.1X, WARP® 3.0, NOVELL® Netware 3.1X, 4.X, SCO Unix® 3.2 v 4.2 SCO Open Server Release 5, and UnixWare 2.0X, 2.1

■ **Video Drivers Available** *(Call factory for additional info)*:
DOS® 5.0 thru 6.X, Windows® 3.1, Windows for Workgroups® 3.1X, Windows NT® 3.51, 4.X, Windows 95®, and OS/2 v 2.11, 3.0 and 4.0

■ **Environmental:**

Operating

temperature	0ºC to 60ºC	(32ºF - 140ºF)
humidity	40ºC, non-condensing	

Non-Operating

temperature	-40ºC to 70ºC (-40ºF to 158ºF)
humidity	0 to 95% @ 40ºC, non-condensing

ORDERING GUIDE	**MODEL NUMBER**
233MHz P55C PCI/ISA SBC	**PV5233HX2-M**
with Pentium processor, video and 0KB L2 cache	
200MHz P55C PCI/ISA SBC	**PV5200HX2-M**
with Pentium processor, video and 0KB L2 cache	
166MHz P55C PCI/ISA SBC	**PV5166HX2-M**
with Pentium processor, video and 0KB L2 cache	
166MHz P54C PCI/ISA SBC	**PV5166HX2**
with Pentium processor, video and 0KB L2 cache	
133MHz P54C PCI/ISA SBC	**PV5133HX2**
with Pentium processor, video and 0KB L2 cache	
100MHz P54C PCI/ISA SBC	**PV5100HX2**
with Pentium processor, video and 0KB L2 cache	
4MB 70ns DRAM (1M x 36)	**TMM-10036/70**
8MB 70ns DRAM (2M x 36)	**TMM-20036/70**
16MB 60ns high-density DRAM (4M x 36)	**TMM-40036HD/60**
32MB 60ns high-density DRAM (8M x 36)	**TMM-80036HD/60**
64MB 60ns high-density DRAM (16M x 36)	**TMM-16036HD/60**
4MB 60ns EDO DRAM (1M x 32)	**TMM-10032EDO/60**
8MB 60ns EDO DRAM (2M x 32)	**TMM-20032EDO/60**
256KB L2 cache module	**TMM-PBS/256KB**
(8ns synchronous pipeline burst COAST SRAM)	
512KB L2 cache module	**TMM-PBS/512KB**
(8ns synchronous pipeline burst COAST SRAM)	
Parallel and serial ports harness (LPT1, COM2)	**SP1A**