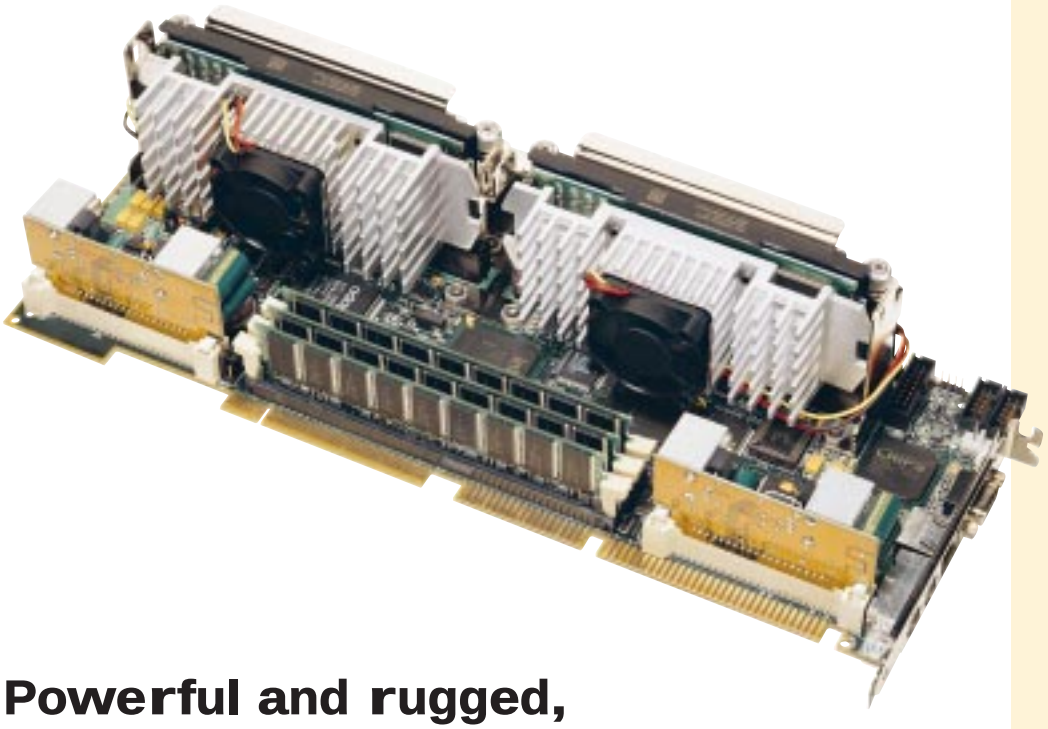
PCI-945

Innovative technology for maximum power



Powerful and rugged, the ultimate feature-laden SBC

The PCI-945 SBC features one or two 100 MHz Front Side Bus Pentium® III SECC processors with 256/512 KB ECC L2 synchronous pipelined burst cache using Teknor's innovative rugged FlexMount™ mounting bracket (patent pending).

It also supports high performance PCI Ultra DMA/33 IDE, Ultra Fast/Wide SCSI-3, and 10Base-T/100Base-TX Ethernet controllers.

Other onboard features include Universal Serial Bus (USB) ports, serial/parallel ports, and a floppy interface. A 64-bit PCI SVGA CRT controller with 2 MB of SDRAM is optional.

The PCI-945 SBC represents the most powerful offering of the Teknor product line. Including single or dual Pentium® III processors with rugged FlexMount™ retention, it provides a powerful, feature-laden SBC for use with standard PICMG-compliant PCI/ISA passive backplanes.

Features include:

- **Single / Dual Pentium® III SECC Processor 450 to 700 MHz with 256/512 KB L2 Cache**
- **Intel 440BX AGPset with 100 MHz FSB**
- **Up to 768 MB SDRAM/RSDRAM**
- **USB, Serial and Parallel Ports**
- **Ultra DMA/33 IDE (Dual) & Ultra Fast/Wide SCSI 3**
- **10/100Base-TX Ethernet**
- **64-bit PCI Video with 2 MB SDRAM**

PCI-945 - Technical Specifications

CPU
- Single or dual Pentium® III SECC processors 450, 500, 600, 650 or 700 MHz
- Intel 82440BX AGPset
- Rugged FlexMount™ mounting bracket accommodates Pentium III

Bus Interface
- Front Side Bus (100 MHz)
- PCI Bus (33 MHz)
- ISA Bus (8.33 MHz)
- High drive ISA buffers to support up to 20-slot backplane

Cache
- 16/16 KB Instruction / Data Level 1
- 256 KB internal 64-bit wide SPB non-blocking ECC Level 2 at full CPU core speed
- 512 KB internal 64-bit wide SPB non-blocking ECC Level 2 at 1/2 CPU core speed

Memory
- Three 168-pin latching DIMM sockets, 64/72-bit
- Up to 768 MB with 2, 4, 8, or 16 M x 64/72, 100 MHz Synchronous DRAM / Registered SDRAM non-ECC/ECC mode (single bit error correction, double bit detection via Intel 82440BX chip set)
- All 768 MB cacheable

Data Path
- 64-bit on CPU and video memory bus; 32-bit on PCI bus; 16-bit on ISA bus

Interrupts
- 11 edge sensitive and configurable
- 4 PCI level sensitive, configurable to any interrupt vector for PnP compatibility
- All ISA onboard interrupts are PnP compliant

DMA Channels (ISA)
- Four 8-bit, three 16-bit
- Supports scatter / gather, Fast Type-F DMA

Flash Memory
- 2 Mb (256 KB) Boot Block for BIOS field upgrade
- 4 KB Serial EEPROM for user configuration

I/O
I/O: NSC PC87309 Super I/O

USB Ports: Two

Serial Ports: Two RS-232 (16C550) with 16 byte FIFO as COM1-4 with BIOS selectable IRQs and addressing; serial port 2 BIOS configurable as RS-422/485

Parallel Port: One bi-directional with all IEEE 1284 protocols supported and BIOS selectable IRQs and addressing

Floppy Disk: Support for two drives (360 KB to 1.44 MB)

EIDE: PCI EIDE Ultra DMA/33, support for four IDE drives in a (master/slave configuration); PIO Mode 4, Bus Master IDE or synchronous DMA mode transfers up to 33 MB/s

SCSI: PCI Ultra Fast/Wide SCSI 3 with operation up to 40 MB/s and data bursts to the host at full PCI speeds (Adaptec AIC 7880)

Ethernet: PCI 10Base-T/100Base-TX (Intel 82558)

Video
- PCI SVGA CRT controller with 2 MB SDRAM memory optional (C&T 69000A)
- Supports CRTs with resolution up to 800 x 600, 16.8M colors; 1024 x 768, 64K colors; or 1280 x 1024, 256 colors, non-interlaced

Clock / Calendar
- Real-time clock with 256 byte battery backup CMOS RAM

Connectors
Rear I/O Bracket: PS/2 mouse and keyboard (two 6-pin mini-DIN); CRT (female DB-15 slim); Ethernet (RJ-45 with link/activity indicators)

Headers: USB (10-pin); serial ports (two 10-pin shrouded); parallel port (26-pin shrouded); floppy (34-pin shrouded); EIDE (two 40-pin shrouded); SCSI 3 (68-pin D-Sub receptacle); PS/2 mouse (4-pin locking); system monitor (14-pin); CPU fans (two 3-pin locking); SCSI activity LED (2-pin locking); AT keyboard, speaker, reset, EIDE activity LED (16-pin shrouded); auxiliary power input (4-pin standard HD); external battery (2-pin locking); power button (2-pin locking)

BIOS
- Award Elite BIOS in Boot Block Flash with recovery code; save CMOS in Flash option, and boot from LAN capability
- Auto configuration, extended setup; support for memory hole at 15-16 MB / ISA bus aliasing CC00-E000 address blocking; PnP tables
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- Software enable/disable of onboard Ethernet, SCSI
- Diskless, keyboardless, and videoless operation extensions; system, video and SCSI BIOS shadowing
- Programmable bus and I/O speeds, and memory wait states
- Advanced security feature for floppy and HDD; DMI and HDD S.M.A.R.T. support
- Advanced Configuration and Power Interface (ACPI 1.0), Advanced Power Management (APM 1.2), advanced thermal management (resume, overheat alarm and auto slow down), and Green support

Supervisory
- Two-stage software programmable watchdog timer drives NMI on 1st stage, system reset on 2nd stage. Time out from 16 msec to 4.5 min
- Hardware system monitor (voltages, temperature, fan speed), CPU temperature monitor / alarm; board temperature sensor, power failure / low battery detector, and two end-user defined open-drain general purpose I/Os; SMBus, I^2C Bus

OS Compatibility
- PC and MS-DOS™; Windows® 3.X; Windows® 95; Windows® 98; Windows® NT 4.0/5.0; OSR2; QNX™; SCO UNIX™; NOVELL™; UnixWare™

Mechanical
- 338 x 122 x 70 mm at CPU / fan (13.32 x 4.80 x 2.8 in. at CPU / fan)
- Conforms to IEEE P996 PC/AT bus, PCI Rev. 2.1, and PICMG Rev. 2.0 specifications

Power Requirements
Supply Voltage Vcc = +5V ±5% / +12V ±5%

Pentium III:	**450**	**500**	**600**	**650**	**700**
ICC typ.* +5V	8.9A	9.7A	6.9A	7.2A	7.5A
+12V	0.4A	0.4A	0.4A	0.4A	0.4A

- Two VRM 8.2 modules for Vcore of each processor (only one installed on single-processor configurations)

** Measured with dual CPU, video, Ethernet, SCSI, 384 MB SDRAM, keyboard, floppy and hard disk.*

Environmental

	Operating	**Storage and Transit**
Temperature:	0° to 55°C/32° to 131°F (w/airflow)	-40° to +70°C/-40° to 158°F
Humidity (RNC):	5% to 95% @ 40°C/104°F non-condensing	0% to 95% @ 40°C/104°F non-condensing
Altitude:	4,572 m / 15,000 ft	15,240 m / 50,000 ft
Shock:	5 G, each axis	
Vibration:	1.5 G, each axis	

Reliability
- MTBF: TBD
- SCSI termination, USB and mouse / keyboard voltage protected by self-resetting fuses
- Unique silicon serial number accessible via software
- 2 year limited warranty

Designed to meet or exceed:
Safety: UL 1950; CSA C22.2 No 950; EN 60950; IEC950
EMI/EMC: FCC 47 CFR Part 15/CISPR22; CE Mark to EN55022/EN50082

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