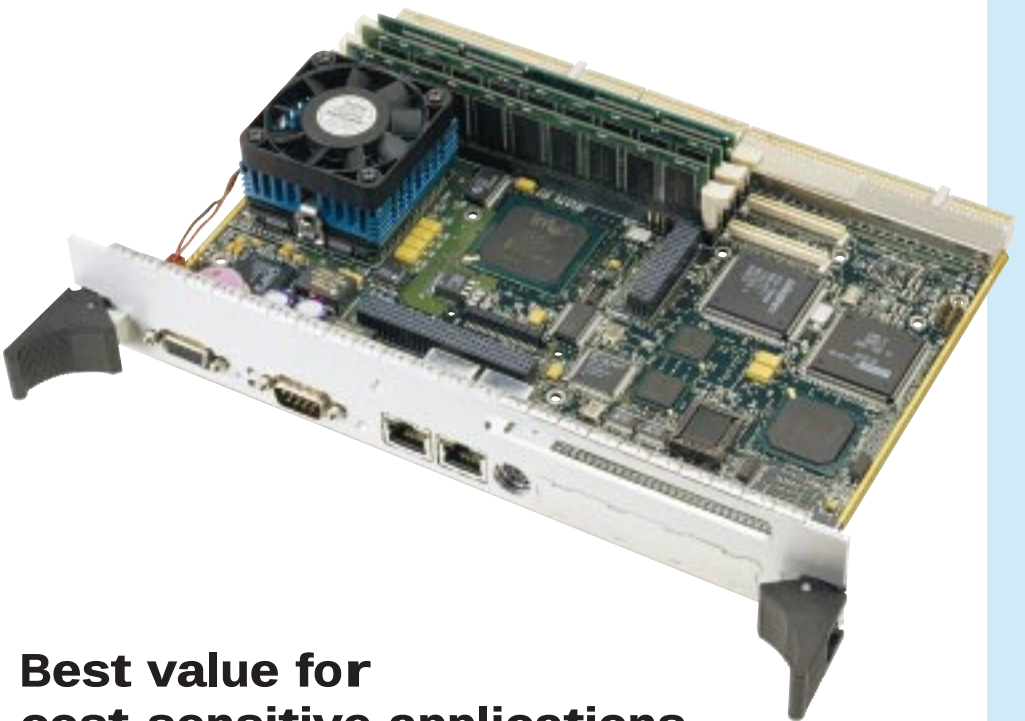
cPCI-CXS
6U CompactPCI® System Processor

with Celeron™ Processor 433 MHz



Best value for cost-sensitive applications

Teknor's cPCI-CXS system processor is the best value for cost-sensitive applied computing applications addressing industrial automation, control, monitoring as well as data communications, telecommunications, CTI, imaging and data acquisition markets.

The PICMG-compliant cPCI-CXS offers the embedded market superior value providing high performance and integration with high availability hot-swap controllers on a standard dual-slot 6U form factor. It provides support for the highest level of hot-swap functionality as specified by the PICMG consortium.

Low cost and high performance comes from Intel's 433 MHz 64-bit Celeron™ processor with on-die 128 KB L2 cache. The cPCI-CXS uses Intel's 440BX AGPset, with 100 MHz system bus, and PPGA370 CPU socket to deliver the superior performance capabilities of the P6 Celeron™ processor.

The cPCI-CXS is pin-out compatible with Teknor's 6U CompactPCI family of system processors, including the award-winning TEK-CPCI-1003. It can be used with all standard Teknor mezzanine cards to expand its interface capabilities from 7 to 14 CPCI I/O slots.

Teknor's cPCI-CXS system processor with rugged socketed Celeron™ processor offers an excellent value with its ideal blend of high performance and integration together with high availability hot-swap controllers in a standard CompactPCI® dual-slot 6U form factor.

Features include:

- **Intel® Celeron™ processor up to 433 MHz in a 370-pin PPGA package with on-die 128 KB L2 Cache**
- **Intel 440BX AGPset**
- **Up to 768MB SDRAM**
- **High-Availability Hot-Swap Controller, PCI-to-PCI bridge**
- **PMC, USB, Serial and Parallel Ports**
- **PCI EIDE, Ultra Fast / Wide SCSI-3 and CompactFlash™ Disk Support**
- **Two 10/100Base-TX Ethernet Controller and one AGP Video Controller**

cPCI-CXS - Technical Specifications

CPU
- Single Intel Celeron™ processor 300A, 366, 433 MHz and higher in PPGA370 package as technology becomes available
- Intel 440BX AGPset
- 21-signal High-Availability controller: Select, Healthy, Reset for 7 CPCI I/O slots

Bus Interfaces
- Front side bus up to 100 MHz
- CompactPCI® Bus, 32-bit (33 MHz) J1 and J2
- PCI-to-PCI bridge: DEC 21150; supports up to 7 REQ/GNT for fully loaded CompactPCI® system
- PCI mezzanine (PMC)
- Proprietary mezzanine with PCI bus, FD and EIDE support
- SMBus (for system management of CPU temperature monitoring, DRAM control, Clock buffers and power control)

Cache
- 16/16 KB Instruction / Data CPU-internal Level 1
- 128 KB 64-bit wide on-die Level 2 pipelined burst

Memory
- Three 168-pin latching DIMM sockets, 64/72-bit
- Up to 768 MB of SDRAM with parity or ECC (for single bit error correction and double bit error detection)

Data Path
- 64-bit on CPU and video memory; 32-bit on local PCI and CompactPCI bus

Interrupts
- 11 edge sensitive and configurable
- 4 PCI level sensitive, configurable to any interrupt vector for PnP compatibility

Flash Memory
- 512 KB for BIOS field upgrade; Silicon Serial ID TAG for unique board identification accessible via software

I/O
I/O: SMC FDC37C672

USB Ports: Two

Serial Ports: Four (three RS-232, COM1, 2, 4; COM3 configurable as RS-422/485)

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

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

EIDE: Two channel Bus Master PCI EIDE; support for four IDE Type 4 drives (master/slave configuration); LBA, PIO Mode 0-4 and Ultra DMA/33

CompactFlash™ Module: Optional bootable CompactFlash™ disk interfaces to primary EIDE channel, user upgradeable, master / slave

SCSI: Supports 16-bit Ultra Wide SCSI up to 40MB/s, 8-bit Fast SCSI-2 up to 10MB/s, 8-bit Ultra SCSI up to 20 MB/s (Adaptec AIC7880)

Ethernet: Two 10/100 Mb/s Ethernet, PCI 10/100Base-TX ports (Intel 82559 controller) HD / FD Mezzanine Card: Optionally onboard using Teknor's cMC series mezzanine cards

Video
- 64-bit AGP video controller (Intel 69000) with 2 MB video memory
- CRT resolutions up to 1024 x 768 x 64K colors or 1280 x 1024 x 256 colors

Clock / Calendar
- Real-time clock with (replaceable) battery backup, CMOS RAM

Connectors in "Front" configuration
- CRT (15-pin D-sub); serial COM 1 (9-pin D-sub); two Ethernets (RJ-45 with link / activity indicators); PS/2 mouse / keyboard (6-pin mini-Din) Interfaces on J3/J4/J5 (Rear-panel transition module, cTM80-STD2S available separately)
- CRT; 4 x serial; 2 x USB; 1 x parallel; SMBus; I2C; speaker I/F; Reset; IR; 2 x Ethernet; PS/2 mouse; keyboard; SCSI; 2 x EIDE; floppy disk interface; fan fail monitoring

BIOS Features
- Award Elite BIOS in Boot Block Flash with recovery code; save CMOS in Flash option, and boot from LAN capability
- Auto configuration, extended setup;
- CC000-E0000 address blocking; PnP tables
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- Software enable/disable of onboard Ethernet & SCSI; hardware enable/disable of onboard video
- Diskless, keyboardless, and videoless operation extensions;
- System, video, SCSI, and LAN BIOS shadowing
- Programmable bus and I/O speeds, and memory wait states
- Advanced security feature for floppy and HDD; DMI & 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 and system reset on 2nd stage
- Programmable CPU temperature monitor/alarm
- Power failure / low battery detector
- Front Panel LEDs: IDE activity, SCSI activity, Ethernet activity & link

OS Compatibility
- MS-DOS™, Windows® 95/98,Windows® NT, VxWorks™, pSOS™, QNX™, Linux, and Solaris Mechanical (compliant to IEEE 1101.10;compliant to PICMG 2.0 Rev 2.1)
- 233 x 160 x 41 mm / 9.2 x 6.3 x 1.6 in; 6U x 8HP (dual slot) Mechanically
- 233 x 160 x 20.5 mm / 9.2 x 6.3 x 0.8 in; 6U x 4HP (single slot) Mechanically

Power Requirements

Supply Voltages:	+3.3V:	±5% / +5V ±5% / +12V ±5%
Supply Current: *	3.3V:	2.0 Amps max.
	5V:	7.5 Amps max.
	12V:	0.75 Amps max.
Power Dissipation:		53W max.

** Celeron processor 300 MHz with 32MB SDRAM*

Environmental

	Operating	Storage and Transit
Temp.:	0-60°C / 32-140°F (w/airflow)	-40°to +70°C / -40°to 158°F
Humidity:	5% to 95% @ 40°C/104°F non-condensing	5% to 95% @ 40°C/104°F non-condensing
Altitude:	4,572 m / 15,000 ft	15,240 m / 50,000 ft
Shock:	Designed to meet IEC 68-2-27	
Vibration:	Designed to meet IEC 68-2-6	

Reliability
- MTBF: > 95,000 hours without fan, > 32,000 hours with fan @ 55°C / 131°F (MIL-HDBK-217F)
- Board serial number in EEPROM
- USB, keyboard, mouse and SCSI voltage protected by self-resetting fuses
- 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, Class B; CE Mark to EN55022/EN50082

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