➤ cPCI-MXS64
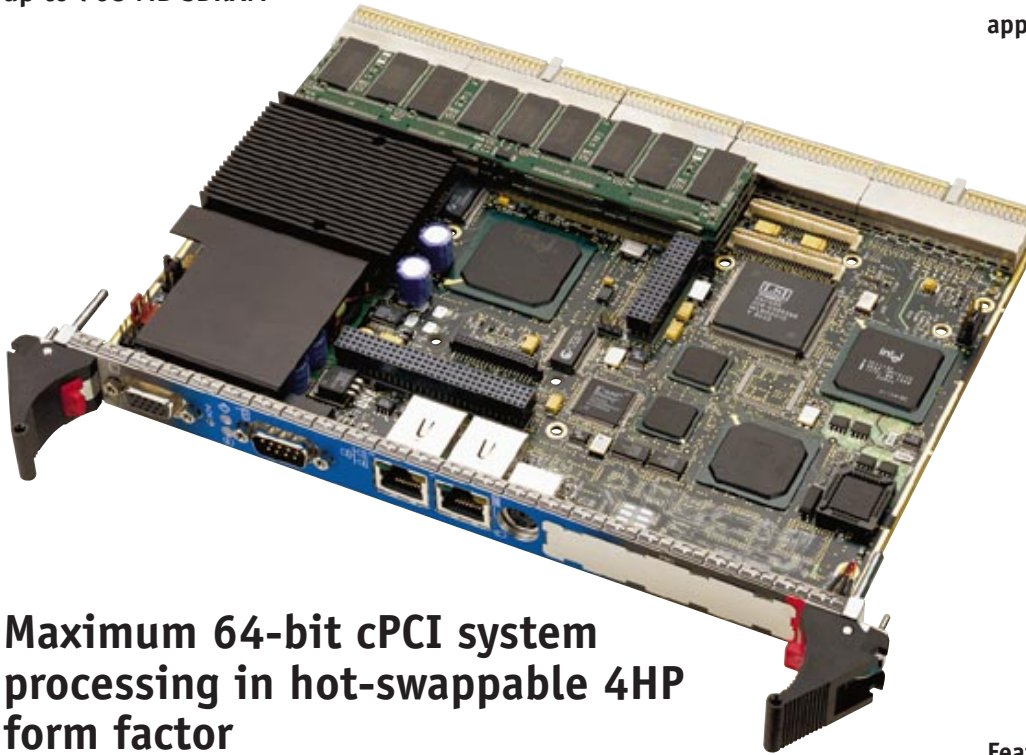
➤ 6U CompactPCI® 64-bit System Processor

Single or Dual Slot Pentium® III Processor LP 500 MHz and up to 768 MB SDRAM

➤ Kontron's cPCI-MXS64 is a hot-swappable, passive cooled system processor that integrates into a single slot footprint a wide range of high availability features ideal for mission critical datacom, telecom and industrial imaging applications.

➤ Maximum 64-bit cPCI system processing in hot-swappable 4HP form factor

In a single slot form factor, Kontron's cPCI-MXS64 system processor integrates state-of-the-art CompactPCI® technology with a full spectrum of high availability features targeted at manufacturers of CTI servers, VoIP equipment and broadband data or intelligent network switches.

The cPCI-MXS64 is built with a Pentium® III - Low Power processor with an option for 400MHz or 500 MHz clock speeds and a Front Side Bus of 100 MHz. It is also backed with up to 768 MB of SDRAM, a 64-bit PCI bus and SCSI-2 LVDS.

To meet the demands of near real-time and real-time, mission critical datacom and telecom applications, Kontron's

cPCI-MXS64 is loaded with other high availability features such as hot swap capability, dual Ethernet, IPMI controller, low power dissipation and passive cooling.

With standard Kontron mezzanine cards, the cPCI-MXS64 interface capabilities are expanded from seven to 14 CompactPCI I/O slots. Also, combine this SBC with either the cPCI-MXP, or the recently released cPCI-MXP64 peripheral processor from Kontron, to produce a powerful solution for scalable multi-processsing using IPTalky™ technology (IP on CompactPCI bus) for Windows® NT, VxWorks, pSOS and Linux-based applications

Features include:

➤ **Pentium III processor - Low Power, 500 MHz with on-die 256KB L2 Cache**

➤ **Intel 440BX AGPset**

➤ **Hot-Swappable**

➤ **Up to 768 MB SDRAM in single slot form factor**

➤ **Supports LVDS SCSI-2**

➤ **PCI-to-PCI transparent bridge**

➤ **PMC, USB, Serial and Parallel Ports, PCI EIDE**

➤ **Dual 10/100Base-TX Ethernet and one AGP Video Controller**

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➤ cPCI-MXS64 - Technical Specifications

CPU
- Pentium III processor - Low Power 500 and 700 MHz
- Intel 440BX AGPset
- Hot swappable
- 21-signal High-Availability controller: Select, Healthy, Reset for 7 CPCI I/O slots

Bus Interfaces
- 100 MHz front side bus
- CompactPCI® Bus, 32-bit/64-bit (33 MHz) J1 and J2
- PCI-to-PCI bridge: DEC 21154; supports up to 7 REQ/GNT for fully loaded CompactPCI® system
- PCI mezzanine (PMC)
- Kontron 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
- 256 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 errorcorrection and double bit error detection)

Data Path
- 64-bit CPU bus; 32-bit AGP bus; 32-bit on local PCI and 64-bit on CPCI 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-422/485/232)
Parallel Port: One bi-directional with all IEEE 1284 protocols supportedwith 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 LVD SCSI up to 80MB/s
Ethernet: Two 10/100 Mb/s Ethernet, PCI 10/100Base-TX ports (Intel 82559 controller)
HD / FD Mezzanine Card: Optionally onboard using Kontron's cMC series mezzanine cards

Video
- 64-bit AGP video controller (Intel 69000) with 2 MB video memory
- CRT resolutions up to 800 x 600, 16.8 M colors; 1024 x 768, 64K colors; or 1280 x 1024, 256 colors, non-interlaced

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); PMC; reset; Interfaces on J3/J4/J5 (Rear-panel transition module, cTM80-STD2S/1S available separately) CRT; 4 x serial; 2 x USB; 1 x parallel; SMBus; I2C; speaker I/F; Reset; 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 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: Disk (IDE/SCSI) activity, Hot Swap LED, and Ethernet activity and 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%,-3% / +5V +5%,-3% / +12V +5%,-3%	
Supply Current:*	3.3V:	4.5 Amps max.
	5V:	3.5 Amps max.
	12V:	0.1 Amps max.
Power Dissipation:	40W max.	

* This is with a Pentium III processor 500 MHz and 768MB DRAM.

Environmental

	Operating	Storage and Transit
Temp.:	0-60°C/32-140°F	-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: > 100,000 hours @ 55°C / 131°F (MIL-HDBK-217F)
- Board serial number in EEPROM
- USB, keyboard, mouse and SCSI voltage protected by self-resettingfuses
- 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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