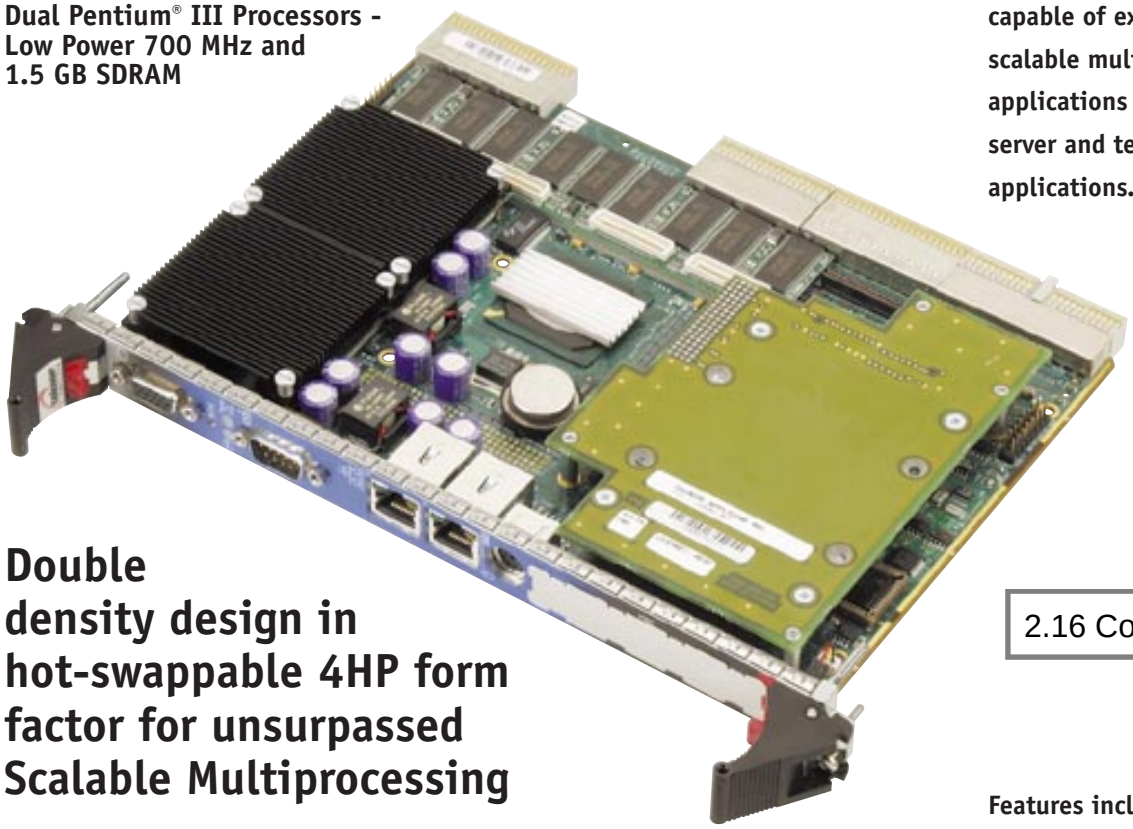
cPCI-DMXP64GX

6U CompactPCI® 64-bit Peripheral Processor

Dual Pentium® III Processors - Low Power 700 MHz and 1.5 GB SDRAM



Double density design in hot-swappable 4HP form factor for unsurpassed Scalable Multiprocessing

The cPCI-DMXP64GX is a next generation CompactPCI® peripheral processor that rounds out Kontron's communications class of extremely high density board level solutions. Targeted at high end applications within Internet and telecommunications server networks, the cPCI-DMXP64GX uniquely stands out by integrating an advanced feature-set with 1.5 GB of memory and dual Pentium III - Low Power processors into a single slot 4HP form factor.

Hot swappable and exceptionally reliable, the cPCI-DMXP64GX is ideal for application developers who deliver systems solutions for mission-critical applications. Featuring two ultra high performance Intel® Pentium® III processors - Low Power at 700 MHz each, customers may deploy a Kontron 8U, 16-slot CompactPCI system with a total of 30 peripheral CPUs. This includes two CPUs from a Kontron cPCI-DMXS64GX system processor which also features a dual Pentium III processor - Low Power, 700 MHz in a SMP configuration. Other performance enhancements include the integration of 1.5 GB of SDRAM, support for dual Ethernet, a 64-bit CPCI bus, one multiple mode parallel port (SPP, EPP, ECP), two serial ports, and a unique standalone circuitry which enables it to function as an independent node.

This makes for a compelling, high end systems solution for unsurpassed clustered multi-processing using Kontron's 2.16 Compliant CompactPCI Platforms on Windows® NT/2000, VxWorks, and Linux-based applications.

One of many examples of this could be a clustered internet server that reproduces telecom-grade characteristics using Linux and open-source software as the base technology, which is an optimal solution as Internet traffic grows more than 100% every six months and servers are increasingly becoming overloaded.

- **Kontron's cPCI-DMXP64GX is a hot-swappable, passive cooled peripheral processor that features Dual Pentium III processors - Low power and 1.5 GB of memory into a single slot footprint, capable of extremely high end scalable multiprocessing applications for CTI, Internet server and telecommunications applications.**

2.16 Compliant

Features include:

- **Dual Pentium III processors - Low Power at 700 MHz each CPU**
- **Intel 440GX AGPset**
- **Hot-Swappable**
- **Up to 1.5 GB SDRAM even in single slot form factor**
- **PCI-to-PCI non-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-DMXP64GX - Technical Specifications

CPU
- Dual Pentium III processor - Low Power 500, 700 MHz
- Intel 440GX AGPset

Bus Interfaces
- Front side bus up to 100 MHz
- CompactPCI® Bus, 64-bit (33 MHz) J1 and J2
- PCI-to-PCI non-transparent bridge: Intel's 21554
- PCI mezzanine (PMC)
- Kontron mezzanine with Floppy Drive and EIDE support
- Kontron mezzanine with Hard Drive support (4HP, Single Slot)
- 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 1.5 GB of SDRAM with parity or ECC (for single bit error correction and double bit error detection) in single and dual slot form factor

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: Two (one RS-232, COM1, COM2 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: Support for two IDE 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
Ethernet: Two 10/100 Mb/s Ethernet, PCI 10/100Base-TX ports (Intel 82559 controller), PICMG 2.16 Compliant
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

Connectors
Front
- 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)

Rear
- Interfaces on J3/J5 (Rear-panel transition module, cTM80-STD (available in 4HP and 8HP) available separately)
- CRT; 2 x serial; 2 x USB; 1 x parallel; SMBus; I2C; speaker I/F; Reset; IR; 2 x Ethernet; PS/2 mouse/keyboard; 2 x EIDE; floppy disk interface; fan fail monitoring 2 x EIDE; floppy disk interface.

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;
- CC000-E0000 address blocking; PnP tables
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- Software enable/disable of onboard Ethernet; hardware enable/disable of onboard video
- Diskless, keyboardless, and videoless operation extensions;
- System, video, 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: IDE activity, SCSI activity, Ethernet activity & link, and 'Ready to Swap' blue LED

OS Compatibility
- Windows® 2000, Windows® NT, VxWorks™, QNX™, and Linux

Mechanical (compliant to IEEE 1101.10; compliant to PICMG 2.0 Rev 3.0)
- 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	5 Amps max.
	5V	6 Amps max.
	12V	0.1 Amps max.
Power Dissipation:	48W max.	

** This is with a Pentium III processor 700 Mhz and 1.5 GB DRAM.*

Environmental

	Operating	Storage and Transit
Temp.:	0-55°C/32-131°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: TBD
- Board serial number in EEPROM
- USB, keyboard, mouse and 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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