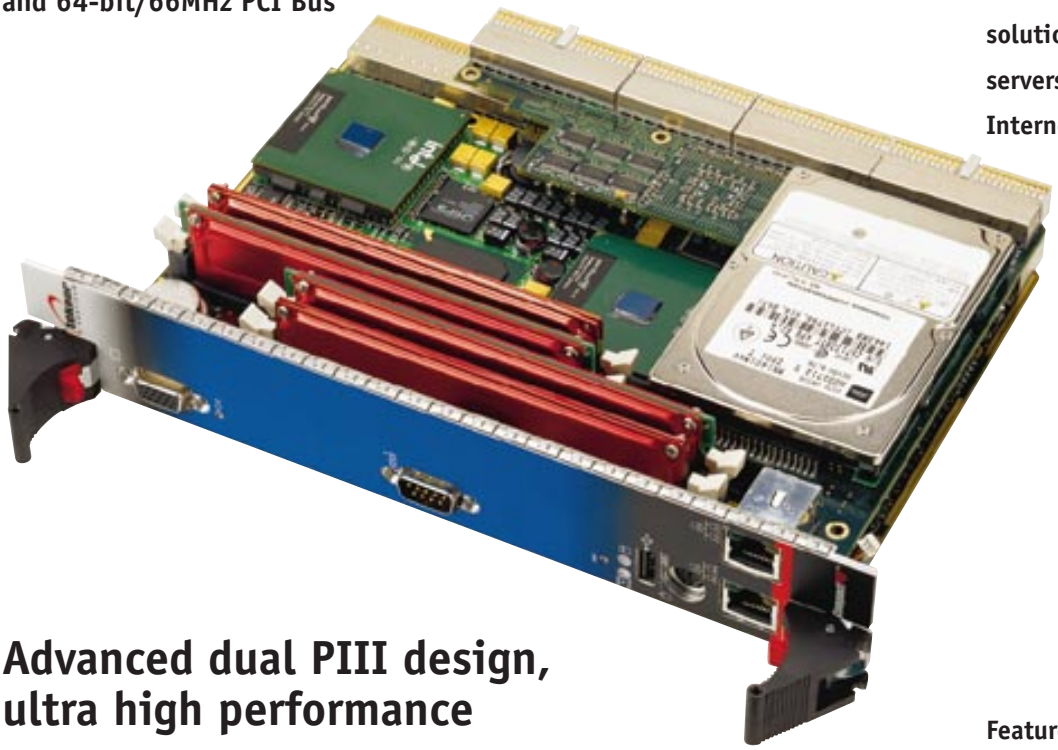
cPCI-DXS64

6U CompactPCI® System Processor

with Single/Dual Pentium® III Processor 600 MHz and 64-bit/66MHz PCI Bus



Kontron's cPCI-DXS64 introduces a new standard in CompactPCI technology by integrating high performance dual-Pentium III processors and Direct Rambus technology into one 6U dual-slot form factor, making it an ideal solution for high performance servers in call processing, CTI and Internet/Intranet applications.

Advanced dual PIII design, ultra high performance

Kontron offers the most complete server class engine solution with the cPCI-DXS64. This high availability 6U CompactPCI system processor meets and exceeds the demands of high performance servers in call processing, CTI and Internet/Intranet applications. Built with Intel's most recent dual processing technology, the cPCI-DXS64 features two 600 MHz Pentium III SMP processors in a Socket 370 (FC-PGA) footprint.

This state-of-the-art dual-slot CPCI solution incorporates Direct Rambus technology with up to 2 GB of PC600 Direct RDRAM on four 184-pin latching RIMM sockets. The significance is that one Rambus DRAM is capable of delivering up to 1.6 GB of data per second over the Rambus channel, dramatically improving overall performance. Another performance enhancement is a 64-bit CompactPCI bus clocking at 66 MHz for quadruple the PCI bus bandwidth.

The hot swappable cPCI-DXS64 is pin-out compatible with Kontron's 6U CompactPCI family of system and peripheral processors, including the cPCI-MXS, cPCI-MXP, cPCI-CXS. It includes a permanent mezzanine with a secondary bridge that extends the cPCI-DXS64 interface capabilities to 14 CPCI I/O slots. An optional high density (min.10 GB) 2.5" HD can also be fitted on the permanent mezzanine.

The cPCI-DX64 also features dual LVDS SCSI with up to 320 MB/s of bandwidth, and support for clustered multiprocessing using IPTalky on NT, VxWorks, pSOS and Linux. Other features include two USB ports, two serial ports, one bi-directional parallel port, and two PCI 10/100Base-TX ports. The cPCI-DXS64 is available in a single Pentium III or in a dual Pentium III SMP processor architecture.

Features include:

- **Single / Dual Intel Pentium III, passive cooled 600 MHz Processors**
- **256KB of 64-bit L2 cache**
- **64-bit/66MHz PCI bus**
- **Intel 840 chipset**
- **Direct Rambus memory, up to 2 GB of PC600 Direct RDRAM**
- **Dual channel LVDS SCSI support of up to 320 MB/s**
- **Clustered multiprocessing using IPTalky on NT, VxWorks, pSOS and Linux**

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cPCI-MXS64 - Technical Specifications

CPU
- Socket 370 (FC-PGA)
- Single / Dual Pentium III 600 MHz processors, passive cooled
- Intel 840 chipset

Bus Interfaces
- Front side bus at 100 MHz
- Local PCI Bus at 64-bit/66 MHz (for PCI-PCI bridges and SCSI controller)
- CompactPCI bus up to 64-bit/66 MHz (Call Technical Support)
- Dual PCI-to-PCI bridge: Intel 21154; supports up to 14 REQ/GNT for fully loaded CompactPCI system
- Video AGP 2X
- SMBus (for system management of CPU temperature monitoring, DRAM control and power monitoring)
- Kontron embedded mezzanine for second PCI bus, SCSI and EIDE HD support

Cache
- 16/16 KB Instruction / Data CPU-internal Level 1
- 256 KB 64-bit wide on-die Level 2 cache

Memory
- Four 184-pin latching RIMM sockets
- Up to 2 GB of DRAM with parity or ECC (for single bit error correction and multiple bit error detection)

Data Path
- 64-bit on CPU and PCI bus; 32-bit AGP bus

Interrupts
- 8 CompactPCI interrupts, configurable to any interrupt vector for PnP compatibility

Flash Memory
- 1MB for BIOS field upgrade;
- Silicon Serial ID TAG for unique board identification accessible via software
- 4Kb (24C32) user serial EEPROM

I/O
I/O: SMSC47B277 super I/O
USB Ports: Two
Serial Ports: Two (One RS-232 COM1, COM2 configurable as RS-232/RS-422/485)
Parallel Port: One bi-directional with all IEEE 1284 protocols supported with BIOS selectable IRQs and addressing
Hard disk: Optional High density hard disk support on embedded mezzanine card
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 ATA66
CompactFlash Module: Optional bootable CompactFlash disk interfaces to primary EIDE channel, user upgradeable, master / slave
SCSI: PCI-ULTRA160 (Ultra3) LVDS SCSI support up to 320 MB/s dual channel or 160 MB/s single channel (Symbios 53C1010)
Ethernet: Two PCI 10/100Base-TX ports (Intel 82559 controller)

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 256 byte CMOS RAM and replaceable battery backup

Connectors
- **Front access 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); one USB
- **Rear access configuration:** Interfaces on J3/J4/J5 (Rear-panel transition module, cTM80-STD1S/STD2S) including: CRT; two serial ports; two USB ports; one parallel port; I2C bus; SMbus; speaker I/F; Reset switch; two Ethernet ports; PS/2 mouse, keyboard; 68 pins D-sub SCSI; 2 x EIDE; floppy disk interface.

BIOS
- Phoenix 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 2 onboard Ethernet & SCSI controllers; 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), Intelligent System Monitoring (chassis intrusion and advanced thermal management such as resume, overheat alarm and auto slow down)

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/SCSI activity, Ethernet activity & link

OS Compatibility
- MS-DOS™, Windows® 95/98,Windows® NT, Linux, VxWorks, pSOS, QNX™, and Solaris

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

Power Requirements

Supply Voltages:	+3.3V:	±5% / +5V ±5% / +12V ±5%
Supply Current: *	3.3V	TBD
	5V	TBD
	12V	TBD
Power Dissipation:	TBD	

Environmental

	Operating	**Storage and Transit**
Temp.:	0-50°C/32-122°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 @ 50°C / 122°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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