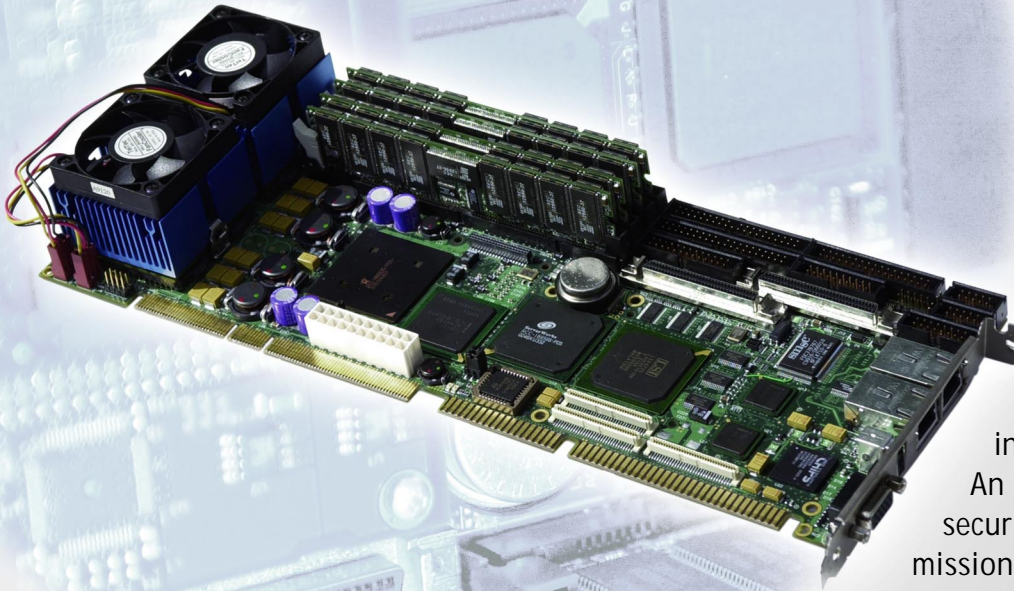


PCI-990

A quantum leap into high performance, high speed communications

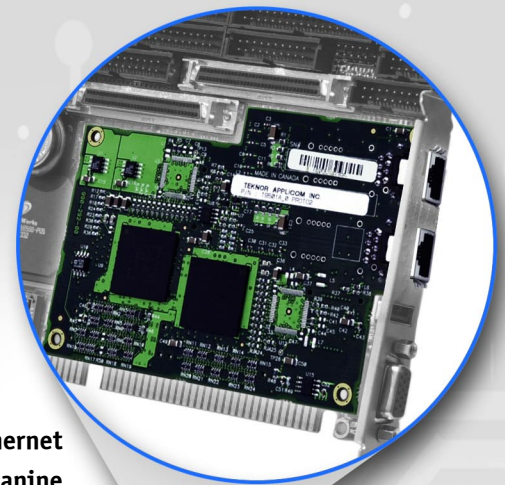


The state-of-the-art dual CPU PCI/ISA Single Board Computer that packs new high power with two Intel®Pentium® III processors providing speed, performance, reliability and flexibility.

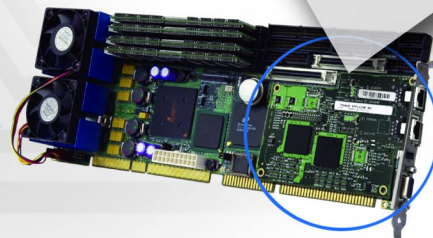
The Kontron PCI-990 is designed to accommodate the endless demands for a high performance engine in platforms used in the embedded datacom/telecom market. An ideal SBC for high performance Internet security and data center solutions, as well as mission-critical CTI and demanding embedded computing applications. It is fully compatible with Kontron's 1U, 2U, and 6U chassis such as the Kontron DreamSpeed and CoreVox families of platforms.

Features:

- Dual Intel® Pentium® III processors 1.26 GHz
- Up to 133 MHz front-side bus
- 256/512K of L2 Cache
- Up to 4 GB of SDRAM
- 64-bit PCI bus
- Choice of Dual Ethernet ports:
 - 10/100Base-TX
or
 - 1000Base (T or S/LX) based on Intel® 82544 Ethernet controller with copper- or optic-type interface available only with Kontron's custom-built mezzanine
- Dual-channel Ultra160 SCSI LVDS/SE (optional)
- Two EIDE hard disk interfaces
- Three USB ports
- Watchdog Timer
- Board and CPU temperature monitoring



Gigabit Ethernet
Mezzanine



► PCI-990 Technical Specifications

CPU

- Dual Pentium III Processor 1.26GHz
- Serverworks ServerSet III LE chipset (CNB30LE north bridge & OSB4 south bridge)

Bus Interfaces

- Front Side Bus at 133 MHz
- PCI Bus (33MHz - PCI bus and 66MHz - PCI bus Rev. 2.1 : Gigabit, SCSI, External backplane)
- ISA Bus (8.33MHz)

Cache

- 16/16KB Instruction / Data Level 1
- 512KB Advanced Transfer Cache (on-die, full speed L2 cache with ECC)

Memory

- Four 168-pin latching DIMM sockets, 64/72-bit
- Up to 4 GB of PC-133 RSDRAM, 133 MHz Registered SDRAM non-ECC/ECC mode (single bit error correction, multiple bit detection via Serverworks ServerSet III LE); all 4 GB cacheable (per CPU)

Data Path

- 64-bit on CPU; 32-bit and 64-bit on PCI busses, 16-bit on ISA bus

DMA Channels (ISA)

- Four 8-bit, three 16-bit
- Supports scatter / gather, Fast Type-F DMA

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

Flash Memory

- 512KB for BIOS field upgrade
- 32Kb user serial EEPROM

I/O

I/O controller	SMSC LPC37B787 super I/O
USB Ports	Three (USB 1.1 compliant)
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	PCI EIDE Ultra DMA/33, support for four IDE drives (in master/slave configuration); PIO Mode 4, Bus Master IDE or synchronous DMA mode transfers up to 33 MB/s
Floppy Disk	Support for two drives (360 KB to 1.44 MB)
Ethernet	Two PCI 10/100Base-TX (Intel 82559ER) or Two Gigabit Ethernet (two RJ-45 for copper; two MT-RJ SX duplex transceiver for fiber), available on mezzanine only
CompactFlash	Supports CompactFlash disk module (on secondary channel)
SCSI	Dual Channel Ultra 160 SCSI-3 LVDS/SE based on LSI 53C1010

Video

- PCI 32-bit video controller (C&T 69000) with 2 MB video memory
- Supports CRT with resolution up to 1280 x 1024

Clock / Calendar

- Real-time clock with 256 bytes battery backup CMOS RAM

Connectors

- **Faceplate** USB port (one 4-pin USB connector)
CRT (female DB-15)
Fast Ethernet (two RJ-45 with link/activity indicators)
or Gigabit Ethernet (two RJ-45 for copper; two MT-RJ SX duplex transceiver for fiber) with link/activity indicators
- **Headers** 10-pin shrouded : Serial ports (2) 10-pin : USB (1)
20-pin shrouded : System monitor (1) 20-pin : ATX power supply connector (1)
26-pin shrouded : Parallel port (1) 3-pin locking : CPU fans (2)
34-pin shrouded : Floppy (1) 40-pin module : CompactFlash module (1)
40-pin shrouded : EIDE (2) 68-pin High Density DB68: SCSI (2)
16-pin shrouded : AT keyboard, speaker, PS/2 mouse, reset, EIDE & SCSI activity LEDs

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
- All onboard peripherals can be enabled or disabled by software
- Diskless, keyboardless, and videoless operation extensions;
- System, video and LAN BIOS shadowing
- Programmable memory wait states
- 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

- Dual-stage software programmable watchdog timer, time out from 16 msec to 4.5 min
- Silicon Serial ID TAG for unique board identification accessible via software
- 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 inputs

OS Compatibility

- Windows ® NT, Windows ® 2000, Linux, UNIX, and other OSs

Mechanical

- 338 x 122 x 44 mm at CPU / fan (13.32 x 4.80 x 1.73 in. at CPU / fan)
- Conforms to IEEE P996 PC/AT bus, PCI Rev. 2.1, and PICMG 1.0 Rev. 2.0 specifications

Power Requirements

- Supply Voltage Vcc =+3.3V ±5%, +5V ±5%, +12V ±5%
- ICC typ.* +5V: 7.4A
- ICC max.* +3.3V: 7.8A
- ICC max* +5V: 10.9A

* Measured with dual CPU, video, 2 x Gigabit Ethernet, 512MB RSDRAM, keyboard and hard disk

Environmental

Temperature :	Operating 0-50°C / 32-122°F (w/100 LFM airflow)	Storage and Transit -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:	4,000m / 13,123ft	15,000m / 49,212ft
Shock:	15 G, 11ms half sine	30G, 11ms half sine
Vibration:	1G, each axis, 10Hz to 500Hz	2G, each axis, 10Hz to 500Hz

Reliability

- MTBF: >105,000hrs @ 30°C/86°F (Telcordia SR-332, Issue 1)
- USB and mouse / keyboard voltage protected by self-resetting fuses
- Unique silicon serial number accessible via software
- 2-year limited warranty

Meets or exceeds:

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

* **Note: Altitude (operating):** May require additional cooling above 1800m/5905ft



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