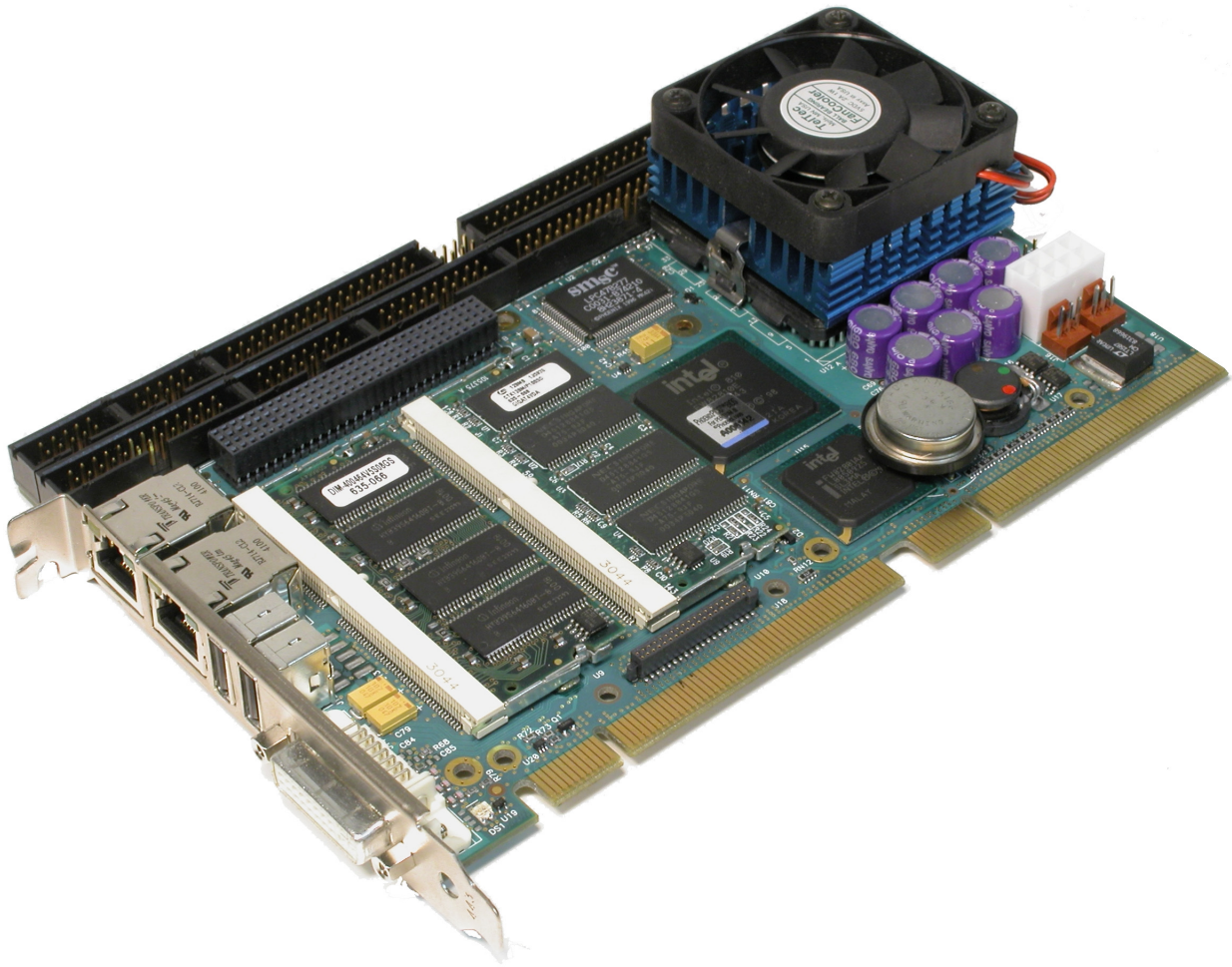# ➤ ePCI-100

➤ Embedded PCI-X single board computer

- ➤ Intel Pentium III 600 to 1 GHz
- ➤ Intel Celeron from 566 to 733 MHz
- ➤ 66/100/133 MHz front side bus
- ➤ 100 MHz SDRAM bus
- ➤ Up to 512 MB of DRAM (SDRAM) on two 144-pin SODIMM sockets
- ➤ Two 10Base-T/100 BaseTX Ethernet Ports
- ➤ Two Enhanced IDE hard disk interface (Ultra DMA/66)
- ➤ Integrated 2D/3D 64-bit CRT video controller with DVI output
- ➤ Two-stage software programmable Watchdog Timer
- ➤ PC/104+ bus compatible, PCI-Only (no ISA connector)
- ➤ ePCI-X passive backplane or stand-alone operation

If it´s Embedded, it´s Kontron.

➤ Product Overview

The ePCI-100 is Kontron's flagship single board computer for the industry-wide PICMG 1.2 Embedded PCI-X standard. An industry-wide approved specification that brings PCI-X technology to the embedded marketplace.

Based on the popular Kontron half-size VIPer SBC line, the ePCI-100 comes standard with a rich feature set including a choice of Intel Pentium III or Celeron processors, up to 512 MB of SDRAM, dual 10/100 Base-TX Ethernet ports, dual IDE hard disk interface and a built-in

2D/3D 64-bit CRT video controller for video support.

All of which establishes the ePCI-100 as the new standard for a wide range of embedded industrial, test and measurement, commercial and medical applications.

Quite simply, the ePCI-100 is a highly integrated, full-featured SBC that is ideally suited for any environment requiring ePCI-X technology, in a space-conscious, robust and reliable design.

➤ Technical Information

Processor
- Celeron processor 566 and 733 MHz (bus speed at 66 MHz)
- Pentium III processor 600/700/850 MHz (bus speed at 100 MHz)
- Pentium III processor 733/866 MHz and 1 GHz (bus speed at 133 MHz)

Chipset
- Intel 82810E

Cache
- 128 KB Instruction / Data CPU-internal Level 1
- 256 KB Advanced Transfer Cache (64-bit wide on-die full speed Level 2 pipelined burst)

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

Memory
- Two 144-pin SDRAM SODIMM supports (long/1.25", short/1") memory configurations up to 512MB
- Standard 3.3V single-sided or double-sided SODIMMs (requires PC-100 SDRAM)

I/O
I/O controller:	LPC47B27X
USB ports:	2x USB 1.1 compliant
Serial ports:	Two (COM1: RS-232 COM2: RS-232/RS-422/485)
Parallel port:	one bi-directional with all IEEE 1284 protocols supported with BIOS selectable IRQs and addressing
ATA/IDE:	Two Enhanced IDE interfaces; support for two IDE drives (master/slave configuration); PIO Mode 0-4 and ultra DMA/66
Floppy Disk:	support for one drive
Ethernet:	Two 10/100 Base-TX Intel 82559ER Ethernet controllers
Compact Flash:	supports CompactFlash disk module (on secondary channel)

Video
- Integrated 2D/3D 64-bit CRT video controller with DVI output
- CRT resolutions up to 1600x1200x64K colors, non-interlaced
- No direct flat panel support (must go through DVI connector)
- Compatible with CGA, EGA, Hercules, MDA, VGA, SVGA, XGA and SXGA

Bus Interfaces
- Front Side Bus 66MHz/100MHz/133MHz determined by CPU
- PCI Bus, 32-bit 33MHz
- SMBus

BIOS
- Phoenix BIOS in Firmware Hub with recovery code.
- Save CMOS in Flash option and Boot from LAN capability.
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- Software enable/disable of onboard Ethernetl software enable/disable of onboard video
- Diskless, keyboardless, and videoless operation extensions
- Advanced security feature for floppy and HDD; DMI & HDD S.M.A.R.T. support, Intelligent System Monitoring (chassis intrusion and advanced thermal management such as resume, overheat alarm and auto slow down) Green support

Supervisory
- Dual Stage software programmable Watchdog timer drives NMI on first stage and system reset on second stage
- Time out from 31 ms to 4:22 min
- Programmable CPU temperature monitor alarm
- Power failure and voltage monitoring/low battery detector
- Hardware system monitor for system voltages, temperature, fan speed, and "cover open" discrete input, accessible via on-board SMBus

OS compatibility
- Windows 98/2000/XP, Windows NT 4.0, QNX, Linux and FreeBSD

Dimensions
- 122 x 185 x 50.8 mm at CPU/fan (4.8" x 7.3" x 2" at CPU/fan)

Power Requirements
- Supply Voltage VCC = +3.3V ±5%, +5V ±5%, +12V ±5%
- ICC typ.* +5V: 1.9A
- ICC typ.* +3.3V: 2.8A
- ICC typ.* +12V: < 1 mA
* Measured with the Eden™ 1.0 GHz CPU and 512 MB SDRAM

Environmental
	Operating	Storage and Transit
Temperature:	0 to 55°C / 32 to 140°F (w/ 150LFM airflow)	-40 to +70°C / -10 to 158°F
	When using a 1.0GHz CPU, must not exceed 45°C (0-45°C/32-113°F)	
Humidity:	When using a CompactFlash, must not exceed 50°C (0-50°C/32-122°F) 5% to 90% @ 40°C /104°F non-condensing	5% to 95% @ 40°C /104°F non-condensing
Altitude:	4,000m / 13,123 ft	15,000m / 49,212 ft
Shock:	5G each axis	
Vibration:	1.5G, each axis	

Reliability
- MTBF: > 75 000 hours at 55°C / 131°F (MIL-HDBK-217F);
- USB, Mouse/Keyboard voltage protected by self-resetting fuses
- Unique silicon serial number accessible via software
- 2- year limited warranty
Designed to meet or exceed:
- Safety: UL 60950; CSA C22.2 No 60950-00; EN 60950; IEC 60950
- EMI / EMC: FCC 47 CFR Part 15/CISPR22, Class B; EN55022/EN55024

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