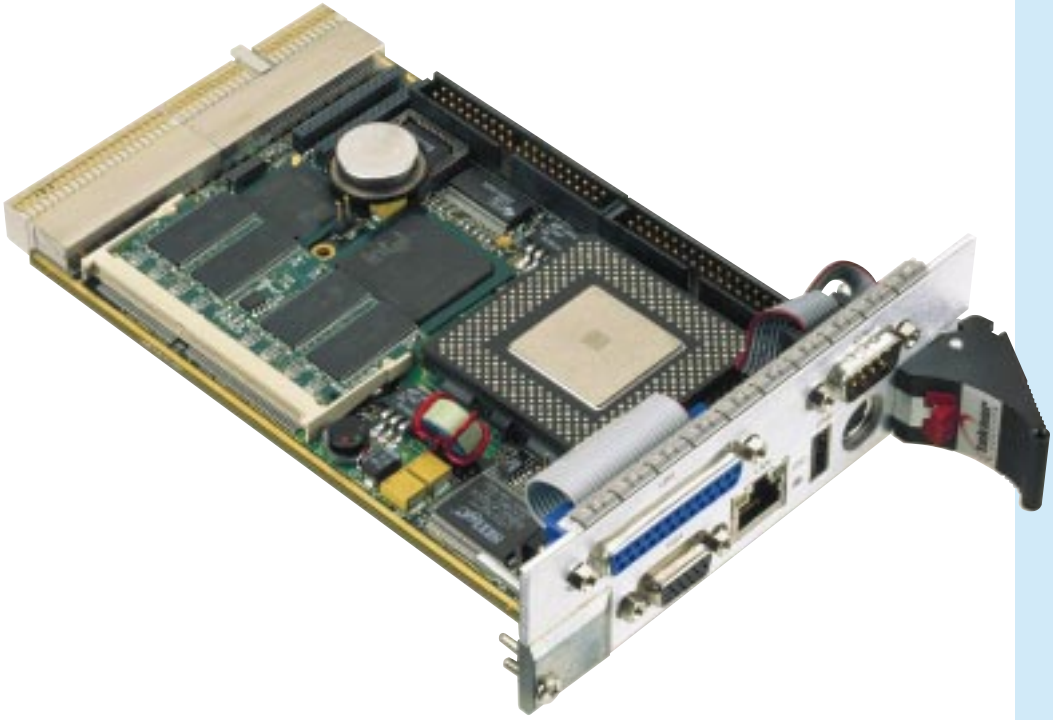
RAP-C810

3U CompactPCI® System Processor

with Celeron® Processor 500 MHz



Teknor's RAP-C810 with Celeron processor incorporates maximum performance and superior value into a standard CompactPCI® dual slot 3U form factor.

Features include:

- **Up to 500 MHz Celeron processor speeds with on-die 128 KB L2 cache**
- **Intel 810 chipset**
- **Up to 128MB of Synchronous SDRAM**
- **Ethernet 10Base-T/100Base-TX**
- **Internal chipset bridging**
- **USB, Serial and Parallel ports**
- **PCI, EIDE, FD, Ethernet and CompactFlash™ Support**

view Quick Reference card

Superior performance, smallest form factor

Teknor's 500 MHz Celeron-powered RAP-C810 offers the best value for rock-solid performance in a 3U footprint. Delivering on form, fit and function migration, the RAP-C810 is indispensable to the upscale demands of the test and measurement, in-vehicle (transportable), and automation markets.

Part of Teknor's new RAPtor (Ruggedized Applied Platform) line of CompactPCI system processors, the RAP-C810 is built on the same successful technology derived from its family of VIPer half-size single board computers (SBCs). With its high-density onboard integration, the RAP-C810 offers many of the benefits associated with CPCI systems – solid connectivity, open Wintel-type platform and high processing power.

Using Intel's Celeron processor, with 66 MHz Front side bus and 128 KB 64-bit wide L2 cache, the RAP-C810 also combines the latest Intel chipset solution with integrated 2D / 3D graphics, and up to 128MB of Synchronous SDRAM on one 144-pin SODIMM socket, to ensure a superior processing capacity.

The RAP-C810 also supports up to seven full hot swap peripheral cards, and an assortment of key software interfaces, including Windows® 2000, MS-DOS™, Windows® 95/98, Windows® NT, and other OSs.

RAP-C810 - Technical Specifications

CPU
- Celeron processor supporting 300/66 MHz to 500/66 MHz processor speeds, and future processor and bus speeds
- Intel 810 chipset

Bus Interfaces
- 66 MHz Front side bus up to 100 MHz
- CompactPCI® Bus, 32-bit (33 MHz) J1 and J2
- Internal chipset bridging and supports up to 7 REQ/GNT for fully loaded CompactPCI® system
- Proprietary mezzanine with FD, EIDE, and Compact Flash 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
- 128 KB 64-bit wide on-die Level 2 pipelined burst

Memory
- Up to 128MB of Synchronous SDRAM on one 144-pin SODIMM socket
- Memory bus speed always at 100 MHz (PC 100)

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

Interrupts
- 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
- 4Kbytes Serial EEPROM for user configuration

I/O
I/O: LPC 47B277

USB Ports: One

Serial Ports: Two (Com 1 - front-accessible; Com 2 - backplane accessible via mezzanine

Parallel Port: One bi-directional with all IEEE 1284 protocols supported with BIOS selectable IRQs and addressing

Floppy Disk: Support for two drives (1.44 MB)

EIDE: One channel Bus Master PCI EIDE; supports up to two IDE Type 4 drives (master/slave configuration); LBA, PIO Mode 0-4 and Ultra DMA/33, DMA/66

CompactFlash™ Module: Optional bootable CompactFlash™ Type 1 or 2 on mezzanine to primary EIDE channel, user upgradeable, master / slave

Ethernet: One10/100 Mb/s Ethernet, PCI 10/100Base-TX ports (Intel 82559 controller)

Video
- CRT resolutions up to 1600 x 1200 at 256 colors; 1280 x 1024 at 16M colors

Clock / Calendar
- Real-time clock with (replaceable) battery backup, CMOS RAM

Connectors
- "Front" configuration: CRT (15-pin D-sub); parallel (25-pin D-sub); serial COM 1 (9-pin D-sub); one Ethernet (RJ-45 with link / activity indicators); PS/2 mouse / keyboard (6-pin mini-Din)
- On Board configuration: Standard hard drive 40-pin connector; standard floppy 34-pin connector; and proprietary PCI and flat panel connectors

BIOS Features
- Pheonix BIOS in Boot Block Flash with recovery code; save CMOS in Flash option, and boot from LAN capability
- Auto configuration, extended setup
- Setup console redirection to serial port (VT100 mode) with CMOS setup access
- Software enable/disable of onboard Ethernet & onboard video
- Diskless, keyboardless, and videoless operation extensions
- System, video, and LAN BIOS shadowing
- Programmable bus and I/O speeds, and 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: Ethernet activity & link
- Voltage monitoring of 1.5V, 2.5V, 5V, 3.3V , 12V, VBAT and Vcore voltage rails

OS Compatibility
- MS-DOS™, Windows® 95/98, Windows® NT, Windows® 2000, QNX™, Linux, (VxWorks™, pSOS™, Solaris for future compatibility).

Mechanical
- Compliant to IEEE 1101.10; compliant to PICMG 2.0 Rev 2.1
- 100 x 160 x 41 mm / 3U x 8HP (dual slot)

Power Requirements

Supply Voltages:	+3.3V:	±5% / +5V ±5% / +12V ±5%
Supply Current: *	3.3V:	1.3 (1.60 Amps max.)
	5V:	2.7 (4.59 Amps max.)
	12V:	0.1 (0.12 Amps max.)
Power Dissipation:	35W max.	

** Celeron processor - 433 MHz with 128MB SDRAM*

Environmental

	Operating	Storage and Transit
Temp.:	0-55°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 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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