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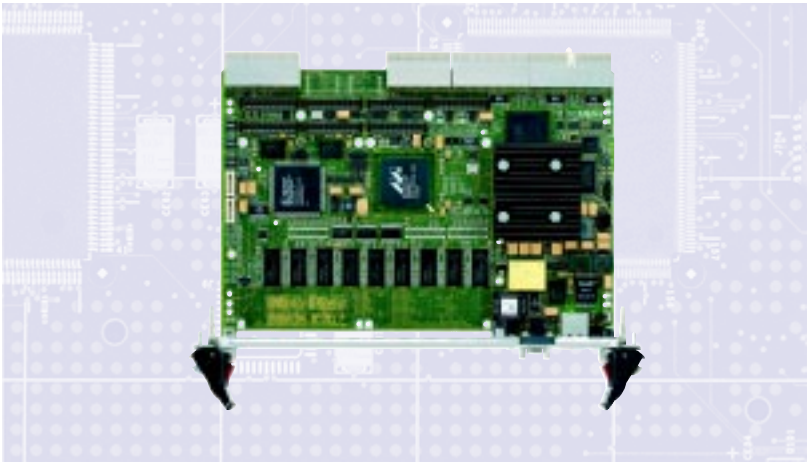
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Find the *Emerson / Motorola / Force Computers PPC/CPCI-695/1024-800-64* at our website: *Click HERE*

PowerCore CPCI-695 'Universal' 64/32-Bit CPCI Interface PowerPC SBC

DATASHEET

750FX PowerPC CompactPCI Board Offers System- and Peripheral-Slot Functionality



PowerCore CPCI-695 uses Force's next-generation Sentinel64 PPB for "universal" 64/32-bit system- and peripheral-slot functionality in PowerPC/ CompactPCI solutions.

- **Telecommunications**
- **Datacommunications**
- **Industrial Control**
- **Defense & Aerospace**

Features

- PowerPC 750FX processor at 800MHz
- 64/32-bit Sentinel64 "universal-mode" PCI-to-PCI bridge—enables SBCs to automatically switch between system- and peripheral-slot functionality
- Marvell Discovery II (MV64360) system controller with five decoupled busses for concurrent processor and PCI peripheral device access to main memory
- 133MHz front-side bus host interface
- Up to 4GBytes high-speed DDR-SDRAM main memory
- Triple Gigabit Ethernet interfaces
- Dual PMC slots (64bit/133MHz, 64bit/66MHz)
- Dual serial RS-232 interfaces
- Full compliance to PICMG 2.16 for Packet-Switching Backplanes
- Full Hot Swap support for CompactPCI
- IPMI system management support (PICMG 2.9)

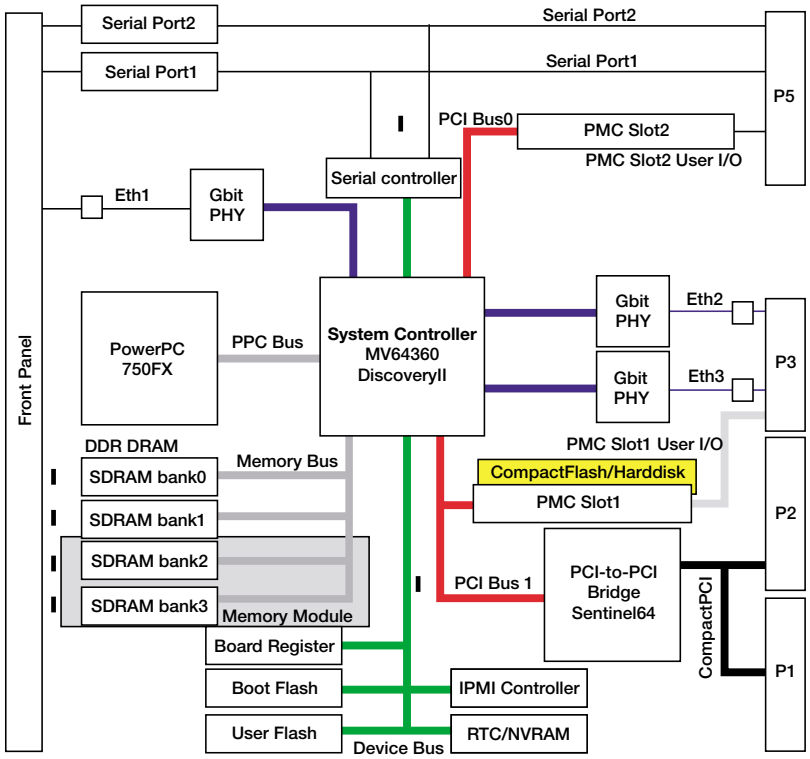
Highlights

Force's PowerCore CPCI-695 CompactPCI high-performance single board computer (SBC) is designed for applications that require high bandwidth, fast memory access and excellent networking capabilities.

Implemented with the next generation of Force's award-winning Sentinel64 "universal-mode" PCI-to-PCI bridge, the PowerCore CPCI-695 can be used as a system controller or an intelligent peripheral card in a CompactPCI system. In addition, the board can automatically switch between operating modes with "zero" hardware or software impact.

For increased I/O, the SBC has dual PMC slots (one full/wide 133MHz PCI-X capable, one 66MHz enabled), triple Gigabit Ethernet interfaces and up to 4GBytes ECC-protected DDR-SDRAM memory to help OEMs more easily upgrade the technology in end-products, which enhances time-to-market. Overall, PowerCore CPCI-695 is one of the most reliable embedded platforms for flexible, cost-effective functionality in defense, industrial automation, data communications and telecommunications.

PowerCore CPCI-695 'Universal' 64/32-Bit CPCI Interface PowerPC SBC



PowerCore CPCI-695 Block Diagram

Enabling power of Force's Sentinel64 universal-mode PCI-to-PCI bridge

The PowerCore CPCI-695 is a powerful and versatile CompactPCI SBC based on Force's revolutionary Sentinel64 universal-mode 64/32-bit PCI-to-PCI bridge (PPB). Sentinel64 technology enables the PowerCore CPCI-695 to function as a system controller or as an intelligent peripheral card in a CompactPCI system. The PPB completely eliminates the need for hardware or software reconfiguration when the SBC switches operating modes—giving users a ready-made building-block for multi-processor solutions—yet still fits in just one slot even when fully configured with a complete set of interfaces and maximum memory.

Broad expansion and I/O flexibility

In addition to its versatility, high performance and backward compatibility to earlier Force PowerPC SBCs, the PowerCore CPCI-695 provides developers with broad expansion capabilities and a wide range of interfaces. Up to two PMC slots are available for expansion, and one PMC slot can accommodate an IDE-compatible PMC module for CompactFlash or hard-disk drive storage (PMC must have onboard IDE controller). Also up to three independent Gigabit Ethernet and two serial interfaces exist for optimum I/O flexibility.

PowerCore CPCI-695 'Universal' 64/32-Bit CPCI Interface PowerPC SBC

SPECIFICATIONS

Processor/memory

- PowerPC 750FX processor (800MHz)
- 512KBytes L2 Cache at full processor speed
- Up to 4GBytes ECC-protected DDR-SDRAM—up to 2GBytes onboard memory, expandable with memory modules
- Up to 64MBytes onboard programmable User Flash
- 512KBytes Boot Flash

I/O capabilities

- Discovery II (MV64360) system controller with five decoupled busses for concurrent access of processor, PCI peripheral devices and main memory
- Dual 64-bit PMC slots—one at 133MHz (PCI-X), one at 66MHz
- Up to three Gigabit Ethernet interfaces—one at the front panel, two at the backplane
- Dual RS-232 serial interfaces—via front panel or rear I/O via rear-transition board (RTB-602)
- Optional mass storage via PMCs—CompactFlash or hard-disk drive module (with onboard IDE controller)
- Optional interfaces (requires one PMC slot)
  - Fast Wide SCSI-2 interface for mass storage
  - Four more serial interfaces

CompactPCI interface

- "Universal" Sentinel64 PCI-to-PCI bridge for system- and peripheral-slot functionality (64-bit/66MHz)
- Built-in buffers for fast data transfers across widely deployed 64/32-bit CompactPCI bus

Other features

- Onboard full compliance with PICMG 2.16 for Packet-Switched Backplanes
- IPMI baseboard management controller (PICMG 2.9)
- 64KBytes NVRAM real-time clock
- Watchdog timer
- Reset and abort switches, status LEDs, Hot Swap LED

Operating system support

- MontaVista Linux, VxWorks and other real-time operating systems

Power requirements

5V 1.5A, +3.3V 1.7A

Board size

Single-slot 6U CompactPCI

160.00nm x 233.35mm

Environmentals

Operating temperature

0°C to 55°C with forced air cooling

Storage temperature

-40°C to +85°C

Relative humidity

5% to 95% non-condensing



Universal PCI-to-PCI Bridge

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Force Computers is the leading designer and worldwide supplier of standard and custom systems, board-level platforms and services for the embedded market.

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