

SCP/DCP-124

3U CompactPCI

Single Board Computer



The SCP/DCP-124 is a high-performance, feature-rich, 3U CompactPCI (cPCI) Single Board Computer (SBC) and the newest member of our CompactCore cPCI product family.

Designed for space-constrained applications, the SCP/DCP-124 represents an evolution in rugged high-performance, highly integrated small form factor SBCs. Based on the Freescale Power Architecture™ MPC7447A/7448 Processor with AltiVec™ technology and up to 1GB of DDR SDRAM, the SCP/DCP-124 offers an unparalleled complement of I/O capability in order to satisfy the most demanding harsh environment embedded applications.

The challenge of high density computing is to pack the greatest functionality into the smallest standard form factor, while retaining as much flexibility as possible. In conjunction with its processing power, the SCP/DCP-124 meets this challenge by offering a PMC site that allows developers to integrate PMCs directly onto the SCP/DCP-124. To support retrofit and technology upgrade applications, the SCP/DCP-124 is also available in pinout modes compatible with the SCP/DCP-122.

A rich complement of I/O is available on the SCP/DCP-124 including two Ethernet/Fast Ethernet/Gigabit Ethernet, up to four serial channels (232/422/485), up to 14-bits of discrete digital I/O and a Universal Serial Bus (USB) port.

Learn More

Sales Info: sales.cwcmbedded.com

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CPU

- ◆ Freescale MPC7447A/7448 processor with AltiVec technology operating at up to 1.0GHz/1.2GHz (DFS functionality is supported)
- ◆ 133MHz CPU bus speed
- ◆ 512KB/1MB of internal L2 cache (MPC7447A/7448)
 - 64KB L1 data cache
 - 64KB L1 instruction cache
 - SIMD vector unit (VMX)
 - 1MB internal L2 Cache per Core

- 512MB or 1024MB of DDR1 SDRAM with ECC
- 128MB or 256MB of Flash, hardware write-protectable
- 16MB Flash for Permanent Alternate Boot Site (PABS)
- 128KB non-volatile RAM

- ♦ Auto-sensing of system slot board (up to 6-slots) or peripheral slot board operation
- ♦ 3.3V or 5V signaling supported
- ♦ 32-bit, 33MHz or 66MHz operation

- ◆ 64-bit, 100MHz PCI-X capable
- ◆ Support for 3.3V or 5V PMCs
- ◆ Full 64 PMC I/O variant available

- ◆ x2 10/100/1000Base-T Ethernet port
- ◆ x2 RS-232 serial port (one with cable detect input)
- ◆ x1 USB 2.0
- ◆ Up to 14-bits of TTL discrete I/O
- ◆ Two EIA-422/485 sync/async channels also software selectable to be
 - One EIA-422 sync/async channel & four pairs of differential I/O
 - Eight pairs of differential I/O

- Four 32-bit user timers
- Six 32-bit system timers
- Two avionics watchdog timers with programmable time-out period
- Real-time Clock with standby power switch over port
- x4 general purpose DMA controllers
- Two temperature sensors

- ◆ Debug monitor (GPM) including
 - Non-volatile memory programmer
 - Configuration boot manager

- ◆ VxWorks® 5.5.x / Tornado™ 2.2.1 for PowerPC™
- ◆ VxWorks 6.x / Workbench 2.x for PowerPC
- ◆ Curtiss-Wright Linux® 2.6 SDK
- ◆ INTEGRITY®, LynxOS® & other RTOS (call for availability)

- ◆ SSSL – a Curtiss-Wright Controls signal processing library with Altivec support

- ◆ Rear transition module and/or cable set for lab use

- ♦ Air-cooled
- ♦ Conduction-cooled

Figure 1: SCP/DCP-124 Block Diagram

