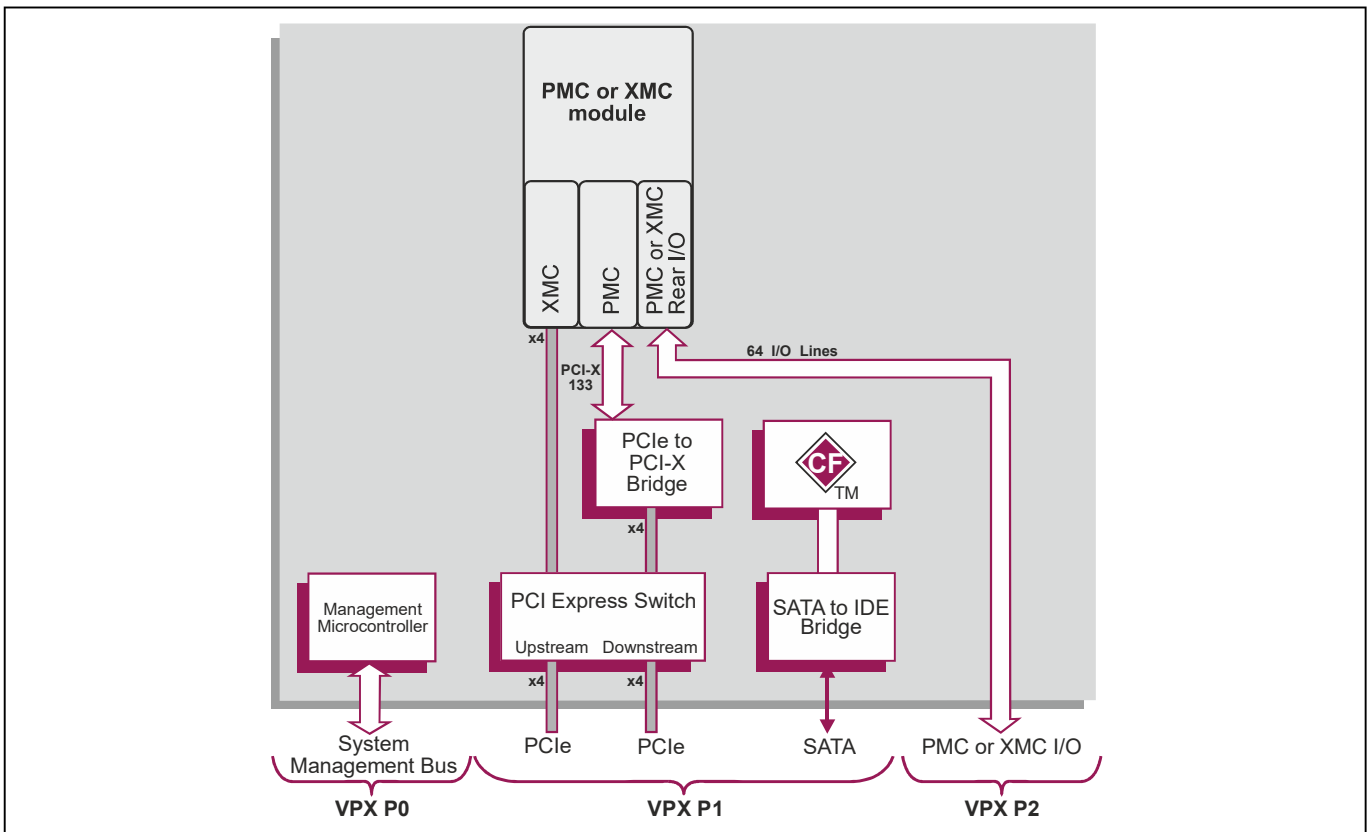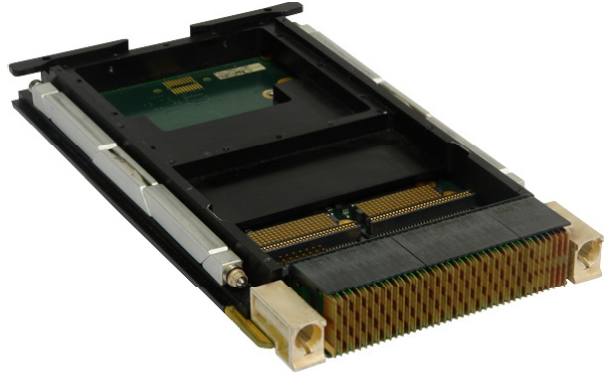# 3U VPX-REDI XMC/PMC Carrier Board

Key Features

The TR XMC/x01-RC XMC/PMC carrier board provides a flexible solution for adding modular I/O functionality to a 3U VPX system.

- Support is included for a CompactFlash® card
- Conduction-cooled for rugged applications
- Supports a range of commercial XMC/PMC module including SAS, LAN, WAN, Graphics and Communications Controllers

VPX-REDI XMC or PMC Carrier

- 3U VPX-REDI XMC or PMC Carrier supports:
  - → one single size XMC or PMC module
  - → supports End-Point Processor XMC modules
  - → supports non-Monarch Processor PMC modules
- complies with CMC (Common Mezzanine Card) standard IEEE 1386-2001 and PMC (PCI Mezzanine Card) standard IEEE 1386.1-2001
- conduction-cooled to VITA 48.2
- conformally coated
- compatible with several OpenVPX™ module profiles
- for non-rugged VPX (N-Series) versions:
  - → commercial air-cooled
  - → front panel interface aperture
  - → optional rear transition module available
  - → see TR XMC/301 datasheet

XMC/PMC Interfaces

- XMC module interface:
  - → supports x1, x2 or x4 PCI Express®
- PMC interface supports:
  - → 32/64-bit, 33/66MHz PCI
  - → 64-bit, 66/100/133MHz PCI-X
- 64-bit rear I/O via VPX P2 connector:
  - → option for rear I/O is via an XMC Pn6 or PMC Pn4 connector
  - → P2 pinout conforms to (build option) X24s+X8d+X12d or P64s (VITA 46.9)

CompactFlash Site

- CompactFlash® Type-I site available:
  - → implemented via SATA to EIDE interface connected to VPX P1 wafer 9 or 10
- available via VPX backplane:
  - → supports OpenVPX™ module profile MOD3-STO-2U-16.5.1-1

VPX Backplane Interface

- P0, P1 and P2 support OpenVPX® configuration
- configurable PCI Express (PCIe)® fabric interface supports:
  - → upstream a x4 PCIe port
  - → downstream four x1 PCIe ports or a x4 PCIe port
  - → PCI Express Gen 1 and Gen 2
- compatible with OpenVPX™ module (VITA 65) profiles:
  - → MOD3-PAY-2F-16.2.7-1
  - → MOD3-PAY-2F-16.2.7-2
  - → MOD3-PAY-1F4U-16.2.8-1
  - → MOD3-PAY-1F4U-16.2.8-3
  - → MOD3-PER-2F-16.3.1-2
  - → MOD3-PER-2F-16.3.1-3
  - → MOD3-PER-1F-16.3.1-1
  - → MOD3-PER-1F-16.3.1-2

System Management

- System Management interface:
  - → implements the SM0-1 interface
- on-board System Management Controller
- supports 8 Kbytes of non-volatile memory

Electrical Specification

- maximum current, XMC or PMC module is not fitted
- +5V VS3 @ 1.2A, voltage +5% / -2.5%
- +3.3V VS2 @ 1.2A, voltage +5% / -2%
- +3.3V AUX @ 0.2A, voltage +5% / -5%
- +12V AUX and -12V AUX routed to the XMC site

Safety

- PCB (PWB) manufactured with flammability rating of UL 94V-0

Environmental Specification

- operating temperature (at card edge):
  - → VITA 47 Class CC4, -40°C to +85°C
  - → conduction-cooled (VITA 48.2)
- non-operating temperature:
  - → VITA 47 Class C4, -55°C to +105°C
- operating altitude:
  - → -1,000 to 50,000 feet (-305 to 15,240 meters)
- 5% to 95% Relative Humidity, non condensing

Mechanical Specification

- 3U VPX form-factor (VITA 46.0, VITA 48.0): 3.9 inches x 6.3 inches (100mm x 160mm)
- slot widths (VITA 48.0):
  - → 0.8 inches VPX-REDI Type 2, RCT-Series
  - → 0.85 inches VPX-REDI Type 1, RCS-Series, Type 1 Two Level Maintenance (VITA 48.2)
- connectors to VITA 46.0 for P0, P1 and P2
- operating mechanical:
  - → shock - VITA 47 Class OS2, 40g
- random vibration - VITA 47 Class V3, $0.1g^2$/Hz

Please contact your local Concurrent Technologies sales office for further details on board build options and accessories.