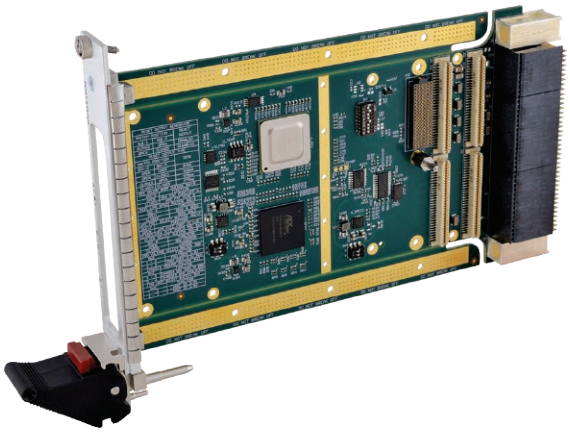
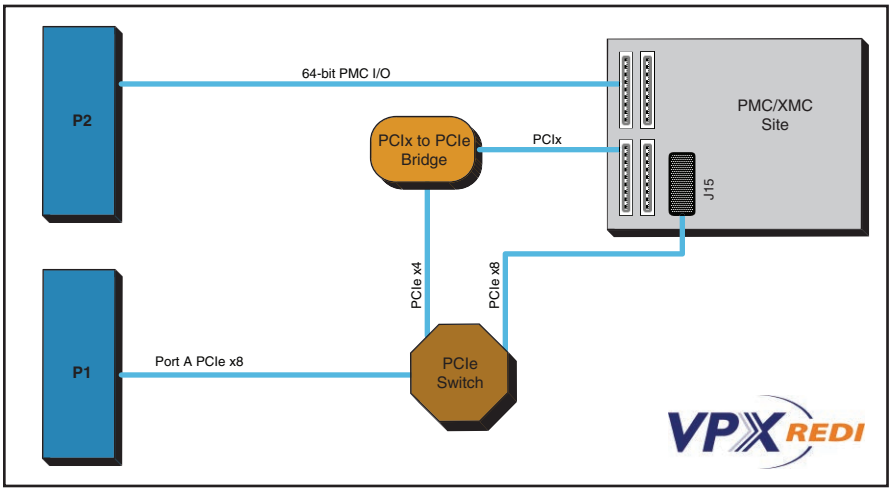
VPX Carrier Cards

VPX4810 VPX Carrier Cards for XMC or PMC Modules

2 YEAR WARRANTY





Air-cooled, conduction-cooled and REDI versions ◆ 3U ◆ One PMC/XMC slot ◆ PCIe x8 Gen 2 interface

Description

These 3U mezzanine carrier cards provide a simple and cost-effective solution for interfacing a PMC or XMC module to a VPX computer system. The carrier card routes power and bus signals to a plug-in mezzanine module through the VPX card slot connector. Industrial I/O and configurable FPGA modules from Acromag or other vendors are supported.

These carriers are ideal for high-performance industrial, defense, scientific research, and telephony systems requiring high-speed I/O expansion. The VPX4810-LF is available in three versions: air-cooled, conduction-cooled and a Ruggedized Enhanced Design Implementation (REDI VITA 48).

Key Features & Benefits

- PMC/XMC site uses 64-bit, 66/133MHz PLX technology with a PCIe to PCI-X bridge
- PCIe bus 8-lane Gen 1 or 2 interface
- Supports standard PMC/XMC modules (IEEE 1386.1)
- Conforms to VPX VITA 46.0, 46.4 and 46.9 specifications and optionally VITA 48
- Supports front or rear panel PMC/XMC I/O
- Supports 64 I/O lines (P14, VITA 46.9) via the P2 VPX connector
- 3.3V PCI-X signaling PMC site
- +12V and –12V provided to PMC/XMC site
- Monitors FRU information and module temperature

Conduction-cooled version

VPX REDI VITA 48 version

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Bulletin #8400-626h

VPX Carrier Cards

VPX4810 VPX Carrier Cards for XMC or PMC Modules

Performance Specifications

NOTE: Specifications for VPX4810 only.

General

Form Factor
3U VPX bus 6.299" (160mm) x 3.937" (100.0mm).

Pitch
VPX4810 (air-cooled): 0.80" pitch
VPX4810CC (conduction-cooled): 0.85" pitch
VPX4810REDI (conduction-cooled REDI): 1.00" pitch

VPX Carrier Interface
Compatible VITA 65 module / slot profiles:
MOD3-PER-1F-16.3.2-2 / SLT3-PER-1F-14.3.2
MOD3-PAY-1D-16.2.6-1[1] / SLT3-PAY-1D-14.2.6
Note 1: Board is compatible with payload profiles but has no hosting capabilities.

FRU EEPROM with temperature monitor.

PMC/XMC Interface
One IEEE 1386.1 PMC/XMC module in single VPX slot.

PMC site is PCI 3.0 compliant, 32/64-bit, 33/66MHz.

PMC site is PCI-X 1.0b compliant, 64-bit, 66/100/133MHz.

XMC site is PCIe Gen. 2.0 and 8 lanes wide.

3.3V, 5V and ±12V provided for PMC modules via the VPX backplane.

Front or rear panel I/O support for the PMC site with 64 I/O lines, or 32 differential pairs. Rear I/O is compliant to VITA 46.9 P2w1-P64s.

Power Requirements

Carrier-Only Power Requirements
+3.3V DC: 0.9A typical plus any additional power consumed by PMC/XMC.

+5V DC: 0.9A typical plus any additional power consumed by PMC and XMC (VPWR).

+12V DC and –12V DC provided to PMC and XMC site (aux only).

Environmental

Air-Cooled Operating Temperature
0 to 70°C (air flow requirement as measured to be greater than 200 LFM).

Conduction-Cooled Operating Temperature Range
-40 to 85°C (board must operate in a fully-installed conduction-cooled rack).

REDI (VITA 48) Operating Temperature Range
-40 to 85°C (board MUST operate in a fully-installed conduction-cooled, REDI supported rack).

Storage Temperature Range
-55 to 100°C.

Relative Humidity
5 to 95% non-condensing.

MTBF
2,652,569 hrs. at 25°C.

1,672,742 hrs. at 40°C.

Vibration
0.05g RMS (20 - 2000Hz) random, operating 6g RMS per Hz spectrum.

Shock
30g each axis, 11ms.

Ordering Information

Carrier Cards

VPX4810-LF
VPX carrier card, 3U, one PMC/XMC slot

VPX4810-CC-LF
Conduction-cooled version of VPX-4810

VPX4810-REDI-LF
Ruggedized enhanced design implementation (REDI VITA 48) version of VPX-4810-LF

Accessories

See www.acromag.com for more information.

Software Development Tools

See www.acromag.com for more information.

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