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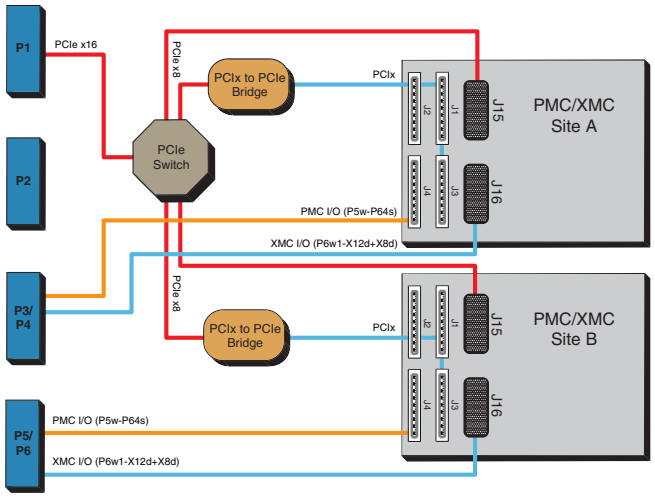
VPX Carrier Cards

VPX4821A VPX Carrier Cards for XMC or PMC Modules

2 YEAR WARRANTY



OpenVPX™



PCIe x8 Gen 2 interface via Data plane ◆ Two PMC/XMC slots ◆ 6U form factor

Description

The VPX4821A carrier card provides a simple and cost-effective solution for interfacing a PMC or XMC module to a VPX computer system.

Connect to the OpenVPX™ via Data plane for a direct PCIe connection over the VPX backplane. This allows host processors access to a high-performance, low latency interconnect to the PMC and XMC modules on the carrier card.

The PMC site uses 32/64-bit, PLX technology with a PCIe to PCI-X bridge; while the XMC site enables rapid data throughput with its use of an 8-lane PCIe Gen 2 interface. These sites support front or rear panel I/O.

By inserting PMC or XMC industrial I/O and configurable FPGA modules, developers can now leverage hundreds of available functions currently unavailable in a VPX platform.

These carriers are ideal for high-performance industrial, defense, scientific research, and telephony systems requiring high-speed I/O expansion. The VPX4821A is available in two versions: air-cooled and conduction-cooled.

The VPX4821A is one member of a family of 3U and 6U OpenVPX mezzanine carrier cards that support a simple and cost-effective solution for interfacing XMC or PMC modules to OpenVPX computer systems.

Key Features & Benefits

- Connects to OpenVPX™ via Data plane
- Support for upstream/downstream
- Optional backplane configuration for one 16-lane port, two 8-lane ports, or four 4-lane ports
- Supports dual standard (IEEE 1386.1) PMC/XMC modules with 25W mezzanine sites
- PMC site uses 32/64-bit, 33/66/133MHz PLX technology with a PCIe to PCI-X bridge
- Supports 64-bits of PMC I/O including differential routing to backplace per pattern "P64s" of VITA 46.9
- 5V tolerant with respect to PMC connectors
- XMC site uses PCIe x8 Gen 1 or 2 interface
- Supports 40-bits (20 pairs) of XMC I/O to backplane per pattern "X12d+X8d" of VITA 46.9
- Conforms to VITA 46.0, 46.4, 46.9
- Supports front or rear panel PMC/XMC I/O
- ±12V AUX power to PMC/XMC site
- Monitors FRU information and module temperature

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VPX Carrier Cards

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Performance Specifications

NOTE: Specifications below only for VPX4821A carrier. See PMC/XMC data sheet for additional specifications.

General

Form Factor
6U VPX bus 6.299″ (160mm) x 9.173″ (233.0mm).

Pitch
VPX4821A (air-cooled): 1.0″ pitch.
VPX4821A-CC (conduction-cooled): 0.81″ pitch.

Front Panel
The VPX4821A-LF has a 1.0″ VITA 48.1 front panel. Contact the factory for IEEE 1101.10 1.0″ and 0.8″ options.

VPX Carrier Interface
Compatible VITA 65 module / slot profiles:

Data Plane PCIe Gen 1
MOD6-PER-4F-12.3.1-2, MOD6-PER-2F-12.3.2-1, MOD6-PER-1U-12.3.3-1, MOD6-PER-1F-12.3.4-1

Data Plane PCIe Gen 2
MOD6-PER-4F-12.3.1-3, MOD6-PER-2F-12.3.2-2, MOD6-PER-1U-12.3.3-2, MOD6-PER-1F-12.3.4-2

Note 1: Board is compatible with payload profiles but has no hosting capabilities.

FRU EEPROM with temperature monitor.

PMC/XMC Interface
Two IEEE 1386-2001 PMC/XMC modules in a single VPX slot.

PMC site is PCI-X 2.0 compliant, 32/64-bit, 33/66/133MHz, up to 1GB/s.

XMC site is PCIe Gen 2 and 8 lanes wide.

Front panel I/O support for the PMC/XMC site with 32 differential pairs (air cooled only).

Rear I/O support for the PMC site with 64 I/O lines.

Rear I/O support for XMC site with 20 differential pairs.

VITA 46.9 compliance:
Slot 1 rear I/O map is P3w1-P64s+P4w1-X12d+X8d.
Slot 2 rear I/O map is P5w1-P64s+P6w1-X12d+X8d.

Power

Power Requirements
+5V DC (0 to 70°C):
8A maximum generated from +12V supply.

+5V DC (-40 to 85°C):
5A maximum generated from +12V supply.

+3.3V DC (0 to 70°C):
8A maximum generated from +12V supply.

+3.3V DC (-40 to 85°C):
5A maximum generated from +12V supply.

+3.3V Aux DC: 5mA typical.

+12V DC and –12V DC provided to PMC site from VPX backplane.

+12V DC: Backplane voltage provided to XMC.

±12V Aux DC.
Note: see manual for further information.

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).

Storage Temperature Range
-55 to 100°C.

Relative Humidity
5 to 95% non-condensing.

Weight
VPX4821A-LF: 1.25 lbs (0.5669kb)

VPX4821A-CC-LF: 1.5 lbs (0.6804kg)

Dimensions
Length: 10in

Height: 6.5in

Width: 1in

Ordering Information

Carrier Cards

VPX4821A-42-LF
Air-cooled 6U VPX XMC/PMC Carrier for Data Plane with VITA 42

VPX4821A-42-CC-LF
Conduction-cooled 6U VPX XMC/PMC Carrier for Data Plane with VITA 42

VPX4821A-61-LF
Air-cooled 6U VPX XMC/PMC Carrier for Data Plane with VITA 61

VPX4821A-61-CC-LF
Conduction-cooled 6U VPX XMC/PMC Carrier for Data Plane with VITA 61

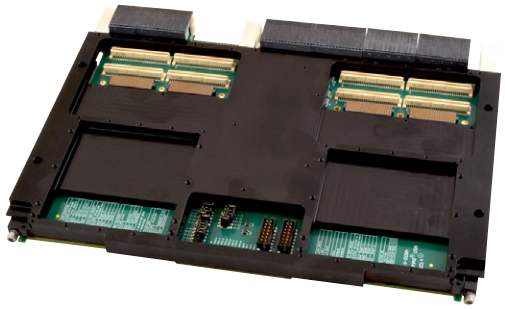
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