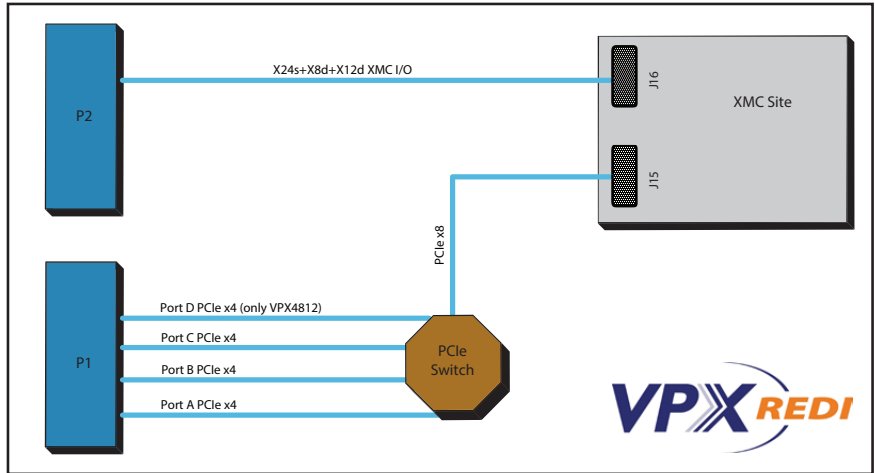
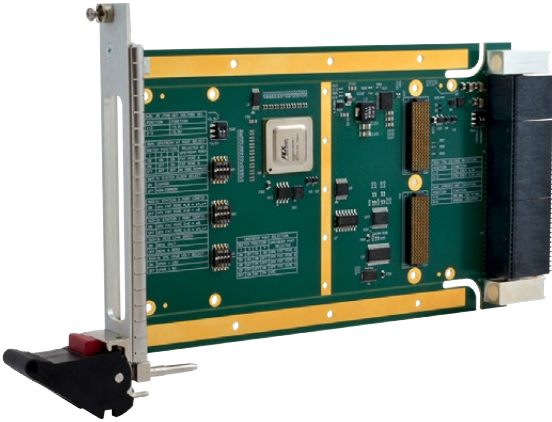


VPX Carrier Cards

VPX4812 / VPX4814 VPX Carrier Cards for XMC Modules



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

Description

These 3U mezzanine carrier cards provide a simple and cost-effective solution for interfacing a 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.

The VPX4812 can be used as a VPX switch card allowing a host CPU to communicate with up to 3 downstream cards in addition to the XMC card. Each VPX port can be configured to be x4 or x8.

The VPX4814 is a peripheral XMC carrier board designed to be used in a system that uses a VPX AcroExpress CPU.

These carriers are ideal for high-performance industrial, defense, scientific research, and telephony systems requiring high-speed I/O expansion. The VPX4812 and VPX4814 is available in three versions: air-cooled, conduction-cooled and a Ruggedized Enhanced Design Implementation (REDI VITA 48).

Key Features & Benefits

- PCIe bus 8-lane Gen 1 or 2 interface
- Supports standard 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 XMC I/O
- Rear I/O is compliant to VITA 46.9 X24s+X8d+X12d
- +12V and -12V provided to XMC site
- Monitors FRU information and module temperature



Conduction-cooled version



VPX REDI VITA 48 version



844-878-2352 ■ solutions@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

VPX Carrier Cards

VPX4812 / VPX4814 VPX Carrier Cards for XMC Modules

Performance Specifications

■ General

Form Factor

3U VPX bus 6.3" (160mm) x 3.94" (100.0mm).

Front Panel

The VPX4821-LF has a 1.0" VITA 48.1 front panel. Contact the factory for IEEE 1101.10 1.0" and 0.8" options.

Bus Compliance

VITA 46.0, 46.4, 46.9, 48 and 65.
MIL Spec 217-F @ 105,000 hours.

■ VPX Carrier Interface

VPX4812

Compatible VITA 65 module / slot profiles:

MOD3-SWH-4F-16.4.5-2 / SLT3-SWH-4F-14.4.4

MOD3-PER-1F-16.3.2 / SLT3-PER-1F-14-3.2.

FRU EEPROM with temperature monitor.

VPX4814

AcroExpress™ VPX6600 system compatible.

Compatible VITA 65 module / slot profiles:

MOD3-PER-1F-16.3.2 / SLT3-PER-1F-14-3.2.

FRU EEPROM with temperature monitor.

Compatible with systems that use UTP control plane interfaces.

■ XMC Interface

One IEEE 1286.1 XMC module in single VPX slot.

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

3.3V and ±12V provided for XMC modules via the VPX backplane.

Front I/O is supported on air-cooled only.

Rear I/O is supported via XMC P16 and is compliant to VITA 46.9 X24s+X8d+X12d.

■ Power Requirements

Carrier-Only Power Requirements

+3.3V DC: 0.2A typical plus any additional power consumed by XMC (4A max).

+5V DC: 0.8A typical (4A max).

+12V DC and -12V DC provided to XMC site from VPX backplane.

■ Environmental

Air-Cooled Operating Temperature

-40 to 70°C (air flow requirement to be greater than 200 LFM).

Conduction-Cooled Operating Temperature

-40 to 85°C (board must operate in a fully-installed conduction-cooled rack).

REDI (VITA 48) Operating Temperature

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

Storage temperature

Air-cooled: -40 to 85°C.

Conduction-cooled/REDI: -40 to 105°C.

Relative humidity

5% to 95% non-condensing.

MTBF

1,595,069 hrs. at 25°C.

1,225,286 hrs. at 40°C.

Shock

Operating:

Designed to comply with VITA 47 Class OS1, 20g, 11ms half sine and terminal sawtooth shock pulses.

Vibration

Operating:

Designed to comply with VITA 47 Class V1.

Ordering Information

Carrier Cards - [Go](#)

[VPX4812-LF](#)

VPX carrier card, 3U, one XMC slot.

[VPX4812-CC-LF](#)

Conduction-cooled version of VPX4812.

[VPX4812-REDI-LF](#)

Ruggedized enhanced design implementation (REDI VITA 48) version of VPX4812.

[VPX4814-LF](#)

AcroExpress® VPX6600 system compatible.

VPX carrier card, 3U, one XMC slot.

[VPX4814-CC-LF](#)

Conduction-cooled version of VPX4814.

[VPX4814-REDI-LF](#)

Ruggedized enhanced design implementation (REDI VITA 48) version of VPX4814.

Accessories

[TRANS-V112-LF](#)

Rear transition module.

[5028-564](#)

JTAG development cable

Software Development Tools

See www.acromag.com for more information.

Related Products

[XMC boards](#)

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