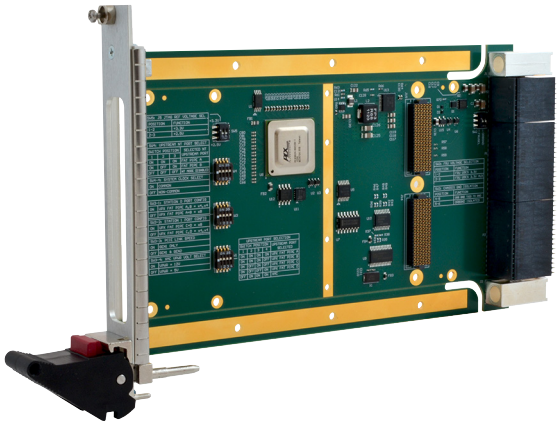
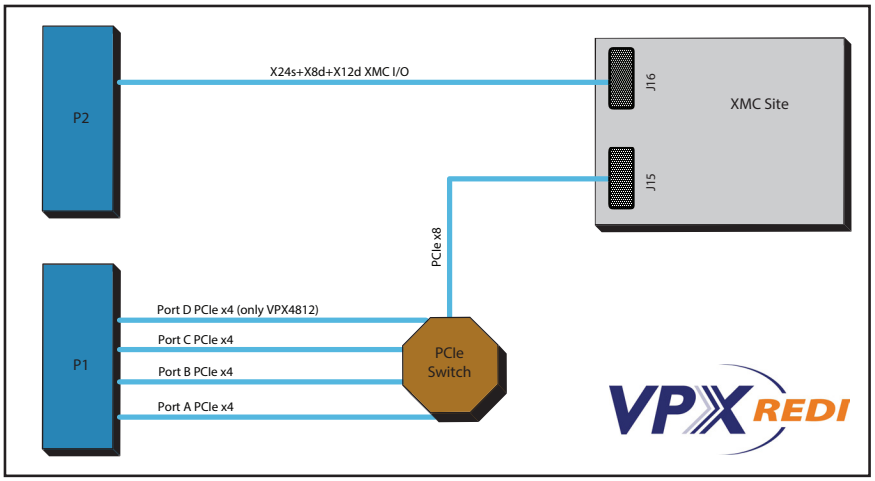
VPX Carrier Cards

VPX4812A / VPX4814A VPX Carrier Cards for XMC Modules

CE 2 YEAR WARRANTY RoHS Compliant





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 VPX4812A 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.

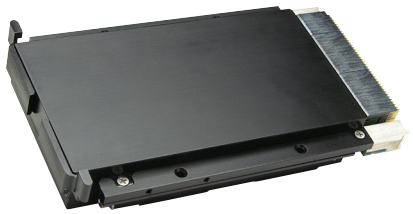
The VPX4814A is a peripheral XMC carrier board designed to be used in a system that uses a VPX AcroExpress® CPU.

These carriers are ideal for high-performance industrial, defense, scientific research, and telephony systems requiring high-speed I/O expansion. The VPX4812A and VPX4814A 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

Acromag THE LEADER IN INDUSTRIAL I/O

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VPX Carrier Cards

VPX4812A / VPX4814A 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 VPX4821A-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

VPX4812A
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.

VPX4814A
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 sytems 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.

+/-12V AUX provided from VPX backplane.

VPWR selectable between +5V or +12V

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
Board is powered from VS1 (+12V) only.
VS2 (+3.3V) and VS3 (+5V) are not used.

Carrier only: +12V 0.4A typical 1A max.

+12V AUX and -12V AUX 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
-40 to 85°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

VPX4812A-LF
VPX carrier card, 3U, one XMC slot.

VPX4812A-CC-LF
Conduction-cooled version of VPX4812.

VPX4812A-REDI-LF
Ruggedized enhanced design implementation (REDI VITA 48) version of VPX4812.

VPX4814A-LF
AcroExpress® VPX6600 system compatible.
VPX carrier card, 3U, one XMC slot.

VPX4814A-CC-LF
Conduction-cooled version of VPX4814.

VPX4814A-REDI-LF
Ruggedized enhanced design implementation (REDI VITA 48) version of VPX4814.

Accessories

TRANS-V112-LF
Rear transition module.

5028-564
JTAG development cable

Related Products

XMC boards

ISO9001
AS9100
MADE IN USA

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