- **Adapt one XMC.3 (PCI Express VITA 42.3) card to a PCI Express slot**
- **PCI Express x1 lane interface**
- **Selective Active signal equalization and compensation for robust operation in any PC**
- **Transparent operation (No Software drivers required for operation)**
- **All signals from P16 connector brought out to 78 - pin D-Sub connector**
- **Triggering and clocking support features for Innovative X3 IO cards**
- **IEEE 1384 XMC mechanicals**
- **50W power provided to the card**
- **Optional connection to external power supply provides extended power capacity to the card**
- **8 CFM fan (consumes 2ndslot)**
- **Conduction-Cooling (VITA20) for card**
- **½ size PCI Express card**

OVERVIEW

The PCI Express to XMC adapter allows a single width XMC card to be used in a PCI Express slot. The XMC site is VITA 42.3 compatible and supports a single (X1) PCI Express lane. The adapter is completely transparent to PCI Express. The adapter helps to compensate for poor system signal quality by providing adjustable signal equalization and compensation for the high speed PCI Express signals. The P16 connector breakout provides convenient access to all P16 signals through a 78-pin D-sub connector. 20 pairs of signals from P16 are routed as differential pairs to JDP1 so that high-speed IO standards can be used to the cable. Balance 38 signals are provided as single ended. Using the optional power jack to the adapter card may provide more power to the XMC card. The power jack provides +12V to the adapter and powers an on-board 3.3V@3A and 5V@3A. XMC card cooling is provided with a fan and also using Conduction-Cooling per VITA standard 20. The bracket mates to standard PMC end brackets and support an EMI gasket. All connectors from the XMC end bracket are fully accessible. No software is required to operate the adapter.

HARDWARE

The adapter uses a Pericom PI2EQX4401 re-driver between the PCI Express host bus and XMC PCI Express interface. This re-driver chip buffers the PCI express lanes and clock signals. The equalization and signal amplification are programmable using the Dipswitches on the card. This allows the card to be tuned to operate in adverse conditions where the PCI Express signals weak are distorted. The re-driver supports 1 active lane and is compatible with PCI Express Base Specification Rev 1.0a. The PCI Express lane operates at 2.5 Gbps. This Pericom redriver is supplied with regulated 1.8V supply.

Software

No software required

Applications

- Add XMC cards to standard PCIe host systems
- Custom interfaces to XMC P16 connector
- Multi-card system synchronization and control

AT-PCIe-XMC-Adapter

PCIe to XMC Adapter Card

PRODUCT SPECIFICATIONS

- +12V selection to the XMC connector can be either from PCIe edge connector or from optional power supply
- +3.3V selection to the XMC connector can be either from PCIe edge connector or from optional power supply

Power Capability Delivered to the XMC

- 3.3V: Supplied by PCIe bus or on-board regulator, as selected by Jp2
- +12V: Supplied by PCIe bus or on-board regulator, as selected by Jp1
- -12V: 1A max (supplied by on-board DC-DC)

Clock

- Clock Inputs: From PCIe connector differential clock
- Clock levels: 0 = <0.7V, 1 = >2.4V -0.3V min, 3.6V

Physical

- PCI Express half card
- Dimension: 4.20 in x 6.54 in
- Slots: Consumes 2 slots when fan is installed; single slot without fan

XMC Site

- Form Factor: 74 mm x 143.75 mm cards (IEEE 1386)
- Mounting height: 10mm for single slot
- Specification: VITA 42.3

Cooling

- Fan: ~8 CFM
- Conduction-Cooling
- Conduction-Cooling from card to adapter and chassis
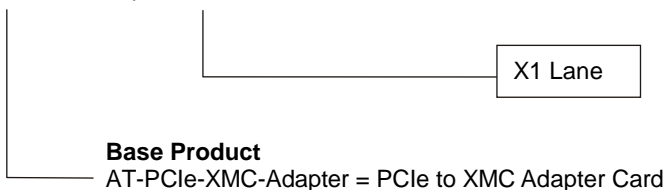- Specifications VITA 20 Conduction-Cooling

Warranty

- 1 Year limited warranty

ORDERING INFORMATION

Hardware Selection

AT-PCIe-XMC-Adapter- Lane Width

| X1 Lane |

Base Product
AT-PCIe-XMC-Adapter = PCIe to XMC Adapter Card

- Contact sales for support for other Operating Systems
- Contact sales for configuration of front and rear I/O configuration
- Contact sales for environmental options

Distributor/Reseller

November 2023