

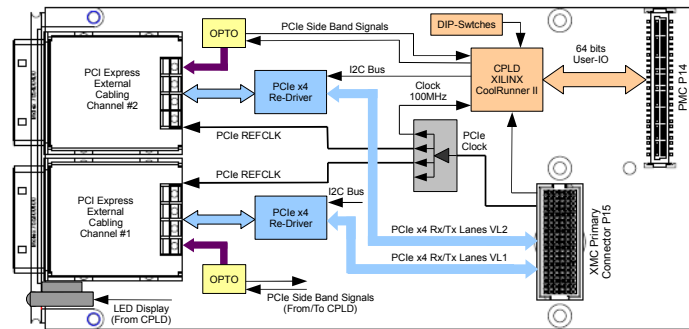


XMC_3105 - Dual PCIe x4 External PCI Express XMC Mezzanine

Data Sheet XMC_3105

Features

- Dual PCI Express x4 External cabling Standard Interface.
- Support for PCI Express Upstream and Downstream connections.
- OPTO coupler isolation for PCI Express cabling sideband signals.
- PCIe x4 GEN1 & GEN2 Re-Driver with Equalization / Emphasis configurable by strap & I2C Bus
- DIP-Switches for setting static options through XILINX CoolRunner II CPLD control.
- PCI Express Clock Re-Driver with very low jitter, low skew & low power.
- CPLD logic for XMC sideband signals and front panel dual Bi-color LED display.
- Optional PMC-Pn4 connector for User defined Back-IO LVTTTL connections.



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Overview

IOxOS Technologies introduces the XMC3105 mezzanine to extend the number of PCI Express External cabling interface for its PEV1100, IPV1102 and IFC1201 PCI Express Intelligent VME64X PMC/XMC Carrier platforms.

This PCI Express External cabling extension allows to build easily different PCI Express system architectures like Multi-PCIe x4 Branches for connecting more VME 64X Chassis or to build PCI Express Intelligent Switch for up to 4 PCI Express channels in a single slot VME64X industrial 6U form factor

XMC Mezzanine

The XMC3105 mezzanine complies with ANSI/VITA 42.3-2006 and ANSI/VITA 42.0-2008 specifications. It is designed to fit a single width XMC mezzanine form factor and implements the XMC-P15 connector for the dual PCI Express x4 Lanes and the 3.3V power (XMC-P16 is not implemented). The optional PMC/XMC P14 connector could be implemented for LVTTTL user-defined Back-IO through CPLD programming.

Environment

- Commercial temperature grade 0 to 50 °C
- Designed for Air-Cooled System
- XMC 3.3Volts/1.2A Power Supply requirement

PCI Express External Cabling

The XMC3105 mezzanine implements 2 independent PCIe x4 standard connectors full compliant with the PCI Express External Cabling Rev.2.0 PCI-SIG specification.

Each PCIe x4 channel implements sideband signals for both Upstream and Downstream Subsystem connection. The selection is performed for each channel by DIP-Switches setting that configure the related CPLD logic. OPTO coupler isolation and Open-Drain drivers are automatically configured for Upstream and Downstream Subsystems.

PCI Express Re-Driver

The XMC3105 mezzanine implements PERICOM PCI Express GEN2 Re-Driver for each channel to provide Equalization and Emphasis amplifier for supporting short and long PCI Express External cabling up to 7 meters. The configuration of these PCIe x4 Re-drivers is assumed by the CPLD logic through simple DIP-Switch setting. At the Power-ON, the CPLD will configure through the I2C Bus each PCIe Re-Driver according programmed modes selected by the DIP-Switches.

Dip-Switches setting Mode for :

- Rx Equalization Level from 0 to 12.3 dB
- Tx Emphasis Level from 0 to -8.5 dB
- Tx Output Swing from 0.5 to 1.0 Volt

Ordering Information

Article Reference	Product Description
XMC3105-A0	Dual PCI Express x4 External Cabling XMC single width mezzanine

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