RIGEL ENGINEERING

Custom solutions with off-the-shelf pricing

XC5000

Dual 10GbE port card for XMC

Features:

⭐ Dual 10GbE ports on an XMC platform
⭐ Air-Cooled and Rugged, Conduction-Cooled available
⭐ Vita Standard 42.0 compliant
⭐ Vita Standard 42.6 Type 1 pinout compliant
⭐ 2 independent 10GbE channels
⭐ 10GbE ports support SFP+ transceivers
⭐ Supports 10GBASE-LR/SR or 10GSFP+Cu interfaces
⭐ Optional Dual XAUI, CX4 or KX4 backplane interfaces
⭐ Configured as a single x8 PCI Express 2.0 VITA 42.3 on P15
⭐ PCIe x8 5GT/s Generation 2 speed (Gen 1 compatible)
⭐ Supports Jumbo Frames
⭐ 64-bit Addressing
⭐ 128 Transmit Queues
⭐ Rigel's Standard 3 Year Warranty

Rigel's XC5000 Dual 10GbE card is a powerful, high-speed, dual-port, 10 Gigabit Ethernet interconnect solution for an XMC platform. The model XC5000 provides two full-speed and fully independent 10GbE ports. Each port supports 10GBASE-LR, 10GBASE-SR or 10GSFP+Cu connectivity using universal SFP+ cages on the front panel or optional XAUI, CX4 or KX4 to the backplane.

The XC5000 features Intel's 3rd generation 10GbE controller, the 82599ES Dual-port 10GbE controller. The XC5000 utilizes the 82599ES controller interfaced to the processor through a single x8 lane PCI Express port. It will auto-negotiate to a reduced number of PCIe lanes if necessary. The 82599ES controller is capable of negotiating the PCIe lanes down to x4, x2 or x1.

The 82599ES employs the latest in Intel's Virtualization Technology for Connectivity (VT-c) to streamline intelligent offloads and storage over Ethernet applications.

The XC5000's flexibility and state of the art design make it ideal for high-speed peer-to-peer communication applications among many others that require high performance communication.

Contact our experienced engineering team to learn more about the XC5000.

Hardware Specifications

XMC PCIe Host Interface

- ★ PCIe Gen 2 (compatible with Gen 1)
- ★ Single x8 default PCIe configuration
- ★ PCIe Base Specification Rev 2.0
- ★ 100MHz PCIe Frequency
- ★ Port widths of x8 (default), x4, x2 & x1 supported

Ethernet

- ★ One Intel 82599ES Dual Port controller
- ★ 2 SFP+ pluggable interfaces (front panel)
- ★ 10GBASE-LR, 10GBASE-SR or 10GSFP+Cu connectivity
- ★ Optional J16 XAUI, CX4 or KX4 routed per Vita 42.6 link 2 & 3

Memory

- ★ 8 Mbit Serial Flash for optional Boot ROM
- ★ 128 Kbit Serial EEPROM for configuration

Miscellaneous

- ★ All power good LED
- ★ 8 Ethernet LEDs, Link, speed & Activity
- ★ Various software driver support

Physical / Electrical / Environmental

- ★ Standard XMC single-slot form factor (Vita 42.0)
- ★ 2.3 oz / 65 grams

- ★ +12V Maximum / typical power :   TBD
- ★ +5V Maximum / typical power :   TBD
- ★ +3.3V Maximum / typical power :   TBD
- ★ +5V_SB Maximum / typical power :   TBD

- ★ Temperature:
  - Operating (standard) :   0°C to +70°C
  - Storage :   -40°C to +85°C

- ★ Relative Humidity:
  - Operating: 5% to 95%, non-condensing
  - Storage: 5% to 95%, non-condensing
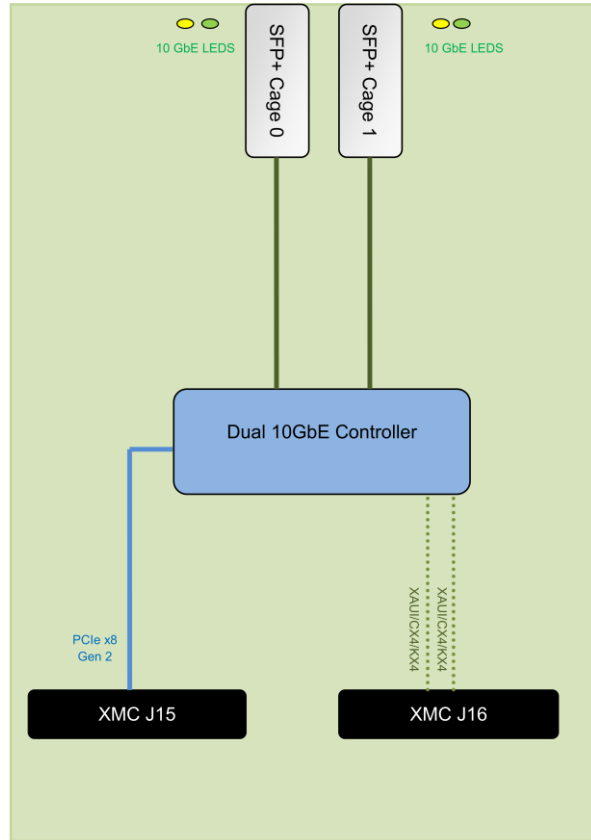
Ordering Information

XC5000-xx00

Base Model

Operating Temperature & Cooling Options

0 = 0°C to +70°C, Air Cooled
1 = -40°C to +85°C, Air Cooled
2 = -40°C to +85°C, Conduction Cooled
Z = Customer specific board configuration

Ethernet Connectivity

0 = Dual Front Panel SFP+ Cages
1 = Dual J16 XAUI
2 = Dual J16 CX4
3 = Dual J16 KX4

Reserved

Reserved

At Rigel Engineering, we are dedicated to working directly with your Engineers and System Designers to provide the best possible solution that meets or exceeds your requirements.

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