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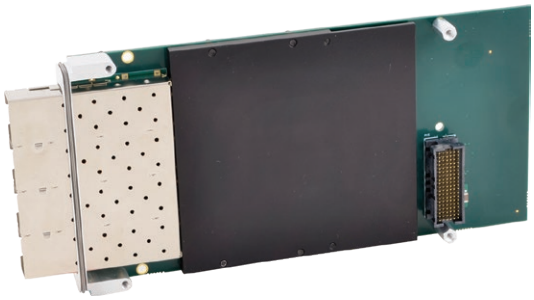
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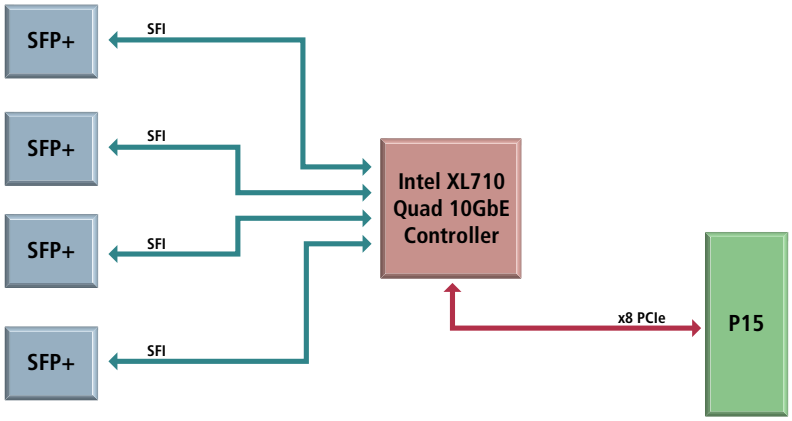
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Find the *Acromag XMC631-42-20* at our website: ***Click HERE***

XMC Modules

XMC631 10-Gigabit Ethernet Network Interface Card (NIC)





Quad SFP+ ports ◆ Intel® XL710 Controller ◆ PCIe Gen 3 x8 interface ◆ Extended temperature operation

Description

Acromag's XMC631 module provides up to four 10-GbE interface ports. Different models are available for extended temperature operation and VITA 42/61 connector options to support a PCIe Gen 3 interface. Four SFP+ ports support optical or copper cabling.

Intel's XL710 quad-port 10-gigabit Ethernet controller delivers high-performance and offers many powerful networking capabilities. Advanced virtualization, intelligent offload and accelerator technologies optimize network performance.

Combining the intelligent off-loading features of the XL710 controller with the processing power of a Xeon-D processor can deliver outstanding performance levels. Together, the two Intel devices provide a balanced hybrid solution of compute and off-load to achieve optimal performance and efficiency in an embedded system.

Designed for COTS applications, these rugged XMC mezzanine modules offer a high-density, high-performance solution for network interface applications. They are ideal for use in defense, aerospace, industrial, and scientific research computing systems.

Key Features & Benefits

- Industry-leading Intel XL710 controller with four independent 10-GbE interfaces
- Four SFP+ ports support 10GBASE-SR, 10GBASE-LR, 10GBASE-T and 10GSFP+Cu connections
- PCIe x8 Gen 3 interface
- IEEE 1588 and 802.1AS precision timing
- IEEE 802.3az Energy Efficient Ethernet (EEE)
- Advanced traffic steering capability increases transaction rates and reduces latency
- VMDq for emulated path
- Dynamic load balancing
- Flexible port partitioning (PCI-SIG SR-IOV)
- Tx/Rx IP, TCP/UDP/SCTP, IPv4/IPv6 checksum offloads lower processor usage
- Jumbo frame packet support up to 9.5KB
- Up to -40 to 85°C operation
- Linux® and Windows® support
- CE compliant.

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Tel 248-295-0310 ■ solutions@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

Bulletin #8400-979b

XMC Modules

XMC631 10-Gigabit Ethernet Network Interface Card (NIC)

CE RoHS Compliant 2 YEAR WARRANTY

Performance Specifications

Ethernet Interface

Ethernet Controller
Intel® XL710

Network Interface
Four SFP+ 10-Gigabit Ethernet interfaces.

Complies with IEEE 802.3-2008 standard for Ethernet.

Complies with IEEE 802.3ae-2002 amendment for 10 Gb/s Ethernet.

Throughput
10,000 MB/s (10GB/s) per port, full-duplex.

Total aggregate rate limited by PCIe host interface.

XMC Host Interface

XMC Compliance
Complies with ANSI/VITA 42.0 specification for XMC module mechanicals and connectors.

Complies with ANSI/VITA 42.3 specification for XMC modules with PCI Express interface.

PCI Express
Conforms to PCI Express Base Specification, Rev. 3.1.

PCIe 8-lane (x8) Gen 3 interface operates at a bus speed of 8 Gbps per lane per direction.

Gen 3 PCIe interface requires VITA 61 connectors.

Gen 2 PCIe interface supported w/ VITA 42 connectors

Electrial / Mechanical

SFP+ Connectors
Four front panel connector cages for insertion of SFP+ transceiver modules supporting optical or copper cables.

Complies with SFF-8431 specification.

XMC Connectors
P15 for PCIe bus via eight high-speed serial lanes.

Available as VITA 42 standard or VITA 61 upgrade for PCIe Gen 3 applications.

Power Requirement
3.3V: 250mA idle, 250mA active, 400mA max.

5.5V: 470mA idle, 565mA active, 1100mA max.

12V: 220mA idle, 260mA active, 485mA max.

Power: 3.0W idle, 3.5W active, 6.2W max.

Dimensions
Single-width XMC. 149 x 74 x 10 mm.

Unit weight: 104.2 g.

Environmental

Operating Temperature Range
Operation - Industrial: 0 to 70°C.

Operation - Extended: -40 to 85°C (200 lfm airflow min.)

Storage: -55 to 125°C.

Relative Humidity
5 to 95% non-condensing.

Shock
Designed to comply with VITA 47 Class OS1.

Vibration
Designed to comply with VITA 47 Class V1.

Certifications
CE compliant.

Software Support

Linux® and Windows® Systems
Intel XL710 Ethernet Controller drivers available at www.intel.com.

Ordering Information

XMC Modules

XMC631-42-20
10GbE NIC with quad SFP+ front I/O, VITA 42, industrial temperature ratings

XMC631-61-20
10GbE NIC with quad SFP+ front I/O, VITA 61, industrial temperature ratings

XMC631-42-30
10GbE NIC with quad SFP+ front I/O, VITA 42, extended temperature ratings

XMC631-61-30
10GbE NIC with quad SFP+ front I/O, VITA 61, extended temperature ratings

Accessories

SM10G-LR
10-GbE long reach single-mode optical SFP+ module.

SM10G-SR
10-GbE short reach single-mode optical SFP+ module.

TAPCABLE1M
SFP+ cable, SFP+-to-SFP+ (male-male) connectors, 1 meter.

Carrier Cards

PCIe Carriers

VPX Carriers

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AS9100
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