ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

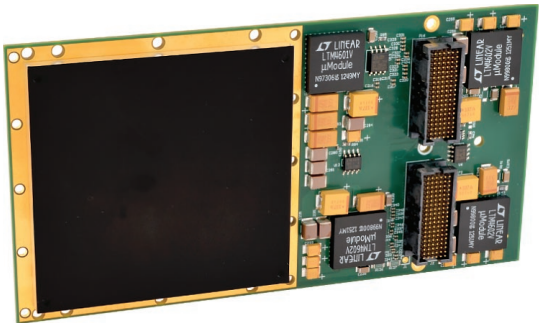
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

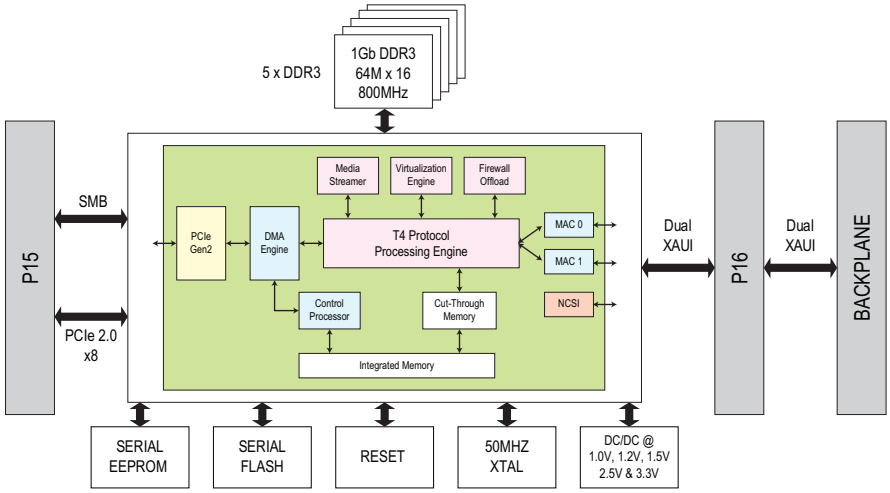
Find the *Acromag XMC-6260-CC-LF* at our website: ***Click HERE***

XMC Modules

XMC-6260-CC 10-Gigabit Ethernet Interface Module with Dual XAUI Ports

RoHS Compliant | 2 YEAR WARRANTY





XMC module with TCP/IP offload engine ASIC ◆ Dual XAUI 10GBASE-KX4 ports ◆ PCIe x8 Gen2

Description

Acromag's XMC-6260-CC provides a 10-gigabit Ethernet (10GbE) interface solution for data-intensive real-time embedded computing systems. Ultra-high performance is achieved using an ASIC-based TCP/IP offload engine (TOE).

Typical applications include high-speed data storage, image collection/transfer, distributed control networks, and board-to-board interfaces.

Fully Integrated Network Interface Card

With the adoption of 10GbE interfaces and rapidly increasing volumes of data, even the most powerful embedded processors can no longer manage data flow without a significant reduction in performance. To solve this problem, Acromag's XMC-6260-CC pairs a high-performance Chelsio T4 purpose-built multi-protocol processor with two channels of 10GbE connectivity. This combination maintains maximum 10GbE performance to meet the needs of data-intensive real-time applications.

High Performance Protocol Offload Engine

A PCI Express v2.0 x8 host interface provides a high-speed connection to the system processor. With support for 5Gbps data rates, the PCIe interface delivers up to 32Gbps of bandwidth to the server. This connection accommodates stateless offloads, packet filtering (firewall offload), and traffic shaping (media streaming).

Complete and Flexible TCP Offload

The XMC-6260-CC's TOE ASIC has hundreds of programmable registers for protocol configuration and offload control. As a result, the XMC-6260-CC can offload TCP processing per connection, per server, per interface. It can also globally and simultaneously tunnel traffic from non-offloaded connections to the host processor for the native TCP/IP stack to process. Additionally, the XMC-6260-CC provides a flexible zero-copy capability for regular TCP connections, requiring no changes to the sender, to deliver line rate performance with minimal CPU usage.

Packet Switching and Routing

The XMC-6260-CC integrates a high-performance packet switch, which allows switching of traffic from any of the input ports to any of the output ports (wire-to-wire), and from any of the output ports to any of the input ports (host-to-host).

Compatibility

Acromag's XMC-6260-CC provides guaranteed interoperability and compatibility with the full Ethernet standard.

Extensive Software Support

The XMC-6260-CC offers a full suite of protocol software and drivers. Linux software tools support all offload (TOE) and network interface (NIC) operations. Windows software supports NIC operations.

Key Features & Benefits

- Dual port 10 GbE via XAUI 10GBASE-KX4
- XMC PCI Express Gen2 x8
- Supports up to 1M connections
- Full offload support for:
  - TCP
  - UDP
  - iSCSI,
  - FCoE (Fiber Channel over Ethernet)
- Low processor overhead
- Very low Ethernet latency
- High-level determinism
- Zero-copy direct data placement
- Traffic filtering and management
- 5Gb DDR3 memory to enhance the number of virtual connections
- Designed for conduction-cooled host card or up to -40 to 85°C operation

Acromag® THE LEADER IN INDUSTRIAL I/O

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

XMC Modules

XMC-6260-CC 10-Gigabit Ethernet Interface Module with Dual XAUI Ports

RoHS Compliant 2 YEAR WARRANTY

Performance Specifications

Communication

Ethernet interface
Dual XAUI ports.

Throughput
2500Mbytes per second, per port, full-duplex.

Latency
2µs end-to-end.

PCI Express
PCIe 8-lane (x8) Gen 2.0 interface.

Determinism
±1µs.

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.

Complies with ANSI/VITA 42.6 specification for XMC modules with XAUI interface.

Electrical/Mechanical Interface: Single-Width Module.

TCP/IP Offload Engine (TOE)

TOE processor
The ASIC incorporates two XGMAC (10GbE) interfaces. These interfaces are labeled MAC0 and MAC1. The ports support 10GBASE-KX4 and XAUI standards. They contain four lanes (four differential TX pairs and four differential RX pairs) of high speed SERDES. KX4 and XAUI operations will use all four lanes of MAC0 and MAC1. For MAC0 and MAC1, all 10GbE serial communication takes place on Lane 0 only.

Software Support

Linux operating systems
Drivers available with support for all TOE and NIC functions. Please contact factory for details.

Windows operating systems
Drivers available with support for NIC functions. Please contact factory for details.

Electrical

XMC PCIe bus interface (P15 and P16)
One 114-pin male connector
(Samtec ASP-103614-05 or equivalent).

P15 primary XMC connector
8 differential TX pairs (PCIe) and
8 differential RX pairs (PCIe).

Optional JTAG: 6 JTAG signals
(TDI, TDO, TMS, TCK, 3.3V, and ground).
JTAG interface follows IEEE Standard 1149.1, which defines a test access port (TAP) and boundary-scan architecture.

System Management (XMC provides hardware definition information read by an external controller using IPMI commands and I2C serial bus transactions.)

3.3V power: 4 pins at 1A/pin.
3.3V auxiliary power: 1 pin for system management.
Variable power (5V or 12V): 8 pins at 1A per pin.

P16 XMC connector
2 ports each with 4 differential TX pairs and 4 differential RX pairs (XAUI/KX4 operations).

1 global clock differential pair.

Environmental

Operating temperature
-40 to 85°C.

Storage temperature
-55 to 125°C.

Relative humidity
5 to 95% non-condensing.

Power requirements
3.3V (±5%): Consult factory.
5V (±5%): Consult factory.
12V (±5%): Consult factory.

MTBF
Contact the factory.

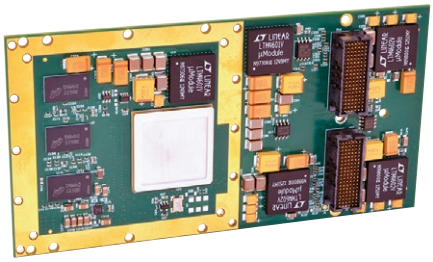
Ordering Information

XMC Modules

XMC-6260-CC-LF
10-gigabit Ethernet interface module, lead-free

Accessories

For more information, see www.acromag.com.



Comparison of TCP/IP Offload Engines (TOE): ASIC vs. Software Stack		
	Acromag ASIC TOE 10GbE Interface	Software Stack TOE 10GbE Interface
Throughput per Port, Full-Duplex	2500MBps (full-duplex)	40MBps (limited by CPU)
Host Overhead	very low	very high
User-to-User Latency	2µs	250µs
Determinism	±1µs	±200µs
Reliability Under Load	Excellent (any load condition)	Variable (dependent on load)

ISO9001
AS9100
MADE IN USA

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

All trademarks are property of their respective owners. Copyright © Acromag, Inc. 2019. Data subject to change without notice. Printed in USA 10/2019.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP