GALLEON QUAD GIGABIT ETHERNET XMC
Rugged Optical LC

The Galleon Titan Quad Gigabit Ethernet XMC offers high-performance Ethernet for a wide range of applications. Based on the high-performance Intel i350 quad port Gigabit Ethernet controller, the Titan Quad Gigabit Ethernet XMC supports IEEE 1588 Precision Time Protocol (PTP), making it suitable for time critical applications. Providing UDP, TCP and IP checksum offload functionality.
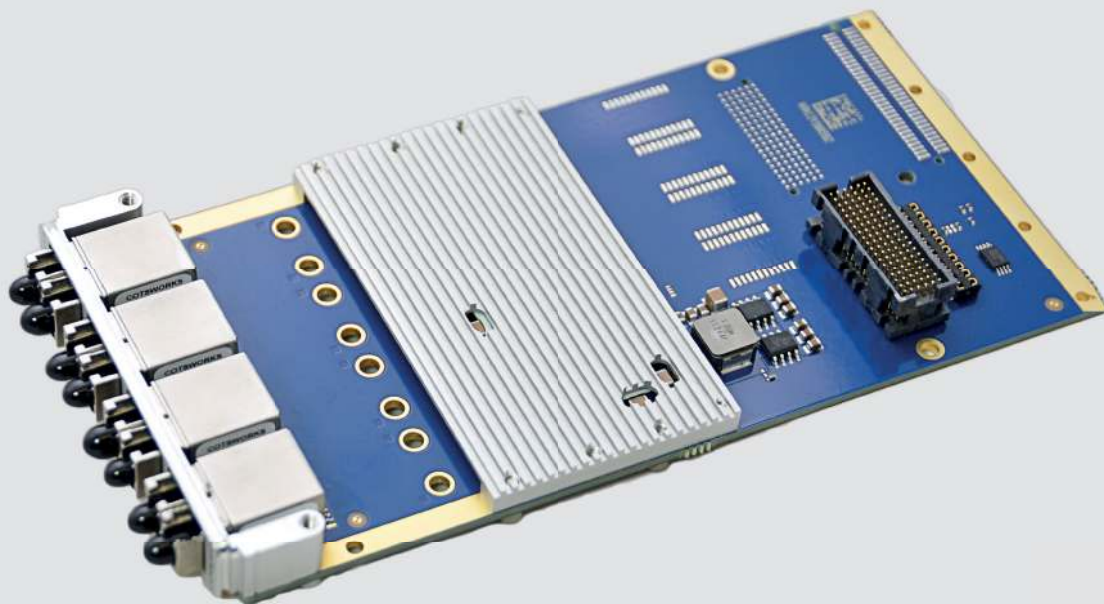
The board may be fitted with rugged front panel connectors, or recessed rugged optical connectors for easy in-box optical cabling in conduction cooled environments. These are 1000BASE-LX optical connectors and the interfaces use 850nm multi mode fiber connections. Rear I/O variants support 1000BASE-T through P14 and 1000BASE BX/UX through P16. The Titan

Quad port Gigabit Ethernet XMC is available in both air cooled and conduction cooled variants to fit a wide range of single board computers (SBCs) in CPCI, VME or VPX form factor.

A x4 PCI Express Gen2 host interface capable of running 2.5GT/s and 5.0GT/s ensures high bandwidth to the host. An optional PCI Express card edge adapter offers easy integration in standard desktop systems for non rugged applications and SW development. The Titan Quad Gigabit Ethernet board ships with both Linux and Windows software drivers.

Galleon Embedded Computing's quality management system is certified to Aerospace Standard AS/EN 9100:2009 and ISO 9001:2008.

Titan Quad Gigabit Ethernet XMC

KEY FEATURES

- 4 channel optical Gigabit Ethernet
- Gen2 PCI Express x4 (5GT/s) host interface
- Rugged optical duplex LC or rear I/O Gigabit Ethernet interfaces
- Air- and conduction cooled variants
- Windows and Linux drivers

APPLICATIONS

- Server applications
- Network-attached storage devices
- Flight test
- High-speed sensor data recording and simulation
- Video over Ethernet data capture
- Geological survey and seismic

BENEFITS

- High performance
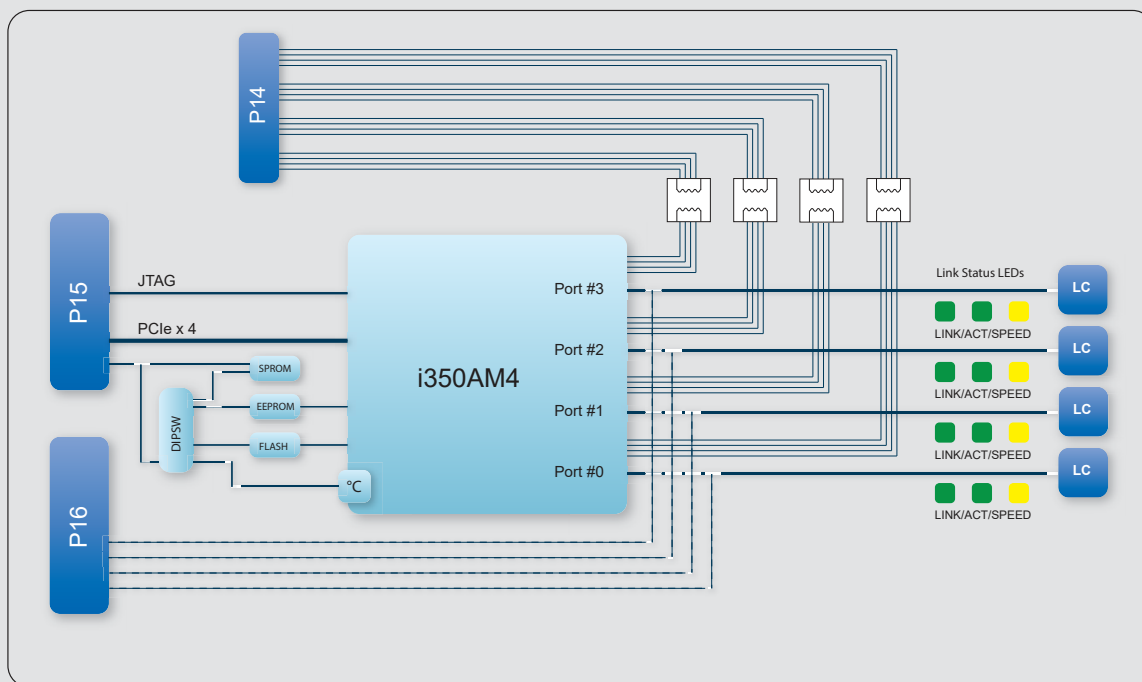- Low power
- Air- and conduction cooled

Diagram includes all IO options, contact factory for specific configuration

Ethernet Controller
• Intel i350AM4

Interfaces
• 4x channels
• Gigabit Ethernet
• 850nm MM transceivers
• Front panel duplex optical connectors
• Optional rear I/O interface (XMC P16, PMC P14)
• Optional recessed LC connectors for easy internal cabling in conduction cooled systems without front panel connections

Ethernet Capabilities
• UDP, TCP and IP checksum offload
• Support up to 8 VMs per port
• 8 TX and 8 RX queues per port
• IEEE 1588 PTP support
• Per packet timestamp

XMC Interface
• x4 PCI Express 2.1 Gen2 (5GT/s)

Operating Temperature
• -40°C to +71°C rugged air cooled
• -40°C to +85°C rugged conduction cooled
• Conformal coating on all models

Shock & Vibration
• Tested to MIL-STD-810

Altitude
• -1500 to 40 000ft (standard)
• -1500 to 80 000ft (extended temp.)

Size, Weight & Power
• Weight: 150g (configuration dependent)
• Power, 4 optical channels active: 6W (typ)
• Power, 4 copper channels active: 5W (typ)

Software
• Linux and Windows drivers

ABOUT GALLEON

Galleon Embedded Computing is an innovative leader in development of high-performance, high-quality storage solutions and small rugged data recorder systems, servers and NAS devices.

Galleon's offerings span from commercial grade products for benign environments to ruggedized conduction-cooled products for deployed systems in severe environments.

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