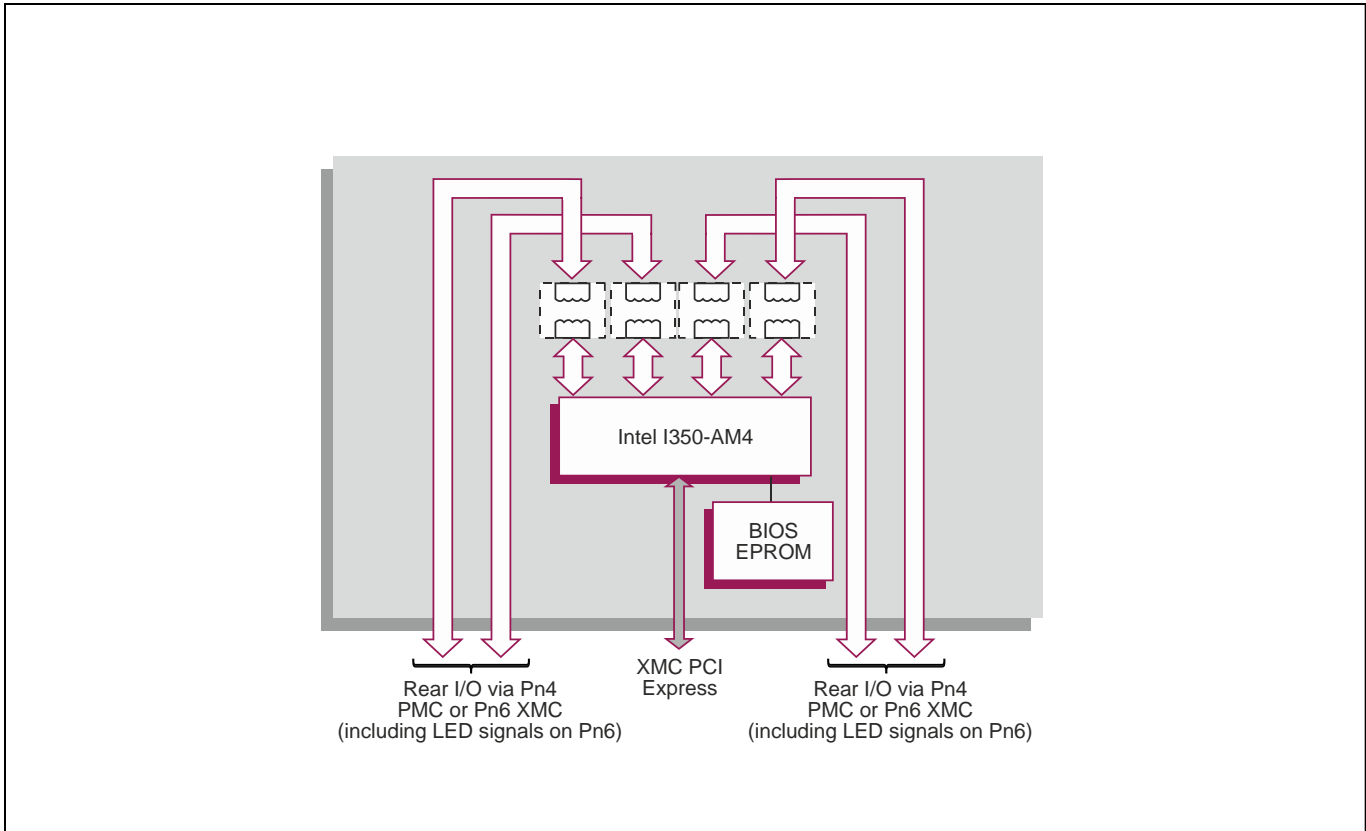


## Rugged Quad-port Gigabit Ethernet XMC Module

### Key Features

XM 515/x24-RC is an XMC module for rugged applications that need multiple Gigabit Ethernet connectivity. It is suitable for use on any conduction-cooled board with an XMC expansion slot that has either XMC or PMC rear I/O. Support is provided for common operating systems.

- 4 x Gigabit Ethernet interfaces with auto-negotiation for use with lower speed Ethernet ports
- Suitable for use on any board with an XMC expansion slot
- Air-cooled versions available
- Support for Linux®, Windows® and VxWorks®



## Rugged XMC Module

- conduction-cooled to ANSI/VITA 20-2001 (R2005)
- conformally coated
- air-cooled variants available:
  - see separate XM 515/x24 datasheet

## Gigabit Ethernet Interfaces

- 4 x 1000BASE-T/100BASE-Tx/10BASE-T interfaces
- factory build options for:
  - 4 x Ethernet via PMC Pn4 or XMC Pn6 connector (with or without magnetics)
- utilizes Intel® Ethernet Controller I350-AM4:
  - supports IEEE 802.3ab for 1000BASE-T
  - supports IEEE 802.3/802.3u for 10BASE-T and 100BASE-Tx
  - supports Jumbo frames
- individual MAC and frame Controllers supporting the following features:
  - transmit and receive IP, TCP and UDP checksum off-loading
  - transmit TCP segmentation
  - automatic retransmission
- physical interfaces (PHY) implemented internally by the Ethernet controller supporting:
  - 1000BASE-T/100BASE-Tx/10BASE-T auto-negotiation
  - automatic polarity and MDI/MDI-X selection
  - full and half-duplex operation
- status LEDs, on-board:
  - status LED signals also on Pn6 connector

## XMC Interface

- interface complies with PCI Express® 2.1:
  - x4 PCI Express port (Gen 1, Gen 2)

## BIOS EEPROM

- 8-bit wide 128 Kbyte SPI Flash EEPROM with Intel® PXE BIOS Firmware
- in-circuit programmable

## Software

- support for Linux®, VxWorks® and Windows®

## Electrical Specification

- maximum current figures with quad 1000BASE-T operating:
  - +5V @ 1.7A
  - +12V @ 0.75A
  - VPWR voltage +5% / -5%
- +3.3V and -12V not utilized

## Environmental Specification

- operating temperature
  - VITA 47 Class CC4, -40°C to +85°C
  - conduction-cooled
- non-operating temperature:
  - VITA 47 Class C4, -55°C to +105°C
- operating altitude:
  - -1,000 to 50,000 feet (-305 to 15,240 meters)
- 5% to 95% Relative Humidity, non-condensing

## Mechanical Specification

- single-width CMC (Common Mezzanine Card) IEEE 1386 form factor: (74mm x 149mm)
- 10mm height stack module

## Safety

- PCB (PWB) manufactured with flammability rating of UL94V-0