

Gigabit Ethernet Interface

Dual Port 10/100/1000 Support

SOLUTION HIGHLIGHTS

Full line rate capture with up to 64Mb per port

Real-time 7 layer protocol analysis

1024 simultaneous connections/channels per port

Simultaneous generation, monitoring and capture on each port

Forced, requested and auto negotiating link configuration

Support for shared and switched networks



Overview

The dual port Gigabit Ethernet interface is designed to generate, monitor and capture 10/100/1000 Mbps Ethernet wire-rate traffic, while performing real time simultaneous analysis of the seven OSI layers.

This module comes standard with 2 RJ-45 connectors for 10/100/1000 UTP and 2 1000 SC-LX GBIC connectors using a 1310nm single mode optical fibre. Additional GBIC connectors are available; RJ-45 connectors for 1000BASE-T and SC connectors for 1000 SX GBIC using a 850 nm multi mode optical fibre.

Up to 7 Gigabit modules (14 ports) can be plugged into the InterWatch 96000 unit, 3 modules (6 ports) on the InterWatch 95000, allowing comprehensive system load testing across multiple ports simultaneously.

The Gigabit Ethernet interface provides application testing support for leading IP, VoIP and MPLS technologies with the ability to test network equipment with traffic from up to 1024 simultaneous connections per port. Nine user-definable filters provide comprehensive real-time IP Performance (RFC 2544) and QoS testing. The interface also provides generation of multiple Ethernet frames of MAC, VLAN, IP or TCP/UDP traffic flows independently on each port.

Gigabit Ethernet Interface

Dual Port 10/100/1000 Support

Specifications

PORT DENSITY

InterWatch 96000

- Up to 7 modules (14 ports)

InterWatch 95000

- Up to 3 modules (6 ports)

RAM CAPTURE

128 MB

DATA PATHS

- 2 Transmit
- 2 Receive

INTERFACE TYPES

INTERFACE (UTP)

- 10BASE-T
- 100BASE-TX
- 1000BASE-T

INTERFACE (OPTICAL)

GBIC Included with Interface

- 1000LX GBIC or 1000SX GBIC

FILTERS

9 Wire Rate Filter Types Including Boolean Operations on:

- Source MAC Address
- Destination MAC Address
- VLAN ID and VLAN Priority Setting
- Encapsulation Type
- MPLS Label
- Layer-3 Network Address: IP Address
- Layer-4 Address: TCP/UDP Source & Destination Port
- Payload Octet Matching (4-octet based)
- User Definable IP (Software Filter)

CONNECTORS

2RJ-45

FULL OR HALF DUPLEX

- 10BASE-T
- 100BASE-TX

FULL DUPLEX

- 1000BASE-T
- Dual duplex SC
- Single Mode (1000LX GBIC)
- Multi Mode (1000SX GBIC)

STATUS LEDs

- Speed (10/100/1000 Mbps)
- Signal
- Active
- Laser On
- Full Duplex (FDX)
- Active
- Fail
- Sysfail

TEST APPLICATIONS

- LAN
- xDSL
- IP Performance (RFC 2544)
- IP QoS (Real-time & Non-real-time)
- GMPLS
- MGCP
- H.248/MEGACO
- SIP

EMULATION

User definable TCP/UDP/IP stack

MONITORING

Up to 64MB full line rate capture and simultaneous analysis on each port.

STATISTICS

1024 simultaneous connections per port including monitoring of:

- Total Number of VLANs
- Total Bursts
- Total Bytes
- Frames in Error including (FCS, Runts, Oversized, Jabber, Fragmented, Overhead)
- Broadcast Frames
- Multicast Frames
- Collisions
- Largest Burst Length
- Smallest Burst Length
- Average Burst Length
- Largest Frame Length
- Smallest Frame Length
- Average Frame Length
- Average Frame Rate
- Average Byte Rate
- Average Percentage Utilization
- Elapsed Time

STANDARD VIOLATIONS

- Frame size (Runt and Jabber Frames)

PHYSICAL CHARACTERISTICS

DUAL SLOT MODULES

Width: 40.6mm (1.6")
Length: 311.2mm (12.25")
Weight: 885g (1.95 lbs.)

STANDARD COMPLIANCE

IEEE 802.3-2000 INCLUDING:

**10BASE-T/100BASE-TX/
1000BASE-T**

- IEEE802.3i
- IEEE802.3u
- IEEE802.3ab

1000BASELX/1000BASESX

- IEEE802.3z

Encapsulation

- IEEE802.3 with 802.3 (LLC1) encapsulation
- IEEE802.3 with SNAP encapsulation
- EtherType encapsulation

VLAN

- IEEE802.1Q&P: defining VLAN

Internet Engineering Task Force (IETF)

- RFC2544
- RFC894
- RFC895
- RFC1042

PART NUMBERS

01-105490A

Dual Port Gigabit Ethernet/Fast Ethernet/Ethernet Module

DUAL PORT

- 2 RJ-45 1000BASE-T connectors
- 2 Multi Mode 850 nm 1000SX GBIC connectors
- Dual VME-64 slot
- 128MB RAM

01-105491A

Dual Port Gigabit Ethernet/Fast Ethernet/Ethernet Module

- 2 RJ-45 1000BASE-T connectors
- 2 Single Mode 1310 nm LX GBIC connectors
- Dual VME-64 slot
- 128 MB RAM

01-105463A

Two Hot Swappable Transceivers

For 1310nm SC Single Mode Connectors with 1000 LX GBIC

01-105466A

Two Hot Swappable Transceivers

For 850nm SC Multi Mode Connectors with 1000 SX GBIC

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