MATRIX HIGH-DENSITY SWITCHING MODULES

Data Sheet

- **Comprehensive Traffic Control at Critical Network Access Points**
  - Traffic regulation to and from servers and desktop users at the network edge
  - Guaranteed delivery of critical applications such as Voice over IP and multicast video
  - Advanced security filtering based on Layer 2-4 information
  - Traffic shaping with per-port bandwidth provisioning and queue management, service level agreements (SLAs)
- **Low Cost of Ownership**
  - Advanced Layer 2-4 traffic control without expensive, complex routing solutions
  - True investment protection: fully compatible with both the Matrix E7 and Matrix E6 platforms
- **High-Density, Scalable Switching for Data Centers and High-Performance Wiring Closets**
  - Up to 336 10/100 ports in the Matrix E7
  - Up to 42 Gigabit ports in the Matrix E7
  - Wire-speed Layer 2-4 services

  192 10/100 ports in Matrix E6
  Up to 30 Gigabit Ports in E6
- **High-Availability Features Based on Emerging Industry Standards**
  - Link aggregation (IEEE 802.3ad)
  - Per-VLAN spanning (IEEE 802.1s)
  - Quick Convergence Spanning Tree (IEEE 802.1w)
- **Intuitive Management for Rapid Deployment and Troubleshooting**
  - SMON and full RMON 1
  - 802.1Q IETF MIB (RFC 2674)
  - GUI-based NetSight device and VLAN management applications

Bringing Competitive Advantage to the Enterprise

The Matrix 6H302-48, 6H303-48 and 6G306-06, new third generation modules for the Matrix E6 and E7, provide quality of service, security and traffic control.

High-Density Switching for Data Centers and High-Performance Wiring Closets

Ethernet has become the undisputed LAN technology of choice, accounting for over 85% of all network connections. As new applications have driven the need for increased bandwidth, Ethernet has cost-effectively scaled from 10 Mbps to 1000 Mbps. Currently, the leading desktop network technology is 10/100 Ethernet, and Gigabit Ethernet is becoming dominant for backbone and server connectivity.

Network infrastructure is a source of competitive advantage for enterprises. Switching solutions for 10/100 and Gigabit Ethernet must therefore be high performance, intelligent, manageable and cost effective.

The 6H302-48, 6H303-48 and 6G306-06 high-density switching modules are the first of Enterasys Networks™ third-generation 10/100 and Gigabit Ethernet switching solutions for the Matrix E7 and Matrix E6 (formerly Smart-Switch 6000). These modules deliver pinpoint control to critical network entry areas, without the expense and complexity of routed solutions. The third-generation modules also provide the throughput and port densities needed to eliminate bandwidth concerns and serve in the largest networks.

By embedding Layer 2-4 services on advanced ASICs, these modules bring comprehensive quality of service, security and traffic containment to desktops and servers at the network edge. Network managers can now guarantee delivery of high-priority applications, enable service level agreements (SLAs) by provisioning bandwidth, and prevent security breaches by stopping them at their sources.

ENTERASYS NETWORKS™

Gigabit Ethernet Port Interface Modules

Using Industry-Standard GBIC Interfaces:

GPIM-01

- Gigabit Ethernet Port Interface Module, 1000Base-SX

GPIM-09

- Gigabit Ethernet Port Interface Module, long haul, 1000Base-LX

GPIM-08

- Gigabit Ethernet Port Interface Module, extended long haul, 1000Base-ELX

IEEE 802.3z Characteristics

GPIM-01

- Segment Length*: IEEE 802.3z 62.5 μm MMF 275 meters
- Transmit Power (min): -9.5 dBm, (62.5 μm MMF)
- Receive Sensitivity: -17 dBm, (62.5 μm MMF)
- Link Power Budget: 7.5 dBm, (62.5 μm MMF)

GPIM-09

- Segment Length*: IEEE 802.3z 62.5 μm MMF 500 meters, 10 μm SMF 10 kilometers
- Transmit Power (min): -11.5 dBm, (62.5 μm MMF 50 μm MMF) -9.5 dBm (10 μm SMF)
- Receive Sensitivity: -17 dBm, (62.5 μm MMF) -20 dBm (10 μm SMF)
- Link Power Budget: 7.5 dBm, (62.5 μm MMF) 10.5 dBm (10 μm SMF)

GPIM-08

- Segment Length*: 10 μm SMF 70 kilometers
- Transmit Power (min): 0 dBm, (10 μm SMF)
- Receive Sensitivity: -22dBm
- Link Power Budget: 22 dB

*The maximum drive distance depends on the quality of the installed single-mode fiber-optic cable segment. Use the link power budget to calculate the maximum cable length of the attached segment. The link power budget must not be exceeded.

TECHNICAL SPECIFICATIONS

Main Memory

20 MB (Expandable to 32 MB on 6G306-06)

Buffer Memory

4 MB

Flash Memory

8 MB (Expandable to 16 MB)

Address Table Size

16,000 entries

Module Performance

Throughput Capacity: 3,500,000 pps (Measured in 64 Byte packets) Switching Fabric Bandwidth Capacity: 6 Gbps

Management Options

In-Band Management

Out-of-Band Management

Via RS232 COM Port, Telnet

Embedded Webview

Web-based management

System LED Indicators

Red-Blinking—Hardware failure has occurred
Red-Solid—Resetting, normal power up reset
Amber-Blinking—Crippled
Amber-Solid—Testing
Green-Solid—Functional
Amber/Green-Booting—Blinks amber and green while booting

Module MTBF

Predicted: >200,000 hrs

Standards Support

IEEE 802.1Q, 802.1D, 802.1p, 802.3u, 802.3x, 802.3
FIB (RFC 1354)
Gigabit Ethernet: IEEE 802.3z

PHYSICAL SPECIFICATIONS

Interfaces

6H302-48: 48 10/100Base-TX via RJ45 connectors
6H303-48: 48 10/100Base-TX ports via RJ21 connectors
6G306-06: 6 ports 1000 Mbps Gigabit Ethernet via GPIM uplink modules

Module Dimensions

46 cm (18.28") H x 6.05 cm (2.38") W x 29.51 cm (11.62") D

Weight

2.03 kg (4.5 lbs)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature

41° to 104° F (+5° to +40° C)

Non-Operating Temperature

-22° to 194°F (-30° to +90°C)

Operating Humidity

5 to 90% RH, non-condensing

Power Consumption

100-125 VAC or 200-250 VAC; 50-60 Hz

AGENCY AND STANDARDS SPECIFICATIONS

Safety

UL1950, CSA C22.2 No. 950, EN60950, IEC950, 72/73/EEC

Electromagnetic Compatibility (EMC)

FCC Part 15, CSA C108.8, EN555022 VCCI V-3/93.01, EN50082-1, 89/336/EEC

ORDERING INFORMATION

6H302-48

48-port RJ 45 10/100 switch for the Matrix E6 and E7

6H303-48

48-port RJ21 10/100 switch for the Matrix E6 and E7

6G306-06

6-port Gigabit Ethernet switching module for the Matrix E6 and E7 via GPIMs

GPIM-01

Gigabit Ethernet port interface module (GPIM), 1000BaseSX

GPIM-08

Long-haul GPIM (70Km)

GPIM-09

Gigabit Ethernet port interface module (GPIM), 1000BaseLX

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