



- **High-density, scalable switching**
 - Optimized for 10/100 Mbps switching with high-speed Gigabit Ethernet, Fast Ethernet, FDDI, ATM, or WAN backbone connectivity
 - Five-slot modular design delivers up to 120 switched Fast Ethernet ports, 240 switched Ethernet ports, 240 Fast Ethernet MicroLAN ports, 240 Ethernet MicroLAN ports
 - Scalable, high-speed Frame Transfer Matrix provides a passive, independent connection from module to module in the chassis
- **Superior fault tolerance for maximum availability**
 - Distributed switching architecture for maximum uptime
 - No single point of failure
 - Redundant, hot-swappable and load-sharing power supplies
- **Standards-based for complete interoperability**
 - Conforms to IEEE 802.3 Ethernet and Fast Ethernet standards as well as 802.3z Gigabit Ethernet, 802.1q VLAN, 802.1p Class of Service and 802.3x Flow Control standards
- **Industry-leading enterprise management**
 - Supports nine groups of RMON, SNMP, smart mirroring, and NetSight management

A Workhorse for the Wiring Closet

The Matrix E6 offers the features and functionality of a high-end switch at a competitive price per port.

High-Performance, Cost-Effective Switching for the Wiring Closet

Combining the enhanced functionality and performance of a high-end data center solution at the competitive cost per port of a wiring closet switch, the Matrix E6 (formerly SmartSwitch 6000) offers the perfect balance of features, performance and economy. The Matrix E6 helps companies get the most out of their wiring closet or departmental network investment with the real business value that comes from investment protection, adherence to industry standards and a migration path to future technologies.

Delivering the same features found in other award-winning Enterasys product lines, the Matrix E6 wiring closet solution offers broadcast storm protection, port mirroring, port trunking, embedded RMON, and advanced VLAN and QoS functionality. A modular, five-slot chassis-based switching platform, the Matrix E6 has been designed to accommodate a wide range of port densities with modules that can provide up to 2,000,000 packets per second of throughput each.

Additionally, as companies migrate from traditional data networks to integrated voice, video and data environments, the Matrix E6 will be able to cost-effectively accommodate these converging requirements from a single platform. With its distributed, high-speed architecture, the Matrix E6 provides the industry's best-performing and uniquely affordable solution.

Why the Matrix E6 is a Better Wiring Closet Switch

- High density, high throughput
- Guaranteed reliability and scalability
- Advanced router module for multilayer support
- Integrated voice, video and data
- Enhanced management capabilities
- True investment protection

Matrix E6 Chassis

The Matrix E6 is a modular, five-slot, chassis-based switching platform designed to provide customers with a cost-effective solution for deploying high-performance Ethernet and Fast Ethernet desktop services in the wiring closet. All available slots can be used for connectivity modules allowing the switch to support high-density configurations. The Matrix E6 chassis also accepts two load-sharing, redundant, and hot swappable power supplies ensuring maximum uptime. Delivering the functionality of a highly manageable, extremely flexible and fault tolerant system, the Matrix E6 is capable of meeting any customer requirement at an affordable price level.

Frame Transfer Matrix

All Matrix E6 Ethernet and Fast Ethernet interface modules connect to the Frame Transfer Matrix (FTM) backplane. The FTM is classified as a matrix, as each module is provided with a separate, independent backplane connection to every other module in the Matrix E6. This increases system fault tolerance by eliminating possible points of failure and allowing the FTM to scale to even higher performance levels in the future.

Distributed Switching Architecture

With the innovative Distributed Switching Architecture, processing functions are fully distributed onto every module within the Matrix E6 chassis, simultaneously increasing performance and fault tolerance. Each interface module is equipped with its own ASIC-based switching engine as well as an i960 microprocessor for management (no “switching engine” or “management module” is required), eliminating a possible point of failure. Since these processes are fully distributed onto each module, aggregate system performance actually increases as more modules are added—a capability that is unmatched in the industry.

Challenge

Solution

Provide scalability to accommodate new users and applications

- *Up to 102 10/100 ports with high-speed uplinks to Gigabit Ethernet, FDDI, ATM and WAN*

Ensure maximum uptime and network availability

- *Distributed switching for no single point of failure*
- *Hot-swappable, load-sharing power supplies*

Maintain high performance while keeping costs down

- *Cost-effective, high-performance switching system*

Deploy, measure and troubleshoot network infrastructure

- *Supports industry-standard management including nine groups of RMON*
- *Intuitive, GUI-based NetSight management application*

Modules and Connectivity

The Matrix E6 offers modules for Ethernet and Fast Ethernet with a variety of media options. Select modules will also support integrated high-speed connectivity to Gigabit Ethernet, ATM, FDDI, Fast Ethernet or WAN backbones. Advanced, built-in features such as port trunking, port mirroring, broadcast control services and standards-based VLAN and QoS services are provided in firmware across all modules. By offering such a vast range of capabilities, customers are provided with the scalability and flexibility necessary to customize their wiring closets to meet any requirement.

Fast Ethernet Switching Modules—provide between 12 and 24 dedicated Fast Ethernet ports via RJ45, RJ21, or MTRJ (fiber) connectors for fully switched 100Base-TX and/or 100Base-FX connectivity. Auto-negotiation services on all 100Base-TX interfaces provide dynamic selection of 10 or 100 Mbps operating speed as well as full-duplex or half-duplex mode. Full Duplex Switched Ethernet (FDSE) operation is supported on all ports.

Fast Ethernet MicroLAN Switching Modules—provide 36 or 48 connectivity ports via RJ21 connectors. Through auto-negotiation services, individual end-users are dynamically attached to either a 100 Mbps Fast Ethernet or 10 Mbps Ethernet shared bandwidth MicroLAN segment depending on the capability of their Network Interface Card. Each of the MicroLANs are separately repeated and “internally” switched by the on-board, high-speed ASIC. MicroLAN switching is an extremely affordable “hybrid” of switched and shared connectivity that is optimized for use in high-density wiring closets where dedicated Fast Ethernet switching to the desktop may not be an immediate requirement.

Ethernet Switching Modules—provide 24 or 48 ports of dedicated 10 Mbps Ethernet and are available with RJ45 or RJ21 connectors, (48 port switched Ethernet module is available only with RJ21 connectors) for switched 10Base-T environments or ST connectors for switched 10Base-FL (multimode or single mode) environments. Full Duplex Switched Ethernet (FDSE) operation is supported on all ports, providing bi-directional throughput of 20 Mbps.

Ethernet MicroLAN Switching Modules—provide 48 connectivity ports via four RJ21 connectors that are divided into four, 12-user-shared bandwidth segments. MicroLAN switching is an extremely affordable “hybrid” of switched and shared connectivity that is optimized for use in high-density wiring closets where dedicated switching to the desktop may not be an immediate requirement.

Management

Matrix E6 interface modules provide a complete range of management services through the use of Remote Monitoring (RMON) and the Simple Network Management Protocol (SNMP). The Matrix E6 supports all nine groups of RMON, and through SNMP, a network management platform such as NetSight can remotely monitor, control and diagnose potential problems in the Matrix E6 and the network to which it is connected.

Integrated Backbone Connectivity

Select Matrix E6 interface modules support integrated Gigabit Ethernet, Fast Ethernet, FDDI, ATM or WAN backbone connectivity, using optional VHSIMs, HSIMs or FEPIMs. Ideal for switched uplink connectivity to local servers or the network backbone, these flexible offerings simplify the migration to new high-speed backbone technologies while saving valuable slots in the chassis.

Features to Look for in a Wiring Closet Switch

- Wire-speed Layer 3/4 switching and routing
- IEEE 802.1 Q VLAN support
- IEEE 802.1 D(p) Priority Queuing
- Internet Group Multicast Protocol (IGMP) snooping
- Broadcast thresholding
- IP multicast control
- Port mirroring
- Link aggregation

PHYSICAL SPECIFICATIONS

Interfaces

Five slots for independent connectivity of host modules

Dimensions

6C105: 62.2 cm (24.5") H x 44 cm (17.3") W
x 35.6 cm (14") D

6C205-2: 42.17 cm (17.57") H x 5.71 cm (2.38") W
x 30.96 cm (12.9") D

6C205-3: 42.17 cm (17.57") H x 5.71 cm (2.38") W
x 30.96 cm (12.9") D

6C405: 6.21 cm (2.59") H x 41.23 cm (17.18") W
x 32.9 cm (13.71") D

Weight:

6C105: 12.5 kg (25 lbs.)

6C205-2: 17.82 kg (8.1 lbs.)

6C205-3: 17.82 kg (8.1 lbs.)

6C405: 7.7 kg (3.5 lbs.)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature

+5° to +40° C (41° to 104° F)

Non-Operating Temperature

-30° to +73° C (-22° to 164° F)

Operating Humidity

15% to 90% (non-condensing)

Power Consumption

Voltage Range: 100 to 125 Vac or 200 to 250 Vac

Frequency Range: 50 to 60 Hz

ORDERING INFORMATION

6C105

5-slot Matrix E6 chassis with modular fan tray and two slots for power supplies (power supplies not included, fan tray ships with chassis)

6C205-2

510 Watt DC (36 to 72 Volts) power supply for the Matrix E6 (6C105)

6C205-3

510 Watt AC (100 to 250 Volts) power supply for the Matrix E6 (6C105)

6C405

Fan tray for the Matrix E6 (ships with the chassis, purchase only if spare is needed)

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Lit. #9012149 10/00

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