

### Features

- Quad-switch modules allow user selection of mixed-media Fiber ports (all connector types) and 10/100 Mb Twisted-Pair ports
- Provides switching services to enhance the performance of 10/100 Mb Ethernet networks by segmenting the network traffic
- High performance operation, plug-and-play installation for switching services, transparent to system software
- Has a compact package for installation in offices and labs, with metal case and auto-ranging internal power supply
- Available options include AC, or -48VDC, 24VDC, 100VDC, and 125VDC power, dual-source, "Reverse" rack mount, ETSI and 23" Telco brackets



**M**agnum™ Quad-Series Fiber Switches boost the performance of large Ethernet LANs, with the flexibility of both fiber and twisted-pair switched ports. Any mix of fiber or RJ-45, 100 Mb or 10 Mb switched ports and connector types may be configured. The Magnum Quad-Series provide the switching speed and the reliability needed for increased network performance using any available fiber media type or twisted-pair cabling.

The Magnum Quad-Series Fiber Switches offer the maximum in application flexibility with a series of fiber and twisted-pair port connector types. All applicable fiber port types (100 Mb FX-ST, SC, MTRJ, and 10 Mb FL) and cable modes (2Km multi-mode, 20Km single-mode and 40Km "long reach" single-mode) are configurable in 4-port modules. Mixed-media combination modules (4-port modules with one fiber port and three twisted-pair ports) are also supported in all of the Quad-Series switch models.

In a common application, groups of standard dual-speed 10/100 hubs, 10 Mb hubs, or 100 Mb hubs and switches would form a series of subnets for workgroups or multi-system power users. A separate switched port on a Magnum Quad-Series Switch would serve each subnet, and each of these subnets would have full 100 Mb or 10 Mb bandwidth. Local traffic on one subnet, either 100 Mb or 10 Mb, is switch-isolated from the other subnets for high overall network performance.

Designed for use in organizations with multiple workgroups, remote offices and network traffic centers, the Magnum Quad-Series Switches are easy to install and use. Addresses of attached nodes are automatically learned and maintained, adapting the switching services to network changes and expansions to provide plug-and-play operation. Front-mounted LEDs provide status information on each port. Large 8 MB packet buffers provide advanced performance, even with unbalanced loads. Store-and-forward switching filters all faulty packets to minimize traffic congestion.

Magnum Quad-Series Fiber Switches have a rugged metal case and an auto-ranging power supply for operation with standard AC power worldwide. The Quad-series and all other Magnum products are designed and manufactured in the USA and backed by a three-year warranty.



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### PERFORMANCE:

**RJ-45 Ports:** 100 or 10 Mbps, full- or half-duplex mode, per port, individually determined. 10/100 auto-negotiating, FDX/HDX (internal jumper can select 100 only)

**Fiber Ports** (multi-mode and single-mode): 100 Mb speed per port based on the fiber connector part. FDX or HDX, default is FDX mode. (Internal jumper can select FDX-only)

### All Ports:

Processing type: Store and Forward with IEEE 802.3x full-duplex flow control, non-blocking

System aggregate forward and filter rate: 2.3M pps (all ports 100Mb speed) System (16p)

Address table: 32K nodes, self-learning, with address aging

Packet buffers: 8 MB dynamic

Latency: 5µs + packet time max (TX - TX, TX - FX, FX - FX)

PDV: 50 BT

### NETWORK STANDARDS:

IEEE 802.3u: 100BASE-TX, -FX, IEEE 802.3: 10BASE-T

Auto-negotiation on TP, IEEE 802.3u

All 10 Mb ports obey the rules for configuring 10Mb Ethernet

All 100 Mb ports use Fast Ethernet rules

### OPERATING ENVIRONMENT:

Ambient: 32° to 120°F (0° to 50°C)

Storage: -40° to 185°F (-40° to 85°C),

Ambient relative humidity: 10% to 95% (non-condensing)

Conformal coating option: Request for quote

### SWITCHES ON CHASSIS, MANUAL:

Power ON-OFF, in rear at power input

### NETWORK CABLE CONNECTORS:

RJ-45 shielded female ports

100 Mb: Category 5 UTP/STP 10 Mb: Cat. 3,4, 5 UTP

Fiber ports connector options: multi-mode FX-ST, SC, MTRJ; single-mode 20Km SC, and 40Km "long reach" single-mode SC.

### AC POWER SUPPLY (INTERNAL):

AC Power Connector: IEC-type, male recessed, ON/OFF switch.

Power Input Voltage: 100 - 240 VAC (auto ranging)

Power Input Frequency: 47 to 63 Hz

Power Consumption: 8-port models, 20 watts typical; 16-ports, 35 watts typical, 65 watts max.

### DC POWER SUPPLY OPTIONS:

**-48VDC:** Input -36 to -70 VDC (auto-ranging)

**24VDC:** Input 20 to 40VDC

**100VDC:** Input 90 to 160VDC

**125VDC:** Input 120 to 160VDC

Std. Terminal Block: "-", GND, "+",

Power Consumption: Same as AC

### DC DUAL POWER SOURCE (OPTIONAL)

The Magnum Quad-Series may be ordered with optional Dual DC power input, for continuity of operation when either one of the DC input sources is interrupted. Available for -48VDC, 24VDC, 100VDC and 125VDC input types.

### MECHANICAL:

Enclosure: Rugged high-strength sheet metal. Suitable for stand-alone or rack-mounting.

Cooling Method: Fan cooled, internal @ 9cfm

Dimensions: 1.75 in H x 17.0 in W x 9.13 in D (10.0 in W for QS580)

4.45 cm H x 43.2 cm W x 23.2 cm D (25.4 cm W for QS580)

Weight: rack-mount 4.0lb. (1.8 kg)

### LED INDICATORS PER RJ-45 PORT:

LK: Steady on when twisted-pair link is operational.

ACT: On with port activity

FDX/HDX: ON = full-duplex mode, OFF = half-duplex mode.

100/10 ON = 100Mbps speed, OFF = 10 Mbps

### LED INDICATORS, FIBER PORTS:

LK: Steady on when fiber link is operational.

ACT: On with port activity, FDX/HDX and 100/10 as above.

### PER-PORT SWITCHES, JUMPERS:

Up-link (RJ-45 ports only): 1 up-link per 4 RJ-45 quad-port module only.

F/H (fiber ports only): Default = FDX

(Internal jumper selects HDX mode)

Mode RJ-45 ports only: Default = Auto-negotiation. (Internal jumpers select 100 Mb-only, auto / full-or half-duplex)

### AGENCY APPROVALS:

UL Listed (UL1950), cUL, CE, Emissions meet FCC Part 15, Class A

### WARRANTY:

Three years

Made in USA

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## Ordering Information

Magnum QS580 10/100 Switch, holds up to 2 quad-port modules, 4 switched ports each, for media and speed flexibility. May be configured with a selection of Quad-Series fiber and RJ-45 port connector types. Full speed filtering and forwarding at 100Mb across all ports, self-learning 32K-node address table, and large 2 MB packet buffers. Front-mounted LEDs, internal auto-ranging power supply, mounting brackets.

Magnum QS5108 Same as QS580 Quad-Series Switch, but in a 19" rack-mount package  
Magnum QS5116 Same as QS5108, but holds 4 quad-port modules (QPMs), 19" rack-mount package

### Q-Series Quad Port Modules:

QPM-MSC Fiber module for Quad-Series switches, w/ four 100 Mb multi-mode FX SC connectors  
QPM-MST Fiber module for Quad-Series switches, w/ four 100 Mb multi-mode FX ST connectors  
QPM-SSC Fiber module for Quad-Series, w/ four 100 Mb 20km single-mode FX SC connectors  
QPM-SSCL Fiber module for Quad-Series, w/ four 100 Mb sgl.m "40km Long Reach" FX SC connectors  
QPM-MTRJ Fiber module for Quad-Series switches, w/four 100 Mb multi-mode FX "MTRJ" ports  
QPM-MV45 Fiber module for Quad-Series switches, with four 100 Mb multi-mode FX "VF-45" ports  
QPM10-FST Fiber module for Quad-Series switches, w/ four 10 Mb multi-mode FL ST connectors  
QPM10-FSM Fiber module for Quad-Series switches, w/ four 10 Mb single-mode FL ST connectors  
QPM-RJ45 TP module for Quad-Series switches, w/ four 10/100 Mb auto-negotiating RJ-45 ports  
QPRJ-MSC 3TP+1F module for Quad-Series switches, w/ three 10/100 Mb auto-negotiating RJ-45 ports and one fiber port with a 100 Mb multi-mode FX SC-type connector  
QPRJ-MST Same as QPRJ-MSC but with fiber ST-type connector  
QPRJ-SSC Same as QPRJ-MSC but with 20km single-mode fiber SC-type connector  
QP-BLNK Blank cover for one QPM opening in a Magnum Quad-Switch chassis



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