



ProSwitch® 2800M/MR Managed Modular Fast Ethernet/Gigabit Switch

Model: 2800M/MR

Key Highlights

- ▶ Modular design allows you to customize ports to meet your unique LAN requirements
- ▶ Combine fiber and copper ports in the same chassis for a maximum of 26 ports
- ▶ Eight port module choices include 10/100Base-TX and 100Base-FX (MM or SM) plus two Gigabit dual media ports
- ▶ Redundant power available in 2800MR model
- ▶ Management features include:
 - Access via web, Telnet or CLI
 - SNMP
 - RMON
 - DHCP client
 - IGMP
 - 802.1x network security
 - QoS
 - VLANs
 - GVRP
 - Port mirroring
 - Port trunking
 - Flow control
 - MAC address
 - Spanning Tree
 - TFTP firmware upgrade
- ▶ Hot swappable modules
- ▶ Significant cost savings when used in conjunction with Waters' classroom/workgroup switches
- ▶ Backed by Waters' limited lifetime warranty

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ProSwitch® 2800M/MR Ethernet Switch Managed Modular Fiber and Copper Port Switching



ProSwitch-2800M with 8 10/100BaseTX ports, 8 100Base-FX ports with SC connectors and 8 100Base-FX ports with ST connectors plus two dual media Gigabit ports

Waters Network Systems' ProSwitch® 2800M modular design provides a flexible cost-savings solution for combining fiber and copper switch ports in a single chassis. By combining fiber and copper switch ports in the same chassis, the flexibility of media conversion is already built into the switch.

Flexibility The 2800M is a fully managed L2 chassis-based switch with three module bays for 10/100Base-TX or 100Base-FX (multi or singlemode) 8-port modules. In addition to the module bays, the 2800M has two 10/100/1000Base-TX ports and two mini GBIC slots which accept 1000Base-SX or 1000Base-LX SFP modules, providing a total of 26 usable ports.

Maximum LAN flexibility and ROI is achieved by allowing you to customize the 2800M to meet your exact connectivity requirements.

Redundant Power The 2800MR model provides a redundant power supply which keeps the switch running even if there is a power problem.

Features and Benefits

- **802.1p Class of Service (QoS).** Four priority levels are available to provide the ability to customize the treatment of specific classes of data for better control. The QoS function allows you to prioritize types of data such as voice and video. QoS provides a means to control attributes such as error rates, lost packet rates, throughput, and delay.
- **802.1x Access control for improved network security.** The 2800M provides 802.1x which enables user authentication for each network access attempt. Port security allows you to limit the number of MAC addresses per port for better control. Static MAC addresses can be defined for each port to ensure only registered workstations are allowed access. By enabling both of these features, you can establish an access mechanism based on user and workstation identities, as well as control the number of access stations.
- **802.1q VLAN capability for performance and security.** VLANs are used to isolate traffic between different users and thus provides better security. Limiting the broadcast traffic to within the same VLAN broadcast domain also enhances performance. The 2800M supports 802.1Q Tagged and Port VLANs, GVRP supported VLAN ID with up to 256 groups.
- **802.1d and 802.1w Spanning Tree and RSTP**
- **802.3ad Port Trunking and Load Distribution**
- **Supports IP Multicasting and Snooping**
- **Supports Ingress Port Security**
- **Supports SNMP, MIB2 and RMON**
- **Supports Port Sniffing (TX-RX)**



ProSwitch®2800M Managed Ethernet Switches

ORDERING INFORMATION

Model	Description
Chassis	
2800M	Modular managed switch chassis. Holds up to three modules plus two dual media ports. (26 usable ports)
2800MR	Modular managed switch chassis with choice of optional redundant power supplies. Holds up to three modules plus two dual media ports. Power supplies must be ordered separately. (26 usable ports)
Modules	
2800-8TX	8-port 10/100Base-TX module with RJ45 connectors
2800-8FXSC	8-port 100Base-FX MM fiber module with SC connectors
2800-8FXST	8-port 100Base-FX MM fiber module with ST connectors
2800-8SMSC-20	8-port 100Base-FX SM (20km, 1310nm) fiber module with SC connectors
2800-PWR-AC/DC	1U AC/DC power module
2800-PWR-DC/DC	1U DC/DC power module
SFP-1000SXLC	1-port 1000Base-SX MM fiber module with LC connector
SFP-1000LXLC-10	1-port 1000Base-SX SM (10km) fiber module with LC connector
SFP-1000LXLC-30	1-port 1000Base-SX SM (30km) fiber module with LC connector

SPECIFICATIONS

OPERATIONAL CHARACTERISTICS:

MAC Address Table

- ▶ Up to 8K

Switching Mode

- ▶ Store-and-forward

Memory Buffer Size

- ▶ 256Kb packet buffer
- ▶ 128Kb control memory

Filtering/Forwarding Rate Performance

- ▶ 10Mbps: 14,880 pps
- ▶ 100Mbps: 148,800 pps
- ▶ 1000Mbps: 1,488,000 pps

LED INDICATORS:

Per port: Power; Link/Activity; FDX; speed
System LED Power

NETWORK STANDARDS:

- ▶ IEEE 802.3
- ▶ IEEE 802.3u
- ▶ IEEE 802.3z
- ▶ IEEE 802.3ad
- ▶ IEEE 802.3ab
- ▶ IEEE 802.3x
- ▶ IEEE 802.1P/Q
- ▶ IEEE 802.1D
- ▶ IEEE 802.1W
- ▶ IEEE 802.1x

MANAGEMENT SPECIFICATIONS:

- ▶ Web Based, SNMP, Console and Telnet
- ▶ RMON
 - RFC1757 group 1, 2, 3 and 9
- ▶ DHCP client
- ▶ IGMP snooping function
- ▶ 802.1x port-based authentication
- ▶ QoS (four levels)

- ▶ VLANs 4094/Maximum 256 groups
- ▶ GVRP
- ▶ Port mirroring
- ▶ Port trunking
- ▶ Flow control
- ▶ Port security
- ▶ Static MAC address security
- ▶ Virtual Stacking Management (VSM)
- ▶ TFTP software upgrade capability

SNMP Agent Version 1:

- ▶ MIB-II
- ▶ Bridge MIB
- ▶ RMON MIB

EMI/SAFETY COMPLIANCE:

FCC Class A and CE Mark Approval

COPPER CABLE/CONNECTORS:

- Twisted Pair
 - ▶ Shielded RJ45
- Console Port:
 - ▶ RS232 Cable/DB9 connector

FIBER CABLE/CONNECTORS:

- ▶ MM FX port: 50/125um, 62.5/125mm
- ▶ SM FX port: 9/125um
- ▶ MM SX port: 50/125um, 62.5/125mm
- ▶ SM LX port: 9/125um
- ▶ SC, ST and LC connectors

FIBER DISTANCE:

- 100Base-FX
 - ▶ MM: 2km
 - ▶ SM: 20km
- 1000Base-SX SFPs
 - ▶ MM: 850m
- 1000Base-LX SFPS
 - ▶ SM: 10km, 1310nm

- ▶ SM: 40km, 1310nm

POWER SUPPLY:

Input Voltage

- ▶ 100-240 VAC, 50/60Hz

Power Consumption

- ▶ 45 watts

OPERATING ENVIRONMENT:

Ambient Temperature

- ▶ 32° to 104°F (0° to 40°C)

Storage

- ▶ -68° to 158°F (20° to 70°C)

Ambient relative humidity

- ▶ 32% to 104% (non-condensing)

MECHANICAL:

Enclosure:

- ▶ Rugged high-strength sheet metal suitable for stand-alone or rack-mounting
- ▶ Cooling Method: Fan cooled

PHYSICAL CHARACTERISTICS:

Dimensions

- ▶ 17.4" W x 11" D x 1.75" H

- ▶ 442mm x 281mm x 44mm

Weight

- ▶ 2800M Chassis: 7.5 lbs (3.4 kg)
- ▶ 2800MR Chassis: 10 lbs (4.6 kg)
- ▶ Copper Module: 0.61 lbs (.28 kg)
- ▶ Fiber Module: 0.75 lbs (.34 kg)

WARRANTY:

Limited Lifetime