



RuggedSwitch™ M-Line

Family of Managed Ethernet Switches with MIL-STD Ratings

M2100

MIL-STD 19-Port Modular Managed Ethernet Switch with Gigabit Uplink Ports

- up to 3-Gigabit Ethernet ports – copper and/or fiber
- up to 16-Fast Ethernet ports – copper and/or fiber
- 2 port modules for tremendous flexibility
- Non-blocking, store and forward switching
- Supports many types of fiber (Multimode, singlemode, bi-directional single strand)
- Long haul optics allow Gigabit distances up to 70km
- Multiple connector types (ST, LC, Mirco-D)

M2200

MIL-STD 9-Port Managed Gigabit Ethernet Switch

- up to 9-Gigabit Ethernet ports - copper and/or fiber
- 2 port modules for tremendous flexibility
- Supports multimode and singlemode fiber
- Non-blocking, store and forward switching
- Supports LC connectors for fiber, Mirco-D connectors for copper

M969

MIL-STD and IP66/IP67 Rated 10-Port Managed Ethernet Switch with Fiber Uplink Ports

- IP67 Rated for protection against immersion in water
- IP66 Rated for protection against strong jets of water
- Fiber Optical Ethernet Ports (100BaseX and 1000BaseX)
- 8 - Fast Ethernet Ports (10/100BaseTX)
- Hazardous Location Certification: Class 1 Division 2

Common Product Features

Cyber Security

- Multi-level user passwords
- SSH/SSL encryption
- Enable/disable ports, MAC based port security
- Port based network access control (802.1x)
- VLAN (802.1q) to segregate and secure network traffic
- Radius centralized password management
- SNMPv3 encrypted authentication and access security

MIL-STD Ratings

- MIL-STD 901D – Shock (Hard Mounted)
- MIL-STD 167 – Vibration
- MIL-STD 461 – EMI
- MIL-STD 1399 – Magnetic Field (DC Magnetic Exposure)
- MIL-STD 810 – Temperature and Humidity

RuggedRated™ for Reliability in Harsh Environments

- Immunity to EMI and heavy electrical surges
- Zero-Packet-Loss™ Technology
- -40 to +85°C operating temperature (no fans)
- Conformal coated printed circuit boards
- 18 AWG galvanized steel enclosure

Rugged Operating System (ROS™) Features

- Simple plug and play operation - automatic learning, negotiation, and crossover detection
- RSTP (802.1w) and Enhanced Rapid Spanning Tree (eRSTP™) network fault recovery (<5ms)
- Quality of Service (802.1p) for real-time traffic
- VLAN (802.1q) with double tagging and GVRP support
- Link aggregation (802.3ad)
- IGMP Snooping for multicast filtering
- Port Rate Limiting and Broadcast Storm Limiting
- Port configuration, status, statistics, mirroring, security
- Loss of link management on fiber ports
- SNTP time synchronization (client and server)

Management Tools

- Web-based, Telnet, CLI management interfaces
- SNMP v1/v2/v3
- Remote Monitoring (RMON)
- Rich set of diagnostics with logging and alarms

Universal Power Supply Options

- Fully integrated, dual-redundant (optional) power supplies
- Universal high voltage range: 88-300VDC or 85-264VAC
- Popular low voltage ranges: 24VDC(9-36VDC), 48VDC (36-59VDC)
- Screw or pluggable terminal blocks available
- Terminal blocks for reliable maintenance free connections
- CSA/UL 60950 safety approved to +85°C

Look for more product information on our website: www.RuggedCom.com

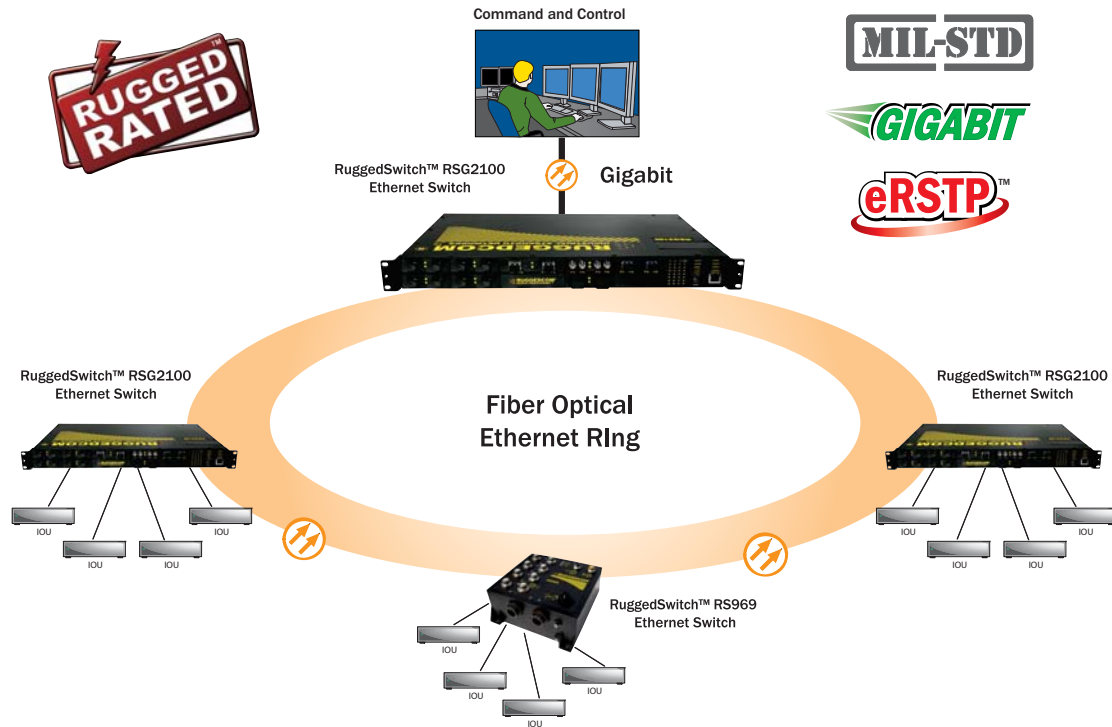
M2100, M2200 and M969

Family of Managed Ethernet Switches with MIL-STD Ratings

- ▶ MIL-STD 901D (Shock); MIL-STD 461E (EMI)
- ▶ MIL-STD 167-1 (Vibration);
- ▶ High Reliability and Availability
- ▶ Fast Network Fault Recovery
- ▶ Based on the Industry Leading RuggedSwitch™ RSG2100, RSG200, and RS969

U.S. Navy imagery used in illustration without endorsement expressed or implied.

Simplified Network Architecture



MIL-STD Test Description Table

Military Standard Tests Description		
MIL-STD	Description	Details
MIL-STD-901D *	Shock (Hard-Mounted)	Grade A, Equipment Class I, Shock Type A Equipment
MIL-STD-167-1 *	Vibration	Type I (Upper Frequency of 33 Hz)
MIL-STD-461E *	Electromagnetic Interference	CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103
MIL-STD-1399 *	Magnetic Field - DC Magnetic Exposure	Section 070, Part 1
MIL-STD-810F *	Temperature - Low/High Temperature	Method 501
MIL-STD-810 *	Temperature - Non-operating Thermal Shock	Method 503
MIL-STD-810 *	Humidity	Method 507, Procedure IV

* Testing complete, pending final documentation (contact RuggedCom for complete details)