RelyUm® Rugged



L2/L3 SFF
Military Switch Router

MILS0800-SR

Overview

As modern military vehicles become increasingly digitised, Ethernet has become a critical backbone for enabling high-speed, reliable, and interoperable communications between onboard systems. From sensor integration to real-time data sharing, Ethernet ensures seamless connectivity across mission-critical platforms.

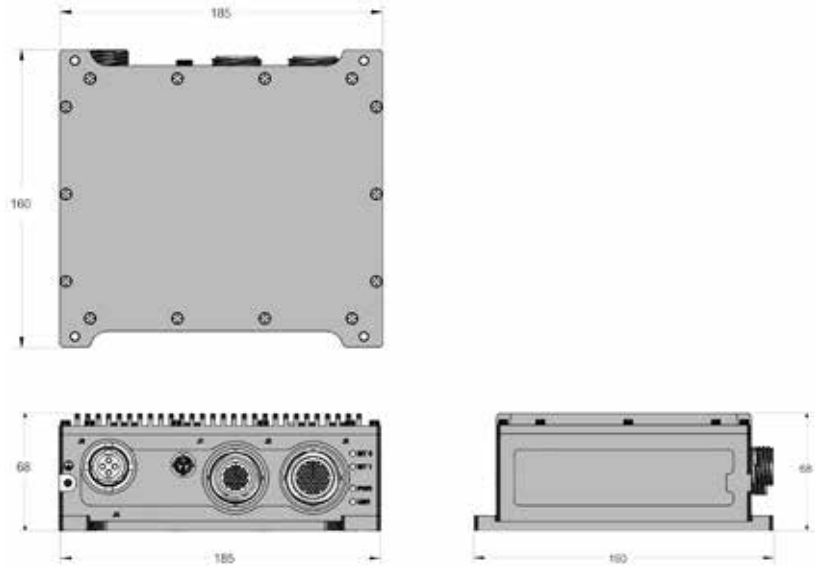
The MILS0800-SR switch is the entry level model of the new MILS platform series. This compact unit provides high-performance Ethernet switching and connectivity in space-constrained military environments.

Compact in size. Powerful in performance. Designed for duty.

Key Features

- **Entry level 8x 10/100/1000BASE-T** Copper Ethernet ports.
- Full in-house design (including networking and synchronization IP Cores) based on a **reconfigurable MPSoC** platform with edge computing capabilities.
- **Simplified management and monitoring** via a user-friendly HTTPS web interface or a flexible console port.
- **Sealed military grade and compact enclosure** with MIL-STD-1275E power supply.

Dimensions



All measurements are in mm.

Technical Specifications

Communication Interfaces

- 8x 10/100/1000BASE-T Copper Ethernet ports
- 1x 10/100/1000BASE-T Ethernet Service port
- 2x RS-232 serial line (Miscellaneous connector)

Layer 2 Features

- IEEE 802.3-2008 (Ethernet)
- Automatic MAC address learning and aging
- Static MAC Table
- Port-Based Virtual LANs (VLANs):
  - Logical segmentation of network for optimal use of bandwidth
  - IEEE 802.1Q for VLAN tagging (up to 4K VLAN groups)
  - IEEE 802.1p for Class of Service (CoS) / Quality of Service (QoS)
- IEEE 802.1AB for Link Layer Discovery Protocol (LLDP)
- Port rate limiting
- Storm control for flooded broadcast, multicast and unicast
- Layer 2 multicast filtering
- IGMP Snooping (up to 1024 multicast filters)

Redundancy

- Spanning Tree Protocol:
  - IEEE 802.1D (STP)
  - IEEE 802.1w (RSTP)
  - IEEE 802.1s (MSTP)

Layer 3 Features

- IPv4/IPv6 unicast and multicast routing
- Static routing
- Virtual Router Redundancy Protocol (VRRP)
- DSCP ToS/QoS
- Source/Destination NAT
- Proxy ARP
- Dynamic routing:
  - OSPFv2, OSPFv3
  - RIPv1, RIPv2, RIPng
  - BGPv4
  - EIGRP
  - PIM-SM (IPv4 and IPv6)
- Policy Based Routing (PBR)*

*Supported in 2026

Gateway

- Edge-computing capabilities for user defined applications (optional)
- Support for DDS standard and MQTT protocol in KVM Virtual Machine for user application (optional)

Synchronization

- NTP (Server/Client)

Security

- MAC port binding & authentication for login security
- RBAC (Role Based Access Control)
- Selective ports disabling capability
- Unsecure protocols disabling capability
- HTTPS for web interface
- Secure Shell (SSH) Protocol v2 for command line interface
- TPM 2.0 IC for identity authentication
- Encryption / authentication & signature for firmware and bitstream
- Secure-boot capability

Configuration & Management

- HTTPS web interface
- SSHv2 command line interface (CLI)
- SNMP V1/V2c/V3 protocol support
- SNMP V3 encrypted authentication and access security
- SNMP over TLS support
- Encrypted and digitally signed firmware / bitstream upgrades
- Saving and restoring configuration
- Per port independent statistics
- Internal status monitoring and logging
- Event notification through Syslog
- DHCP server and relay
- Built-in-Test capability including:
  - PBIT (Power-on BIT)
  - CBIT (Continuous BIT)
  - IBIT (Initiated BIT)
- In-band management via any Ethernet switch port or out-of-band via Ethernet service port
- RS-232 serial console

Processing

- Xilinx UltraScale+ MPSoC device:
  - 4x 64bit CPU ARM-Cortex-A53
  - 2x 32bit CPU ARM-Cortex-R5F
  - 1x 16nm UltraScale+ FPGA
- Up to 4GB DDR4 RAM memory
- 32GB eMMC Flash memory
- 512Mb QSPI Flash memory

Physical & Electrical Characteristics

- Military certified fanless rugged design
- Dimensions (mm): 185(W) | 160(D) | 68(H)
- Weight: 1.9kg
- Power Input: 28VDC
- Power consumption: TBD
- Connectivity via D38999 connector

MTBF

- TBD hours GB@25
- MTTR = TBD hours

Warranty

- 2 years

Export Control

- ITAR Free

Certifications

The following certifications are expected to be achieved by the switch:

- MIL-STD-461G: CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103
- MIL-STD-810G Methods: 500.5, 501.5, 502.5, 506.5, 507.5, 508.6, 509.5, 510.5, 513.6, 514.6, 516.6
- RTCA DO-160G: Sections 4, 7, 8, 15, 16, 17, 18, 19, 20, 21, 25, 26
- MIL-STD-1275E
- ESD EN61000-4-2
- IEC-60529 - IP67
- CE Certification

For more information, please contact your sales representative.

Ordering Code

Ordering code	
0800-SR-73.50	MILS0800-SR: 1G L2/L3 SFF Military Switch Router

To know more about other available references, please contact your sales representative.

RelyUm®

By

MILS0800- SR

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