

True-Rugged™ Series MRCOM-1000

Supporting on-the-go Applications



Specifications

Switching Architecture:

- Chipset: Marvel 88E6185
- Non-Blocking OSI Data Layer 2+, Low-Latency
- Ten Fully Independent 802.3 Media Access Controllers (MACs)
- High-Speed Four Traffic Class QoS Switch Fabric
- 8K MAC Address Look-Up Engine w/Integrated 1MB Frame Buffer Memory
- Back-Pressure and Pause Frame-Based Flow Control

Standards Compliance:

- IEEE 802.3 10 Mbps 10BASE-T (Ethernet)
- IEEE 802.3u 100BASE-TX 100 Mbps (Fast Ethernet)
- IEEE 802.3ab 1000BASE-T 1000 Mbps (Gigabit Ethernet)
- IEEE 802.1d Spanning Tree (Bridging)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1p LAN Layer 2 QoS/CoS Protocol for Traffic Prioritization
- IEEE 802.1Q Tagged VLANs / VLAN Trunking
- RFC 2460 IP Protocol Support for IPv4 and IPv6 addressing
- SNMPv1 (Simple Network Management Protocol)

Note: Support for some protocols/management features still under development/in validation

Port Features:

- Any port can serve as link port for cascading multiple switches
- Data Transfer: 10 Mbits/sec, 100 Mbits/sec, or 1000Mbps
- Duplex: Each Port Works at 10 Mbps or 100 Mbps, full or half-duplex mode; or 1000Mbps full-duplex mode
- Auto-MDI/MDIX, Auto-Negotiation, Auto-Detect, Speed Auto-Sensing, Auto-Crossover, Port Mirroring

Power:

- Power Input: +12v-+36v
- Power Consumption: Approx. 18 Watts

Reliability:

- No Moving Parts
- MTBF TBD (per MIL-HDBK-217F @ 40°C, GB)
- Assembled to IPC-A-610 Class III Workmanship
- Industrial Temperature Grade Components

Environmental:

- Designed to Meet MIL-STD-810G:
- Operating temperature: -40 to +85C (-40°F to +185°F)
- Storage Temperature: -50 to +85C (-58°F to +185°F)
- Humidity: Up to 95% RH, Non-Condensing

Zeroization:

- Recoverable Declassification (Erase Function Returns Board to Basic Unmanaged State)

The MRCOM-1000 is part of the True-Rugged™ product line.

The MRCOM-1000 utilizes our popular Mobile Rugged SRU (Submersible Rack Unit) Chassis. It is a rugged Layer 2+ Gigabit Ethernet switch subsystem equipped with ten auto-sensing 10/100/1000Mbps ports for use with IPv4 and IPv6 compatible devices.

Ideally suited for demanding network-centric portable operations, the MRCOM-1000 is also a perfect solution for integration within manned and autonomous vehicle and aircraft platforms. This stand-alone unit features an onboard microprocessor for both local and remote control and monitoring. Features also include support for Quality of Service (QoS) traffic prioritization, Virtual Local-Area Network (VLAN) trunking, and Rapid Spanning Tree Protocol (RSTP) redundancy. To enhance security and system management the system includes recoverable data zeroization capabilities for declassifying switch data along with RS-232 Command Line Interface (CLI) and Ethernet management ports. The unit also offers status indicators for zeroization signal, power, and port link/speed/activity.

The MRCOM-1000's powerful feature set along with its small mobile lightweight form factor make it an obvious choice as a Commercial-Off-the-Shelf (COTS) solution. A unique solution in the design areas of Size, Weight, and Power (SWaP) make it an excellent product for aircrafts, man-portable requirements, (tactical) ground vehicles and maritime assets.

The chassis uses conduction-cooled aluminum construction with a front panel including sealed MIL-38999 connectors and an isolated MIL-STD-1275D power supply. This fully submersible subsystem is designed to meet harsh MIL-STD-461E EMI/EMC and MIL-STD-810F thermal, shock, vibe, humidity, altitude, and ingress standards. The system features industrial temperature grade components, near cable-less design, and zero moving parts for maximizing MTBF and reliability.

The MRCOM-1000's SRU chassis allows it to be used individually or clipped together creating a blade style on-the-go immediate deployable solution. Taking advantage of other devices in the SRU Product Line which offer computing, communication, mass storage and power solutions you can create a mobile rack replacement with the power of a whole data center using a fraction of the footprint and power requirements. and power solutions you can create a mobile rack replacement with the power of a whole data center using a fraction of the footprint and power requirements.



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