RhinoSwitch® RSM-1000 Managed Switches

The RhinoSwitch® RSM1000 Managed Switches are industrial hardened products. They offer eight Fast Ethernet RJ45 ports of which four can be PoE ports and 2 Gigabit optical fiber or copper ports

- **Models that have 8 10/100 RJ45 Ports with PoE/PoE+ options and two Gigabit SFP ports or fixed Gigabit fiber in a compact package**
- **Robust, user-friendly Management Software**
- **Ability to work in extreme operating environment with temperatures ranging from -40° to +85°C**
- **Robust access via HTTPS/SSH/SSL and authentication using multi-level passwords, TACACS+/RADIUS**
- **High and low AC/DC power options**
- **DIN-Rail and panel mounting options**

The features of the Management Software in RhinoSwitch® RSM-1000 Managed Switches is:

- Robust GUI and CLI-based Management Software
- RSTP and MSTP for rapid recovery
- VLAN (802.1Q) with Double Tagging and GVRP
- IGMP Snooping and GMRP multicast filtering
- Quality of Service (802.1p) and TOS/DiffServ
- LLDP for automated topology discovery
- LACP 802.3ad
- Port Rate Limiting and Broadcast Storm Limiting

- Port Mirroring for Troubleshooting
- SNMP (Simple Network Management Protocol)
- SNTP (Simple Network Time Protocol)
- Remote Monitoring (RMON)
- DHCP Client, Server, and Relay
- Port Trunking for optimal bandwidth utilization
- Port Manager for Speed/Duplex/auto negotiation
- Event Monitoring with automatic email warnings

The features of Cyber Security in RhinoSwitch® RSM-1000 Managed Switches is:

- SSH/SSL Encryption
- Radius-based Access Management and Authentication
- TACACS+ based User Management
- Multiple levels of Passwords/User Access
- Port Security with MAC based Access Control
- 802.1X Port Based Network Access

Product Specifications:-

Type	RSM-1000
General	■ Operation: Store and forward wire speed switching, non-blocking ■ Modes: Full or half duplex operation with flow control supported on all ports ■ Switching bandwidth: 5.6Gbps ■ Latency (100M typical): 7 μs plus frame time ■ Packet Buffer: 1Mb ■ Ethernet isolation: 1500 Vrms 1 minute ■ Console port: RJ45 ■ 8K MAC addresses
RJ45 Copper Ports	■ RJ45 ports: Eight RSM-1000 RJ45 ports that are fully IEEE 802.3 compliant (Optional: Four RJ45 PoE ports (802.3af)) ■ RJ45 speed and duplex: Configurable or 10/100 auto-detecting for speed & duplex (full or half)

	■ RJ45 MDI/MDIX: Auto-MDI/MDIX-Crossover automatically support either straight or crossed cables
Gigabit 1000 Base-X SFP Ports	■ Two (RSM-1000) SFP ports can be configured with Gigabit fiber optic or copper transceivers ■ Optional: 1000 Mb fixed fiber ports may be selected rather than Gigabit SFP slots
Power and Alarm Output	■ AC: Input: 100-125vac at 60 Hz, 215-240vac at 50 Hz ■ DC Power input: Dual redundant power inputs for single power supplies ■ DC: Low Input voltage range (12V) DC 9-15VDC (24/28V,48/55V) DC: 18-75VDC ■ DC: High Input voltage range (110, 125, 150): 90-170VDC ■ Power consumption: Typical w/ all standard ports linked/active RSM-1000: 12 watts ■ Industrial surge and spike protection: 15 kW peak, 5 kW (10 times for 10 μs) ■ Alarm Output (RJ45): 2 alarms; form C contact relay and normally closed
Environmental	■ Operating temperature for all models: -40°C to +85°C ■ Storage temperature for all models: -45°C to +90°C ■ Humidity: 5 to 95% RH (non-condensing) ■ Altitude: 19,000 ft. (6,000m) ■ MTBF: > 219,000 hours ■ **Optional Conformal Coating available on request**
Standards and Compliance	■ Safety: UL/CSA/EN/IEC 60950-1, 2nd Edition CB report ■ Emissions: EN/ETSI 300-386; FCC Part 15 ■ EN55032,24; AN/NZ CISPR22, VCCI, EN61000-6-4 Class A CFR 47-FCC part 15, ICES 003, Class A ■ Hazardous Locations: UL/cUL Class 1 Div 2; ATEX Zone 2 ■ IEC 61850 EMC & Environmental Operating Conditions Class C for **Power Utility substations (KEMA/DNV)** ■ IEEE 1613 Class 2 Environmental Standard for **Power Utility** Substations ■ NEMA TS-2 & TEES for DC- and PoE-powered **traffic control equipment** ■ Military: MIL-STD-810G ■ Marine: DNV ■ Mining: Directive 2006/21/EC ■ Telecom: NEBS, GR63 & GR1089, L3; ETSI 300 386, EN 301 489, ■ Railways: EN50155 and EN50121-4 Compliant ■ Vibration: IEC 60068-2-6 ■ Shock: IEC 60068-2-27 ■ Freefall: IEC 60068-2-32 ■ RoHS (Pb free) and WEEE compliant ■ Immunity: EN55024 EN61000-4-2 (ESD) Level 4; EN61000-4-3 (RFI) Level 4 EN61000-4-4 (EFT) Level 4;

	EN61000-4-5 (Surge) Level 4 EN61000-4-6 (C. Susceptibility) Level 3 EN61000-4-8 (PF Magnetic Field) Level 4 EN61000-4-10 (Damp Osc.) Level 4 EN61000-4-11 (VDI) Class 3 EN61000-4-12 (Osc. Wave Im.) Level 3 EN61000-4-16 (I.C. CMD) Level 3 EN61000-4-29 VDSI on DC Input EN61000-6-2; EN61000-6-5 DT&T-NL, Immunity PS&SS
Mechanical	■ Chassis: DIN rail-mounted; panel or rack-mounted ■ Material: Metal with powder coating ■ Dimensions: Width: 7.125 in (18.1 cm) Depth: 5.5 in (14 cm) Height: 1.75 in (4.4 cm) ■ Weight: 1.5 lb. (0.7 kg)
IP Rating	IP30
Warranty	5 years
Made in	USA