# RhinoSwitch® RSM-3200 Managed Switches

The RhinoSwitch® RSM-3200 Managed Switches are industrially hardened and offer up to Thirty two Fast Ethernet RJ45 ports. Based on the power supply selected, these ports can be either PoE or PoE+. They can alternately be configured with 32 Fast Ethernet and 6 Gigabit fiber or copper ports. The RhinoSwitch® RSM-3200 Managed Switches are highly suitable for harsh or extreme environments.

- Up to 32 100Mb copper or fiber ports (with up to 8 PoE+ ports) OR up to 4 Gigabit ports and 24 100Mb copper or fiber ports (with up to 8 PoE+ ports)

- Robust, user-friendly Management Software

- Extended operating temperatures ranging from –40°C to +85° C

- Multi-level passwords, SNMPv3, IEEE 802.1X, RADIUS, TACACS+, HTTPS, and SSL/SSH for network security

- High and low AC/DC power options

## The features of the Management Software in RhinoSwitch® RSM-3200 Managed Switches are:

- Robust GUI and CLI-based Management Software

- RSTP, RSTP-2004 & 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

**DELTA SURGE™**
Real Robust Industrial Networking

- Port Mirroring for Troubleshooting

- Simple Network Management Protocol (SNMP)

- Simple Network Time Protocol (SNTP)

- 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-3200 Managed Switches are:

- 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 Control

- SNMPv3 Encrypted Authentication and Access Security

- VLAN (802.1Q) for Security and Traffic Segregation

## Product Specifications:-

| Type | RSM-3200 |
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| General | ■ Operation: Store and forward wire speed switching, non-blocking<br><br>■ Modes: Full or half duplex operation with flow control supported on all ports<br><br>■ Switching bandwidth: 12.8 Gbps<br><br>■ Latency (100M typical): 7 µs plus frame time<br><br>■ Packet Buffer: 4 Mb<br><br>■ Ethernet isolation: 1500 Vrms 1 minute<br><br>■ Console port: RJ45<br><br>■ 8K MAC addresses |
| RJ45 Copper Ports | ■ RJ45 ports: Up to 32 ports fully IEEE 802.3 compliant (Optional: up to 8 PoE ports (802.3af) or PoE+ ports (802.3at)<br><br>■ RJ45 speed and duplex: Configurable or 10/100/1000 auto-detecting for speed & duplex (full or |

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| | half) |
| | ■ RJ45 MDI/MDIX: Auto-MDI/MDIX-Crossover automatically    supports either straight or crossed cables |
| | ■ RJ45 polarity: Auto-polarity for automatic correction of crossed TXD and RXD pairs |
| **100Mb Fiber Ports** | ■ Multi-mode and Single-mode. Up to 32 fiber LC-type ports, each FDX or HDX. FDX mode is default. |
| **Gigabit 1000Base-X SFP Ports** | ■ Optional: SFP Slots for 2 Gigabit fiber optic transceivers or 1000Mb copper transceivers for distances up to 40km |
| | ■ Optional: 4 Gigabit 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 (24/28V,48/55V) DC: 18-75VDC |
| | ■ DC: High Input voltage range (110, 125, 150, 250VDC): 90-300VDC |
| | ■ Power consumption: 60 watts max |
| | ■ 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) |
| | ■ 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-461G |
| | ■ 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 |

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| **Product Specifications (Continued)** | ■ Vibration: IEC 60068-2-6 <br><br> ■ Shock: IEC 60068-2-27 <br><br> ■ Freefall: IEC 60068-2-32 <br><br> ■ RoHS (Pb free) and WEEE compliant <br><br> ■ Immunity: <br><br>      EN61000-4-2 (ESD) Level4; EN61000-4-3 (RFI) Level 4 EN61000-4-4 (EFT) Level 4; <br><br>      EN61000-4-5 (Surge) Level 4 <br><br>      EN61000-4-6 (C. Susceptibility) Level 3 <br><br>      EN61000-4-8 (PF Magnetic Field) Level 4 <br><br>      EN61000-4-10 (Damp Osc.) Level 4 <br><br>      EN61000-4-11 (VDI)  Class 3 <br><br>      EN61000-4-12 (Osc. Wave Im.) Level 3 <br><br>      EN61000-4-16 (I.C. CMD) Level 3 <br><br>      EN61000-4-29 VDSI on DC Input <br><br>      EN61000-6-2; EN61000-6-5 DT&T-NL, Immunity PS&SS |
| **Mechanical** | ■ Chassis: 1RU; may be rack-mounted <br><br> ■ Material: Metal with powder coating <br><br> ■ Dimensions: <br><br>      Width: 17 in (43.2 cm) <br><br>      Depth: 8 in (20.3 cm) <br><br>      Height: 1.73 in (4.4 cm) <br><br> ■ Weight: 5 lb. (2.3 kg) |
| **IP Rating** | IP32 |
| **Warranty** | 5 years |
| **Made in** | USA |