

## RhinoSwitch® RES50 Mini Switch

RES50 are built for the most demanding environments, such as power utility substations, industrial factory floor applications, outdoor traffic control boxes, and video surveillance structures. RES50 are suitable for most environments that have extreme temperatures and challenges, such as EMC, shock, and vibration.



- Ruggedized, compact design in a very small footprint.
- Offered with five 10/100Mb Fast Ethernet ports.
- Hardened, Designed to operate in temperature ranges between -40 °C to +85 °C.
- S Available in high and low DC and AC power options.
- O Convenient and fast ethernet switches, wherever network connectivity is required.

### Product Specifications

Type	RES50
General	<ul style="list-style-type: none"> <li>■ Operation: Store and forward wire speed switching, non-blocking</li> <li>■ Modes: Full or half duplex operation with flow control supported on all ports</li> <li>■ Switching bandwidth: 1Gbps</li> <li>■ Latency (100Mb typical): 5 μs plus frame time</li> <li>■ Packet Buffer: 64KB</li> <li>■ Ethernet isolation: 1500 Vrms 1 minute</li> <li>■ 1024 MAC addresses</li> </ul>
RJ45 Copper Ports	<ul style="list-style-type: none"> <li>■ RJ45 ports: Five ports IEEE 802.3 compliant</li> <li>■ RJ45 speed and duplex: 10/100Mb auto-detecting for speed and duplex (H/F)</li> <li>■ RJ45 MDI/MDIX: Auto-MDI/MDIX-Crossover automatically supports either straight or crossed cables</li> </ul>
Power Input Options	<ul style="list-style-type: none"> <li>■ AC: External power supply; Power input DC jack (8 to 15v) 2.5mm, center positive, with 6 ft DC power cord AC: Input: 100-125vac at 60 Hz, 215-240vac at 50 Hz</li> <li>■ DC Power input: Dual redundant power inputs</li> <li>■ DC: Input voltage range (12, 24/28, 48V) DC: 9-60VDC</li> </ul>

	<ul style="list-style-type: none"> <li>■ Power consumption: Typical with all ports linked and active 3 watts</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>■ Operating temperature: -40°C to +85°C</li> <li>■ Storage temperature for all models: -55°C to +125°C</li> <li>■ Humidity: 5 to 95% RH (non-condensing)</li> <li>■ Altitude: 19,000 ft. (6,000m)</li> <li>■ MTBF: &gt; 219,000 hours</li> <li>■ <b>Optional Conformal Coating available on request</b></li> </ul>
<b>Standards and Compliance</b>	<ul style="list-style-type: none"> <li>■ Safety: UL/CSA/EN/IEC 60950-1, 2nd Edition CB report</li> <li>■ Emissions: EN/ETSI 300-386; FCC Part 15</li> <li>■ EN55022,24; AN/NZ CISPR22, VCCI, EN61000-6-4 Class A</li> <li>■ CFR 47-FCC part 15, ICES 003, Class A</li> <li>■ Hazardous Locations: UL/cUL Class 1 Div 2; ATEX Zone 2</li> <li>■ IEC 61850 EMC &amp; Environmental Operating Conditions Class C for <b>Power Utility substations (KEMA)</b></li> <li>■ IEEE 1613 Class 2 Environmental Standard for <b>Power Utility Substations</b></li> <li>■ NEMA TS-2 &amp; TEES for DC- and PoE-powered <b>traffic control equipment</b></li> <li>■ Military: MIL-STD-810G</li> <li>■ Marine: DNV</li> <li>■ Mining: Directive 2006/21/EC</li> <li>■ Telecom: NEBS, GR63 &amp; GR1089, L3; ETSI 300 386, EN 301 489</li> <li>■ Railways: EN50155 and EN50121-4 Compliant</li> <li>■ Vibration: IEC 60068-2-6</li> <li>■ Shock: IEC 60068-2-27</li> <li>■ Freefall: IEC 60068-2-32</li> <li>■ RoHS (Pb free) and WEEE compliant</li> <li>■ Immunity:           <ul style="list-style-type: none"> <li><input type="checkbox"/> EN61000-4-2 (ESD) Level 4; EN61000-4-3 (RFI) Level 4</li> <li><input type="checkbox"/> EN61000-44(EFT) Level 4;</li> <li><input type="checkbox"/> EN61000-4-5 (Surge) Level 4</li> <li><input type="checkbox"/> EN61000-4-6 (C. Susceptibility) Level 3</li> <li><input type="checkbox"/> EN61000-4-8 (PF Magnetic Field) Level 4</li> <li><input type="checkbox"/> EN61000-4-10 (Damp Osc.) Level 4</li> <li><input type="checkbox"/> EN61000-4-11 (VDI) Class 3</li> <li><input type="checkbox"/> EN61000-4-12 (Osc. Wave Im.) Level 3</li> <li><input type="checkbox"/> EN61000-4-16 (I.C. CMD) Level 3</li> <li><input type="checkbox"/> EN61000-4-29 VDSI on DC Input</li> <li><input type="checkbox"/> EN61000-6-2; EN61000-6-5 DT&amp;T-NL, Immunity PS&amp;SS</li> </ul> </li> </ul>

<p><b>Mechanical</b></p>	<ul style="list-style-type: none"> <li>■ Case: Fully enclosed metallic case</li> <li>■ Material: Corrosion-resistant aluminum with powder coating</li> <li>■ Mounting: DIN rail or panel mounted.</li> <li>■ Dimensions: <ul style="list-style-type: none"> <li><input type="checkbox"/> Width: 3.6 in (9.1 cm)</li> <li><input type="checkbox"/> Depth: 3.2 in (8.1 cm)</li> <li><input type="checkbox"/> Height: 0.9 in (2.3 cm)</li> </ul> </li> <li>■ Weight: 1 lb. (0.45 kg)</li> </ul>
<p><b>IP Rating</b></p>	<p>IP32</p>
<p><b>Warranty</b></p>	<p>5 years</p>
<p><b>Made in</b></p>	<p>USA</p>

