Cleerline Industrial Switch
1 x SFP to 2 x RJ45 Gigabit Switch with PoE

The SSF-1x2-RUGGED is a 2 port Gigabit Ethernet 10/100/1000Base-TX to 1000Base-X non-managed Industrial Ethernet Switch. This switch also provides PoE+ 30W per port power. It is designed with a hardened case for use in extreme operating temperatures (-40 to +75°C). The rugged metal housing is IP40 rated and intended to withstand mechanically or electrically extreme environments.

This industrial switch features strong surge protection (4kV ~ 8kV) per port and is compliant with IEC and EN standards for industrial grade equipment.

FEATURES AND BENEFITS

- DC power input block 48-52V
- Extreme operating temperature: -40 to 75°C
- Rugged IP40 rated metal casing, DIN rail bracket
- Store and Forward switching mechanism
- Reversed power polarity protection
- Auto-Negotiation & Auto MDI/MDI-X on every RJ45 port
- Supports 6kV surge protection per port on all TP ports for PoE models
- Supports IEEE 802.1Q Tag VLAN pass thru
- Redundant DC power inputs on every model
- 60W total PoE power budget: 30W 802.3af/at per port

APPLICATION EXAMPLE

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OPERATION & DETAILS

Operating Temperature  -40 ~ 75°C
Operating Humidity     5% to 95% (Non-condensing)
Storage Temperature   -40 ~ 85°C
Housing               Rugged Metal, IP40 Protection
Dimensions            88 x 35 x 120mm (D x W x H)
Weight                0.44kg
Installation Mounting DIN Rail mounting or wall mounting

PART NUMBER | DESCRIPTION
-------------|--------------------------------------------------
SSF-1x2-RUGGED | Industrial grade PoE 60W budget 2x 10/100/1000Base-Tx to 1000Base-X SFP converter, 802.3af/at compatible, DC48V required for PoE, DIN rail mountable
SPECIFICATIONS

**GENERAL**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE Standard</td>
<td>IEEE 802.3 10Base-T Ethernet, IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet, IEEE 802.3ab 1000Base-T and 1000Base-X Gigabit Eth, IEEE 802.3x Flow Control and Back Pressure</td>
</tr>
<tr>
<td>Switch Architecture</td>
<td>Back-plane (Switching Fabric): 10 Gbps</td>
</tr>
<tr>
<td>Data Processing</td>
<td>Store and Forward</td>
</tr>
<tr>
<td>Flow Control</td>
<td>IEEE 802.3x flow control, back pressure flow control</td>
</tr>
<tr>
<td>Provides Broadcast</td>
<td>Present</td>
</tr>
<tr>
<td>Storm Protection</td>
<td>Present</td>
</tr>
<tr>
<td>MAC Address Table</td>
<td>4K</td>
</tr>
<tr>
<td>Packet Buffer Size</td>
<td>1MB</td>
</tr>
<tr>
<td>Ports</td>
<td>2 x RJ-45, 1 x 1000Base-X SFP slot, 10/100/1000Base-TX auto negotiation speed Auto MDI/MDI-X function, Full/Half duplex</td>
</tr>
<tr>
<td>Network Cable</td>
<td>10Base-T: 2-pair UTP/STP Cat. 5 cable, 100Base-TX: 2-pair UTP/STP Cat. 5 cable 1000Base-T: 4-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m)</td>
</tr>
<tr>
<td>Protocols</td>
<td>CSMA/CD</td>
</tr>
<tr>
<td>LED</td>
<td>Per unit: PWR (Green), LNK/ACT (Green - Fiber port status and activity), Per Port: Link/Active (Green), Speed/100 (Yellow)</td>
</tr>
</tbody>
</table>

**POWER, PoE, ALARM, TERMINAL BLOCK**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Reverse Polarity Protection</td>
<td>Present</td>
</tr>
<tr>
<td>Overload Current Protection</td>
<td>Present</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant Dual DC 48V (48~52VDC) Input power</td>
</tr>
<tr>
<td></td>
<td>(Removable Terminal Block)</td>
</tr>
<tr>
<td>PoE Specs</td>
<td>PoE+ PSE device: IEEE 802.3af/at, up to 30W per port 60W total PoE budget</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>&lt;65W (at full PSE capacity)</td>
</tr>
<tr>
<td>Alarm Relay Contact</td>
<td>Relay outputs with current carrying capacity of 1 A@24VDC, NC</td>
</tr>
<tr>
<td>Removable Terminal Block</td>
<td>Provide 2 Redundant power, Alarm relay contact, 6 Pin</td>
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</tbody>
</table>

**RATINGS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>EMI</td>
<td>FCC Part 15 Subpart B Class A, CE EN 55022 Class A</td>
</tr>
<tr>
<td>EN61000-6-4 – Emission for industrial environment</td>
<td></td>
</tr>
<tr>
<td>EN61000-6-2 – Immunity for Industrial environment</td>
<td>EN61000-6-2 (ESD) Level 3, Criteria B</td>
</tr>
<tr>
<td>EN61000-4-3 (RS) Level 3, Criteria B</td>
<td>EN61000-4-5 (Surge) Level 3, Criteria B</td>
</tr>
<tr>
<td>EN61000-4-6 (CS) Level 3, Criteria A</td>
<td>EN61000-4-8 (Magnetic Field) Level 3, Criteria A</td>
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<tr>
<td>Traffic Control</td>
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<tr>
<td>Rail Traffic</td>
<td>EN50121-4</td>
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<tr>
<td>Shock</td>
<td>IEC 60068-2-27</td>
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<tr>
<td>Freefall</td>
<td>IEC 60068-2-32</td>
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<tr>
<td>Vibration</td>
<td>IEC 60068-2-6</td>
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<td>MTBF</td>
<td>120,000Hrs</td>
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<tr>
<td>Warranty</td>
<td>2 years</td>
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**DIMENSIONS**

<table>
<thead>
<tr>
<th>Side</th>
<th>W</th>
<th>H</th>
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<tbody>
<tr>
<td>120mm</td>
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**WALL MOUNT KIT VIEW**

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