

RuggedNet® GLPoE/Mi

Managed Industrial Single Pair Power over Ethernet Switch

The RuggedNet GLPoE/Mi is a managed Industrial Single Pair Power over Ethernet (SPoE) switch that is IEEE 802.3cg compliant and features copper or fiber uplink ports and four single-pair 10BASE-T1L copper SPoE user ports.

The Single Pair Power over Ethernet switch features four IEEE 802.3cg compliant 10BASE-T1L 3-pin SPoE terminal ports or IEC 63171-2 SPoE ports and two 10/100/1000 RJ-45 or 100/1000 fiber SFP uplink ports.

The GLPoE/Mi SPoE user ports detect and classify 30VDC class 10 - 12 and 58VDC class 13 -15 powered devices through DIP-switch selection.

The switch supports Dual Device mode, Directed Switch mode and Redundant Uplinks.

Dual Device mode that enables the module to operate as two independent and isolated Ethernet switches. In Dual Device mode, the GLPoE/Mi provides separate and independent data traffic paths between the two uplink ports and four user ports.

Directed Switch mode directs multicast traffic (such as video) only to the appropriate uplink port, preventing the multicast video traffic from flooding other network ports.

Redundant fiber or copper uplinks provide protection and restoration for critical applications. In the event of a failure on the primary uplink port, the switch will failover to the secondary uplink port. Once the failed uplink port has been restored, the switch will return to the primary uplink port. For daisy-chain applications, the second uplink port can be used to cascade multiple switches.

The mode of operation can be configured using easily accessible DIP-switches or using Web, Telnet, SSH, SNMPv1/v2c/v3 or Serial Console management interfaces. IPv4 and IPv6 are supported on the switches. These management interfaces provide access to filtering and security options, such as, broadcast storm prevention, IGMP, IEEE 802.1x, RADIUS, TACACS+ and Access Control Lists. Email notification and alarm reporting is provided.

The Small Form Pluggable (SFP) transceiver receptacle ports support 10/100/1000BASE-T and 1000BASE-T copper transceivers and 100Mbps and 1000Mbps standard, CWDM and DWDM fiber transceivers in a variety of distances and fiber types.

The switch can be wall or rack mounted using a wall mount bracket (8260-3) and shelf (8260-0) or DIN-rail mounted using the included DIN-rail mounting clip. The switch is available with dual DC input power.



SFPs not included

KEY FEATURES

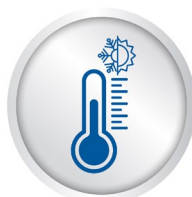
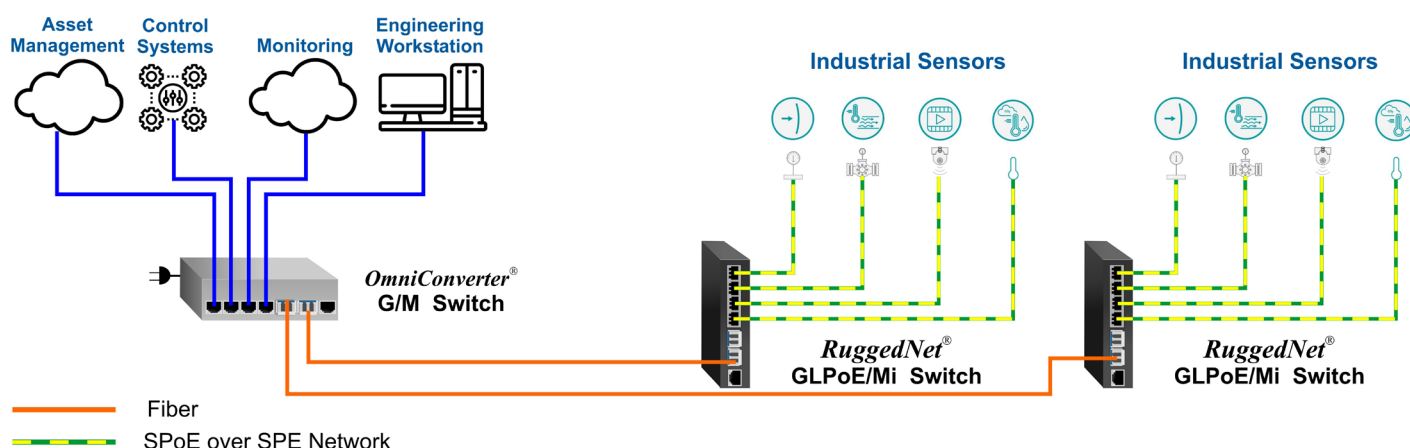
- Managed Single-Pair Power over Ethernet switch
- Modbus Industrial Protocol for device management and monitoring
- Supports IPv4 and IPv6
- IEEE 802.1x, RADIUS, TACACS+ and ACL
- Email Notification
- Rapid and Multiple Spanning Tree Protocol
- Media Redundancy Protocol (MRP)
- IEEE 802.1ax LAG and LACP; Active/Active and Active/Standby
- IEEE 802.1Q VLAN tagging and IEEE 802.1ad Q-in-Q
- Broadcast / Multicast / Unicast Storm Prevention
- DHCP Relay Option 82, DHCPv6 and DHCPv6 Relay
- IPv4 IGMP and IPv6 MLD snooping
- Rate Limiting, Queue prioritization and Class of Service
- IEEE 802.1ab Link Layer Discovery Protocol
- Static MAC configuration and blocking of unknown Unicast/Multicast addresses
- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces
- Easy to use Hierarchical Command Line Interface
- SNMP management via Omnitron's NetOutlook® management software, or third-party SNMP software
- Free 24/7/365 Technical Support

ADDITIONAL FEATURES

- Dual Device mode for operating as two separate switches
- Directed Switch mode prevents flooding of multicast traffic
- Four IEEE 802.3cg Single-Pair Power over Ethernet SPoE 30/58VDC user port
- Supports 3-Pin SPE Terminal connector or IEC 63171-2 SPE connector
- Two SFP or two 10/100/1000 RJ-45 uplink ports
- Supports 10/100/1000 and 1G copper SFP transceivers
- Supports 100Mbps and 1000Mbps fiber SFPs
- Alarm contacts and sensors
- Dual DC power for redundancy
- Wall, Rack and DIN-rail mountable
- Fan-less design for long life
- Industrial (-40° to 75°C) operating temperature
- TAA, BAA and NDAA compliant, and Made in the USA

APPLICATION

In this application, an OmniConverter G/M Ethernet switch is extending the Management/Environmental network across fiber to a RuggedNet GLPoE/Mi Single Pair Power over Ethernet switch. The RuggedNet GLPoE/Mi is powering multiple environmental sensors in an industrial warehouse. Each sensor is connected up to a distance of 1000 meters over a single-pair Ethernet cable to a terminal port on the GLPoE/Mi switch.



SPECIFICATIONS

Description	RuggedNet® GLPoE/Mi 10T/T1L to 100/1000 Fiber or 10/100/1000 Copper Uplinks Managed Industrial SPoE Ethernet Switch
Standard Compliances	IEEE 802.3, 802.3cg
Regulatory Compliances (Pending)	Safety: UL 62368-1, UL 60950-1, IEC 62368-1, IEC 60950-1, EN 62368-1, EN 60950-1, CAN/CSA C22.2 No. 62368-1-14, CAN/CSA C22.2 No. 60950-1, CE Mark, UKCA EMC: EN 55032/24 CE Emissions/Immunity, IEC 61000-6-4 Industrial Emissions, IEC 61000-6-2 Industrial Immunity EMI: CISPR 32, FCC 47 Part 15 Subpart B Class A EMS: IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m (on UTP cabling) and 20 V/m (on STP cabling) IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: Signal: 10 V, IEC 61000-4-8 (Magnetic Field), 30A/m, IEC 61000-4-11 (General Immunity in Industrial Environments) IP Rating: IP40 Protection ACT: TAA, BAA, NDAA
Environmental	REACH, RoHS and WEEE
SPoE Mode	30 VDC for Class 10 - 12 PDs, max 51 watts 58 VDC for Class 13- 15 PDs, max 316 watts
Management	IPv4 and IPv6 address Web, Telnet, SSH, SNMPv1/v2c/v3 In-Band management via Ethernet port Out-of-band management via serial port
Frame Size	10BASE-T1L: Up to 2,048 bytes RJ-45: Up to 10,240 bytes SFP: 100M - up to 2,048 bytes 1000M - up to 10,240 bytes
Port Types	10BASE-T1L: 3-Pin SPE Terminal connector or IEC 63171-2 SPE connector RJ-45: 10/100/1000BASE-T SFP: 10/100/1000BASE-T SGMII or 1000BASE-T SERDES Copper Transceiver, 100BASE-X or 1000BASE-X Fiber Transceiver
Cable Types	10BASE-T1L: Single-Pair Ethernet (SPE) cable, IEC 61156-13 (fixed) or IEC 61156-14 (flexible) 18AWG cable or better RJ-45: EIA/TIA 568A/B, Cat 5 UTP and higher Fiber: Multimode: 50/125, 62.5/125µm Single-mode: 9/125µm
DC Power Requirements	+50 to +58VDC; 5.82A @ 56VDC 2 Pin Terminal (isolated)
Alarm Contact (Output)	2 form C Relay for Normally Open and Normally Closed Operation 110VDC/125VAC Maximum Voltage 2A Maximum Current
Alarm Sensor (Input)	2.0ma @ 3.3VDC Closure Detection
Dimensions (W x D x H)	1.5" x 5.5" x 5.5" (38.1 mm x 139.7 mm x 139.7 mm)
Weight	1.70 lb. (772 grams)
Operating Temperature	Extended: -40 to 75°C Storage: -40 to 80°C
Humidity	5 to 95% (non-condensing)
Altitude	-100m to 4,000m (operational)
MTBF (hours)	207,000
Warranty	5 year product warranty with 24/7/365 free Technical Support

ORDERING INFORMATION

Step 1: Choose a Base Part Number (2934-x-4c-2Z)

Model Number	Description
2934-0-4c-2Z	4 x 10BASE-T1L SPoE 30/58V + 2 x 100/1000 SFP Ports
2934-1-4c-2Z	4 x 10BASE-T1L SPoE 30/58V + 2 x 10/100/1000 RJ-45 Ports

Step 2: Choose a SPE Connector Type (2934-x-4c-2Z)

0 = 3-pin SPE Terminal Connector
2 = IEC 63171-2 SPE Connector

Power Option (2934-x-4c-2Z)

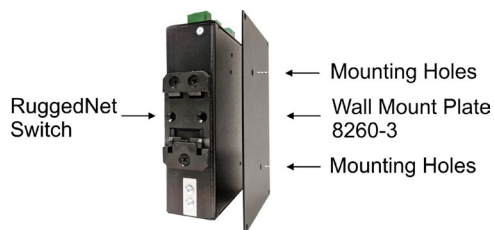
2 = Dual DC 2-Pin Terminal Power Connectors

Operating Temperature Range (2934-x-4c-2Z)

Z = Extended temperature (-40 to 75°C)

ACCESSORIES

Model Number	Description
8260-3	Wall Mounting Plate
8260-0	19" rack mount shelf (up to 2 modules)



Wall Mount Plate used to wall or rack mount the RuggedNet switch

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