RuggedNet® **10GPoE+/Si**

Unmanaged Industrial 6 and 10 Port PoE/PoE+ 10Gigabit Ethernet Switch

The RuggedNet 10GPoE+/Si is a ruggedized unmanaged PoE and PoE+ industrial Ethernet switch that features two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 Power Sourcing Power-over-Ethernet ports.

The RuggedNet 10GPoE+/Si is a Layer 2 Ethernet switch that forwards frames to any port based on their MAC address.

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

The switches support daisy-chain configurations and redundant uplinks for critical applications that require protection and sub 50ms restoration in the event of an uplink failure.

The switches support Dual Device mode that enables the 10GPoE+/Si to operate as two independent and isolated Ethernet switches. In Dual Device mode, the 10GPoE+/Si provides separate and independent data traffic paths between each uplink port and a group of copper ports.

The modes of operation can be configured using easily accessible DIP-switches. Each DIP-switch function is labeled on the side of the RuggedNet for ease of identification and use.

The RuggedNet PoE switches are available with Small Form Pluggable (SFP) transceiver receptacle ports. The SFP ports support 10/100/1000BASE-T, 1000BASE-T and 10GBASE-T copper transceivers. They also support 1G and 10G multimode or single-mode fiber, dual or single-fiber and standard or CWDM/DWDM wavelengths.

The 10GPoE+/Si automatically negotiate and deliver the power level required by a Powered Device (PD) partner. The 10GPoE+/Si can deliver up to 30 Watts of power per copper port.

The switches features a Remote PoE Power Reset that can be configured with a DIP-switch. This feature enables the user to remotely power-cycle and reset each PD increasing network reliability, up time and save manpower time and expense by automating the recovery of remote PD equipment.

The RuggedNet compact industrial PoE Ethernet switches can be wall or rack mounted using an optional wall mount bracket shelf or DIN-rail mounted using the included DIN-rail mounting clip. They are available with dual DC input power.

SFPs not included
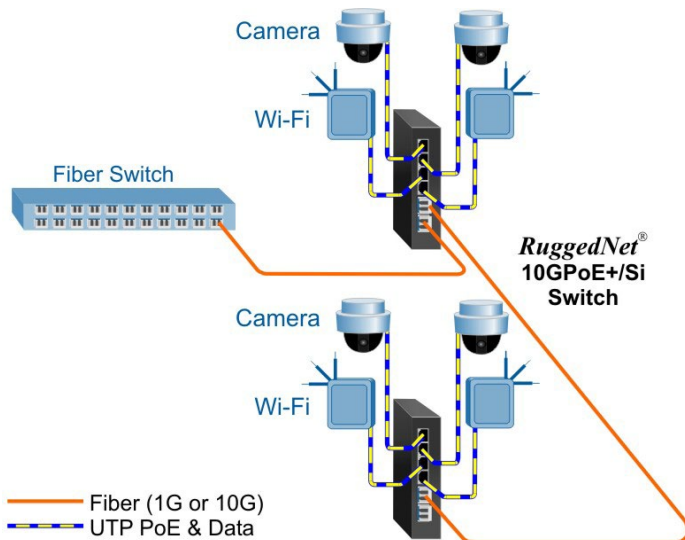
KEY FEATURES

- Unmanaged Industrial 6 and 10 Port PoE/PoE+ 1/10G Ethernet switch

- Two 1/10G SFP/SFP+ transceiver uplink ports

- Supports copper and fiber SFP transceivers

- Supports speeds of 10M, 100M, 1G and 10Gbps copper SFP/SFP+ transceivers

- Four or eight 10/100/1000 copper PoE/PoE+ ports

- Provides full PoE/PoE+ power simultaneously to all RJ-45 ports

- Supports jumbo frames up to 10,240 bytes

- Configurable PoE Power Reset

- Uplink redundancy

- Dual Device mode for operating as two separate switches

- Directed Switch mode AKA Camera mode to prevent port flooding

- Dual DC power for redundancy

- Wall, Rack and DIN-rail mountable

- Fan-less design

- Industrial (-40 to 75º C) operating temperature

- Made in the USA

- Free 24/7/365 Technical Support

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APPLICATIONS

Daisy Chain Application

This example demonstrates the daisy chain capabilities of the RuggedNet PoE switches. In this application each RuggedNet switch connects to its neighboring switch via its uplink ports. The daisy chain can continue to additional switches using this method of connectivity.
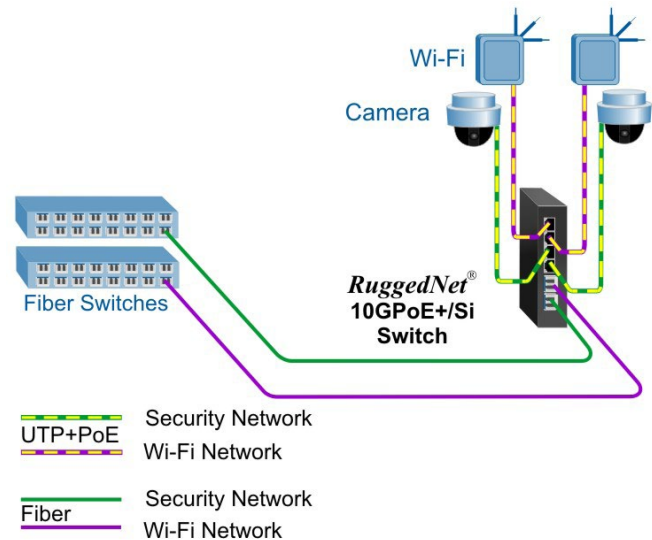
Each RuggedNet switch provides high speed connectivity to the fiber links, and power to IP cameras and Wi-Fi access points at each location along the daisy chain.

Dual Device Mode Application

This Dual Device feature is extremely useful when two isolated networks domains share a single network distribution location.

The example below depicts a scenario where a surveillance security (green) network and a Wi-Fi (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single PoE switch driving both the Cameras and the Wi-Fi Access Points while maintaining isolation between the networks.

Power / Voltage Requirements and Specifications per IEEE

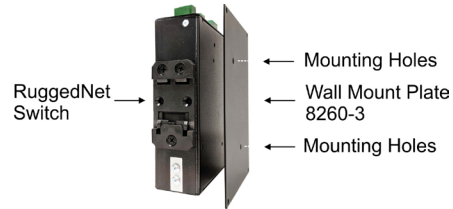| Description	IEEE 802.3af PoE	IEEE 802.3at PoE+
Power Supply Voltage Range	46.0 to 57.0 VDC	51.0 to 57.0 VDC
Voltage Range at PSE port Output	44.0 to 56.0 VDC	50.0 to 56.0 VDC
Maximum Power from PoE/PSE port	15.4 watts	30 watts
Minimum Voltage at PoE/PD port input*	37.0 VDC	42.5 VDC
Minimum Power at PoE/PD port*	12.95 watts	25.5 watts
* at 100 meters using Cat5		

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SPECIFICATIONS

	RuggedNet 10GPoE+/Si
Description	10/100/1000BASE-T with 1/10G Uplink Ports Ruggedized Unmanaged PoE+ 10Gigabit Ethernet Switch
Standard Compliances	IEEE 802.3, IEEE 802.3af (15.40 watts), IEEE 802.3at (30 watts)
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 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
Environmental	REACH, RoHS and WEEE
PoE Modes	IEEE Alternate A (Alt A)
Frame Size	Up to 10,240 bytes
Port Types	Copper: 10/100/1000BASE-T (RJ-45) SFP/SFP+: 10GBASE-X Fiber Transceivers 10GBASE-T Copper Transceivers 1000BASE-X Fiber Transceivers 1000BASE-T Copper Transceivers 10/100/1000BASE-T SGMII Copper Transceivers
Cable Types	Copper: EIA/TIA 568A/B, Cat 5 UTP and higher Fiber: Multimode: 50/125, 62.5/125µm Single-mode: 9/125µm
DC Power Requirements	4 RJ-45 Ports: +46 to +57VDC; 2.33A @ 56VDC 2 Pin Terminal (non-isolated) 8 RJ-45 Ports: +46 to +57VDC; 4.49A @ 56VDC 2 Pin Terminal (non-isolated)
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	4 RJ-45 Ports: 1.70 lb. (772 grams) 8 RJ-45 Ports: 1.77 lb. (803 grams)
Operating Temperature	Industrial: -40 to 75°C Storage: -40 to 80°C
Humidity	5 to 95% (non-condensing)
Altitude	-100m to 4,000m (operational)
MTBF (hours)	280,000
Warranty	5 year product warranty with 24/7/365 free Technical Support

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ORDERING INFORMATION

RuggedNet 10GPoE+/Si Models	
Model Number	**Description**
9583-0-24-2Z	RuggedNet 10GPoE+/Si 2 x SFP/SFP+ uplink port and 4 x RJ-45 PoE/PoE+ ports, Dual DC Terminal Connectors, Industrial Temperature
9583-0-28-2Z	RuggedNet 10GPoE+/Si 2 x SFP/SFP+ uplink port and 8 x RJ-45 PoE/PoE+ ports, Dual DC Terminal Connectors, Industrial Temperature
Contact Omnitron for other fiber options. Order the appropriate SFPs separately. Visit the Omnitron Optical Transceivers web page.	

Accessories	
Model Number	**Description**
8260-3	Wall Mounting Plate
8260-0	19" rack mount shelf

RuggedNet Switch → ← Mounting Holes
← Wall Mount Plate 8260-3
← Mounting Holes

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

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