Omnitron Systems Switches

Comparison Guide for *OmniConverter*® and *RuggedNet*® Switch Products

MADE IN USA
TAA / BAA / NDAA COMPLIANT

Switch Overview

The OmniConverter and RuggedNet product family of switches have models that support copper or fiber uplink ports, 10/100/1000BASE-T RJ-45 copper user ports, multi-gigabit/multi-rate RJ-45 copper user ports or IEEE 802.3cg compliant 10BASE-T1L copper user ports.

The Single Pair Ethernet switches features two 10/100/1000 RJ-45 or 100/1000 fiber SFP uplink ports and four 10BASE-T1L 3-pin terminals or IEC 63171-2 user ports.

The Gigabit switches feature one fixed fiber connector, two 10/100/1000 RJ-45 copper ports or two SFP uplink ports and four or eight 10/100/1000 RJ-45 Ethernet user ports.

The 10Gigabit switches feature two SFP/SFP+ uplink ports and four or eight 10/100/1000 RJ-45 Ethernet user ports.

The 10Gigabit multi-gigabit/multi-rate switches feature one 1/10G SFP/SFP+ or one multi-gigabit/multi-rate RJ-45 uplink port and two multi-gigabit/multi-rate RJ-45 and two 10/100/1000 RJ-45 Ethernet user ports. The RJ-45 user ports support multi-gigabit/multi-rate speeds of 100Mbps, 1Gbps, 2.5Gbps, 5Gbps and 10Gbps.

All switches are available with or without management (unmanaged switches are shown below).

OmniConverter Switches

Single Pair Ethernet

10G Multi-Rate

10Gigabit

1Gigabit

RuggedNet Switches

Single Pair Ethernet

10G Multi-Rate

10Gigabit

1Gigabit

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Features

All Ethernet switches support:

- Layer 2 Ethernet switch that forwards frames to any port based on their MAC address.
- Directed Switch mode, which directs multicast traffic (such as video) only to the appropriate uplink port, preventing the multicast video traffic from flooding other network ports.
- Models with two uplink ports support redundant uplinks and daisy-chain configurations for high availability industrial network applications.
- Models with two uplink ports support Dual Device mode that enables the switches to operate as two independent and isolated Ethernet switches.
- The mode of operation can be configured using easily accessible DIP-switches.
- 1G models are available with one or two SFP receptacles or two 10/100/1000 RJ-45 copper ports or fixed fiber ST, SC, LC connectors. The fiber ports support multimode or single-mode and dual fiber or single-fiber. SFPs support a variety of distances in standard and CWDM wavelengths.
- All models can be wall mounted, rack mounted or DIN-rail mounted.
- OmniConverter models support commercial (0º to 50ºC), wide (-40º to 60ºC) and extended (-40º to 75ºC) operating temperature ranges and are available with an external 100 to 240VAC power adapter or with a DC terminal connector.
- RuggedNet models support industrial (-40º to 75ºC) operating temperature ranges. 1G models are available with single or dual DC terminal connectors. 10G models are available with dual DC terminal connectors.

Managed Models support:

- Management via Web, Telnet, SSH, SNMPv1/v2c/v3 and serial interfaces.
  - IPv4 and IPv6
  - IP-based web management provides intuitive and easy-to-navigate menu options to all the features of the OmniConverter using any standard web browser.
  - Password Strength Checking
- Email Notification with Simple Mail Transfer Protocol (SMTP)
- IEEE 802.1x, RADIUS, TACACS+ and ACL
- Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP) with Loop Prevention (CTP) and BPDU Guard.
- IEC 62439-2 Industrial Ring Media Redundancy Protocol (MRP)
- IEEE 802.1ax Link Aggregation Group (LAG) and Link Aggregation Control Protocol (LACP); Active/Active and Active/Standby.
- IEEE 802.1Q VLAN tagging and IEEE 802.1ad Q-in-Q Provider Bridge VLAN stacking.
- RFC 4541 Internet Group Management (IGMP) snooping
- IPv6 Multicast Listener Discovery (MLD) snooping
- IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
- SNTP / NTP and time of day
- Broadcast / Multicast / Unicast Storm Prevention
- Port Mirroring
- DHCP Relay Option 82
- Rate Limiting, Queue prioritization and Class of Service
- Static MAC configuration and blocking of unknown Unicast/Multicast addresses.
- Port Access Control for enhanced security.
- Managed models with two uplink ports support redundant uplinks, industrial ring Media Redundancy Protocol (MRP), Spanning Tree protocol and daisy-chain configurations for high availability network applications.
- RuggedNet managed models support alarm contacts and sensors
- Check individual data sheets for more details on available features and options

OmniConverter and RuggedNet Switch Comparison

	Models	Model #	Managed	Number of Uplink Ports	Number of RJ-45 or SPE Ports	Uplink Data Rates (Mbps)	RJ-45 or SPE Data Rates (Mbps)	Directed Switch Mode	Dual Device Mode	Alarm Contacts	DC Terminal	AC Connector	Temp
SPE OmniConverter	GL/Sx	2911		2 fiber or 2 RJ-45	4 SPE	100/1000 fiber or 10/100/1000 copper	10	✓	✓		2-Pin	Barrel	0 to 50°C -40 to 60°C -40 to 75°C
1G OmniConverter	G/Sx	2860 - 2879		1/2 SFP or 1/2 Fixed Fiber or 2 10/100/1000	4 or 8 RJ-45	1G or 10/100/1000	10/100/1000	✓	✓		2-Pin	Barrel	0 to 50°C -40 to 60°C -40 to 75°C
	G/M	2820 - 2839	✓	1/2 SFP or 1/2 Fixed Fiber or 2 10/100/1000	4 or 8 RJ-45	1G or 10/100/1000	10/100/1000	✓	✓		2-Pin	Barrel	0 to 50°C -40 to 60°C -40 to 75°C
10G OmniConverter	10G/Sx	2901		2 SFP/SFP+	4 or 8 RJ-45	1G or 10G	10/100/1000	✓	✓		2-Pin	Barrel	0 to 50°C -40 to 60°C -40 to 75°C
	10G/M	2900	✓	2 SFP/SFP+	4 or 8 RJ-45	1G or 10G	10/100/1000	✓	✓		2-Pin	Barrel	0 to 50°C -40 to 60°C -40 to 75°C
	10GMG/Sx	9650		1 SFP/SFP+ or 1 RJ-45	4 RJ-45	1/10G SFP or Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	10/100/1000 and Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	✓			2-Pin	DIN-6	0 to 50°C -40 to 60°C -40 to 75°C
	10GMG/M	9655	✓	1 SFP/SFP+ or 1 RJ-45	4 RJ-45	1/10G SFP or Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	10/100/1000 and Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	✓			2-Pin	DIN-6	0 to 50°C -40 to 60°C -40 to 75°C
SPE RuggedNet	GL/Si	2913		2 fiber or 2 RJ-45	4 SPE	100/1000 fiber or 10/100/1000 copper	10	✓	✓		Dual 2-Pin		-40 to 75°C
1G RuggedNet	G/Si	2880 - 2899		1/2 SFP or 1/2 Fixed Fiber or 2 10/100/1000	4 or 8 RJ-45	1G or 10/100/1000	10/100/1000	✓	✓		Single or Dual 2-Pin		-40 to 75°C
	G/Mi	2840 - 2859	✓	1/2 SFP or 1/2 Fixed Fiber or 2 10/100/1000	4 or 8 RJ-45	1G or 10/100/1000	10/100/1000	✓	✓	✓	Single or Dual 2-Pin		-40 to 75°C
10G RuggedNet	10G/Si	2903		2 SFP/SFP+	4 or 8 RJ-45	1G or 10G	10/100/1000	✓	✓		Dual 2-Pin		-40 to 75°C
	10G/Mi	2902	✓	2 SFP/SFP+	4 or 8 RJ-45	1G or 10G	10/100/1000	✓	✓	✓	Dual 2-Pin		-40 to 75°C
	10GMG/Si	9660		1 SFP/SFP+ or 1 RJ-45	4 RJ-45	1/10G SFP or Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	10/100/1000 and Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	✓			Dual 2-Pin		-40 to 75°C
	10GMG/Mi	9665	✓	1 SFP/SFP+ or 1 RJ-45	4 RJ-45	1/10G SFP or Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	10/100/1000 and Multi-gigabit Multi-rate 100/1000/ 2.5G/5G/10G	✓		✓	Dual 2-Pin		-40 to 75°C

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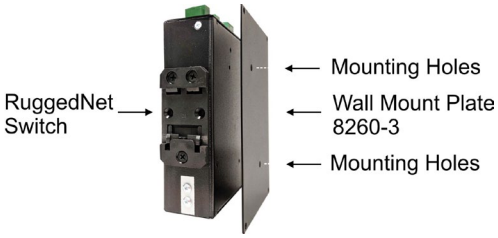
OmniConverter and RuggedNet Mounting Options

OmniConverter Wall Mount

The OmniConverter can be wall mounted using the mounting holes on the integrated mounting brackets.

RuggedNet Wall/Rack Mount Plate

The wall mount plate (8260-3) is used to wall or rack mount any RuggedNet switch.

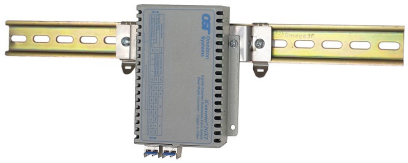


Rack Mount Shelf

The 1U 19" rack mount shelf (8260-0) accommodates RuggedNet and OmniConverter switches. RuggedNet switches will need to have the wall mount plate (8260-3) installed in order to rack mount the switches.

DIN-Rail Mounting

The DIN-Rail mounting clips (8251-0) provides DIN Rail (35mm x 7.5mm) capabilities for any Omnitron product with wall mount brackets. The DIN Rail mounting clip attaches to the wall mount brackets on the module, allowing any wall mount module to be DIN Rail mounted.



The RuggedNet switches can be DIN-rail (35mm x 7.5mm) mounted using the included DIN-rail mount bracket.