OmniConverter® 10G/Sx

Unmanaged 6 and 10 Port 10Gigabit Ethernet Switch

The OmniConverter 10G/Sx is an unmanaged compact Ethernet switch that features two 1/10G uplink ports and four or eight 10/100/1000 RJ-45 copper user ports. The OmniConverter 10G/Sx enables network distance extension with fiber cabling.

The OmniConverter 10G/Sx is a Layer 2 Ethernet switch that forwards frames to any port based on their MAC address.

The OmniConverter 10G/Sx supports 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.

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 10G/Sx to operate as two independent and isolated Ethernet switches. In Dual Device mode, the 10G/Sx provides separate and independent data traffic paths between each uplink port and a group of user ports.

The 10G/Sx modes of operation can be configured using easily accessible DIP-switches. Each DIP-switch function is labeled on the side of the OmniConverter for ease of identification and use.

The OmniConverter 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, CWDM and DWDM wavelengths.

The compact OmniConverter 10G/Sx Ethernet switches can be wall mounted, rack mounted using a shelf or DIN-rail mounted using DIN-rail mounting clips. The OmniConverter Ethernet switch models are available with 2-Pin DC Terminal or external 100-240V AC power adapters.

SFPs not included

KEY FEATURES

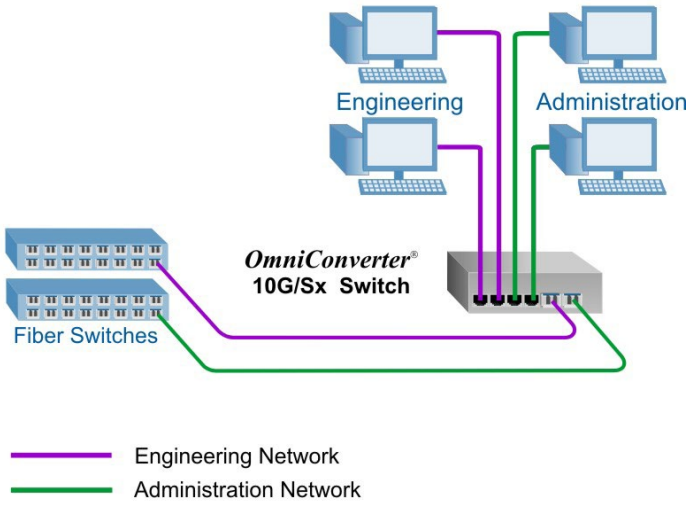
- Unmanaged 1/10G Ethernet Switch
- Dual Device mode for operating as two separate switches
- Directed Switch mode prevents flooding of multicast video traffic
- Uplink redundancy
- Two 1/10G SFP/SFP+ transceiver uplink ports
- Supports copper and fiber SFP transceivers
- Supports speeds of 10M, 100M, 1G and 10Gbps copper SFP/SFP+ transceivers
- Four or eight 10/100/1000 copper user ports
- AC to DC Power Adapter or 2-Pin DC terminal
- Wall, Rack and DIN-rail mountable
- Fan-less design for long life
- Commercial (0º to 50ºC), wide (-40º to 60ºC) and extended (-40º to 75ºC) operating temperature ranges
- TAA, BAA and NDAA compliant, and Made in the USA
- Free 24/7/365 Technical Support

APPLICATIONS

Dual Device Mode Application

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

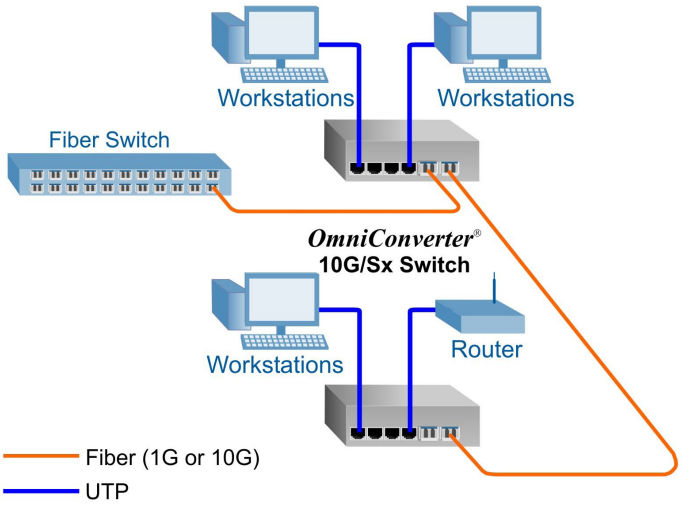
The example below depicts a scenario where the Administration (green) network and the Engineering (purple) network are sharing a single hub distribution location. Using the two uplinks and the Dual Switch mode facilitates using a single switch driving both the Administration and the Engineering workstations while maintaining isolation between the networks.



Daisy Chain Application

This example demonstrates the daisy chain capabilities of the OmniConverter switches. In this application each OmniConverter switch connects to its neighboring switches via its uplink ports. The daisy chain can continue to additional switches using this method of connectivity.

In this application, two locations are connected using the OmniConverter switches providing high speed connectivity between the workstations and the router.



SPECIFICATIONS

Description	**OmniConverter® 10G/Sx** 10/100/1000BASE-T with 1/10G Uplink Ports Unmanaged 6 and 10 Port 10Gigabit Ethernet Switch	
Standard Compliances	IEEE 802.3	
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, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV (DC models), IEC 61000-4-4 EFT: Power: 1 kV; Signal: 1 kV (AC models), IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV (DC models), IEC 61000-4-5 Surge: Power: 1 kV Line/Line; 2 kV Line/Gnd; Signal: 2 kV (AC models), IEC 61000-4-6 CS: Signal: 10 V, IEC 61000-4-8 (Magnetic Field) 30A/m, IEC 61000-4-11 (Voltage Dips, interrupts) IP Rating: IP20 Protection ACT: TAA, BAA, NDAA	
Environmental	REACH, RoHS and WEEE	
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	
AC Power Requirements (Models with AC/DC Adapters)	100 - 240VAC/50 - 60Hz 0.25A max at 115VAC 0.12A max at 230VAC	
DC Power Requirements (Models with DC Terminals)	4 RJ-45 Ports: +12 to +57VDC; 0.81A @ 12VDC 0.20A @ 48VDC 2 Pin Terminal (isolated)	8 RJ-45 Ports: +12 to +57VDC; 0.90A @ 12VDC 0.22A @ 48VDC 2 Pin Terminal (isolated)
Dimensions (W x D x H)	6.28” x 5.2” x 1.5” (159.5 mm x 132.1 mm x 38.1 mm)	
Weight	4 RJ-45 Ports: Module Only: 1.5 lb. (720 grams) Module with AC/DC Adapter: 2.0 lbs. (913 grams)	8 RJ-45 Ports: Module Only: 1.6 lbs. (748 grams) Module with AC/DC Adapter: 2.1 lbs. (941 grams)
Operating Temperature	Commercial: 0 to 50°C Wide: -40 to 60°C (-20°C AC cold start) Extended: -40 to 75°C (-20°C AC cold start) Storage: -40 to 80°C	
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m (operational)	
MTBF (hours)	Module Only: 312,000 AC/DC Adapter: 100,000	
Warranty	5 year product warranty with 24/7/365 free Technical Support and 2 year AC power adapter warranty	

ORDERING INFORMATION

Step 1: Choose the Base Part Number (xxxx-x-xx-pt)

Model Number	Description
2901-0-24-pt	OmniConverter 10G/Sx 2 x SFP/SFP+ uplink port and 4 x RJ-45 user ports
2901-0-28-pt	OmniConverter 10G/Sx 2 x SFP/SFP+ uplink port and 8 x RJ-45 user ports
Contact Omnitron for other fiber options. Order the appropriate SFPs separately. Visit the Omnitron Optical Transceivers web page.	

Step 2: Choose the Power Option (xxxx-x-xx-pt)

1 = External AC/DC Adapter, 100 - 240 VAC included, with US Power Cord
2 = External AC/DC Adapter, 100 - 240 VAC included, No Power Cord
8 = External AC/DC Adapter, 100 - 240 VAC included, PS JET/PSE Certified, with Japanese Power Cord
9 = Direct DC 2 pin terminal connector, no AC/DC power adapter

Step 3: Choose the Operating Temperature Range Option (xxxx-x-xx-pt)

<leave blank> = Commercial temperature (0 to 50°C)
W = Wide temperature (-40 to 60°C)
Z = Extended temperature (-40 to 75°C)

ACCESSORIES

Accessories			
Model Number	**Description**	**Model Number**	**Description**
8251-0	DIN-Rail Mounting Clip	8260-0	19” rack mount shelf