OmniConverter® GL/Sx
Unmanaged Single Pair Ethernet Switch

The OmniConverter GL/Sx is an unmanaged compact gigabit Ethernet switch that features copper or fiber uplink ports and four single-pair 10BASE-T1L Ethernet copper user ports.

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

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

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

Dual Device mode enables the module to operate as two independent and isolated Ethernet switches. In Dual Device mode, the GL/Sx 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 GL/Sx modes of operation can be configured using easily accessible DIP-switches. Each DIP-switch function is labeled on the side of the switch for ease of identification and use.

The switch is available with Small Form Pluggable (SFP) transceiver receptacle ports or 10/100/1000 RJ-45 copper ports. The SFP 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 mounted, rack mounted using a shelf (8260-0) or DIN-rail mounted using the DIN-rail mounting clips (8251-0). The switch is available with an external 100 to 240V AC power adapter or with a DC terminal connector.


SFPs not included

KEY FEATURES

■ Unmanaged Single-Pair Ethernet switch

■ Dual Device mode for operating as two separate switches

■ Directed Switch mode prevents flooding of multicast traffic

■ Uplink redundancy

■ Four IEEE 802.3cg Single-Pair Ethernet user ports

■ 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

■ 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

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APPLICATIONS

Building Automation Application

This example shows a Building Automation application using an OmniConverter GL/Sx and 10TPS/L modules to connect building systems back to a centralized control room. Each building system is powered by PoE/PoE+ from the OmniConverter 10TPS/L modules. Systems controlled by the OmniConverter modules include Motion Detection, Lighting, Elevator Control, Access Control to Floors, Security Surveillance and HVAC.
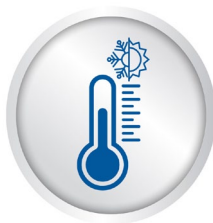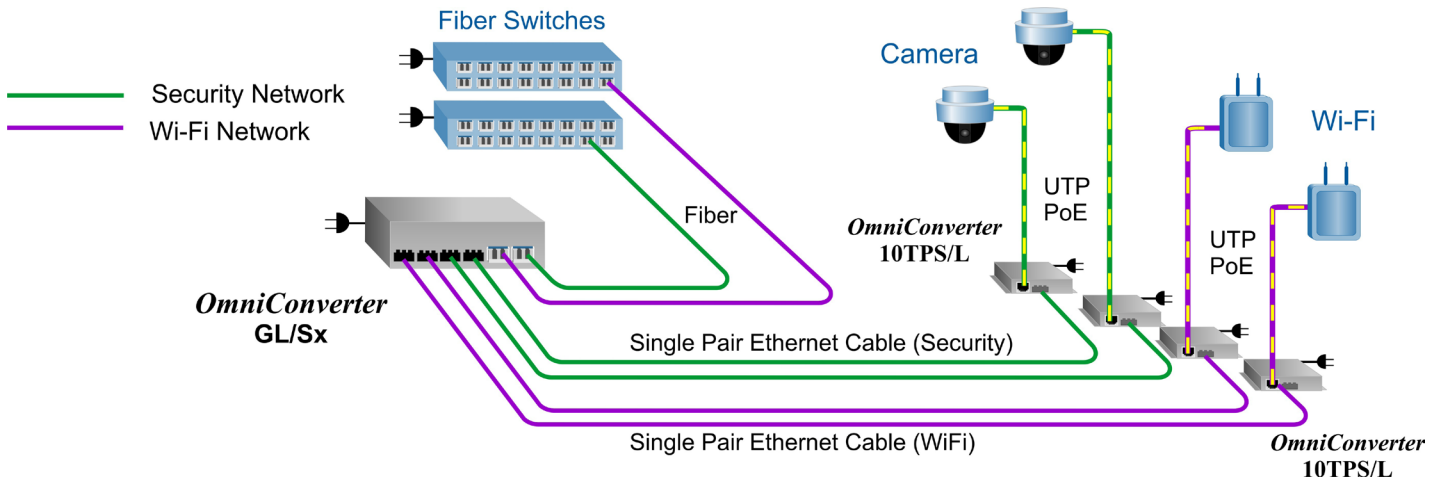
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Systems
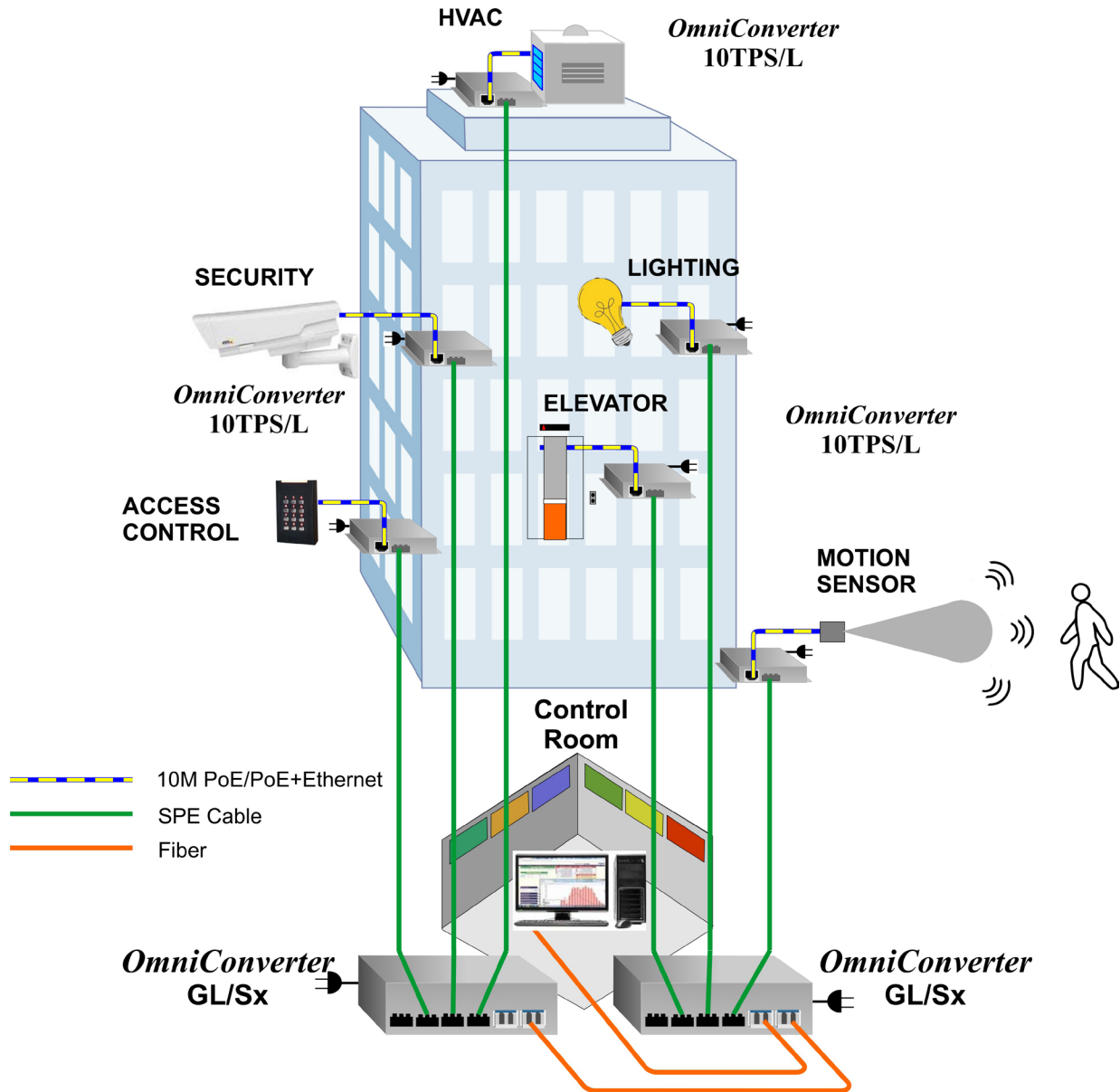
APPLICATIONS

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 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 Device mode facilitates using a single switch driving both the Cameras and the Wi-Fi Access Points across SPE cabling while maintaining isolation between the networks. At the far end, OmniConverter 10TPS/L modules are used to power the Cameras and Access Points.

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SPECIFICATIONS

Description	**OmniConverter® GL/Sx** 10T/T1L to 100/1000 Fiber or 10/100/1000 Copper Uplinks Unmanaged 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, 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	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
AC Power Requirements (Models with AC/DC Adapters)	100 - 240VAC/50 - 60Hz 0.9A max at 115VAC; 0.5A max at 230VAC
DC Power Requirements (Models with DC Terminals)	+12 to +58VDC; 0.55A @ 12VDC; 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	Module Only: 1.5 lb.; 720 grams Module with AC/DC Adapter: 2.0 lbs.; 913 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: 222,000 AC/DC Adapter: 100,000
Warranty	5 year product warranty with 24/7/365 free Technical Support and 2 year AC power adapter warranty

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ORDERING INFORMATION

Step 1: Choose a Base Part Number (2911-x-4c-pt)

Model Number	Description
2911-0-4c-pt	4 x 10BASE-T1L + 2 x 100/1000 SFP Ports
2911-1-4c-pt	4 x 10BASE-T1L + 2 x 10/100/1000 RJ-45 Ports

Step 2: Choose a SPE Connector Type (2911-x-4c-pt)

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

Step 3: Choose a Power Option (2911-x-4c-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 4: Choose an Operating Temperature Option (2911-x-4c-pt)

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

ACCESSORIES

Model Number	Description
8251-0	DIN-Rail Mounting Clip
8260-0	19" rack mount shelf (up to 2 modules)

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