S-10G Media Converters

10 Gigabit Copper and Fiber Converters

- Fiber to Fiber, copper to fiber and copper to copper conversion
- 2 empty slots that use a variety of **10G transceivers supplied by Perle** or other MSA compliant XFPs
- Advanced features –Smart Link Pass-Through, Fiber Fault Alert, Built-in Link Test Generator and Loopback
- Support for Power Level 1,2,3 as well as high-power Level 4 XFPs
- Optical signal regeneration: 3R (re-amplify, reshape, and retime)

Perle **S-10G Media Converters** transparently connect 10 Gigabit Ethernet links over multimode or single mode fiber. Each 10GbE Media Converter comes with two pluggable transceiver ports that support fiber to fiber, copper to fiber or copper to copper media conversion.

Fiber to Fiber and Copper to Fiber conversion is achieved by inserting XFP fiber transceivers that support multimode and single-mode fiber, including CWDM/DWDM wavelengths. Copper to copper is achieved by inserting XFP 10Gbase-CX4 transceivers.

The empty transceiver ports on the **S-10G Media Converters** allow for flexible network configurations to meet any requirement using a variety of **10G transceivers supplied by Perle** or other manufacturers of MSA compliant XFPs.

Perle 10 Gigabit Ethernet to Fiber Converters provide an economical path to extend the distance of an existing 10GbE link. Network Administrators can “see-everything” with Perle’s advanced features such as Smart Link Pass-Through, Fiber Fault Alert, a built-in Link Test capability and Loopback. This allows for more efficient troubleshooting and less on-site maintenance. These cost and time saving features, along with a lifetime warranty and free worldwide technical support, make Perle **S-10G Media Converters** the smart choice for IT professionals. 10G Media Converters are also available for **managed networks with AAA security**.

S-10G Media Converter Features

Smart Link Pass-Through

- When the Smart Link Pass-Through switch is enabled (default), each port will reflect the state of its port peer. In this mode, if a link loss is detected on one port, the transmit signal on the other port is disabled “passing through” the state of the failed link. This enables managed switches and other devices to report link failures to their network NMS.
- When the switch is in the down position, Smart Link Pass-Through is disabled. If a link loss is detected on one port, the transmit signal remains enabled on the other port.

Fiber Fault Alert

With Fiber Fault Alert the state of the 10 Gigabit Ethernet receiver is passed to the transmitter. This provides fault notification to the partner device attached to the 10G Ethernet interface of the media converter.

3R – Optical Signal Regeneration

Optical signal regeneration: 3R (**R**e-amplify, **R**eshape, and **R**etime the signal) ensures that there is a quality link at 10 Gigabit speeds.

Built-in Link Test

When enabled, the built-in packet generator transmits Ethernet test frames to its 10 Gigabit Ethernet peer. The remote media converter will auto-detect the test frames and loopback the test frames. Any frames received in error, will cause the Power, LK1 and LK2 LEDs to illuminate in a specific combination to identify the error. During the test different bit test patterns will be utilized every 5 seconds ensuring a thorough link test.

Test Mode Auto-detect

No switches are required to be flipped in order to go into test mode. The remote media converter will enter test mode automatically when requested by its central site peer. This virtually eliminates unnecessary truck rolls to a remote site when diagnosing a link failure.

EDC Mode Control

Electronic Dispersion Compensation (EDC) is an algorithmic method used to compensate for optical dispersion that occurs on high speed 10 Gigabit links. EDC mode settings are automatically configured by the media converter based on the information retrieved from the XFP module. This will enable proper operation for extended multimode 10GBase-LRM as well as active or passive copper cabling.

Module Temperature Protection

Protects your DOM/DMI capable XFP module by monitoring its internal temperature and will automatically shut down the XFP if the module is operating above its maximum temperature threshold.

High Power Level 4 XFPs

High powered Level 4 XFPs are supported in XTSH and XTXH models.

Jumbo Packets

Transparent to Jumbo Frames with a maximum MTU size of 10,024 bytes

VLAN

Transparent to VLAN tagged packets.

Power Strain Relief strap

A strain relief strap is provided to ensure a solid and secure power connection to the media converter. Ideal for areas that may be exposed to any vibration.

Remote Loopback

Capable of performing a loopback on the 10 Gigabit interface. In this mode, all frames received on the port in loopback mode will be transmitted back. This provides users with the capability of utilizing their own in-house test generators for testing the link.

Specifications

Lifetime limited warranty	Reach, RoHS and WEEE Compliant	HTSUS Number:	UNSPSC Code:	ECCN:
		8517.62.0020	43201553	5A991

Power

Input Supply Voltage	9 - 30 vDC, unregulated (12 vDC Nominal)
Maximum Power Consumption (Watts)	• XTX: 12.0* • XTXH: 16.8*
Total Transceiver power supports (watts)	• XTX: 7.0 • XTXH: 11.0

Power Connector	5.5mm x 9.5mm x 2.1mm barrel socket
Power Adapter	
Universal AC/DC adapter	100-240v AC, regulated AC/12v DC adapter included
Indicators	
Power / TST	• On: Power indication and in normal operation • Blinking slowly: the unit is in loopback or test mode (either port) • Red solid: the unit has a hardware error (upon power up) • Red and blinking: the unit has a hardware error specified by combination of LK1 and LK2
LK1, LK2	• On: Fiber link present • Blinking quickly: Fiber link present and receiving data.(including test data) • Blinking slowly: Fiber link disabled because the other fiber link went down. • Blinking 1 sec on 3 sec off – module shut down due to high temperature. • Off: No fiber link present or no module inserted
Switches - accessible through a side opening in the chassis	
Smart Link Pass-Through	When the Smart Link Pass-Through switch is enabled (default), each port will reflect the state of its port peer. In this mode, if a link loss is detected on one port, the transmit signal on the other port is disabled “passing through” the state of the failed link. This enables managed switches and other devices to report link failures to their network NMS. When the switch is in the down position, Smart Link Pass-Through is disabled. If a link loss is detected on one port, the transmit signal remains enabled on the other port.
Fiber Fault Alert	*Enabled (Default - Up)* With Fiber Fault Alert the state of the 10 Gigabit ethernet receiver is passed to the transmitter. This provides fault notification to the partner device attached to the 10G ethernet interface of the media converter • *Disabled (Down)*

EDC Mode	Electronic Dispersion Compensation (EDC) is an algorithmic method used to compensate for optical dispersion that occurs on high speed 10 Gigabit links. EDC mode settings are automatically configured by the media converter based on the information retrieved from the SFP+ or XFP module. This will enable proper operation for extended multimode 10GBase-LRM as well as active or passive copper cabling. In the default UP switch position the media converter will automatically set the 10G transceiver to match the EDC type declared by the SFP+ / XFP module to either to “linear” or “limiting”. In the event that there is a mismatch, setting the switch to the Down position on the media converter will flip the setting to that declared by the module.
Loopback	Capable of performing a loopback on each 10 Gigabit interface. In this mode, all frames received on the port in loopback mode will be transmitted back. This provides users with the capability of utilizing their own in-house test generators for testing the link.
Connectors	
Pluggable 10G Fiber Transceiver slots (Hot insertion and removable)	Two 10 Gigabit XFP Slots • Power level 1,2,3 • Power Level 4 (XTSH model)
Voltages supplied to XFP slots	1.8V, 3.3V, 5V and -5.2V
Supported 10 Gigabit Fiber pluggable transceivers	IEEE 802.3ae compliant: • 10GBase-SR • 10GBase-LRM • 10GBase-LR • 10GBase-ER • 10GBase-ZR CWDM/DWDM
Supported 10 Gigabit Copper pluggable transceivers	IEEE 802.3ak compliant: • XFP 10GBase-CX4 copper
Environmental Specifications	
Operating Temperature	0°C to 50°C (32°F to 122°F)

Storage Temperature	minimum range of -25°C to 70°C (-13°F to 158°F)
Operating Humidity	5% to 90% non-condensing
Storage Humidity	5% to 95% non-condensing
Operating Altitude	Up to 3,048 meters (10,000 feet)
Heat Output (BTU/HR)	• XTX: 41.0 • XTXH: 57.3
MTBF (Hours)	• XTX & XTXH - without power adaptor: 332,711 Hours • XTX - with power adaptor: 196,235 Hours • XTXH - with power adaptor: 210,748 Hours *Calculation model based on MIL-HDBK-217-FN2 @ 30°C*
Mounting	
Din Rail Kit	Optional
Wall / Rack Mount Kit	Optional
Product Weight and Dimensions	
Product Weight	0.38 kg, 0.84 lbs
Product Dimensions	8 x 12 x 4.2 cm (3.1 x 4.7 x 1.7 inches)
Shipping Weight	0.66 kg, 1.46 lbs
Shipping Dimensions	26 x 17 x 7 cm (10.2 x 6.7 x 2.8 inches)
Regulatory Approvals	
Emissions	• FCC Part 15 Class A, EN55022 Class A • CISPR 22 Class A • CISPR 32:2015/EN 55032:2015 (Class A) • CISPR 35/EN 55035 • EN61000-3-2
Immunity	EN55024

Electrical Safety	• UL/EN/IEC 62368-1 • CAN/CSA C22.2 No. 62368-1 • UL 60950-1 • IEC 60950-1(ed 2); am1, am2 • EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013 • CE

*Maximum rating for both media converter and modules inserted. Actual rating is dependent on the power consumption of the SFP+/XPF modules inserted.

Product List

S-10G-XTX - 10 Gigabit Ethernet Stand-alone Media Converter with dual XFP slots (empty)

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060534	05060531	05060532	05060535	05060536	05060538

S-10G-XTXH - 10 Gigabit Ethernet Stand-alone Media Converter with dual XFP slots (empty). Support Power Level 4 XFPs

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060544	05060541	05060542	05060545	05060546	05060548

Related Accessories

Accessories

DIN Rail Mounting Kit for 4 & 8 port IOLAN desktop models, all Stand-Alone Media Converters and all Stand-alone Ethernet Extenders. Two of these brackets are required for the 8 port STS8-D model.

04030840

Standalone media converter wall / rack mount bracket

05059999