S-4GPT-DSFP-XT Fiber Mode Converter

perle.com/products/sfp-to-sfp-industrial-media-converter.shtml

Industrial Temperature Fiber Mode Conversion

- Easy Fiber to Fiber network extension to remote locations
- Provide wavelength conversion for CWDM and DWDM transponder applications
- Protocol-transparency support for all network protocols
- Support for SFP transceivers with data rates up to 4.25 Gbps
- Reliable operation with advanced features like Smart Link Pass-Through and Fiber Fault Alert
- Operates in -40F to +167F (-40°C to +75°C) extended temperature environments

Perle's feature rich **SFP to SFP industrial protocol and rate-transparent media converters** enable network administrators to incorporate multiple fiber types and wavelengths in, or between, networks through **fiber to fiber mode conversion in -40°F to +167°F operating environments**. Using this technology will result in significant cost savings when compared to replacing an optical blade on network equipment. Easily extend a network to remote locations by converting:

- Multimode to Multimode
- Multimode to Single Mode
- Single Mode to Single Mode
- Dual to single fiber (Duplex to Simplex BiDi)

SFP to SFP Conversion

The **S-4GPT-DSFP-XT Industrial Fiber Mode Converter** comes with two empty SFP slots. This allows for flexible network configurations using SFP fiber transceivers supplied by Perle, Cisco or other manufacturers of MSA compliant SFPs. Adapting to different fiber types, distances and wavelengths is made simple by **mixing and matching SFP's as needed** for maximum flexibility across a variety of topologies and network architectures. The hot-swappable nature of SFPs allow for easy configuration and future upgrades as network demands evolve by simply upgrading a single SFP instead of replacing the entire fiber mode converter.

Fully designed to operate in extreme temperatures

There are others products on the market claiming to operate at -40°F to +175°F but, they use **"commercial-grade" parts** that **have not been qualified** by the manufacturer (OEM) to operate at the claimed temperature ranges. When "commercial-grade" parts are exposed to extremely high or low temperatures, product failures are inevitable. For example, **integrated circuits** on the PCB **overheat**

causing premature failure of the product. Under-rated **connectors do not allow for proper contact** between the device and the cables. **These failures eventually stop all data communications in these high and low temperature environments.**

Perle understands the critical nature of the **traffic management, oil and gas pipelines, weather tracking, industrial and outdoor applications** where customers are deploying this technology. Often, they are connecting security cameras, wireless access points, alarms, traffic controllers, sensors or tracking devices **in remote or difficult to access locations**. Unreliable products made with standard components simply won't work. This is why all **Perle Industrial Temperature Media Converters only use components that are fully qualified and rated to operate in -40°F to +175°F**.

Convert different wavelengths (WDM Transponders)

SFP transceivers enable the **S-4GPT-DSFP-XT Industrial Fiber Mode Converter** to operate as a **Wave Division Multiplexing (WDM) transponder**. Also referred to as Bi-Directional (BiDi) or Simplex, WDM Transponders help network administrators take advantage of the cost savings in both material and labour associated with Single Strand Fiber. WDM uses separate transmit and receive frequencies to **communicate on a single fiber strand**. WDM technology relies on the fact that optical fibers can carry many wavelengths of light simultaneously without interaction between each wavelength. Thus, a single fiber can carry many separate wavelength signals or channels simultaneously. WDM systems are divided into different wavelength patterns, conventional/coarse (**CWDM**) and dense (**DWDM**).

S-4GPT-DSFP-XT Industrial Fiber Mode Converter Features

Network Administrators can "see-everything" with Perle's advanced features such as Smart Link Pass-Through and Fiber Fault Alert. 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 the **S-4GPT-DSFP-XT Industrial Fiber Mode Converter** the smart choice for IT professionals.

Protocol Transparency	Transparent to all protocols (including but not limited to) • Ethernet : 10Base-FL • Fast Ethernet : 100Base-X • Gigabit Ethernet (1.25G , 2.5G) : 1000Base-X • GR-253-CORE : ATM/SONET (OC-3, OC-12, OC-48) • G.957 : SDH (STM-1, STM-4, STM-16) • Fibre Channel: (FC-1, FC-2, FC-4) • FDDI, IBM protocols ESCON and FICON • Video protocols (DVB, SDI, HD-SDI, SMTPE)
Rate Transparency	Supports SFP data rates up to 4.25Gbps.

Smart Link Pass-Through	Smart Link Pass-Through when enabled ensures that the link state on a fiber connection is directly reflected through the media converter to the other connection. If link is lost on one of the connections, then the other link will be brought down by the media converter. This feature applies when both SFP slots are occupied. If set in Standard Mode, the link is kept active. The unit will transmit a 25Mhz keep-alive signal to artificially keep the link up.
Fiber Fault Alert	If the media converter module detects a loss of fiber, it will immediately notify the fiber link partner that an error condition exists.
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.

Power	
Input Supply Voltage	6 - 30 vDC, unregulated (12 vDC Nominal). Regulated power adapter is not included
Current	325mA @ 12VDC
Power Consumption	4 watts
Power Connector	2-pin terminal block
Indicators	
Power	This green LED is turned on when power is applied to the media converter. This LED is off when there is no power supplied. A Blinking LED will indicate that a hardware error has been detected.
LK1	LED is ON when a signal is detected on LK1. LED is OFF when there is no signal.
LK2	LED is ON when a signal is detected on LK2. LED is OFF when there is no signal.
Switches - accessible through a side opening in the chassis	

Link Mode	Smart Link Pass-Through when enabled (Default) ensures that the link state on a fiber connection is directly reflected through the media converter to the other connection. If link is lost on one of the connections, then the other link will be brought down by the media converter. This feature applies when both SFP slots are occupied. If set in Standard Mode, the link is kept active. The unit will transmit a 25Mhz keep-alive signal to artificially keep the link up.
Fiber Fault Alert	If the media converter module detects a loss of fiber, it will immediately notify the fiber link partner that an error condition exists. *Disabled (Default).* The Media Converter will not monitor for fiber fault.
Multi-speed SFP	When enabled, identifies that the SFPs inserted are MSA complaint SFPs that have a multi-rate capability. When disable (Default), no action is performed in this context.
Rate Select	This enables rate selection when using dual-rate capable SFPs. If the “Multi-Speed SFP” select switch is in the “Disabled” position, this switch is ignored. High Speed - UP (default) Low Speed – DOWN
2 x SFP Slots	
SFPs	SFP line rates up to 4.25Gbps are supported. The SFPs occupying each slot in the media converter however must be operating at the same speed. SFP power level 1 and 2 are supported.
Environmental Specifications	
Operating Temperature	-40° C to 75° C (-40° F to 167° F)
Storage Temperature	minimum range of -40° C to 85° C (-40° F to 185° F)
Operating Humidity	5% to 90% non-condensing
Storage Humidity	5% to 95% non-condensing

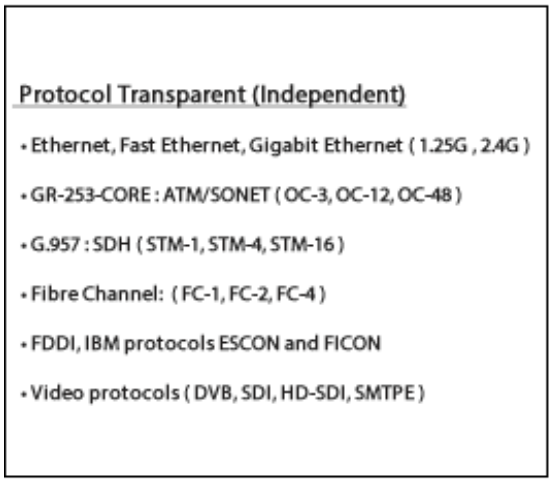
Operating Altitude	Up to 3,048 meters (10,000 feet)
Heat Output (BTU/HR)	13.65
MTBF (Hours)	902,294 Calculation model based on MIL-HDBK-217-FN2 @ 30 °C
Chassis	Metal with an IP20 ingress protection rating
Mounting	
Din Rail Kit	Optional
Wall / Rack Mount Kit	Optional
Product Weight and Dimensions	
Weight	0.3 Kg, 0.7 lbs
Dimensions	120 x 80 x 26 mm, 4.7 x 3.1 x 1.0 inches
Packaging	
Shipping Weight	0.45 Kg, 1.0 lbs
Shipping Dimensions	170 x 260 x 70 mm, 6.7 x 10.2 x 2.8 inches
Regulatory Approvals	
	FCC Part 15 Class A, EN55022 Class A
	CISPR 22 Class A CISPR 32:2015/EN 55032:2015 (Class A) CISPR 24:2010/EN 55024:2010
Emissions	EN61000-3-2
Immunity	EN55024
Electrical Safety	UL/EN/IEC 62368-1 CAN/CSA C22.2 No. 62368-1

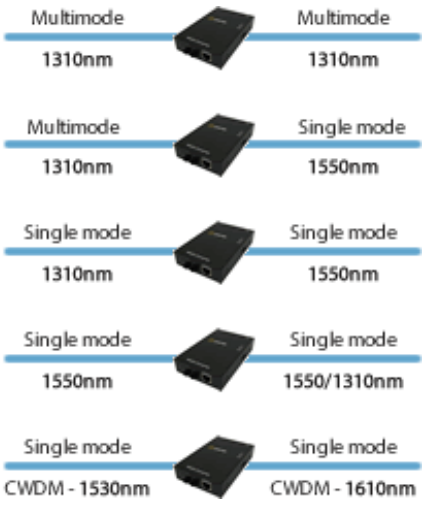
	UL 60950-1 IEC 60950-1(ed 2); am1, am2 EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
	CE
Laser Safety	Dependent on SFPs used. SFPs that meet Class 1 Laser safety requirements per IEC-60825 FDA/CDRH standards and comply with 21CFR1040.10 and 21CFR1040.11 are recommended for use with this product.
Environmental	Reach, RoHS and WEEE Compliant
	ECCN: 5A991
	HTSUS Number: 8517.62.0020
Other	Perle Limited Lifetime Warranty

Fiber to Fiber Mode Conversion

Interconnect Multiple Fiber Types and Wavelengths

SFP to SFP protocol-transparent fiber converters enable network administrators to incorporate multiple fiber types and wavelengths within or between networks. See below some examples.





Product Image	Description	Power Cord	Product Number

Product Image	Description	Power Cord	Product Number
	**S-4GPT-DSFP-XT - Protocol Transparent Stand-Alone Industrial Temperature Media Converter with dual SFP slots (empty).** Supports two SFPs with identical speeds up to 4.25 Gbps. Extended Temperature, terminal block power connector for external power source.	None	05060580

Accessories

Accessory Image	Description	Model Number	Accessory Number
	DIN Rail Mounting Kit for 4 & 8 port IOLAN SDS/STS wall mount 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.	4 DIN Rail Mount Bkt	04030840
	Standalone media converter wall / rack mount bracket	MCSM	05059999
Power Supply			
	Extended Temperature UK power adapter for 12 volt Extended Temperature Terminal Servers, Media Converters and Ethernet Extenders	Ext. Temp Power Adapter UK	04030671
	Extended Temperature EU power adapter for 12 volt Extended Temperature Terminal Servers, Media Converters and Ethernet Extenders	Ext. Temp Power Adapter EU	04030672
	Extended Temperature USA power adapter for 12 volt Extended Temperature Terminal Servers, Media Converters and Ethernet Extenders	Ext. Temp Power Adapter USA	04030674

Accessory Image	Description	Model Number	Accessory Number
	Extended Temperature SA power adapter for 12 volt Extended Temperature Terminal Servers, Media Converters and Ethernet Extenders	Ext. Temp Power Adapter SA	04030675
	Extended Temperature AUS power adapter for 12 volt Extended Temperature Terminal Servers, Media Converters and Ethernet Extenders	Ext. Temp Power Adapter AUS	04030676
	UNO-PS/1AC/24DC/60W DIN-Rail Power Supply: 24 VDC, 60 Watt with universal 85 to 264 VAC, -25 to 70°C extended operating temperature.	UNO-PS/1AC/24DC/60W Power Supply	29029928