Perle

Protocol Transparent

Standalone

Media Converters

Installation Guide

S-4GPT-DSFP
S-4GPT-DSFP-XT

Overview

This document contains instructions necessary for the installation and operation of the Perle Protocol Transparent Standalone Media Converters. These Media Converters allow connection and cross-connection of fiber networks of different types to each other. They are protocol independent using standard SFP* modules with speeds up to 4.25 Gbps.

*(purchased separately)

Supported modes of operation
- o Multimode to multimode
- o Multimode to single mode
- o Single mode to single mode
- o Multimode to single Mode Single strand
- o Wavelength Transponder (CWDM/DWDM)
- o Dual and single fiber (Simplex to Duplex)

Key Features
- o Protocol and rate transparency for fiber SFPs
- o Support for all standard MSA-complaint SFPs
- o SFP rates from 1 up to 4.25 Gbps
- o Support for multi-rate SFPs
- o Smart Link Passthrough
- o Fiber Fault Alert
- o Provides diagnosis LED functions
- o Extended Temperature models available

Refer the Perle web site for the most up to date Installation guides, models and specifications. www.perle.com

Installation

The default switch settings (all switches in the UP position) will work for most installations. See the Operation section of this guide for more details.

The converter comes equipped with a bank of DIP switches and set of jumpers for setting configuration.

The following steps are used to configure the Media Converter.

1. Set the DIP switch settings (optional).

2. Insert the SFP modules (purchased separately) into the transceiver ports.

3. Connect the power cord strain relief clip (optional) and connect and apply power.

DIP Switch Settings

The DIP switches are accessible through the opening in the side of the enclosure.

1 - Link Mode
2 - Fiber Fault Alert
3 - Rate Select
4 - Unused

Link Mode (Switch 1)

Switch Position	Mode
Up (default)	Smart Link Pass-Through Mode
Down	Standard Mode

Smart Link Pass-Through: In this mode, the fiber link state on one connection is directly reflected through the Media Converter to the other fiber connection. Since this media converter is protocol independent, it monitors the Signal Detect indicator from the SFP

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and reflects this on the TX port of the other SFP by turning off the transmitter. When the signal (Link) gets restored and Signal Detector becomes active the affected transmitter gets re-enabled.

Standard Mode: In Standard Mode the media converter will monitor the fiber link in the same manner. If Signal Detect goes down the media converter will output a 25MHz signal on the TX port of the other SFP.

Fiber Fault Alert (Switch 2)

Switch Position	Mode
Up (default)	Enabled
Down	Disabled

Enabled: If the media converter detects a loss of fiber signal on its fiber receiver, it will disable its fiber transmitter on the same SFP. This, in effect, notifies the fiber link partner that an error condition exists on the fiber connection.

Disabled: The Protocol Transparent Media Converter will not monitor for Fiber Fault.

Rate Select (Switch 3)

Switch Position	Mode
Up (default)	High Speed
Down	Low Speed

High Speed – When a multi-rated SFP is inserted, it is enabled for its higher speed of operation.

Slow Speed – When a multi-rated SFP is inserted, it is enabled for its slower speed of operation.

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Attaching the Power Cord Strain Relief Clip

For extra power cable strain relief, attach the strain clip to the side of the unit, then thread the power cable through the clip in either one or two loops.

Operation

Powering up the Perle Media Converter

1. Connect the Perle supplied power adapter to the media converter.
2. Turn on the power at the source.
3. Check that the PWR LED light is lit.

Terminal Block Connector

1. Ensure the Power Source is off prior to connection.
2. Strip insulator sheathing from both wires 5mm (3/16th inch) to expose the copper conductor wire.
3. Loosen the terminal block screws and connect Positive (+) wire to the left terminal. Connect the Negative (-) wire to the right terminal. Tighten Terminal screws (0.22Nm-0.25Nm torque).
4. Turn on power source.
5. Check that the PWR LED light is lit.

Status LED

There are three status LEDs located on the front of the unit.

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PWR   ◎
LNK1  ◎
LNK2  ◎
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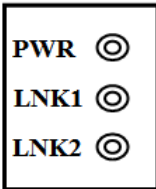
PWR
On – Power is applied to the unit *Blinking Fast* – Hardware Error
LK1 *On* – Signal Detected *Off* – No Signal Detected
LK2 *On* – Signal Detected *Off* – No Signal Detected

Technical Specifications

Max Power Input Consumption 6-30 VDC 0.625A Max	Commercial	Extended Temperature
	325mA at 12VDC	325mA at 12VDC
Operating Temperature	0℃ - 50℃ (32℉ - 122℉)	-40℃ - 75℃ (-40℉ - 167℉)
Storage Temperature	-25℃ - 70℃ (-13℉ - 158℉)	-40℃ - 85℃ (-40℉ - 158℉)
Operating Humidity	5% to 90% non-condensing	
Storage Humidity	5% to 95% non-condensing	
Operating Altitude	Up to 3,048 m (10,000 ft)	

Note: *Please refer the product page on the Perle website for the most up to date models and specifications.*

Compliance Information

EMI/EMC

EN 55022/CISPR22
EN 55022/CISPR22

FCC

This product has been found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in this Guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

Safety

IEC 60950-1 2nd edition
UL 60950-1 CAN/CSA STD C22.2 No 60950-1

Warning: If this unit is to be installed in a location where the ambient temperature exceeds 50C, the case temperature may exceed safe levels. For this reason, this unit should installed in a restricted access location.

Warranty / Registration

Perle's standard Lifetime Warranty provides customers with return to factory repairs for Perle products that fail under the conditions of the warranty coverage. Details can be found at:
http://www.perle.com/support_services/warranty.shtml

Contacting Technical Support

Contact information for the Perle Technical Assistance Center (PTAC) can be found at the link below. A Technical Support Query may be made via this web page.
www.perle.com/support_services/support_request.shtml

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