S-110 Media and Rate Converter

10/100Base-TX to 100Base-X Conversion



- 10/100Base-TX to 100Base-X Fiber Media Converters
- Extend network distances up to 120km
- Advanced features - Link Pass-Through, Far-End Fault, Auto-MDIX and Loopback

Perle's line of feature rich **10/100 Rate Converting to Fiber Media Converters** transparently connect 10/100 Ethernet to fiber. Our 10/100 converters provide an economical path to extend the distance of an existing network, the life of non-fiber based equipment, or the distance between two devices. **S-110 Media Converters** are also available with support for **Power over Ethernet (PoE)** and **Extended Temperature ranges**.

Network Administrators can "see-everything" with Perle's advanced features such as Auto-Negotiation, Auto-MDIX, Link Pass-Through, Far End Fault, and Remote 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 **10/100 ethernet media converters** the smart choice for IT professionals.

Media Converter 10/100 to Fiber Features

Auto-Negotiation (802.3u)

The media converter supports auto negotiation on the 10/100Base-TX interface.

Auto-MDIX

Auto-MDIX (automatic medium-dependant interface crossover) detects the signaling on the UTP interface to determine the type of cable connected (straight-through or crossover) and automatically configures the connection when enabled. With Auto-MDIX enabled, either a straight-through or crossover type cable can be used to connect the media converter to the device on the other end of the cable.

Link Pass-Through

With Link Pass-Through the state of the UTP receiver is passed to the fiber transmitter to make the media converter appear transparent to the end devices that are connected. In addition if Far-End Fault is enabled the media converter can turn off the 10/100Base-TX transmitter when a FAR-End Fault is received.

Using Link Pass-Through with Far-End Fault minimizes data loss when a fault occurs. Should a fault occur, the end devices have the indication of a failure available to them making trouble shooting easier.

Far-End Fault (FEF)

The media converter implements the 802.3 standard for Far-End Fault for the indication and detection of remote fault conditions on the 100Base-X fiber connection. With Far-End Fault enabled the media converter transmits the Far-End Fault Indication over the 100Base-X fiber connection whenever a receive failure is detected on the 100Base-X fiber connection. The media converter continuously monitors the100Base-X fiber connection for a valid signal.

The action the media converter takes on receiving a Far-End Fault Indication is dependent on the Link Pass-Through switch setting.

Pause (IEEE 802.3xy)

Pause signaling is an IEEE feature that temporarily suspends data transmission between two devices in the event that one of the devices becomes overwhelmed. The media converter supports pause negotiation on the 10/100Base-TX copper connection.

VLAN

The media converter is transparent to VLAN tagged packets.

Remote Loopback

The media converter is capable of performing a loopback on the fiber port.

Not what you are looking for? View all Perle **Media Converters.**.

Need help? **Contact Perle**.

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

Power	
Input Supply Voltage	6 - 30 vDC, unregulated (12 vDC Nominal)

Current	175 mA
Power Consumption	2.1 watts
Power Connector	5.5mm x 9.5mm x 2.1mm barrel socket
Power Adapter	
Universal AC/DC adapter	100-240v AC, regulated DC adapter included
Indicators	
Power / TST	This green LED is turned on when power is applied to the media converter. Otherwise it is off. The LED will blink when in Loopback test mode.
Fiber link on / Receive activity (LKF)	This green LED is operational only when power is applied. The LED is on when the 100Base-FX link is on and flashes with a 50% duty cycle when data is received.
Copper link on / Receive activity (LKC)	This green LED is operational only when power is applied. The LED is on when the 100Base-TX link is on and flashes with a 50% duty cycle when data is received.
Fiber Duplex (FDF)	This green LED is operational only when power is applied. The LED is on when the 100Base-FX link is operational in full duplex mode. The LED is off when in half duplex.
Copper Duplex (FDC)	This green LED is operational only when power is applied. The LED is on when the 10/100Base-TX link is operational in full duplex mode. The LED is off when in half duplex.
10/100/1000 Speed	This green LED is operational only when power is applied. The LED is on when the speed of the copper Ethernet port is running at 100 MBPS. The LED is off when in 10 MBPS
Switches - accessible through a side opening in the chassis	
Auto-Negotiation (802.3u)	• *Enabled (Default)* - The media converter uses 802.3u Auto-negotiation on the 100Base-TX interface. It is set to advertise full duplex. • *Disabled* - The media converter sets the port according to the position of the speed and duplex switches.

Link Pass Through	*Enabled (Default)* - When the state of the receiver is changed on the 100Base-TX interface it is reflected on the 100Base-FX fiber transmitter. When the state of the receiver on the 100Base-FX interface is changed it is reflected on the 100Base-TX transmitter. When a Far-End Fault Indication is received on the fiber interface the 100Base-TX transmitter is turned off. When the Far-End Fault Indication is cleared the transmitter is turned back on. *Disabled* - The 100Base-TX and the 100Base-FX fiber interface operate independently. Far-End Fault indication on the 100Base-FX fiber interface has no effect on the 100Base-TX interface.
Far-End Fault (FEF)	• *Enabled (Default - Up)* - The media converter transmits the Far-End Fault Indication over the 100Base-X fiber connection whenever a receive failure is detected on the 100Base-X fiber connection. The media converter continuously monitors the 100Base-X fiber connection and clears the Far-End Fault Indication condition when a valid signal is received. • *Disabled* - Far-End Fault Indications are not transmitted regardless of the condition of the receive signal on the 100Base-FX fiber connection.
Remote Loopback	The media converter can perform a loopback on the 100Base-X fiber interface. • *Disabled (Default - Up)* • *Enabled* - The 100Base-X receiver is looped to the 100Base-X transmitter. The 100Base-TX transmitter is taken off the interface.
Auto-MDIX (Internal Strap)	If Auto-Negotiation (802.3u) is enabled, the media converter uses the HP Auto-MDIX method for the 100Base-TX interface. If Auto-Negotiation (802.3u) is disabled the Media converter will use the RX Energy method on the 100Base-TX interface to set the port MDI or MDIX whichever is appropriate. • *Enabled (Default)* - Either a straight-through or crossover type cable can be used to connect the media converter to the device on the other end of the cable. • *Disabled* - If the partner device on the other end of the cable does not have the Auto-MDIX feature a specific cable, either a straight-through or crossover will be required to ensure that the media converter's transmitter and the partner devices transmitter are connected to the others receiver. The Media converter's 100Base-TX port is configured as MDI-X with this switch setting.

Speed Copper	• 100 (Default) • 10
Duplex Copper	• Full (Default) • Half
Duplex Fiber	• Full (Default) • Half
Connectors	
100Base-TX	RJ45 connector, 2 pair CAT 5, EIA/TIA 568A/B or better cable
Magnetic Isolation	1.5kv
Filtering	
Filtering	1024 MAC Addresses
Frame Specifications	
Buffer	512 Kbits frame buffer memory
Size	Maximum frame size of 2048 bytes
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)	7.2
MTBF (Hours)*	• Without power adaptor: 598,000 Hours • With power adaptor: 334,000 Hours *Calculation model based on MIL-HDBK-217-FN2 @ 30°C*

Chassis	Metal with an IP20 ingress protection rating
Mounting	
Din Rail Kit	Optional
Rack Mount Kit	Optional
Product Weight and Dimensions	
Weight	0.3 kg, 0.66 lbs
Dimensions	120 x 80 x 26 mm, 4.7 x 3.1 x 1.0 inches
Packaging	
Shipping Weight	0.55 kg, 1.2 lbs
Shipping Dimensions	170 x 280 x 70 mm, 6.7 x 10.2 x 2.8 inches
Regulatory Approvals	
Emissions	• FCC Part 15 Class B* • CISPR 32 / EN 55032 • EN61000-3-2
Immunity	CISPR 35 / EN 55035
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	• EN 60825-1 • Fiber optic transmitters on this device meet Class 1 Laser safety requirements per IEC-60825 FDA/CDRH standards and comply with 21CFR1040.10 and 21CFR1040.11.

* When used with a Class B rated AC power adapter.

Product List



S-110-M2ST2 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-FX 1310nm multimode (ST) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050404	05050401	05050402	05050405	05050406	05050408



S-110-M2SC2 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-FX 1310nm multimode (SC) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050414	05050411	05050412	05050415	05050416	05050418



S-110-M2LC2 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-FX 1310nm multimode (LC) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050424	05050421	05050422	05050425	05050426	05050428



S-110-S2SC20 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-LX 1310nm single mode (SC) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050434	05050431	05050432	05050435	05050436	05050438



S-110-S2LC20 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-LX 1310nm single mode (LC) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050444	05050441	05050442	05050445	05050446	05050448



S-110-S2SC40 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-EX 1310nm single mode (SC) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050454	05050451	05050452	05050455	05050456	05050458



S-110-S2SC80 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-ZX 1550nm single mode (SC) [80 km/49.7 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050464	05050461	05050462	05050465	05050466	05050468



S-110-S1SC20U - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1310nm TX / 1550nm RX single fiber single mode (SC) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050474	05050471	05050472	05050475	05050476	05050478



S-110-S1SC20D - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1550nm TX / 1310nm RX single fiber single mode (SC) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050484	05050481	05050482	05050485	05050486	05050488



S-110-S1SC40U - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1310nm TX / 1550nm RX single fiber single mode (SC) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050494	05050491	05050492	05050495	05050496	05050498



S-110-S1SC40D - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1550nm TX / 1310nm RX single fiber single mode (SC) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050504	05050501	05050502	05050505	05050506	05050508



S-110-S2SC120 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-ZX 1550nm single mode (SC) [120 km/74.6 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050514	05050511	05050512	05050515	05050516	05050518



S-110-S2ST20 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-LX 1310nm single mode (ST) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050524	05050521	05050522	05050525	05050526	05050528



S-110-S2ST40 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-EX 1310nm single mode (ST) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050534	05050531	05050532	05050535	05050536	05050538



S-110-S2ST80 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-ZX 1550nm single mode (ST) [80 km/49.7 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050544	05050541	05050542	05050545	05050546	05050548



S-110-S2ST120 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-ZX 1550nm single mode (ST) [120 km/74.6 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050554	05050551	05050552	05050555	05050556	05050558



S-110-S2LC40 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-EX 1310nm single mode (LC) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050564	05050561	05050562	05050565	05050566	05050568



S-110-S2LC80 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-ZX 1550nm single mode (LC) [80 km/49.7 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050574	05050571	05050572	05050575	05050576	05050578



S-110-S2LC120 - 10/100 Fast Ethernet Stand-Alone Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-ZX 1550nm single mode (LC) [120 km/74.6 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05050584	05050581	05050582	05050585	05050586	05050588



S-110-M1SC2D - 10/100 Fast Ethernet Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1550nm TX / 1310nm RX single strand fiber, multimode (SC) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05040904	05040901	05040902	05040905	05040906	05040908



S-110-M1SC2U - 10/100 Fast Ethernet Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1310nm TX / 1550nm RX single strand fiber, multimode (SC) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05040914	05040911	05040912	05040915	05040916	05040918



S-110-M1ST2D - 10/100 Fast Ethernet Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1550nm TX / 1310nm RX single strand fiber, multimode (ST) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05040844	05040841	05040842	05040845	05040846	05040848



S-110-M1ST2U - 10/100 Fast Ethernet Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1310nm TX / 1550nm RX single strand fiber, multimode (ST) [2 km/1.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05040854	05040851	05040852	05040855	05040856	05040858



S-110-S1ST20U - 10/100 Fast Ethernet Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1310nm TX / 1550nm RX single strand fiber, single mode (ST) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05040824	05040821	05040822	05040825	05040826	05040828



S-110-S1ST20D - 10/100 Fast Ethernet Media and Rate Converter. 10/100Base-TX (RJ-45) [100 m/328 ft.] to 100Base-BX 1550nm TX / 1310nm RX single strand fiber, single mode (ST) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05040834	05040831	05040832	05040835	05040836	05040838

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

Power Supplies



UK 12VDC / 12W power adapter with Barrel connector for Perle Device Servers, Media Converters, and Ethernet Extenders

04031581



EU 12VDC / 12W power adapter with Barrel connector for Perle Device Servers, Media Converters, and Ethernet Extenders

04031582



USA 12VDC / 12W power adapter with Barrel connector for Perle Device Servers, Media Converters, and Ethernet Extenders

04031584



Australia 12VDC / 12W power adapter with Barrel connector for Perle Device Servers, Media Converters, and Ethernet Extenders

04031586