S-1110 Media and Rate Converters

10/100/1000Base-T to 1000Base-X Conversion

- 10/100/1000 Copper to 1G Fiber Media Converters
- Connect 10/100 devices to Gigabit backbone
- Dual fiber ST/SC/LC or Single fiber SC Connectors
- Extend network distances up to 160km
- Advanced features - Smart Link Pass-Through, Fiber Fault Alert, Auto-MDIX and Loopback

S-1110 Media and Rate Converters transparently connect copper to multimode or single mode fiber. It also automatically detects if the copper port speed is 10Mbps, 100Mbps, or 1G and does a rate conversion to 1G if the fiber port speed is different. These 10/100/1000 Ethernet to Gigabit Fiber 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-1110 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, Fiber Fault Alert, 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 **10/100/1000 Media Converters** the smart choice for IT professionals.

10/100/1000 Rate Converting to Fiber Media Converter Features

Auto-Negotiation (802.3u)	The media converter supports auto negotiation. The 1000Base-X fiber interface negotiates according to 802.3 clause 37. The 10/100/1000Base-T negotiates according to 802.3 clause 28 and 40. The 1000Base-X will link up with its partner after the highest common denominator (HCD) is reached and the copper has linked up with its partner. The 1000Base-X will continue to cycle through negotiation transmitting a remote fault of offline (provided this is enabled through the switch setting) until the copper is linked up and the HCDs match. The media converter supports auto-negotiation of full duplex, half duplex, remote fault, full duplex pause, asymmetric pause and Auto MDI-X.

Auto-MDIX	Auto-MDIX (automatic medium-dependant interface crossover) detects the signaling on the copper ethernet interface to determine the type of cable connected (straight-through or crossover) and automatically configures the connection when enabled. The media converter can also correct for wires swapped within a pair. The media converter will adjust for up to 120ns of delay skew between the 1000Base-T pairs.
Smart Link Pass-Through	When the Link Mode switch is placed into Smart Link Pass-Through mode, the copper ethernet port will reflect the state of the 1000Base-X media converter port. This feature can be used whether fiber auto-negotiation is enabled or disabled.
Fiber Fault Alert	With Fiber Fault Alert the state of the 1000Base-X receiver is passed to the 1000Base-X transmitter. This provides fault notification to the partner device attached to the 1000Base-X interface of the media converter. If the 1000Base-X transmitter is off as a result of this fault it will be turned on periodically to allow the condition to clear should the partner device on the 1000Base-X be using a similar technique. This eliminates the possibility of lockouts that occur with some media converters. Applies only when fiber auto-negotiation is disabled.
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 10/100/1000Base-T connection and 1000Base-X fiber connection.
Duplex	Full and half duplex operation supported.
Jumbo Packets	Transparent to jumbo packets up to 10KB.
VLAN	Transparent to VLAN tagged packets.
Remote Loopback	Capable of performing a loopback on the 1000Base-X fiber interface.

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Need help? Contact Perle.

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 1000Base-X 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 10/100/1000Base-T 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 10/100/1000Base-X link is operatinal 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 10/100/1000Base-T link is operatinal in full duplex mode. The LED is off when in half duplex.
10/100/1000 Speed	This multi-color LED is operational only when power is applied. The LED is green when the speed of the copper ethernet port is running at 1000 Mbps. The LED is orange 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 10/100/1000Base-T interface. It is set to advertise full duplex, half duplex, pause and remote fault capabilities. *Disabled* - The media converter sets the port according to the position of the speed and duplex switches.

Link Mode	Link Mode provides a transparency to the state of the copper link allowing for simplified trouble shooting from the devices connected to the media converter. *Normal (Default – Up)* With Fiber Auto Negotiation enabled when the copper link goes down the 1000Base-X link is brought down. The 1000Base-X link will advertise Remote Fault (Link Fault).

With Fiber Auto Negotiation disabled the state of the copper link has no effect on the 1000Base-X link.

Smart Link Pass Through (Down) With Fiber Auto Negotiation enabled the behavior is as follows. When the copper link goes down the 1000Base-X link is brought down. The 1000Base-X link will advertise Remote Fault (Link Fault). When Remote Fault (Link Fault) is received on the 1000Base-X interface the copper transmitter will be turned off. When the copper receiver is off the 1000Base-X transmitter will be turned off. When the 1000Base-X receiver goes off the copper transmitter will be turned off.

With Fiber Auto-Negotiation disabled the behavior is as follows. When the copper receiver is off the 1000Base-X transmitter will be turned off. When the 1000Base-X receiver goes off the copper transmitter will be turned off. |
| **Fiber Fault Alert** | The Fiber Fault Alert switch has meaning when Auto-Negotiation is disabled *Enabled (Default - Up)* When the 1000Base-X receiver is off the 1000Base-X transmitter is turned off. Periodically the 1000Base-X receiver will be turned on for a short period to allow the condition to clear if the 1000Base-X link partner is using a similar feature.

Disabled (Down) |
| **Remote Loopback** | The media converter can perform a loopback on the 1000Base-X fiber interface. *Disabled (Default - Up)*

Enabled - The 1000Base-X receiver is looped to the 1000Base-X transmitter. The copper transmitter is taken off the interface. |

Auto-MDIX (Internal Strap)	If Auto-Negotiation (802.3u) is enabled, the media converter determines the current cable pinout to use on the copper interface. If Auto-Negotiation (802.3u) is disabled the Media converter will use the RX Energy method on the copper 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	
10/100/1000Base-T	RJ45 connector 2 pair CAT5, EIA/TIA 568A/B or better cable for 10/100. 4 pair CAT5 UTP cable for Gigabit.
Magnetic Isolation	1.5kv
Filtering	
Filtering	1024 MAC Addresses
Frame Specifications	
Buffer	1000 Kbits frame buffer memory
Size	Maximum frame size of 10,240 bytes -- Gigabit Maximum frame size of 2048 bytes -- Fast Ethernet
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 With power adaptor: 334,000 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	
	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	
	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	
Electrical Safety	CE	
	EN 60825-1:2007	
Laser Safety	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.	
Environmental	Reach, RoHS and WEEE Compliant	
	ECCN: 5A991	
	HTSUS Number: 8517.62.0020	
Other	Perle Limited Lifetime Warranty	

Select a Model to obtain a Part Number - Unmanaged Stand-alone Media Converters - 10/100/1000 to Fiber

Model	Connector	Type	Transmit (dBm) Min	Max	Receive (dBm) Min	Max	Power Budget (dBm)	Wavelength (nm)	Fiber Type	Core Size (um)	Modal Bandwidth (MHz* Km)	Operating Distance
S-1110-M2SC05	Dual SC	1000Base-SX	-9.5	-4.0	-17.0	-3.0	7.5	850	MMF	62.5	160	220 m (722 ft)
										62.5	200	275 m (902 ft)
										50	400	500 m (1,640 ft)
										50	500	550 m (1,804 ft)
										50	2000	1000 m (3281 ft)
S-1110-M2LC05	Dual LC	1000Base-SX	-9.5	-4.0	-17.0	-3.0	7.5	850	MMF	62.5	160	220 m (722 ft)
										62.5	200	275 m (902 ft)
										50	400	500 m (1,640 ft)
										50	500	550 m (1,804 ft)

Model	Connector	Standard						Wavelength	Fiber	Core (µm)	Bandwidth	Distance
										50	2000	1000 m (3281 ft)
S-1110-M2ST05	Dual ST	1000Base-SX	-9.5	-3.0	-20.0	-3.0	10.5	850	MMF	62.5	160	220 m (722 ft)
										62.5	200	275 m (902 ft)
										50	400	500 m (1,640 ft)
										50	500	550 m (1,804 ft)
										50	2000	1000 m (3281 ft)
S-1110-M2SC2	Dual SC	1000Base-LX	-6.0	0.0	-17.0	-0.0	11	1310	MMF	62.5	160	2 km (1.2 mi)
										50	500	1000m (3280ft)
S-1110-M2LC2	Dual LC	1000Base-LX	-9.0	-1.0	-19.0	-1.0	10	1310	MMF	62.5	160	2 km (1.2 mi)
										50	500	1000m (3280ft)
S-1110-M2ST2	Dual ST	1000Base-LX	-6.0	0.0	-17.0	-0.0	11	1310	MMF	62.5	160	2 km (1.2 mi)
										50	500	1000m (3280ft)
S-1110-S2SC10	Dual SC	1000Base-LX/LH	-9.5	-3.0	-20.0	-3.0	10.5	1310	MMF*	62.5	500	550 m (1,804 ft)
										50	400	550 m (1,804 ft)
										50	400	550 m (1,804 ft)
									SMF	**	-	10 km (6.2 mi)
S-1110-S2LC10	Dual LC	1000Base-LX/LH	-9.5	-3.0	-20.0	-3.0	10.5	1310	MMF*	62.5	500	550 m (1,804 ft)
										50	400	550 m (1,804 ft)
										50	400	550 m (1,804 ft)
									SMF	**	-	10 km (6.2 mi)
S-1110-S2ST10	Dual ST	1000Base-LX/LH	-9.5	-3.0	-20.0	-3.0	10.5	1310	MMF*	62.5	500	550 m (1,804 ft)
										50	400	550 m (1,804 ft)
										50	400	550 m (1,804 ft)
									SMF	**	-	10 km (6.2 mi)
S-1110-S2SC40	Dual SC	1000Base-EX	-2.0	2.0	-23.0	-3.0	21.0	1310	SMF	**	-	40 km (25 mi)

Model	Connector	Type	Min	Max	Min	Max	Power Budget (dBm)	Wavelength (nm)	Fiber Type	Core Size (um)	Modal Bandwidth (MHz* Km)	Operating Distance
S-1110-S2LC40	Dual LC	1000Base-EX	-3.0	2.0	-23.0	-3.0	20.0	1310	SMF	**	-	40 km (25 mi)
S-1110-S2ST40	Dual ST	1000Base-EX	-2.0	2.0	-23.0	-3.0	21.0	1310	SMF	**	-	40 km (25 mi)
S-1110-S2SC70	Dual SC	1000Base-ZX	-2.0	5.0	-23.0	-3.0	21.0	1550	SMF	-	-	70 km (43 mi)
S-1110-S2LC70	Dual LC	1000Base-ZX	0.0	5.0	-23.0	-3.0	23.0	1550	SMF	-	-	70 km (43 mi)
S-1110-S2ST70	Dual ST	1000Base-ZX	-2.0	5.0	-23.0	-3.0	21.0	1550	SMF	-	-	70 km (43 mi)
S-1110-S2SC120	Dual SC	1000Base-ZX	0.0	5.0	-32.0	-9.0	32	1550	SMF	-	-	120 km (75 mi)
S-1110-S2LC120	Dual LC	1000Base-ZX	0.0	5.0	-32.0	-9.0	32	1550	SMF	-	-	120 km (75 mi)
S-1110-S2ST120	Dual ST	1000Base-ZX	0.0	5.0	-32.0	-9.0	32	1550	SMF	-	-	120 km (75 mi)
S-1110-S2SC160	Dual SC	1000Base-ZX	2.0	5.0	-34.0	-9.0	36.0	1550	SMF	-	-	160 km (100 mi)
S-1110-S2LC160	Dual LC	1000Base-ZX	2.0	5.0	-34.0	-9.0	36.0	1550	SMF	-	-	160 km (100 mi)
S-1110-S2ST160	Dual ST	1000Base-ZX	2.0	5.0	-34.0	-9.0	36.0	1550	SMF	-	-	160 km (100 mi)

Single Fiber Models Recommended use in pairs

Model	Connector	Type	Transmit (dBm)		Receive (dBm)		Power Budget (dBm)	Wavelength (nm)	Fiber Type	Core Size (um)	Modal Bandwidth (MHz* Km)	Operating Distance
			Min	Max	Min	Max						
S-1110-M1SC05U	Single SC	1000Base-BX-U	-10.0	-4.0	-17.0	-3.0	7.0	1310 / 1550	MMF	62.5	500	500 m (1,640 ft)
										50	500	500 m (1,640 ft)
S-1110-M1SC05D	Single SC	1000Base-BX-D	-10.0	-4.0	-17.0	-3.0	7.0	1550 / 1310	MMF	62.5	500	500 m (1,640 ft)
										50	500	500 m (1,640 ft)
S-1110-S1SC10U	Single SC	1000Base-BX-U	-9.0	-3.0	-20.0	-3.0	11.0	1310 / 1490	SMF	**	-	10 km (6.2 mi)
S-1110-S1SC10D	Single SC	1000Base-BX-D	-9.0	-3.0	-20.0	-3.0	11.0	1490 / 1310	SMF	**	-	10 km (6.2 mi)
S-1110-S1SC20U	Single SC	1000Base-BX-U	-8.0	-3.0	-22.0	-3.0	14.0	1310 / 1490	SMF	**	-	20 km (12.4 mi)
S-1110-S1SC20D	Single SC	1000Base-BX-D	-8.0	-3.0	-22.0	-3.0	14.0	1490 / 1310	SMF	**	-	20 km (12.4 mi)
S-1110-S1SC40U	Single SC	1000Base-BX-U	-3.0	2.0	-23.0	-3.0	20.0	1310 / 1490	SMF	**	-	40 km (25 mi)
S-1110-S1SC40D	Single SC	1000Base-BX-D	-3.0	2.0	-23.0	-3.0	20.0	1490 / 1310	SMF	**	-	40 km (25 mi)
S-1110-S1SC80U	Single SC	1000Base-BX-U	-2.0	3.0	-26.0	-3.0	24.0	1510 / 1590	SMF	-	-	80 km (50 mi)

S-1110-S1SC80D	Single SC	1000Base-BX-D	-2.0	3.0	-26.0	-3.0	24.0	1590 / 1510	SMF	-	-	80 km (50 mi)
S-1110-S1SC120U	Single SC	1000Base-BX-U	-3.0	2.0	-34.0	-9.0	31	1510 / 1590	SMF	-	-	120 km (75 mi)
S-1110-S1SC120D	Single SC	1000Base-BX-D	-3.0	2.0	-34.0	-9.0	31	1590 / 1510	SMF	-	-	120 km (75 mi)

The minimum fiber cable distance for all converters listed is 2 meters.

*A mode-conditioning adapter as specified by the IEEE standard, is required regardless of the span length. Note how the mode conditioning adapter for 62.5-um fibers has a different specification from the mode-conditioning adapter for 50-um fibers.

**ITU-T G.652 SMF as specified by the IEEE 802.3z standard.

Media Converter Accessories

4 DIN Rail Mount Bkt	DIN Rail Mounting Kit
MCSM	Standalone media converter wall mount bracket

Bridge 10/100 Devices to gigabit Backbone

Connect 10/100 devices to Gigabit Backbone
Devices on a 10/100 ethernet switch can be connected to a Gigabit backbone through the use of rate converting 10/100/1000 Media Converters.
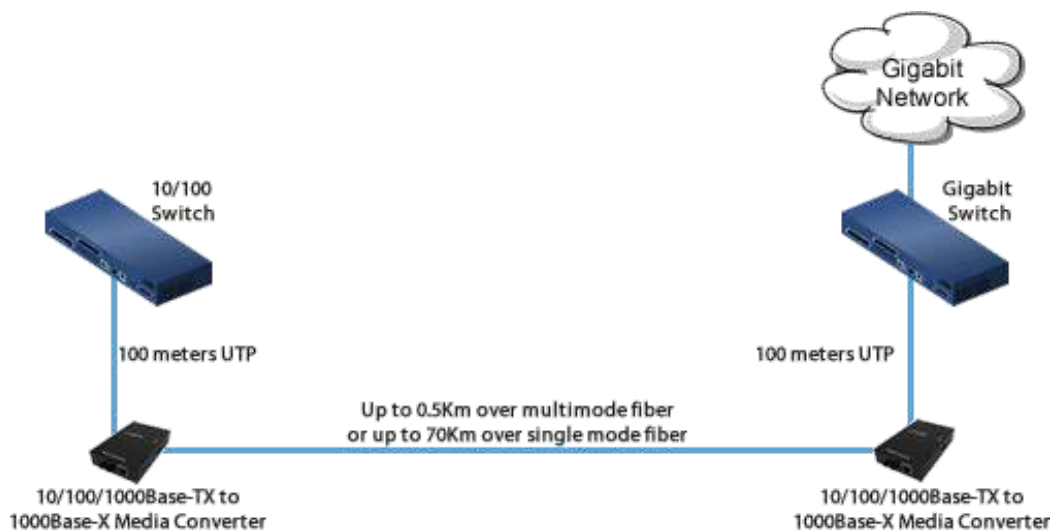
Single Mode / Single Fiber

Connect copper ports over a single fiber strand (also referred to as "Bi-Directional" BiDi)
When Single Strand fiber is used, a pair of Single Fiber Media Converters is needed for the copper to fiber conversion. Perle Single Fiber Media Converters are also referred to as "Up/Down" models. For example the S-1110-S1SC10**U** ("Up") and S-1110-S1SC10**D** ("Down"), shown below, must be used in pairs. An "**U**p" must be matched with a "**D**own" peer to deal with transmit and receive frequencies separately.
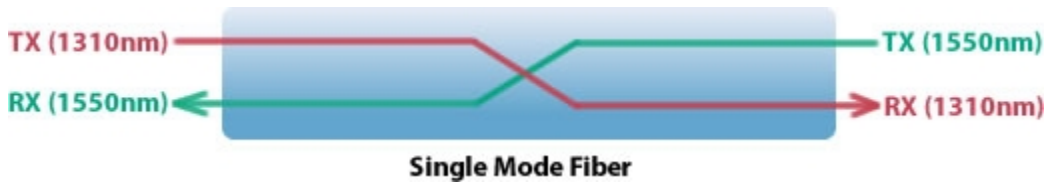
Single Mode Fiber

S-1110-S1SC10US-1110-S1SC10D

The majority of installations for single mode fiber media converters are of the "dual connector" or "dual fiber" type where one fiber connection is used for transmit, the other for receive. These are physically "crossed" to match up the Transmit/Receive links.

However, to reduce costs, or where there are limits on available fiber, WDM technology may be utilized. 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.

So remember, if Single Strand fiber is used, you will need an **"Up"** Media Converter on one side and a **"Down"** Media Converter on the other for copper to fiber conversion.

Perle offers a wide variety of Single Fiber ("**U**p/**D**own") Media Converters to connect 10BaseT, Fast Ethernet and Gigabit to single fiber. Whether you need Managed or Unmanaged, Standalone or Modular Chassis Based, 20km or 120km, Perle has the right model to meet your fiber conversion requirement.

Product Image	Description	Power Cord	Product Number
	S-1110-S2ST160 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-ZX 1550 nm single mode (ST) [160 km/100 miles]	USA UK EU SA AUS NONE	05050894 05050891 05050892 05050895 05050896 05050898

Product Image	Description	Power Cord	Product Number
	S-1110-S2SC160 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-ZX 1550 nm single mode (SC) [160 km/100 miles]	USA UK EU SA AUS NONE	05050914 05050911 05050912 05050915 05050916 05050918
	S-1110-S2LC160 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-ZX 1550 nm single mode (LC) [160 km/100 miles]	USA UK EU SA AUS NONE	05050924 05050921 05050922 05050925 05050926 05050928
	S-1110-S1SC20U - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1310nm TX / 1490nm RX single strand fiber, single mode (SC) [20 km/12.4 miles]	USA UK EU SA AUS NONE	05050934 05050931 05050932 05050935 05050936 05050938
	S-1110-S1SC20D - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1490nm TX / 1310nm RX single strand fiber, single mode (SC) [20 km/12.4 miles]	USA UK EU SA AUS NONE	05050944 05050941 05050942 05050945 05050946 05050948
	S-1110-S1SC40U - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1310nm TX / 1490nm RX single strand fiber, single mode (SC) [40 km/25 miles]	USA UK EU SA AUS NONE	05050954 05050951 05050952 05050955 05050956 05050958
	S-1110-S1SC40D - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1490nm TX / 1310nm RX single strand fiber, single mode (SC) [40 km/25 miles]	USA UK EU SA AUS NONE	05050964 05050961 05050962 05050965 05050966 05050968

Product Image	Description	Power Cord	Product Number
	S-1110-S1SC80U - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1510nm TX / 1590nm RX single strand fiber, single mode (SC) [80 km/50 miles]	USA UK EU SA AUS NONE	05050974 05050971 05050972 05050975 05050976 05050978
	S-1110-S1SC80D - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1590nm TX / 1510nm RX single strand fiber, single mode (SC) [80 km/50 miles]	USA UK EU SA AUS NONE	05050984 05050981 05050982 05050985 05050986 05050988
	S-1110-S1SC120U - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1510nm TX / 1590nm RX single strand fiber, single mode (SC) [120 km/75 miles]	USA UK EU SA AUS NONE	05050994 05050991 05050992 05050995 05050996 05050998
	S-1110-S1SC120D - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1590nm TX / 1510nm RX single strand fiber, single mode (SC) [120 km/75 miles]	USA UK EU SA AUS NONE	05050594 05050591 05050592 05050595 05050596 05050598
	S-1110-M2SC2 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm Extended multimode (SC) [2km /6562 ft.]	USA UK EU SA AUS NONE	05040974 05040971 05040972 05040975 05040976 05040978
	S-1110-M2ST2 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm Extended multimode (ST) [2km /6562 ft.]	USA UK EU SA AUS NONE	05040984 05040981 05040982 05040985 05040986 05040988

Product Image	Description	Power Cord	Product Number
	S-1110-M2LC2 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm Extended multimode (LC) [2km /6562 ft.]	USA UK EU SA AUS NONE	05040994 05040991 05040992 05040995 05040996 05040998
	S-1110-M1SC05D - 10/100/1000 Gigabit Ethernet Media and Rate Converter. 10/100/1000BASE-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1550nm TX / 1310nm RX single strand fiber, multimode (SC) [550 m/1804 ft]	USA UK EU SA AUS NONE	05040864 05040861 05040862 05040865 05040866 05040868
	S-1110-M1SC05U - 10/100/1000 Gigabit Ethernet Media and Rate Converter. 10/100/1000BASE-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1310nm TX / 1550nm RX single strand fiber, multimode (SC) [550 m/1804 ft]	USA UK EU SA AUS NONE	05040874 05040871 05040872 05040875 05040876 05040878
	S-1110-M2SC05 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (SC) [550 m/1804 ft.]	USA UK EU SA AUS NONE	05050604 05050601 05050602 05050605 05050606 05050608
	S-1110-M2LC05 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (LC) [550 m/1804 ft.]	USA UK EU SA AUS NONE	05050614 05050611 05050612 05050615 05050616 05050618
	S-1110-S2LC10 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX/LH 1310 nm single mode (LC) [10 km/6.2 miles] or multimode (LC) [550 m/1804 ft.] using a mode cond	USA UK EU SA AUS NONE	05050624 05050621 05050622 05050625 05050626 05050628

Product Image	Description	Power Cord	Product Number
	S-1110-S2SC10 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX/LH 1310 nm single mode (SC) [10 km/6.2 miles] or multimode (SC) [550 m/1804 ft.] using a mode cond	USA UK EU SA AUS NONE	05050634 05050631 05050632 05050635 05050636 05050638
	S-1110-S2LC40 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-EX 1310 nm single mode (LC) [40 km/24.9 miles]	USA UK EU SA AUS NONE	05050644 05050641 05050642 05050645 05050646 05050648
	S-1110-S2SC70 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-ZX 1550 nm single mode (SC) [70 km/43.5 miles]	USA UK EU SA AUS NONE	05050654 05050651 05050652 05050655 05050656 05050658
	S-1110-S2LC70 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-ZX 1550 nm single mode (LC) [70 km/43.5 miles]	USA UK EU SA AUS NONE	05050664 05050661 05050662 05050665 05050666 05050668
	S-1110-S1SC10U - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1310nm TX / 1490nm RX single strand single mode (SC) [10 km/6.2 miles]	USA UK EU SA AUS NONE	05050674 05050671 05050672 05050675 05050676 05050678
	S-1110-S1SC10D - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-BX 1490nm TX / 1310nm RX single strand single mode (SC) [10 km/6.2 miles]	USA UK EU SA AUS NONE	05050684 05050681 05050682 05050685 05050686 05050688

Product Image	Description	Power Cord	Product Number
	S-1110-M2ST05 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (ST) [550 m/1804 ft.]	USA UK EU SA AUS NONE	05050714 05050711 05050712 05050715 05050716 05050718
	S-1110-S2ST10 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX/LH 1310 nm single mode (ST) [10 km/6.2 miles]	USA UK EU SA AUS NONE	05050724 05050721 05050722 05050725 05050726 05050728
	S-1110-S2SC40 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-EX 1310 nm single mode (SC) [40 km/24.9 miles]	USA UK EU SA AUS NONE	05050694 05050691 05050692 05050695 05050696 05050698
	S-1110-S2ST40 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-EX 1310 nm single mode (ST) [40 km/24.9 miles]	USA UK EU SA AUS NONE	05050734 05050731 05050732 05050735 05050736 05050738
	S-1110-S2ST70 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-ZX 1550 nm single mode (ST) [70 km/43.5 miles]	USA UK EU SA AUS NONE	05050744 05050741 05050742 05050745 05050746 05050748
	S-1110-S2SC120 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-EZX 1550 nm single mode (SC) [120 km/74.6 miles]	USA UK EU SA AUS NONE	05050764 05050761 05050762 05050765 05050766 05050768

Product Image	Description	Power Cord	Product Number
	S-1110-S2ST120 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-EZX 1550 nm single mode (ST) [120 km/74.6 miles]	USA UK EU SA AUS NONE	05050754 05050751 05050752 05050755 05050756 05050758
	S-1110-S2LC120 - 10/100/1000 Gigabit Ethernet Stand-Alone Media and Rate Converter. 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-EZX 1550 nm single mode (LC) [120 km/74.6 miles]	USA UK EU SA AUS NONE	05050774 05050771 05050772 05050775 05050776 05050778

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