

S-1000MM Gigabit Media Converters

1000Base-SX to 1000Base-X Fiber Mode Conversion



- 1000Base-SX to 1000Base-X Fiber to Fiber Media Converters
- Multimode to multimode or multimode to single mode
- Extend multimode fiber to 160km and beyond (through cascading)
- Choice in SC, LC and ST fiber connector models
- Signal regeneration prevents signal degradation
- Advanced Features: **Smart Link Pass-Through**, Fiber Fault Alert, loopback for each fiber connection

Perle's feature rich **S-1000MM Gigabit Fiber to Fiber Media Converters** enable transparent fiber extension of 1000Base-SX multimode fiber to 1000Base-SX multimode or 1000Base-LX/EX/ZX/BX single mode fiber.

Perle's advanced features make the end to end fiber link completely transparent. This allows for more efficient troubleshooting and less on-site maintenance. In addition, a lifetime warranty and free worldwide technical support make **Perle's S-1000MM Gigabit Fiber to Fiber Media Converters** the smart choice for IT professionals.

Whether you need to extend **multimode to multimode** or **multimode to single mode**, Perle has an extensive range of S-1000MM Gigabit Fiber to Fiber Media Converters to meet your fiber conversion requirement.

S-1000MM Fiber to Fiber Features: 1000Base-SX to 1000Base-X

Auto-Negotiation (802.3ab)

The 1000Base-X fiber interfaces negotiate according to 802.3 clause 37.

Smart Link Pass-Through

When the Link Mode switch is placed into Smart Link Pass-Through mode, the 1000BASE-X link on one port will reflect the state of the other 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.

Signal Regeneration

Signal regeneration maintains signal integrity and allows for maximum fiber to fiber connections without degradation.

Cascading

Media converters can be cascaded. Two or more media converters can be chained in a link to achieve even greater distances.

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 is transparent to Pause frames.

VLAN

The media converter is transparent to 802.1Q VLAN tagged packets.

Duplex

Full and half duplex operation supported.

Jumbo Packets

Transparent to jumbo packets up to 10KB.

Remote Loopback

The media converter can perform a loopback on each 1000Base-X fiber interface.

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	0.21 amps			
Power Consumption	2.5 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 slowly when in Loopback test mode.			
Fiber link 1 / Receive activity (LK1)	This green LED is operational only when power is applied. The LED is on when the 100Base-X link is on and flashes with a 50% duty cycle when data is received.			
Fiber link 2 on / Receive activity (LK2)	This green LED is operational only when power is applied. The LED is on when the 100Base-X link is on and flashes with a 50% duty cycle when data is received.			

Switches - accessible through a side opening in the chassis	
Auto-Negotiation	• Auto (default up) - Fiber Negotiation is performed for both fiber ports. Full and half duplex will be advertised. Pause will advertise support for Symmetrical and Asymmetrical Pause. Pause frame will not be acted upon or generated but will be passed through. • Off - Negotiation on both fiber ports will be disabled. Settings of Link mode and Fiber fault alert will be determined by those switch settings. Pause frames will not be acted upon or generated but will continue to be passed through.
Link Mode	• Smart Link Pass-Through: - (default up) - In this mode, the link state on one 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. • Standard: - In this mode the links on both fiber ports can be brought up and down independently of each other. A loss of link on either link can take place without affecting the other connection
Fiber Fault Alert	• Enabled - (default up) - If the media converter detects a loss of fiber signal on a fiber receiver, it will immediately disable its fiber transmitter signal. This, in effect, notifies the remote fiber link partner that an error condition exists on the fiber connection. The setting of this switch applies to both fiber ports • Disabled: The media converter will not monitor for fiber fault or generate them.
Remote Loopback #1	• The media converter can perform a loopback on the link #1 fiber interface. Disabled (Default - Up) • Enabled - The 1000Base-X receiver is looped to the 1000Base-X transmitter. Link #2's fiber transmitter is taken off the interface
Remote Loopback #2	• The media converter can perform a loopback on the link #1 fiber interface. Disabled (Default - Up) • Enabled - The 1000Base-X receiver is looped to the 1000Base-X transmitter. Link #1's fiber transmitter is taken off the interface.
Fiber Connectors	
1000Base-X	Available in SC, ST and LC connector models

Packet Transmission Characteristics	
Bit Error Rate (BER)	<10 ⁻¹²
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)	8.53
MTBF (Hours)*	- Without power adaptor: 432,138 Hours - With power adaptor: 274,804 Hours <i>Calculation model based on MIL-HDBK-217-FN2 @ 30°C</i>
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 (W x H x D)	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 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
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.

Product List



S-1000MM-M2SC05 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter, 1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-SX 850nm multimode (SC) [550 m/1804 ft.]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060194	05060191	05060192	05060195	05060196	05060198



S-1000MM-M2LC05 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-SX 850nm multimode (LC)
[550 m/1804 ft.]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060204	05060201	05060202	05060205	05060206	05060208



S-1000MM-M2ST05 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-SX 850nm multimode (ST)
[550 m/1804 ft.]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060214	05060211	05060212	05060215	05060216	05060218



S-1000MM-S2SC10 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-LX/LH 1310 nm single
mode (SC) [10 km/6.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060224	05060221	05060222	05060225	05060226	05060228



S-1000MM-S2LC10 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-LX/LH 1310 nm single
mode (LC) [10 km/6.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060234	05060231	05060232	05060235	05060236	05060238



S-1000MM-S2ST10 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-LX/LH 1310 nm single
mode (ST) [10 km/6.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060244	05060241	05060242	05060245	05060246	05060248



S-1000MM-S2SC40 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-EX 1310 nm single mode (SC) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060254	05060251	05060252	05060255	05060256	05060258



S-1000MM-S2LC40 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-EX 1310 nm single mode (LC) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060264	05060261	05060262	05060265	05060266	05060268



S-1000MM-S2ST40 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-EX 1310 nm single mode (ST) [40 km/24.9 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060274	05060271	05060272	05060275	05060276	05060278



S-1000MM-S2SC70 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-ZX 1550 nm single mode (SC) [70 km/43.5 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060284	05060281	05060282	05060285	05060286	05060288



S-1000MM-S2LC70 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-ZX 1550 nm single mode (LC) [70 km/43.5 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060294	05060291	05060292	05060295	05060296	05060298



S-1000MM-S2ST70 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-ZX 1550 nm single mode (ST) [70 km/43.5 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060304	05060301	05060302	05060305	05060306	05060308



S-1000MM-S2SC120 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-EZX 1550 nm single mode (SC) [120 km/74.6 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060314	05060311	05060312	05060315	05060316	05060318



S-1000MM-S2LC120 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-EZX 1550 nm single mode (LC) [120 km/74.6 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060324	05060321	05060322	05060325	05060326	05060328



S-1000MM-S2ST120 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-EZX 1550 nm single mode (ST) [120 km/74.6 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060334	05060331	05060332	05060335	05060336	05060338



S-1000MM-S1SC10U - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1310nm TX / 1490nm RX single strand fiber, single mode (SC) [10 km/6.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060344	05060341	05060342	05060345	05060346	05060348



S-1000MM-S1SC10D - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter,
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1490nm TX / 1310nm
RX single strand fiber, single mode (SC) [10 km/6.2 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060354	05060351	05060352	05060355	05060356	05060358



S-1000MM-S2ST160 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-EZX 1550 nm single mode
(ST) [160 km/100 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060464	05060461	05060462	05060465	05060466	05060468



S-1000MM-S2SC160 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-EZX 1550 nm single mode
(SC) [160 km/100 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060444	05060441	05060442	05060445	05060446	05060448



S-1000MM-S2LC160 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-EZX 1550 nm single mode
(LC) [160 km/100 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060454	05060451	05060452	05060455	05060456	05060458



S-1000MM-S1SC80U - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1510nm TX / 1590nm
RX single strand fiber, single mode (SC) [80 km/50 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060404	05060401	05060402	05060405	05060406	05060408


S-1000MM-S1SC80D - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.

1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1590nm TX / 1510nm RX single strand fiber, single mode (SC) [80 km/50 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060414	05060411	05060412	05060415	05060416	05060418


S-1000MM-S1SC40U - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.

1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1310nm TX / 1490nm RX single strand fiber, single mode (SC) [40 km/25 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060384	05060381	05060382	05060385	05060386	05060388


S-1000MM-S1SC40D - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.

1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1490nm TX / 1310nm RX single strand fiber, single mode (SC) [40 km/25 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060394	05060391	05060392	05060395	05060396	05060398


S-1000MM-S1SC20U - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.

1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1310nm TX / 1490nm RX single strand fiber, single mode (SC) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060364	05060361	05060362	05060365	05060366	05060368


S-1000MM-S1SC20D - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.

1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1490nm TX / 1310nm RX single strand fiber, single mode (SC) [20 km/12.4 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060374	05060371	05060372	05060375	05060376	05060378



S-1000MM-S1SC120U - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1510nm TX / 1590nm RX single strand fiber, single mode (SC) [120 km/75 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060424	05060421	05060422	05060425	05060426	05060428



S-1000MM-S1SC120D - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-BX 1590nm TX / 1510nm RX single strand fiber, single mode (SC) [120 km/75 miles]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060434	05060431	05060432	05060435	05060436	05060438



S-1000MM-M2SC2 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (SC) [550 m/1804 ft.] to 1000Base-LX 1310nm Extended multimode (SC) [2km /6562 ft.]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060474	05060471	05060472	05060475	05060476	05060478



S-1000MM-M2LC2 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (LC) [550 m/1804 ft.] to 1000Base-LX 1310nm Extended multimode (LC) [2km /6562 ft.]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060484	05060481	05060482	05060485	05060486	05060488



S-1000MM-M2ST2 - Gigabit Ethernet Fiber to Fiber Stand-Alone Media Converter.
1000Base-SX 850nm multimode (ST) [550 m/1804 ft.] to 1000Base-LX 1310nm Extended multimode (ST) [2km /6562 ft.]

Power Cord & Part Number(s)

USA	UK	EU	SA	AUS	None
05060494	05060491	05060492	05060495	05060496	05060498

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

04031581



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

04031582



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

04031584



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

04031586