Mini Gigabit Ethernet Unidirectional Media Converter

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

Transmit & Receive Must Be Used As a Pair

Unidirectional communication is often used to safeguard information in secure environments such as government agencies and military networks. A Unidirectional device, sometimes referred to as a unidirectional security gateway or a data diode, provides a connection between two or more networks with different security classifications and helps to protect assets by ensuring information is directed only to, or from, the appropriate network as designated by the directional device.

Unidirectional media converters combine this one-way communications with the benefits of a copper to fiber media converter. Media converters are a cost-effective, plug-and-play device that allows fiber optic cabling to be connected to copper-based networking equipment. The deployment of fiber adds a layer of security to networks as it is difficult to tap into fiber and go undetected. If threats are attacking a network, the fiber links go down and network administrators are made aware of the problem, providing them the opportunity to address a potential breach of security.

Adding unidirectional technology to a media converter creates a physically secure one-way communication channel over fiber between a secure network and an unsecure network. These devices can be used to allow data from a classified, high-security area to be transmitted to a low-security area, while preventing unsecure data from re-entering the classified network. An alternate application allows a secure network to be updated with data from an external source while ensuring its critical data is unable to leave the classified area.

Features

- Unidirectional data transmissions over fiber to, or from, secure networks
- Simplex communications only requires one strand of fiber cable
- Applications require a transmit-only converter to be paired with a receive-only converter
- Converters support dual speed 100/1000Mbps SFP modules offering great flexibility to meet network requirements
- Converters use duplex SFP modules but the transmitting converter only uses the TX port on the SFP, while the RX port is deactivated. Likewise the receiving converter only uses the RX port, while the TX port is deactivated
- Unit and port LEDs allow for quick status information
- Auto-Negotiation on the 10/100/1000 copper port
- Auto-MDI/MDIX configuration
- Jumbo Frame Support

Specifications

Standards	IEEE 802.3 IEEE 802.3u IEEE 802.3af (for PD Versions Only)	IEEE 802.3z IEEE 802.3ab
Status LEDs	Pwr (Power): On = Power FX-Link/Act (Fiber Link / Activity): On = Link, Flashing = Activity TX-Link/Act (Copper Link / Activity): On = Link, Flashing = Activity	
Dimensions	Width: 1.8" [46 mm] Depth: 3.3" [85 mm] Height: 0.85" [22 mm]	
Power Consumption	1.8 watts without the SFP module	
Power Supply	External AC/DC required, 12 VDC, 0.5A	
Power Input	4.5VDC to 14VDC via barrel connector (-PSW) 12 – 48 VDC or 24 – 36VAC via 2-pin terminal block (-ISW) IEEE 802.3af via TP RJ-45 (-PD)	
Environment	M/GE-PSW-SFP-01-UxX: Operating: 0°C to 50°C Humidity: 5% to 95% (non-condensing) Storage: -15°C to 65°C Altitude: 0 to 10,000 ft. M/GE-ISW-SFP-01-xx-UxX: Operating: -40°C to 75°C Humidity: 5% to 95% (non-condensing) Storage: -40°C to 85°C Altitude: 0 to 10,000 ft.	
Weight	2 lbs. [0.9 kg]	
MTBF	Greater than 41,680 hours (MIL-HDBK-217F) Greater than 114,580 hours (Bellcore7 V5.0)	
Certifications	Safety: Wall Mount Power Supply, UL Listed, cUL Listed (Canada); FCC Class A, CISPR22 / EN55022 Class A, EN55034, CE Mark	
Warranty	Lifetime	

Ordering Information

Enterprise Grade Converters (0°C to 50°C)

M/GE-PSW-SFP-01-UTX
10/100/1000Base-T (RJ-45) [100 m/328 ft.] to Unidirectional 100/1000Base-X SFP Slot (empty) Transmitting Converter

M/GE-PSW-SFP-01-URX
10/100/1000Base-T (RJ-45) [100 m/328 ft.] to Unidirectional 100/1000Base-X SFP Slot (empty) Receiving Converter

Hardened Grade Converters (-40°C to 75°C)

M/GE-ISW-SFP-01-UTX
Hardened Mini 10/100/1000Base-T (RJ-45) to Unidirectional 100/1000Base-X Open SFP Slot Transmitting Converter

M/GE-ISW-SFP-01-URX
Hardened Mini 10/100/1000Base-T (RJ-45) to Unidirectional 100/1000Base-X Open SFP Slot Receiving Converter

PoE-Powered Hardened Grade Converters (-40°C to 75°C)

M/GE-ISW-SFP-01-PD-UTX
PoE Powered Hardened Mini 10/100/1000Base-T (RJ-45) to Unidirectional 100/1000Base-X Open SFP Slot Transmitting Converter

M/GE-ISW-SFP-01-PD-URX
PoE Powered Hardened Mini 10/100/1000Base-T (RJ-45) to Unidirectional 100/1000Base-X Open SFP Slot Receiving Converter

Optional Accessories (sold separately)

SFP Modules

Power Supply (sold separately)

SPS-2460-SA (For Enterprise Converters)
24VDC to 60VDC input Stand-alone Power Supply

SPS-UA12DHT (For Hardened Non-PD Converters)
12 VDC, 18W, External AC/DC Desktop Power Supply

25165 (For Hardened Non-PD Converters)
Universal AC/DC Input DIN Rail Mountable +12 VDC Power Supply

Mounting Options (sold separately)

WMBM (For Enterprise Converters)
Wall Mount Bracket for Mini

M-MCR-01 (For Enterprise Converters)
18-Slot Powered Mini Chassis

DRBM (For Enterprise Converters)
DIN Rail Mount Bracket for Mini

RMBM
Rack Mount Bracket for Mini, use with RMS19-SA4-02 and/or E-MCR-05

Power Supply Included
To order the corresponding country specific power supply, add the extension from the list below to the end of the SKU; Ex: For M/GE-PSW-SFP-01-UTX-NA or M/GE-PSW-SFP-01-URX-NA Only

-NA = Country Code -NA = North America, -LA = Latin America , -EU = Europe, -UK = United Kingdom, -SA = South Africa, -JP = Japan, -OZ = Australia, -BR = Brazil