WISENET

10/100/1000 Mbps Ethernet Media Converters with 100FX and 1000FX Support + Optional Power over Ethernet (PoE)

TMC-GSFP Series

POWER SUPPLY	HARDENED	SFP	PoE 30W PoE+	TX ↔ FX ELECTRICAL TO OPTICAL	GIGABIT ETHERNET
INCLUDED*	-40° TO +75° C	FLEXIBILITY	30W POE+	CONVERTER	1

The TMC-GSFP electrical-to-optical Ethernet media converters accept a 10/100 or 1000 Mbps electrical input and converts to a 100 or 1000 Mbps optical output (selected by a dip switch) and the 100/1000 Mbps optical input back to the 10/100/1000 Mbps electrical output. "Auto-Negotiating" is supported on the copper interface side. These devices use either one or two optical fibers, depending upon the selection of sold-separately SFP† optical module.

A PoE model, the TMC-GSFPPOEM meets the IEEE802.3at standard and provides 30 watts of PoE+ power.

The series consists of small size single channel models, TMC-GSFPM & TMC-GSFPPOEM, and a standard size, single-channel model, TMC-GSFP. The standard size unit may be directly plugged into the SBP-C14 / SBP-C03 Rack or operated as a standalone module. The small size unit operates as standalone modules only.

FEATURES

› Full-duplex transmission of 10/100/1000 Mbps Ethernet
  - 10/100/1000BASE-TX electrical port
  - 1000BASE-FX or 100BASE-FX optical port when used with suitable SFPs

› IEEE 802.3 compliant

› 10/100/1000 BASE-TX port supports auto-negotiation and automatic MDI/MDI-X crossover for full and half-duplex operation

› Uses customer-installed SFPs for compatibility with a wide range of optical fibers, optical connector types, and optical transmission distances of up to 120 km

› Designed for installation in harsh out-of-plant/unconditioned industrial or roadside operating environments (-40° to +75°C ambient). Fully compliant with the environmental requirements of NEMA TS-2 for Traffic Signal Control Equipment

› Voltage transient protection on all power and signal input/ output line provide protection from voltage surges and other transient events

› Mini-package size of the TMC-GSFPM allows the unit to be installed in those locations where space is at a premium.

› Supports Jumbo Frames up to 10K Bytes for streaming video applications

› **Bi-color LED status indicators confirm operating status**

› **Available in standalone small size, or standard size, which is interchangeable between stand-alone or hot-swappable rackmount use**

APPLICATIONS

› Optical transmission of Ethernet-compatible industrial security access control systems, intercom systems, VoIP (Voice over IP) telephony networks, and IP-compatible CCTV camera surveillance networks

› Optical Ethernet transmission to wireless LAN access points

› Industrial Security, Transportation/ITS, and Industrial Control/ Factory Automation IP Networks

› Optical transmission of any Ethernet-compatible equipment with a maximum data rate of 100 Mbps or 1000 Mbps

Low Power Consumption

* Power Supply for PoE applications is sold separately.
† Small Form-Factor Pluggable (SFP) Module. Sold separately.

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SPECIFICATIONS

Data

Data Interface	Ethernet
Data Rate	10/100/1000 Mbps
	IEEE 802.3 Compliant
	Full Duplex or Half Duplex Electrical Port/ Full Duplex Optical Port

Connectors

Power	Terminal Block
Optical	SFP dependent
Electrical	RJ45
Fibers[1]	SFP Dependent
Fiber Connectors	Requires selection of sold-separately SFP modules. See Hanwha Techwin Wisenet SFP datasheet for model and description of SFP modules.

Power

Operating Voltage Range	TMC-GSFP / TMC-GSFPM: 9-24 VDC or 24 VAC
	TMC-GSFPPOEM: 48 – 57 VDC @ 0.85A
Power Consumption	TMC-GSFP / TMC-GSFPM:2.5W
	TMC-GSFPPOEM: 35W (with full PoE+ load)
Current Protection	Automatic Resettable Solid-State Current Limiters

Electrical & Mechanical

LED Indicators	› Optical Link/Data Activity › Power
	› POE Enabled (TMC-GSFPPOEM only)
Circuit Board	Meets IPC Standard
ComFit Size	6.1 × 5.3 × 1.1 in (15.5 × 13.5 × 2.8 cm)
ComFit Rack Slots	1
Mini Size	3.3 x 2.5 x 1.1 in (8.4 x 6.4 x 2.8 cm)
Shipping Weight	<2 lbs./0.9 kg

Environmental

MTBF	>100,000 hours
Operating Temp	-40˚ C to +75˚ C
Storage Temp	-40˚ C to +85˚ C
Relative Humidity	0% to 95% (non-condensing)

[1] Multimode fiber needs to meet or exceed fiber standard ITU-T G.651. Single mode fiber needs to meet or exceed fiber standard ITU-T G.652

AGENCY COMPLIANCE

FC PART 15 COMPLIANT   CE   cULus   RoHS

ORDERING INFORMATION

Part Number	Description	# Rack Slots
TMC-GSFPM	10/100/1000Mbps Multi-Rate Media Converter, 100FX/1000FX Selectable, Small Size	N/A
TMC-GSFPPOEM	10/100/1000Mbps Multi-Rate Media Converter, 100FX/1000FX Selectable, Small Size, PoE+	N/A
TMC-GSFP	10/100/1000Mbps Multi-Rate Media Converter, 100FX/1000FX Selectable	1
Included Accessories	DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included with TMC-GSFPM / TMC-GSFP, for benign 0 to 50°C applications. Hardened power supply available)	
Options	PWR-DR48060 48 Volt DC Plug-in Power Supply for use with TMC-GSFPPOEM model only	
	User selection of Wisenet SFP (see SFP Modules data sheet for product numbers and compatibility before ordering)	
	SBP-UDR DIN-Rail Mounting Adaptor Kit - With Mounting Hardware	
	PWR-DR12033 Hardened power supply for use with TMC-GSFPM / TMC-GSFP	
	SBP-C14 / SBP-C03 Card Cage Racks	

Note: In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

TYPICAL APPLICATIONS

E ↔ TMC-GSFP ——○—— TMC-GSFP ↔ E

E ↔ TMC-GSFP ——○—— TMC-GSFPPOEM ↔ E / PoE

48 – 57 VDC INPUT

E — Ethernet device
—○— Optical Fiber
—— Copper Cable
··········· 30W PoE Power

Fiber Count, Type and Distance are dependent on SFP selection

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