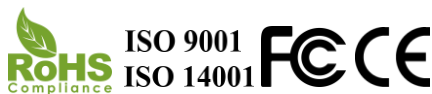


**FMC-1000-PH**  
**FMC-1000S-PH**  
**10/100/1000Base-T to 1000Base-FX or 100/1000Base-X SFP**  
**with PoE+ (PSE) Fiber Converter**



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**Introduction**

**FMC-1000-PH & FMS-1000S-PH** are unmanaged Gigabit PoE (Power over Ethernet) converters that provide stable and reliable Fast and Gigabit Ethernet transmission. PoE technology describes a system to pass electrical power safely, along with data, on Ethernet cabling. The original IEEE 802.3af-2003 PoE standard provides up to 15.4W of power to the connected device. The updated IEEE 802.3at-2009 PoE standard also known as PoE+ or PoE plus, provides up to 30W of power. FMC-1000S-PH gives you the freedom to extend your 10/100/1000Mbps cabling distance by allowing connectivity up to 120KM over fiber. LED indicators signal the power status, UTP link & speed, fiber link & speed and PoE status.

**Features**

- Conversion between 10/100/1000Base-T and 1000Base-X or 100/1000Base-X SFP Fiber cable interface
- Support IEEE802.3at/af PoE
- Support LFPT (Link Fault Pass Through)
- Support DIP Switch setting
- Support jumbo frame 9K bytes packet
- Support wall-mounting installation
- Compact size for easy installation

**Specifications**

**Ethernet Interface**

- Standards: IEEE802.3 (10Base-T), 802.3u (100Base-TX), 802.3ab (1000Base-T)
- Interface: 1 x RJ-45 (shielded) connector
- Speed: 10/100/1000M (Auto)

**Optical Interface**

- Standards: IEEE802.3u (100Base-FX), 802.3z (1000Base-X)
- Interface: 1 x fixed fiber (FMC-1000-PH) or 1 x SFP slot (FMC-1000S-PH)
- Speed: 1000M (FMC-1000-PH) or 100/1000M (FMC-1000S-PH)

**Specifications (Cont.)**

**Switch Features**

- Store & Forward Switch mode or Pass Through Converter mode
- Packet Size: 9K bytes
- Supports IEEE802.3x Flow Control
- Auto MDI/MDI-X
- Duplex: Full/Half

**Power over Ethernet**

- 1 PoE enabled port, End-span, Alternate A Mode
- Supports IEEE802.3af 15.4watts PoE per port
- Supports IEEE802.3at 30watts PoE+ per port
- Positive (VCC+) pins 1,2; Negative (VCC-) pins 3,6
- Data: 1, 2, 3, 6, 4, 5, 7, 8

**Power**

- DC Input Power: 48~57VDC
- Reverse Polarity Protection: Yes
- PoE Power Budget: 30W
- Consumption:

Model	FMC-1000-PH	FMC-1000S-PH
Power		
Input Power Consumption	32.3W	31.7W
PoE Power Budget (W)	30W	30W

**Mechanical**

- Dimensions: 108 mm (D) x 74 mm (W) x 23 mm (H)
- Mounting: Wall mounting (optional)
- Weight: 90g (FMC-1000-PH), 80g (FMC-1000S-PH)

**Environmental**

- Operating Temperature: 0°C~50°C
- Storage Temperature: -40°C~85°C
- Humidity: 10%~90% (Non-condensing)

**MTBF (MIL-HDBK-217)**

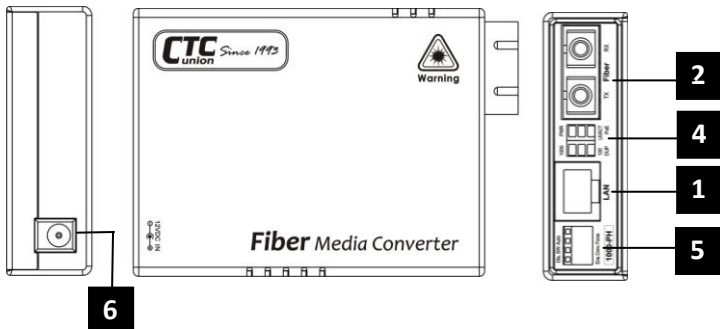
- FMC-1000-PH: 774,378 Hours
- FMC-1000S-PH: 749,556 Hours

**Certifications**

- EMC: FCC Class A, CE

**Panels**

➤ **FMC-1000-PH**



➤ **FMC-1000S-PH**

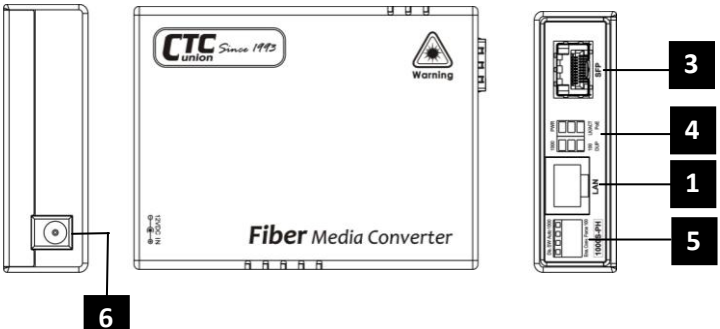


Figure 1. Rear Panel

Figure 2. Top Panel

Figure 3. Front Panel

No.	Description
1	LAN connection
2	Fixed Fiber interface
3	SFP Fiber slot
4	LED indicators
5	DIP Switch
6	Power input

Table 1: Index Reference

**LAN and Fiber Connection**

FMC-1000-PH & FMC-1000S-PH PoE have 1 electrical LAN port and 1 fixed fiber port or 1 SFP-based slot on the front panel. The LAN port utilizes shielded RJ-45 connector that supports 10/100/1000M; while the fiber SFP port supports 1000M (FMC-1000-PH) or 100/1000M (FMC-1000S-PH).

**PoE Port**

The LAN port supports PoE (Power over Ethernet) per IEEE802.3af (15.4W) or IEEE802.3at (30W) for connection to standard PoE PD (Power Devices) such as IP Cameras, Access Points, IP Phones, Digital Signage, etc. PoE eliminates the need to run separate power to these devices thereby simplifying deployment and reducing expenses.

The LAN ports may also connect to any non-PoE device for normal Ethernet transmission without any damage to the non-PoE device or to this device.

**RJ-45 Ethernet Port Pinouts**

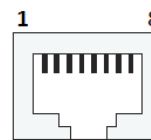


Figure 4. RJ-45 Ethernet Port Pinouts

**RJ-45 Ethernet & PoE Pin Assignments**

Pin No.	RJ-45 Ethernet		PoE Output
	100Base-TX	1000Base-T	
1	RX+	TRD 0+	V+
2	RX-	TRD 0-	V+
3	TX+	TRD 1+	V-
4	-	TRD 2+	
5	-	TRD 2-	
6	TX-	TRD 1-	V-
7	-	TRD 3+	
8	-	TRD 3-	

**DIP Switch Function Descriptions**

Pole No.	Status	Setting	Function Description
1	OFF *	Disable	Disable link fault pass through.
	ON	LFPT	Enable link fault pass through.
2	OFF *	Switch	Store & Forward Switching mode.
	ON	Pass Thru	Pass through converter mode.
3	OFF *	FX Auto	Fiber duplex auto mode.
	ON	Force	Fiber force mode.
4 For FMC-1000S-PH Only	OFF *	1000	Force Fiber speed to 1000Mbps.
	ON	100	Force Fiber speed to 100Mbps.

NOTE 1: By default, all DIP switches are set to OFF (marked with \*).

NOTE 2: When LFPT is enabled, the LAN port (Fiber port) link down will force Fiber port (LAN port) link down.

**LED Indicators**

LED	Color	Description
PWR	Green	Lit if power is connected and active.
	Off	Power is not connected.
1000	Green	The connected LAN speed is 1000M.
	Off	No 1000M Ethernet link.
100	Green	The connected LAN speed is 100M.
	Off	No 100M Ethernet link.
DUP/COL	Green	Full duplex mode.
	Green Blinking	Collisions occur on the link.
	Off	Half duplex mode.
Fiber LNK/ACT	Green	The connected LAN speed is 1000M.
	Off	No fiber link.
PoE	Green	The LAN port has successfully negotiated PoE and is supplying output power to the remote connected PD.
	Green Blinking	One of the PoE faults (overload, short circuit, port failure at startup) occurs.
	Off	PD is not connected or output power is not provided.

**Wall Mounting Option**

FMC-1000-PH & FMC-1000S-PH standalone converters have the option of adding wall mount capability. One wall mount kit is required for installing a single standalone unit on the wall. Each wall mount kit provides all the necessary hardware for a complete installation.

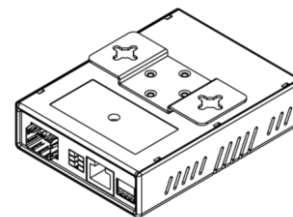


Figure 5. Converter with Wall Mounting Bracket

**Application**

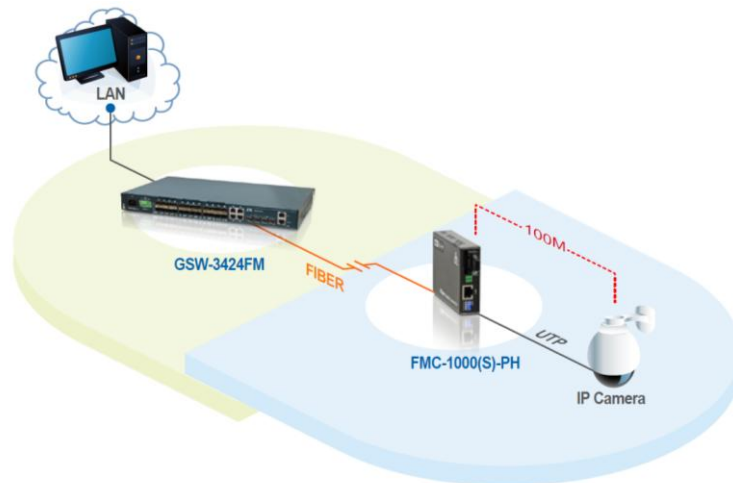


Figure 6. Application for FMC Series Converter