



CVT-5002SFP-MG

1 x 10/10GBase-X SFP+ to

1 x 10G/5G/2.5G/1G/100MBase-T RJ-45

Standalone Media Converter

Description

The CTS CVT-5002SFP-MG is a Layer 2 media converter designed to provide seamless connectivity between 10G fiber networks and multi-gigabit devices with easy plug-and-play functionality.

Interface

This model features one 10/10GBase-X SFP+ slot and one 10G/5G/2.5G/1G/100MBase-T RJ-45 port, ensuring compatibility with a wide range of network environments and devices. This allows for efficient and flexible data transfer, making it an essential component for modern networking needs, especially in Wi-Fi scenarios.

Easy Network Management

The CVT-5002SFP-MG is equipped with intuitive LED indicators for real-time status monitoring and advanced control options such as port speed, link alarm, and data-diode functionality. These features enable installers to quickly and easily assess the operational status of the device, ensuring optimal and high-quality network connections while facilitating prompt troubleshooting if needed.

Ideal Applications

In addition to its versatile gigabit Ethernet options, the CVT-5002SFP-MG can manage large volumes of data transmission within a secure topology, thanks to its 40Gbps internal fabric, 9K jumbo frame support, and auto-negotiation capabilities in its Ethernet port. This makes it perfect for converting 10 gigabit fiber to multi-gigabit network infrastructures, including data center cloud computing, enterprise backbones, and campus networks.

As for the installation, this model offers flexible options— including **wall mounting**, **DIN-rail mounting**, and **magnetic mounting**— making it adaptable to various deployment scenarios.

Key Features

■ Plug-and-Play

Installation is quick and hassle-free with no complex setup or configuration required.

■ Flexible Applications: 10G/1G Fiber to Multi-Gigabit (10G/5G/2.5G/1G/100M) Ethernet

Featuring a 10G/1G SFP+ port and a 5-speed RJ-45 port (10G/5G/2.5G/1G/100M), it is perfect for instantly bridge the high-speed fiber network and various multi-gigabit devices with no additional setup, which is ideal for modern digital infrastructures, corporate networks, and any environment needing high-speed, reliable and flexible connectivity.

■ Automatic Speed Detection

Both the port and slot can automatically identify and adjust to the optimal speed for connected devices. This ensures seamless and efficient data transmission by matching the speed requirements, whether it's 100M, 1G, 2.5G, 5G, or 10G, without requiring manual configuration.

■ Data Diode: Assurance for Cyber Security

A data diode integrated into this model guarantees unidirectional data flow, allowing data packets to travel in only one direction. This prevents any possibility of data leakage or unauthorized access by blocking reverse communication channels, thus securing sensitive information and critical systems. Additionally, users can customize the direction of data transfer to meet their specific needs.

■ Versatile Installation Modes

To adapt perfectly to diverse environments, it supports five types of installation modes: flat-type wall mounting, flat-type DIN-rail mounting, slim-type wall mounting, slim-type DIN-rail mounting, and magnetic mounting.

■ Target Applications

- Network infrastructures demanding 10 gigabit fiber converting to multi-gigabit Ethernet

Specification

■ Interface

RJ-45 Port

- 1 x 10G/5G/2.5G/1G/100MBase-T RJ-45

Fiber Port

- 1 x 10/1GBase-X SFP+

Standards

- IEEE 802.3an 10GBase-T
- IEEE 802.3ae 10GBase-R
- IEEE 802.3bz 2.5G/5GBase-T (NBase-T)
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-X
- IEEE 802.3u 100Base-TX/FX
- IEEE 802.3x flow control

■ H/W Specification

- MAC Address Table: 4K
- Non-blocking Switching Fabric: 40Gbps
- Throughput @ 64Bytes: 29.76Mpps
- Jumbo Frame: 16K Bytes
- Packet Buffer: 8Mbit
- Store and Forward Switching Mechanism
- Auto-Cross over for MDI/MDI-X in TP port
- Auto-Negotiation in TP Port
- Full/Half Duplex Mode Operation

■ Forward/Filter Rate

- 10G: 14,880,000/14,880,000pps
- 5G: 7,440,000/7,440,000pps
- 2.5G: 3,720,000/3,720,000pps
- 1000M: 1,488,000/1,488,000pps
- 100M: 148,800/148,800pps

■ LED

- Power, Status,
- TP Link/Act/Speed, F/O Link/Act/Speed

■ DIP Switch

- Max. TP speed up to 2.5/10Gbps
- Force/Auto Mode for F/O
- F/O speed 1Gbps/10Gbps
- Link Alarm Enable/Disable
- Data-diode Enable/Disable
- Data-diode Direction
 - block RJ-45 to Fiber direction
 - block Fiber to RJ-45 direction

■ Installation Method

- Flat type DIN-rail kit (optional)
- Flat type wall-mount kit (optional)
- Magnetic-mount kit (optional)
- Slim type DIN-rail kit (optional)
- Slim type wall-mount kit (optional)

■ Power Requirement

- Power Input (Main body): 12V DC
- Power Adaptor (Including in package):
 - Input: 100~240V AC, 50~60Hz
 - Output: 12V DC
- Max. Power Consumption: 6.4W (21.8 BTU/h)

■ Environmental Condition

- Operation: 0°C~50°C
- Storage: -20°C~60°C
- Humidity: 5%~90% RH, Non-Condensing

■ Dimension & Weight

- Size: 71 x 94 x 26mm (W x D x H)
- Weight: 210g
- Housing: Aluminum(Upper), Iron(Bottom)

■ Standards and Certifications

CE/FCC Class A

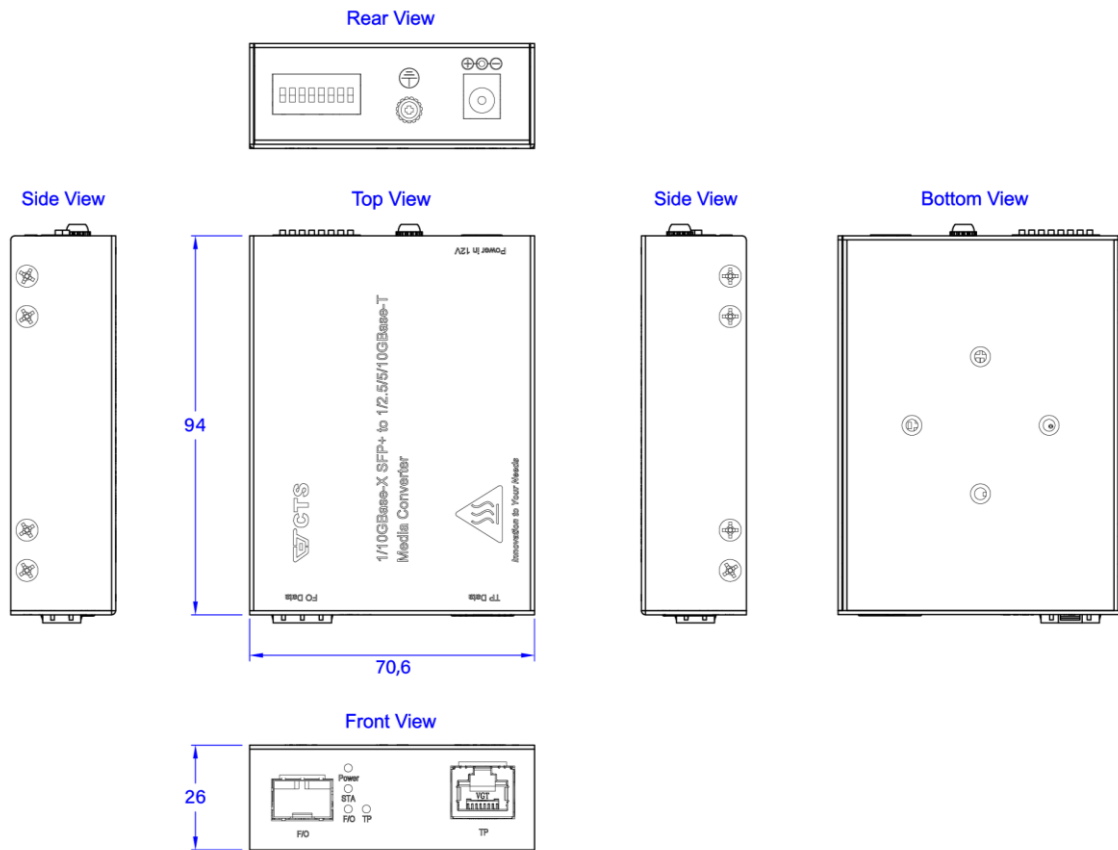
- Safety: EN/IEC 62368-1
- EMC: EN 55032 / EN 55035
- ESD
 - Air Discharge: +/-8kV
 - Contact Discharge: +/-4kV
- EFT
 - AC input: +/-1kV
 - Signal (RJ-45): +/-0.5kV
- Surge Protection
 - AC input: +/-2kV
 - Signal (RJ-45): +/-1kV

VCCI/UKCA/RCM

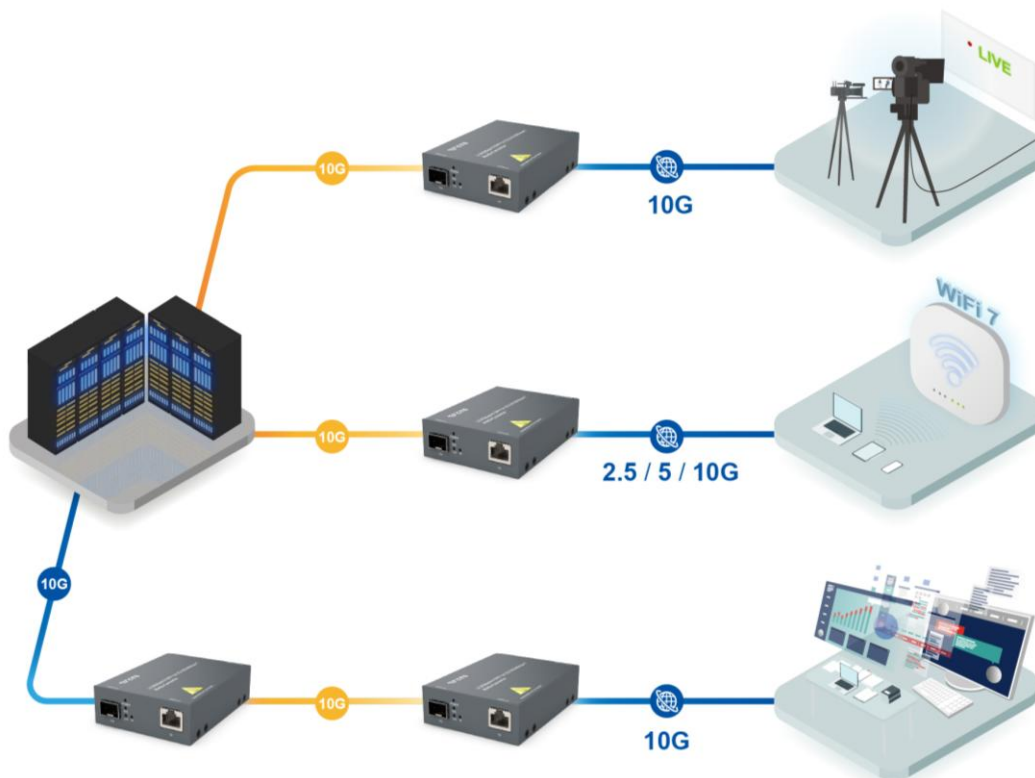
RoHS 2.0

Dimension

Unit : mm



Application Diagram



Order Information

Model	Fiber Slot			TP Port		Support Power Source
	Speed	Type	Slot	Speed	Port	
CVT-5002SFP-MG	10/1G	SFP+	1	10G/5G/2.5G/1G/100M	1	By 12V DC External Power Adaptor

Accessory

SFP-51

Model	Specification					
	Speed	Type	Connector	Distance	Wavelength	Operating Temperature
SFP-51FC	10Gbps	MM	LC	300M	850nm	0°C~70°C
SFP-51FC(SM-02/10/20/40)	10Gbps	SM	LC	2/10/20/40KM	1310/1310/1310/1550nm	0°C~70°C
SFP-51W2A(SM-10/20/40)	10Gbps	WDM	LC	10/20/40KM	TX: 1270/1270/1270nm RX: 1330/1330/1330nm	0°C~70°C
SFP-51W2B(SM-10/20/40)	10Gbps	WDM	LC	10/20KM	TX: 1330/1330/1330nm RX: 1270/1270/1270nm	0°C~70°C

SFP-31

Model	Specification					
	Speed	Type	Connector	Distance	Wavelength	Operating Temperature
SFP-31FC-DR	100/1000Mbps	MM	LC	550M/2KM	1310nm	0°C~70°C
SFP-31FC(SM-10)-DR	100/1000Mbps	SM	LC	10KM	1310nm	0°C~70°C
SFP-31W2A(SM-10/20)-DR	100/1000Mbps	WDM	LC	10/20KM	TX: 1310/1310nm RX: 1550/1550nm	0°C~70°C
SFP-31W2B(SM-10/20)-DR	100/1000Mbps	WDM	LC	10/20KM	TX: 1550/1550nm RX: 1310/1310nm	0°C~70°C
SFP-31FC	1000Mbps	MM	LC	550M	850nm	0°C~70°C
SFP-31FC(SM-10/20/40)	1000Mbps	SM	LC	10/20/40KM	1310/1310/1310nm	0°C~70°C
SFP-31W2A(SM-10/20/40)	1000Mbps	WDM	LC	10/20/40KM	TX: 1310/1310/1310nm RX: 1550/1550/1550nm	0°C~70°C
SFP-31W2B(SM-10/20/40)	1000Mbps	WDM	LC	10/20/40KM	TX: 1550/1550/1550nm RX: 1310/1310/1310nm	0°C~70°C

* SFP-31xxx-DR modules only support 1000Mbps on CVT-5002SFP-MG

Copper SFP

Model	Specification			
	Speed	Connector	Distance	Operating Temperature
SFP-50TP-MG(30M)	10Gbps	RJ-45	30M @ Cat 6A	0°C~65°C
	2.5/5Gbps		50M @ Cat 5E	
	1000Mbps		100M @ Cat 5E	
SFP-30TP	1000Mbps	RJ-45	100M	0°C~70°C

Accessory

Installation Kit (Optional)

Model	Mounting Method	Support Model
CVT Wall-Mount Kit	Flat type wall mounting	SRC/CVT Series Media Converter
DIN Rail (50x45mm)	Flat type DIN-rail	SRC/CVT Series Media Converter
CVT magnet kit	Flat type wall mounting	SRC/CVT Series Media Converter
SRC/CVT Slim Wall Mount Kit	Slim type wall mounting	SRC/CVT Series Media Converter
SRC/CVT Slim Wall+DIN Rail Kit	Slim type wall mounting & DIN-rail	SRC/CVT Series Media Converter

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