



MCT-6002FSMSFP28

25G SFP28 to 25G SFP28

Compact Media Converter

Description

The CTS **MCT-6002FSMSFP28** is an advanced 2-port 25G media converter module designed for high-density, high-bandwidth network environments.

Interface

This model features 2 x SFP28 slots supporting both 25G and 10G speeds, delivering bit-level transparent forwarding and ultra-fast data transmission.

Product Highlights

Equipped with full 3R signal regeneration (Re-amplify, Re-shape, Re-time) and an average latency of just 13 ns, this module ensures pristine signal integrity and real-time responsiveness across demanding fiber links. The DIP switch enables field-selectable 25G/10G dual-speed operation, delivering maximum deployment flexibility without compromising wire-speed performance.

Ideal Applications

Ideal for high-frequency trading networks, data center interconnects, and broadcast video transport requiring ultra-low latency and reliable 25G signal regeneration.

Key Features

■ Hardware-Based Plug-and-Play

No IP configuration or driver installation is required for basic operation. Simply configure the DIP switches and connect.

■ Ultra-Low Latency Transparent Transport (avg. 13 ns)

Adopts an enterprise-grade Re-timer architecture to deliver ultra-low latency transparent transmission with an average latency of just 13 ns. By utilizing advanced CDR (Clock Data Recovery) technology, the MCT-6002FSMSFP28 ensures wire-speed forwarding for latency-critical applications.

■ 3R (Re-amplifying, Re-shaping, Re-timing) optical signal regeneration

Data transmission is fully transparent and regenerated through 3R processing between fiber optic devices, ensuring clean and reliable signal delivery across extended links.

■ Multi-Rate Flexibility

Supports hardware-selectable 10G/25G operation, allowing flexible migration from 10G to 25G networks.

■ Signal Loss Alarm

Provides quick link fault indication by detecting signal loss between two network devices interconnected via the media converter.

■ Standalone and Rack Deployment

Supports standalone operation with a 12 VDC adapter. For rack installation, compatibility is limited to the MCT-RACK-12 HW Version B and MCT-RACK-12-MGM HW Version B chassis, both of which provide centralized power.

■ Optional Management and Firmware Upgrades

When installed in an MCT-RACK-12-MGM HW Version B chassis, the converter supports basic management functions, including Signal Loss Alarm enable/disable control and port speed configuration, as well as firmware upgrades.

■ Targeted Applications

- Designed for any latency-critical, high-bandwidth environment where 3R signal integrity and wire-speed 25G/10G transport are essential — including HFT execution networks, data center fabrics, and broadcast infrastructure.

Specification

■ Interface

Fiber Port

- 2 x 25G/10GBase-R SFP28

Standards

- IEEE 802.3by 25GBASE-SR
- IEEE 802.3cc 25GBASE-LR/ER
- IEEE 802.3ae 10GBase-R

■ H/W Specification

- Total Bandwidth: 50Gbps Full-Duplex
- Data Forwarding: Bit-level transparent forwarding

■ LED

- Power, Status, Link/Speed of FO1/FO2

■ DIP Switch

- FO speed 25Gbps/10Gbps
- FO1 Signal loss alarm Enable/Disable
- FO2 Signal loss alarm Enable/Disable
- Software control
Configure via software of CTS MCT-RACK-MGM chassis
Configure via DIP switch

■ Support Installation Kit

- MCT Wall Mount Kit (optional)
- MCT Wall+DIN Rail Kit (optional)

■ Power Requirement

- Power Input (Main body): 12 VDC
- Power Adaptor (Included in package):
Input : 100~240 VAC, 50~60Hz
Output : 12 VDC

Power consumption (Full load)

- Device: 5.1W (17.4 BTU/h)
- With adapter: 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: 51 x 74 x 20 mm (W x D x H)
- Weight: 77g
- Housing: Aluminum

■ Standards and Certifications

CE/FCC Class A

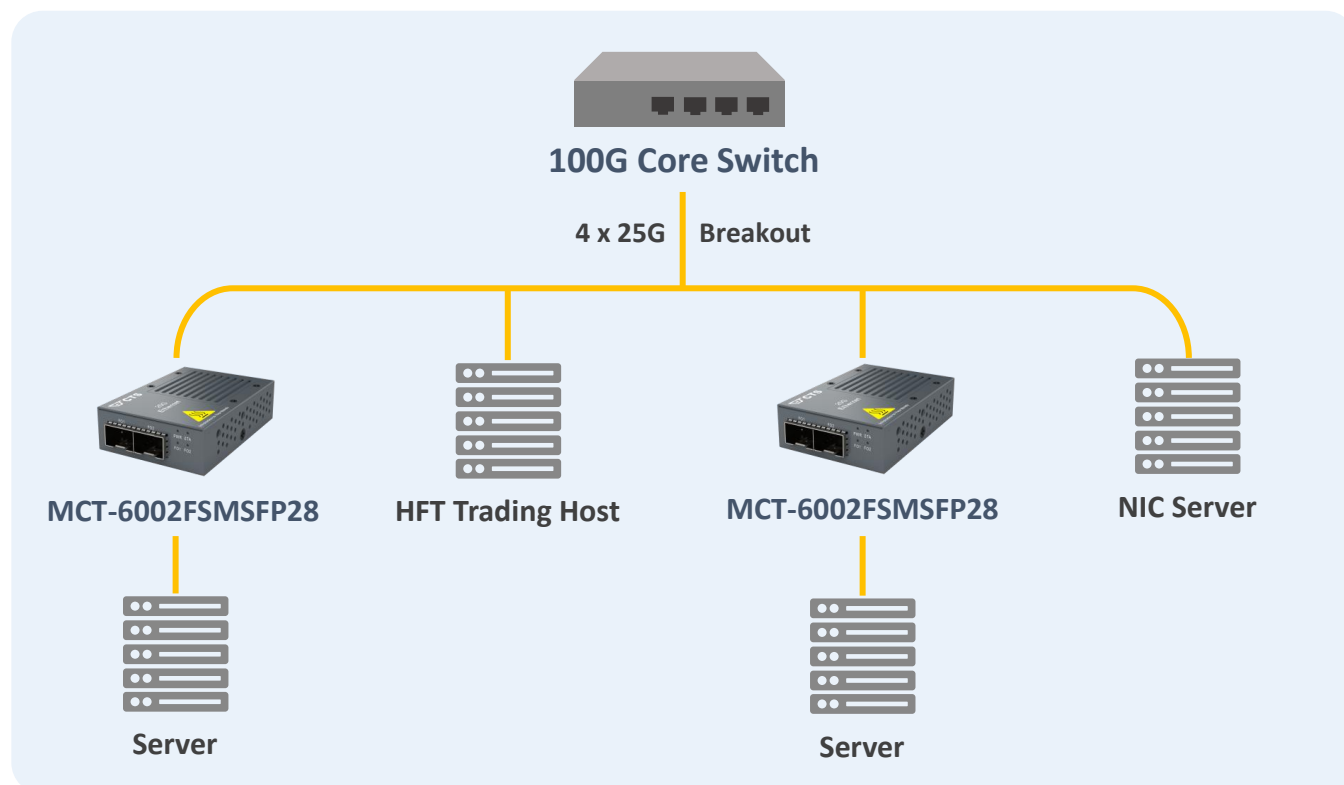
- Safety: EN/IEC 62368-1
- EMC: EN 55032 / EN 55035
- ESD
Air Discharge: +/- 8 kV
Contact Discharge: +/- 4 kV
- EFT

- AC Input: +/- 1 kV
- Surge Protection
AC Input: +/- 1 kV

VCCI/UKCA/RCM

RoHS 2.0

Application Diagram



Order Information

Model	Fiber Port			Support Power Source
	Speed	Type	Slots	
MCT-6002FSMSFP28	25G/10Gbps	SFP28	2	By 12 VDC External Power Adapter

Accessory

Installation Kit (optional)

Model	Mounting Method	Supported Model
MCT Wall Mount Kit	wall mounting	MCT Series Media Converter
MCT Wall+DIN Rail Kit	wall mounting & DIN-rail	MCT Series Media Converter

Connection Technology Systems Inc. (HQ)

Tel: +886-2-2698-9661
 E-mail: cts_esales@ctsystem.com
info@ctsystem.com
 Sales Direct Line: +886-2-26989201

Connection Technology Systems Japan

Tel: +81-6-6450-8890
 E-mail: cts_japan@ctsystem.com

Connection Technology Systems NE AB

Tel: +46-31-221980
 E-mail: info@ctsystem.se

Connection Technology Systems India Private Limited

E-mail: cts_in@ctsystem.com

Connection Technology Systems CE GmbH

Tel: +43 1 343 9553 50
 E-mail: cts_ce@ctsystem.com

