### Trademarks

CTS is a registered trademark of Connection Technology Systems Inc. Contents subject to revision without prior notice.

All other trademarks remain the property of their owners.

## **Copyright Statement**

Copyright © Connection Technology Systems Inc.

This publication may not be reproduced as a whole or in part, in any way whatsoever unless prior consent has been obtained from Connection Technology Systems Inc.

# FCC Warning

The CVT-5002SFP-MG media converter has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These standards are designed to provide reasonable protection against harmful interference when these devices are operated in a commercial environment. These devices generate, use, and can radiate radio frequency energy and may cause harmful interference to radio communications unless installed in accordance with this User's Guide. Operation of these devices in a residential area is likely to cause harmful interference which will make the user responsible for the appropriate remedial action at his / her own expense.

## **CE Mark Warning**

These are Class A products. In a domestic environment these products may cause radio interference in which case the user will need to consider adequate preventative methods.

## 1. Overview

Thank you for purchasing CTS CVT-5002SFP-MG Media Converter. In this user's guide, "Media Converter" will be used as an alternative name for the CVT-5002SFP-MG.

#### Major Features:

- TP Auto-Negotiation
- MDI/MDIX Auto-Crossover
- 16K Bytes Jumbo Frame
- Store and Forward switching mechanism
- 4K MAC address
- Link Alarm
- Data-diode
- Flow Control \*

\* Automatically enabled when the F/O port operates at 10G, and the copper port operates at 100M, 1G, 2.5G, or 5G.

## 2. Checklist

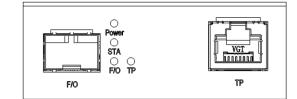
The items listed below should be included in the package:

- Media Converter
- AC-DC Power Adapter
- Quick Guide

Please contact your sales representative for assistance immediately if any item is missing or damaged.

## 3. Installation

- Set the DIP switch according to section four.
- Insert the SFP transceiver into the SFP slot.
- Attach fiber cable from the media converter to the fiber network. The fiber connector must be matched – transmit socket to receive socket.
- Attach a UTP cable from the 100M/1/2.5/5/10GBASE-T network to the RJ-45 port on the media converter.
- Connect the power source to the media converter and check that the Power LED lights up. The TP Link/Act/Speed and F/O Link/Act/Speed LEDs will light up when all the cables are properly connected.



#### Figure 1. Front Panel of Media converter

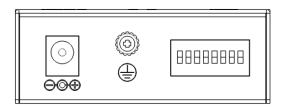


Figure 2. Rear Panel of Media converter

## 4. DIP SWITCH Setting

The default setting for PIN 1 through PIN 3 are ON, PIN 4 through PIN 8 are OFF.

Pin NO.	Function	OFF / Down	ON / Up
1	Maximum	Up to	Up to
	RJ-45 Speed	2.5Gbps	10Gbps
2	Fiber Mode	Force	Auto
3	Fiber Speed	1Gbps	10Gbps
4	Reserve	-	-
5	Link Alarm	Disabled	Enabled
6	Data-diode	Disabled	Enabled
7	Data-diode Direction	Block TP to	Block fiber
		fiber port	to TP port
		direction	direction
8	Reserve	-	-

#### NOTE:

- Please power off the device first when you change DIP switch.
- Pin 3 can only be activated when Pin 2 is in the OFF position.
- Pin 7 can only be activated when Pin 6 is in the ON position.
- Pin 7 can determine the blocking direction of Data-diode when Pin 6 is in the ON position.

### 5. LED Description

LED	Color	Function	
Power	Green	Power is available.	
TP Link/Act /Speed	Off	No link is established.	
	Yellow	<b>Lights up</b> when a 100Mbps/1Gbps link is established.	
		Blinks when 100Mbps/1Gbps TP traffic is present.	
	Blue	Lights up when a 2.5/5/10Gbps link is established.	
		Blinks when 2.5/5/10Gbps TP traffic is present.	
5/0	Off	No link is established.	
	Yellow	Lights up when a 1Gbps link is established.	
F/O Link/Act		Blinks when 1Gbps F/O traffic is present	
/Speed	Blue	Lights up when a 10Gbps link is established.	
		Blinks when 10Gbps F/O traffic is	
		present.	
Status	Orange	TP or F/O link is not established.	
	Green	Both TP and F/O link are established.	

### 6. Technical Specifications

Standards	IEEE 802.3u, 802.3ab, 802.3z, 802.3bz, 802.3an, 802.3ae, 802.3x		
Interface	1 x 1/10GBase-X SFP+		
Interface	1 x 100M/1G/2.5G/5G/10GBase-T		
	RJ-45		
LED	Power, Status,		
	TP Link/Act/Speed, F/O Link/Act/Speed,		
Power Input (Main Body)	12VDC		
Power	I/P 100-240VAC		
Adapter	O/P 12VDC, 1A		
Max. Power	9 watts (30.7BTU/hr) **		
Consumption			
Weight	210g		
Dimensions	71mm(W)x94mm(D)x26mm(H)		
Temperature	Operating: 0°~50°C		
	Storage: -20°~60°C		
Humidity	5%~90% RH, Non-Condensing		
Certification	CE/FCC Class A		
Media	TP: EIA/TIA-568		
	CAT 5e @ 100M, 1G, 2.5G		
	CAT 6A @ 5G, 10G		
	Fiber: 50/125 or 62.5/125 µm		
	multi-mode		
	9/125 or 10/125 µm		
	single-mode		
* Dia			
* Please contact us for further reports and updates.			
•	of power consumption will differ based on		
the fiber transceivers			

the fiber transceivers.

NOTE: Specifications may change without prior notice.



# CVT-5002SFP-MG

1/10GBase-X SFP+ to 100M/1/2.5/5/10GBase-T RJ-45 Standalone Media Converter

**User's Guide** 

Version 1.0

### **Contact Information**

Connection Technology Systems INC (CTS) 18F-6, No.79, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, TAIWAN, R.O.C. TEL: +886 2 26989661 FAX: +886 2 26989662 E-Mail: info@ctsystem.com