Trademarks

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FCC Warning

The CVT-3002-PLUS Series converters have 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. Checklist

The package should contain the following items:

- CVT-3002-PLUS Converter
- AC-DC Power Adapter
- User's Guide

Please notify your sales representative immediately if any items are missing or damaged.

2. Overview

CVT-3002-PLUS is designed to meet the massive needs for Gigabit network deployment and able to extend a copper based Gigabit network via fiber cable to a maximum distance up to 80KM.

CVT-3002-PLUS is fully compliant with IEEE802.3, 802.3u, 802.3ab & 802.3z standards. It can be installed into a CVT Converter RACK. The installation & operation procedures are simple & straightforward. Operation status can be locally monitored through a set of Diagnostic LED located in the front panel.

Major Features:

- Auto-Negotiation in TX port
- MDI/MDIX Auto-Crossover supported
- Support Flow Control
- Support Link Alarm
- Support Jumbo Frame 9K bytes (under 10,100,1000Mbps)
- Store and Forward Switching Mechanism
- Support Auto & Force mode configuration

3. Installation

- Attach fiber cable from the CVT-3002-PLUS to the fiber network. The fiber connections must be matched – transmit socket to receive socket.

- Attach a UTP cable from the 10/100/1000BASE-T network to the RJ-45 port on the CVT-3002-PLUS.

- Connect the power adapter to the CVT-3002-PLUS and check that the Power LED lights up. The TX Link/Act and F/O Link/Act LEDs will light up when all the cable connections are satisfactory.
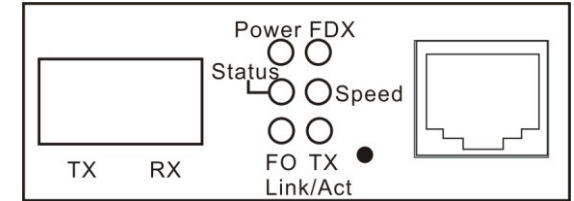

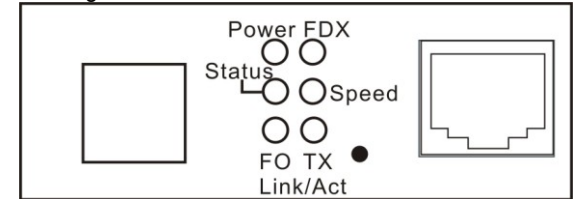Figure 1. CVT-3002-PLUS dual fiber Front Panel

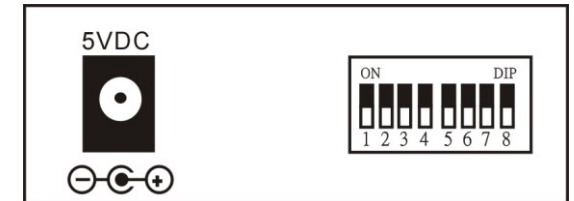Figure 2. CVT-3002-PLUS WDM & SFP Front Panel

Figure 3. CVT-3002-PLUS Converter Rear Panel

4. DIP SWITCH Setting

The default setting for PIN 1 and 6 is ON. The rest of Pins are OFF.

Pin NO.	Function	OFF	ON
1	TP Auto-Negotiation	Disable	Enable
2	Manual TP speed	10M	100M
3	Manual TP speed	N/A	1000M
4	Duplex mode	Half	Full
5	Flow Control	Disable	Enable
6	F/O mode	Force	Auto
7	Link Alarm	Disable	Enable
8	Transmission mode	Store and forward	Pass-through

NOTE:
1. Before changing TP speed, duplex mode and flow control setting, please make sure PIN 1 is set to OFF.
2. When TP speed is set to 10M or 100M manually, PIN 3 needs to be turned OFF.
3. Under 1000Mbps, it supports full-duplex mode only.
4. When Pin 8 is set to ON and the TP speed to 1000M, full-duplex mode and flow control are disabled.

5. LED Description

LED	Color	Function
Power	Green	Lit when power is available.
TX Link/Act	Green	Lit when TX cable connection with remote device is good. Blink when TX traffic is present.
FO Link/Act	Green	Lit when Fiber cable connection with remote device is good. Blink when F/O traffic is present.
FDX	Green	Lit when TX works in Full-Duplex. Not-Lit when TX works in Half-Duplex.
Speed	Green	No-Lit when TX works in 10M. Lit when TX works in 100M.
	Orange	Lit when TX works in 1000M.
Status	Green	Lit when TX and F/O link is up.
	Orange	Lit when TX or F/O link is down.

6. Technical Specifications

Standards:	IEEE 802.3, 802.3u, 802.3ab, 802.3z
Interface:	1 X 10/100/1000 RJ-45 connector 1 X 1000 F/O port or SFP Slot
LED:	Power, FDX, Status, Speed, FO Link/ACT, TX Link/ACT
Power:	I/P AC 100-240V O/P DC 5V, 1.6A
Power Consumption:	3W
Shipping Weight:	0.6KG
Dimensions:	71mm(W)X94mm(D)X26mm(H)
Temperature:	Operating: 0°~50^oC Storage: -20°~60^oC
Humidity:	5%~90% RH
Emission:	Electrical: UL, CSA EMI: FCC Class A, CE

*Please contact us for further reports and updates.

Media:	
TP	EIA/TIA-568 CAT 5e, 1000M
Fiber	50/125, 62.5/125um multi-mode fiber 9/125, 10/125um single-mode fiber

Fiber Transceiver Information

1000M

Multi-Mode

TYPE	BTFC
Connector Type	SC
Wavelength	850nm
Typical Distance	500m
Min TX PWR	-9.5dBm
Max TX PWR	-4.0dBm
Sensitivity	-18.0dBm
Link Budget	8.5dB

Single-Mode

TYPE	BTFC(SM-10)	BTFC(SM-20)	BTFC(SM-30)
Connector Type	SC	SC	SC
Wavelength	1310nm	1310nm	1310nm
Typical Distance	10Km	20Km	30Km
Min TX PWR	-9.5dBm	-5.0dBm	-5.0dBm
Max TX PWR	-3.0dBm	3.0dBm	3.0dBm
Sensitivity	-20.0dBm	-24.0dBm	-24.0dBm
Link Budget	10.5dB	19.0dB	19.0dB

Wave-Length WDM

TYPE	W2A(SM-10)	W2B(SM-10)	W2A(SM-20)	W2B(SM-20)
Connector Type	SC	SC	SC	SC
TX Wavelength	1310nm	1550nm	1310nm	1550nm
RX Wavelength	1550nm	1310nm	1550nm	1310nm
Typical Distance	10 Km	10 Km	20 Km	20 Km
Min TX PWR	-10.0dBm	-9.0dBm	-7.0dBm	-7.0dBm
Max TX PWR	-3.0dBm	-3.0dBm	0dBm	0dBm
Sensitivity	-22.0dBm	-22.0dBm	-23.0dBm	-23.0dBm
Link Budget	12.0 dB	13.0 dB	16.0 dB	16.0 dB

NOTE: Specifications may change without prior notice.

Contact Information

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CTS
CONNECTION TECHNOLOGY SYSTEMS

CVT-3002-PLUS SERIES

10/100/1000BASE-T to 1000BASE-X Standalone Media Converter

User's Guide

Version 0.95