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FCC Warning

This equipment 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. Checklist

The package should contain the following items:

- MCT-3002 Series Converter
- AC-DC Power Adapter
- User's Guide

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

2. Overview

The MCT-3002 series media converter converts traditional twisted-pair RJ-45 cable into various fiber media including multi-mode, single-mode, SC connector, bi-directional WDM, or a SFP slot for pluggable fiber transceiver, extending transmission distance for the deployment to the household, apartment or campus.

MCT-3002 series media converter is fully compliant with IEEE 802.3, 802.3u, 802.3ab & 802.3z standards. Besides, it is equipped with some switching features including store and forward. Operation status can be locally monitored through a set of Diagnostic LED located in the front panel.

Major Features:

- Auto-Negotiation in TP port
- MDI/MDI-X Auto-Crossover supported
- 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 MCT-3002 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 MCT-3002.
- Connect the power adapter to the MCT-3002 and check that the PWR/STA LED lights up. The TP and F/O LEDs will light up when all the cable connections are satisfactory.

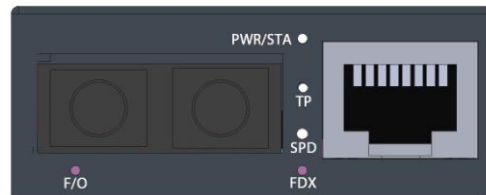


Figure 1. MCT-3002 dual fiber Front Panel



Figure 2. MCT-3002 WDM & SFP Front Panel

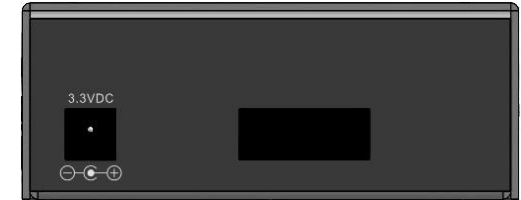


Figure 3. MCT-3002 Converter Rear Panel



Figure 4. MCT-3002 Converter Side Panel

4. LED Description

LED	Color	Function
PWR/STA	Green	Lit when power is available.
TP	Green	Lit when TP cable connection with remote device is good. Blink when TP traffic is present.
F/O	Green	Lit when Fiber cable connection at 100M with remote device is good. Blink when F/O traffic is present. (For dual rate model only)
	Orange	Lit when Fiber cable connection at 1000M with remote device is good. Blink when F/O traffic is present.
FDX	Green	Lit when TP works in Full-Duplex. Not-Lit when TP works in Half-Duplex.
SPD	Green	Lit when TP works in 10M. Lit when TP works in 100M.
	Orange	Lit when TP works in 1000M.

5. DIP SWITCH Setting

The default setting for PIN 1 through 7 is ON and PIN 8 is OFF.

Pin NO.	Function	OFF	ON
1	TP Auto-Negotiation	Disable	Enable
2	Manual TP speed	Please refer to NOTE 3,4 and 5	
3			
4	Fiber Speed	Manual	Auto-Sensing
5	Fiber Manual Speed	100M	1000M
6	F/O mode	Force	Auto
7	N/A	N/A	N/A
8	Link Alarm	Disable	Enable

NOTE:

- Before adjusting the configuration of the Dip Switch, the power should be unplugged.
- Before changing the TP speed, please make sure PIN 1 is set to OFF.
- The TP speed is fixed in 10Mbps when PIN 2 & 3 are both set to ON or OFF.
- The TP speed is fixed in 100Mbps when PIN 2 is set to ON and PIN 3 is set to OFF.
- The TP speed is fixed in 1000Mbps when PIN 2 is set to OFF and PIN 3 is set to ON.
- Under 1000Mbps, it supports full-duplex mode only.
- PIN 4 & 5 are for dual rate model (MCT-3002-DR) only.
- Auto-Negotiation MUST be enabled (Pin 1 must be ON) before enabling Link Alarm (Pin 8 is ON).

6. Technical Specifications

Standards:	IEEE 802.3, 802.3u, 802.3ab, 802.3z
Interface:	1 X RJ-45 connector 1 X F/O port or SFP Slot
LED:	Power/Status, FDX, Speed, F/O, TP
Power:	I/P AC 100-240V O/P DC 3.3V
Power Consumption:	2.3W
Weight:	0.1Kg
Dimensions:	51mm(W)X74mm(D)X20mm(H)
Temperature:	Operating: 0°~50°C Storage: -20°~60°C
Humidity:	5%~90% RH
Certification:	FCC/CE Class A
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

Dual Rate

2 Wave-Length WDM

TYPE	W2A(SM-10)	W2B(SM-10)
Connector Type	SC	SC
Wavelength	1310/1550nm	1550/1310nm
Typical Distance	10 Km	10 Km
Min TX PWR	-10.0dBm	-10.0dBm
Max TX PWR	-3.0dBm	-3.0dBm
Sensitivity	-20.0dBm	-20.0dBm
Link Budget	10.0dB	10.0dB

1000M

Multi-Mode/Single-Mode

TYPE	BTFC	BTFC (SM-10)	BTFC (SM-20)	BTFC (SM-30)	BTFC (SM-50)	BTFC (SM-80)
Connector Type	SC	SC	SC	SC	SC	SC
Wavelength	850nm	1310nm	1310nm	1310nm	1550nm	1550nm
Typical Distance	550m	10 Km	20 Km	30 Km	50 Km	80 Km
Min TX PWR	-9.5dBm	-9.5dBm	-5.0dBm	-5.0dBm	-5.0dBm	0dBm
Max TX PWR	-4.0dBm	-3.0dBm	3.0dBm	3.0dBm	3.0dBm	5.0dBm
Sensitivity	-18.0dBm	-20.0dBm	-24.0dBm	-24.0dBm	-24.0dBm	-24.0dBm
Link Budget	8.5dB	10.5dB	19.0dB	19.0dB	19.0dB	24.0dB

2 Wave-Length WDM

TYPE	W2A (SM-10)	W2B (SM-10)	W2A (SM-20)	W2B (SM-20)	W2A (SM-40)	W2B (SM-40)
Connector Type	SC	SC	SC	SC	SC	SC
TX Wavelength	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm
RX Wavelength	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm
Typical Distance	10 Km	10 Km	20 Km	20 Km	40 Km	40 Km
Min TX PWR	-10.0dBm	-9.0dBm	-7.0dBm	-7.0dBm	-3.0dBm	-3.0dBm
Max TX PWR	-3.0dBm	-3.0dBm	0 dBm	0 dBm	2.0dBm	2.0dBm
Sensitivity	-22.0dBm	-22.0dBm	-23.0dBm	-23.0dBm	-22.0dBm	-22.0dBm
Link Budget	12.0dB	13.0dB	16.0dB	16.0dB	19.0dB	19.0dB

NOTE: Specifications may be changed without prior notice.



MCT-3002 SERIES

10/100/1000BASE-T to
1000BASE-X or
100/1000BASE-X

Standalone Media Converter

User's Guide

Version 1.0

Contact Information

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