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FCC Warning

The MCT-3612 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:

- MCT-3612 Converter
- AC-DC Power Adapter
- Quick Guide

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

2. Overview

The MCT-3612 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-3612 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/MDIX 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-3612 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-3612.
- Connect the power adapter to the MCT-3612 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.

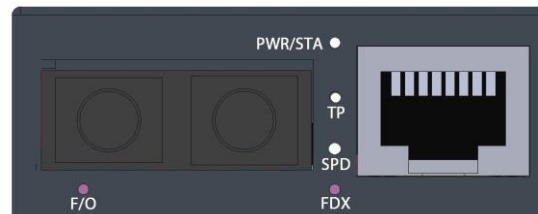


Figure 1. MCT-3612 Dual Fiber Front Panel

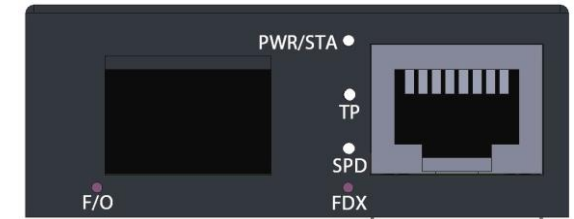


Figure 2. MCT-3612 WDM & SFP Front Panel

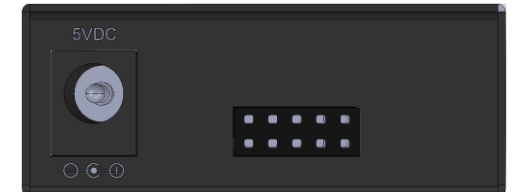


Figure 3. MCT-3612 Converter Rear Panel

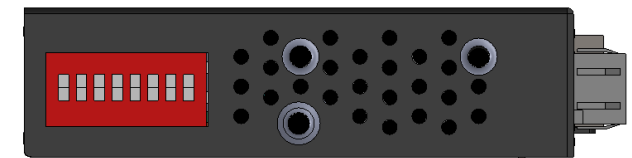


Figure 4. MCT-3612 Converter Side Panel

4. DIP SWITCH Setting

The default settings for PIN 1 through 6 are ON. The PIN 7 & 8 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	Fiber Speed	Manual	Auto-Sensing
5	Fiber Manual Speed	100M	1000M
6	F/O mode	Force	Auto
7	Link Alarm	Disable	Enable
8	Config from DIP/Soft	Soft	DIP

NOTE:

1. Before changing TP speed, 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. PIN 4 & 5 are for dual rate model (MCT-3612-DR) only.

5. LED Description

LED	Color	Function
PWR/STA	Off	Power is not ready
	Green	Lit when power is available.
	Orange	Lit when power is being booted up. Blink when new firmware is detected and is available.
	Green/Orange Blinking	Firmware upgrade is currently processing when the LED blinks green & Orange in turn.
TP	Off	The TP port is link down
	Green	Lit when TP cable connection with remote device is good. Blink when TP traffic is present.
F/O	Off	The fiber port is link down.
	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	Off	TP works in Half-Duplex.
	Green	Lit when TP works in Full-Duplex.
SPD	Off	The TP port is link down.
	Green	Lit when TP works in 10M or 100M.
	Orange	Lit when TP works in 1000M.

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 Input (Main body)	I/P DC 5V	
Power Adapter (Including in package)	I/P AC 100-240V O/P DC 5V, 2A	
Power Consumption	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
*The wattage of power consumption will differ based on the fiber transceivers.		

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 (SM-10)	BTFC (SM-20)	BTFC (SM-30)	BTFC (SM-50)	BTFC (SM-80)
Connector Type	SC	SC	SC	SC	SC
Wavelength	850nm	1310nm	1310nm	1310nm	1550nm
Typical Distance	550m	10 Km	20 Km	30 Km	50 Km
Min TX PWR	-9.5dBm	-9.5dBm	-9.0dBm	-5.0dBm	0dBm
Max TX PWR	-1.5dBm	-3.0dBm	-2.0dBm	3.0dBm	5.0dBm
Sensitivity	-17.0dBm	-20.0dBm	-23.0dBm	-24.0dBm	-24.0dBm
Link Budget	7.5dB	10.5dB	14.0dB	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	-10.0dBm	-9.0dBm	-9.0dBm	-5.0dBm	-5.0dBm
Max TX PWR	-3.0dBm	-3.0dBm	0dBm	0dBm	3.0dBm	3.0dBm
Sensitivity	-22.0dBm	-22.0dBm	-23.0dBm	-23.0dBm	-23.0dBm	-23.0dBm
Link Budget	12.0 dB	12.0 dB	14.0 dB	14.0 dB	18.0dB	18.0dB

NOTE: Specifications may change without prior notice.

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MCT-3612 SERIES

**10/100/1000BASE-T to
1000BASE-X or
100/1000BASE-X
Managed Media Converter**

User's Guide

Version 2.0