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FCC Warning

The Fast Ethernet Switching Converter 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 Fast Ethernet Switching Converter package should contain following items:

- Fast Ethernet Switching Converter
- AC-DC Power Adapter
- Quick Installation Guide

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

2. Overview

Fast Ethernet Switching Converter is designed to meet the needs for massive optical fiber network deployment and able to extend a legacy copper based network via fiber cable to a maximum distance of up to 100KM.

Fast Ethernet Switching Converter is fully compliant with IEEE 802.3 & 802.3u standards; built-in Switching ASIC has turned Fast Ethernet Switching Converter to function more like a 2-port switch than a traditional converter. Users can get all switching benefits such as traffic segmentation, frames checking & error filtering. In addition, LLF function allows users to monitor & maintain their critical fiber link more easily and effectively.

The installation & operation procedures of the Fast Ethernet Switching Converter are simple & straightforward. Operation status can be monitored through a set of Diagnostic LED indicators on the front panel.

Major Features:

- 10/100Base-TX to 100Base-FX converter
- Store & Forward Switching Mechanism
- Comply with IEEE 802.3, 802.3u
- MDI/MDIX Auto-Crossover supported
- Auto-Negotiation or Manual mode setting of Speed & Duplex mode
- LLF function

3. Installation

The installation procedure is simple and straightforward.

- Attach fiber cable from the Fast Ethernet Switching Converter to the fiber network.
- Attach a UTP cable from the 10/100Base-TX network to the RJ-45 port on the Fast Ethernet Switching Converter.
- Connect the power adapter to the Fast Ethernet Switching Converter and check that the Power LED lights up. The TX Link and FX Link LED light when all the cable connections are satisfactory.

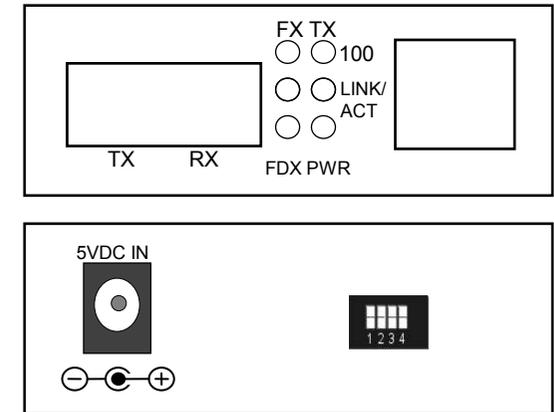


Fig. 1 Fast Ethernet Switching Converter Front & Rear Panel

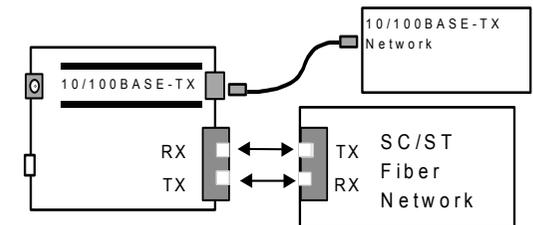


Fig. 2 Basic Network Connection

4. LED Description

LED	Color	Function
PWR	Green	Lit when power is available.
FX 100	Green	Lit when FX port speed is 100M.
FX Link/ACT	Green Blink	Lit when fiber link is up. Blink when traffic is present.
FDX	Green	Lit when TX port Full Duplex Mode is enabled.
TX 100	Green	Lit when TX port speed is 100M.
TX Link/ACT	Green Blink	Lit when TX link is up. Blink when traffic is present.

5. Technical Specifications

Standards	IEEE 802.3 & IEEE 802.3u
Switching Mechanism	Store & Forward
MAC Table	1K Entries
Forward & Filter Rate (64 Bytes)	10Base-T 14,800 pps 100Base-TX 148,800 pps
LED	Power, FDX, TX 100, TX Link/Act, Fiber 100, Fiber Link/Act
Power Adapter	input: AC100~240V output: DC 5V 2A
Power Consumption	5W
Weight	0.6Kg
Dimensions	71mm (W) x 97mm (D) x 26mm(H)
Temperature	Operating: 0 ~ 50 °C Storage: -20 ~ 60 °C
Humidity	5% ~ 90% RH
Emission	FCC/CE Class A

*Please contact us for further reports and updates.

UTP	Cat. 5 UTP cable
Fiber	50/125, 62.5/125, or 100/140 μ m multi-mode 8.3/125, 8.7/125, 9/125 or 10/125 μ m single-mode

6. Rear Panel DIP Switch

Pin 1	Off/On	TX Auto-negotiation	Enable/Disable
Pin 2	Off/On	TX Speed	100M/10M
Pin 3	Off/On	TX Duplex	Full/Half
Pin 4	Off/On	LLF	Disable/Enable

The default setting for Pin 1 through Pin 4 is Off.

Please perform Power On reset after modifying the Dip Switch setting.

7. Link Loss Forwarding

LLF allows users to easily identify and diagnose the linking status. If LLF Dip switch is set to Enable, UTP and Fiber port can link up only when both linking conditions are good. In addition, if the fiber or UTP port link is down during operation, the other port will also be turned down to alert the user. Setting LLF Dip switch to Enable provides users transparent link indication between two network devices interconnected by Fast Ethernet Switching Converter.

If LLF function is disabled, the UTP and fiber port will link up based on their individual linking condition. Furthermore, if fiber port link is down during operation, it will not turn down the UTP port link and vice versa.

Fiber Transceiver Information

100M

Multi-Mode

TYPE	BTFC	BTFT
Connector Type	SC	ST
Wavelength	1310nm	1310nm
Typical Distance	2Km	2Km
Min TX PWR	-20.0dBm	-20.0dBm
Max TX PWR	-14.0dBm	-14.0dBm
Sensitivity	-31.0dBm	-31.0dBm
Link Budget	11.0dB	11.0dB

Single-Mode

TYPE	BTFC (SM-30)	BTFC (SM-50)	BTFC (SM-80)	BTFC (SM-100)
Connector Type	SC	SC	SC	SC
Wavelength	1310nm	1310nm	1310nm	1550nm
Typical Distance	30Km	50Km	80Km	100Km
Min TX PWR	-15.0dBm	-5.0dBm	0dBm	-5.0dBm
Max TX PWR	-8.0dBm	0dBm	5.0dBm	0dBm
Sensitivity	-34.0dBm	-35.0dBm	-36.0dBm	-35.0dBm
Link Budget	19.0dB	30.0dB	36.0dB	30.0dB

NOTE: Specifications may change without prior notice.

CM-011A 10/100BASE-TX to 100BASE-FX Media Converter w/ LLF Function

User's Guide

Version 3.3