

Trademarks

Copyright © PLANET Technology Corp. 2002.

Contents subject to revision without prior notice.

PLANET is a registered trademark of PLANET Technology Corp. The information in this manual is subject to change without notice. All other trademarks belong to their respective owners.

FCC Warning

This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Revision

User's manual for PLANET Fast Ethernet Media Converter

Multi-mode: WFT-801, WFT-802

Single-mode: WFT-802S15

WDM: WFT-806A20, WFT806B20

Rev 1.0 (Dec. 2002)

Part No. EM-WFT8v1

Table of Contents

Chapter 1	OVERVIEW	1
Chapter 2	PRODUCT FEATURES	2
Chapter 3	MODEL LIST	3
Chapter 4	CHECKLIST	4
Chapter 5	DIP SWITCH	5
Chapter 6	INSTALLING THE CONVERTER	6
6.1	Used as a stand-alone converter	6
6.2	Used with WMC-1600R converter chassis	7
Chapter 7	MANAGE MEDIA CONVERTER	8
Chapter 8	LED INDICATORS	9
Chapter 9	LINK PASS THROUGH FUNCTION	10
Chapter 10	PRODUCT SPECIFICATION	12

Chapter 1

OVERVIEW

Thank you for choosing the Smart 10/100TX to 100FX Media Converter, The Media Converter introduced here provides one channel media conversion between 10/100TX and 100FX.

About Media Converter

The Smart Media Converter utilizes a network technology specified by IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, 100Base-FX standards.

About Link Pass Through

When LLCF (Link Loss Carry Forward) is enabled, the ports do not transmit a link signal until they receive a link signal from the opposite port. Link loss is "carried forward" to the managed switch or hub that is sending the link. LLCF can be used for either the copper or fiber ports.

When LLR (Link Loss Return) is enabled, the fiber port's transmitter shuts down if its receiver fails to detect a valid receive link. If one of the optical conductors is bad, the converter with LLR enabled will return a no link condition to its link partner. LLR is used to detect link problems only on the fiber port.

Chapter 2

PRODUCT FEATURES

- One-channel media conversion between 10/100TX and 100FX
- Fiber media allows: multi-mode fiber using ST, SC, LC or MT-RJ connector; single-mode fiber using SC or single SC WDM connector
- Auto-negotiation of speed and duplex mode on 10/100TX port
- Supports Link Pass Through
- Supports Auto-MDI/MDIX for 100TX port
- DIP switch for configuring fixed half/full duplex modes
- DIP switch for setting to Forced mode or Auto-negotiation
- DIP switch for setting the speed
- DIP switch for setting the LLCF, LLR function
- Store-and-forward mechanism
- Back-pressure & IEEE802.3x compliant flow control
- Full wire-speed forwarding rate
- Front panel status LEDs
- Used as a stand-alone device or with a chassis
- Hot-swappable when used with a Chassis System
- Manageable through Intelligent Chassis System

Chapter 3

MODEL LIST

Your Fast Ethernet Converter comes with one of the following models.

- ⇒ WFT-801 ST fiber connector
- ⇒ WFT-802 SC fiber connector
- ⇒ WFT-802S15 SC fiber connector
- ⇒ WFT-806A20 SC WDM_(Tx:1310) fiber connector
- ⇒ WFT-806B20 SC WDM_(Tx:1550) fiber connector

Models with last two numbered characters indicate the fiber-port is with "Single-Mode" optic fiber connector and the number indicates the maximum distance in km. The rest will be "Multi-Mode" optic fiber models.

In the following sections, the term "WFT-80X" indicates the product family above.

Chapter 4

CHECKLIST

Your WFT-80X carton should contain the following items:

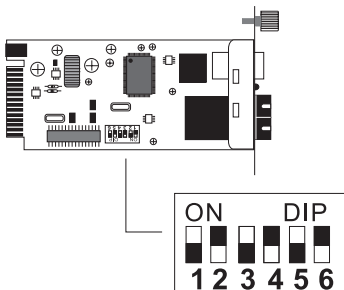
- ⇒ The Fast Ethernet Converter
- ⇒ AC-DC Power Adapter (Output: 7.5VDC, 1.5 A max.)
- ⇒ This user's manual

If any item is missing or damaged, please consult the dealer from whom you purchased your Fast Ethernet Converter.

Chapter 5

DIP SWITCH

There is a DIP switch for the setting on copper and fiber port. Refer to the table below for more details.



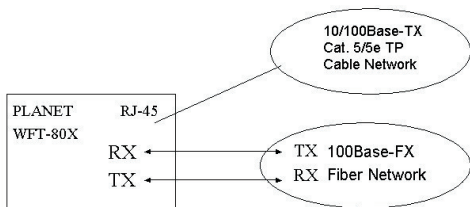
Switch 1	On	Fiber Half Duplex
	Off	Fiber Full Duplex (default)
Switch 2	On	TX Forced Mode
	Off	TX Auto-Negotiation(default)
Switch 3	On	TX 10M
	Off	TX 100M (default)
Switch 4	On	TX Half Duplex
	Off	TX Full Duplex (default)
Switch 5	On	LLR Enable
	Off	LLR Disable (default)
Switch 6	On	LLCF Enable
	Off	LLCF Disable (default)

Chapter 6

INSTALLING THE CONVERTER

6.1 Used as a Stand-alone converter

- Step 1- Turn off the power of the device in a network to which the WFT-80X will be attached
- Step 2- Ensure that there is no activity in the network
- Step 3- Attach fiber cable from the WFT-80X to the fiber network.
- Step 4- TX, RX must be paired at both ends
- Step 5- Attach a Cat. 5 UTP cable from the 10/100 Base- TX network to the RJ-45 port on the WFT-80X.
- Step 6- Connect the 7.5VDC power adapter to the WFT- 80X and verify that the Power LED lights up.
- Step 7- Turn on the power of the device, the TX Link and FX Link LEDs should light when all cables are attached

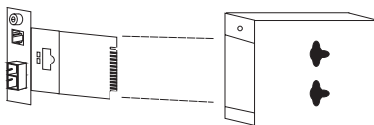


Note:

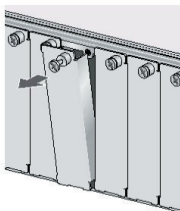
- RJ-45 Cat 5, straight-through cable is accepted
- Please refer to Chapter 10 for more about the wiring distance of your TP, Optic-fiber networks.

6.2 Used with WMC-1600R converter chassis

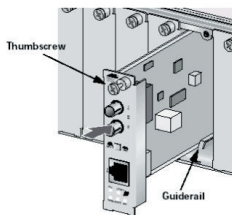
Step 1- Unscrew and pull out the media converter board



Step 2- Remove a blank faceplate from an empty expansion slot on the front of the chassis. The module can be installed in any expansion slot.



Step 3- Slide the module into the expansion slot, aligning it with the guiderails, until it firmly connects to the chassis' backplane.



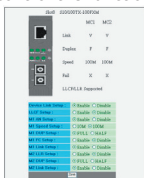
Step 4- Secure the module to the chassis by tightening the thumbscrew.

Chapter 7

MANAGE MEDIA CONVERTER

The Intelligent Media Converter Chassis that can control this Smart Media Converter through the management system, this Smart Media Converter can be controlled through Web Browser, SNMP management utility and terminal emulation program.

The Intelligent Chassis will detect the setting on the DIP switches and display out the status, also the Management Chassis can control the function through the management system.



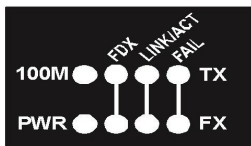
Through the Intelligent Media Converter Chassis System, you can control the setting of this Smart Media Converter, to set the Fiber and UTP (FDX/HDX), UTP (Auto-negotiation/Manual), Speed (10M/100M), LLR Enable/Disable, LLCF (Enable/Disable)

Device Link Setup	To enable or disable the connection of both UTP port and Fiber port
LLCF Setup	To enable or disable the LLCF function of the device
M1 AN Setup	To set the UTP to Auto-negotiation or Forced Mode
M1 Speed Setup	To set the speed of UTP to 10M or 100M
M1 DUP Setup	To set the Duplex Mode of UTP port to Full or Half
M1 FC Setup	To set the Flow Control of the UTP to enable or disable
M1 Link Setup	To enable or disable the connection of the UTP port
M2 LLR Setup	To enable or disable the LLR function of the Fiber port
M2 DUP Setup	To set the Duplex Mode of Fiber port to Full or Half
M2 Link Setup	To enable or disable the connection of the Fiber port

Chapter 8

LED INDICATORS

The LED indicators give you instant feedback on status of the converter:



LEDs	Status	Indication
PWR (Power)	Lights on	Power on
	Lights off	Power off
100M (100Mbps)	Lights on	Runs at 100Mbps on TX port
	Lights off	Runs at 10Mbps on TX port
FDX	Lights on	Connection in full duplex mode
	Lights off	Connection in half duplex mode
	Blinking	Data collision
LINK/ACT	Lights on	A valid network connection established
	Lights off	Not Linking
	Blinking	Data transmitting or receiving
FAIL	On	The physical line is broken
	Off	The physical line is fine

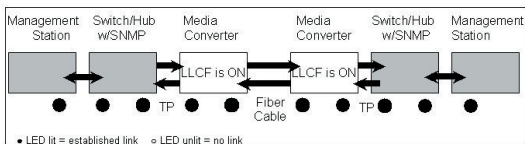
Chapter 9

LINK PASS THROUGH FUNCTION

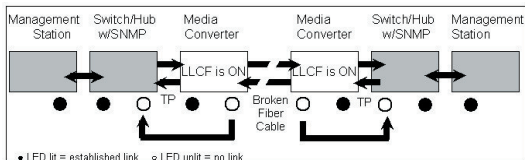
Link Loss Carry Forward (LLCF)

Smart Media Converter modules incorporate an LLCF function for troubleshooting a remote connection. When LLCF is enabled, the FL/TP ports do not transmit a link signal until they receive a link signal from the opposite port.

The diagram below shows a typical network configuration with a good link status using Smart Media Converter for remote connectivity. Note that LLCF is enabled on DIP switch.



If the connection breaks, the Smart Media Converter that link loss forward to the switch/hub which generates a trap to the management station. The administrator can then determine the source of the problem.



IMPORTANT: When connecting the Smart Media Converter with LLCF enabled to an auto-negotiating-capable device, force both sides of the configuration to 10 or 100Mbps full or half duplex. This allows the converter to immediately see link pulses and start passing data.

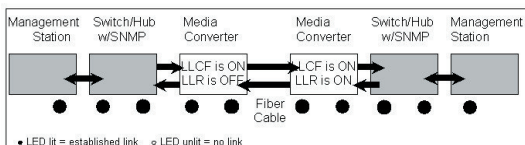
* Units are shipped with the LLCF function disabled.

Link Loss Return (LLR)

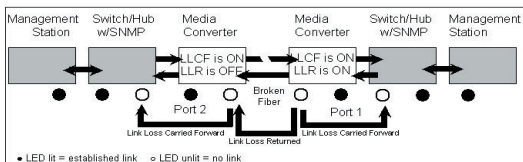
The fiber ports of WFT-80X have been designed with an LLR function for troubleshooting a remote connection. LLR works in conjunction with LLCF.

When LLR is enabled*, the port's transmitter shuts down when its receiver fails to detect a valid receive link. LLR should only be enabled on one end of the link and is typically enabled on either the unmanaged or remote device.

The diagram below shows a typical network configuration with a good link status using Smart Media Converter for remote connectivity. Note that LLR and LLCF are enabled as indicated in the diagram.



If one of the optical conductors is bad (as shown in the diagram box below), the converter with LLR enabled will return a no-link condition to its link partner. With LLCF also enabled, the no-link condition is carried forward to the switch/hub where a trap is generated to the management station, and the administrator can then determine the source of the loss.



IMPORTANT: LLR must NOT be active on both ends of a configuration. If it is, the link can never be established.

*Units are shipped with the LLR function disabled (DOWN).

Chapter 10

PRODUCT SPECIFICATION

Applicable Standards	IEEE802.3 10T IEEE802.3u 100TX, 100FX
Ports	1 x 10/100TX port, 1 x 100FX port
Speed	10/20Mbps for half/full-duplex 100/200Mbps for half/full-duplex
LED Indicators	Unit: PWR(Power)
	TX: FAIL, LINK/ACT, FDX, 100M FX: FAIL, LINK/ACT, FDX
Cable	10T: 2-pair UTP Cat. 3,4,5, up to 100 m 100TX: 2-pair UTP Cat. 5, up to 100 m 100FX: 62.5/125 μ m or 50/125 μ m multi-mode fiber optic cable; 9/125 μ m single-mode fiber optic cable
Dimensions	L120 x W88 x H25 mm
Power	External power adapter 7.5V 1.5A
Power Consumption	7.2W Max.
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-25°C ~ 70°C (-13°F ~ 158°F)
Humidity	10 ~ 90%, non-condensing
Emissions	FCC Class B, CE Class B, VCCI Class B

Part No.:EM-WFT8v1

