## *Trademarks*



## *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 Smart Media Converter

For Models: WGT-702, WGT702S

Rev 1.0 (Dec. 2002)

Part No. EM-WGT7v1

## *Table of Contents*

# Chapter 1
# OVERVIEW

Thank you for choosing the 1000Mbps Gigabit Ethernet Media Converter, The Converter introduced here provides one channel media conversion between 1000Base-TX and 1000Base-SX/LX.

### About Media Converter

This Smart Media Converter WGT-702 utilizes a network technology specified by IEEE802.3ab and IEEE802.3z 1000Base-T/LX/SX standards.

### About Link Pass Through

When LLCF (Link Lose 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 Lose Reture) 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 card 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 1000Base-TX and 1000Base-FX
- Fiber media allows: multi-mode fiber and single-mode fiber using SC connector
- Link Pass Through function
- Auto negotiation of duplex mode on TX port
- Auto MDI/MDI-X for TX port
- 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
- Manageable through Intelligent Chassis System

# Chapter 3
# MODEL LIST

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

- ⇨WGT-702 1000Baes-SX Multimode, SC
- ⇨WGT-702S 1000Baes-LX Singlemode, SC, 10km

In the following sections, the term "WGT-702" indicates the product family above.

# Chapter 4
# CHECKLIST

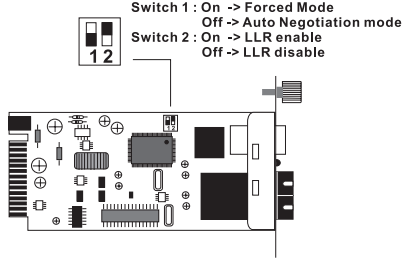
Your WGT-702 carton should contain the following items:

- ⇨The Gigabit 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 Gigabit Ethernet Converter.

# Chapter 5
# DIP SWITCH

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




| | | |
|---|---|---|
| Switch 1 | On | Fiber is Forced Mode |
| | Off | Fiber is Auto-Negotiation (default) |
| Switch 2 | On | LLR enable |
| | Off | LLR disable (default) |

Note:

1. Be sure the opposite end is using the same setting (forced or Auto-negotiation). And when using two converters at the same time, the two converters MUST set to forced mode.

2. When using two converters, don't enable the both device's LLR function at the same time.

# 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 WGT-702 will be attached

Step 2- Ensure that there is no activity in the network

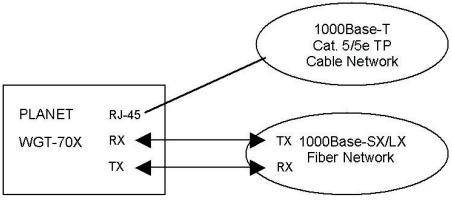
Step 3- Attach fiber cable from the WGT-702 to the fiber network.

Step 4- TX, RX must be paired at both ends

Step 5- Attach a Cat. 5 UTP cable from the 1000Base-T Network to the RJ-45 port on the WGT-702.

Step 6- Connect the 7.5VDC power adapter to the WGT-702 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



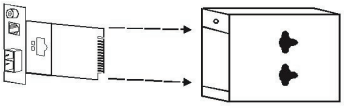

Note:

☐ RJ-45 Cat 5, straight-through cable is accepted

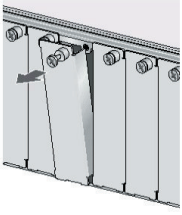
☐ Please refer to Chapter 10 for more about the wiring distance of your TP, Optic-fiber networks.

## *6.2 Used with WMC-1600R converter chassis*

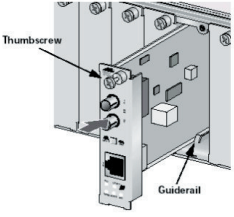
Step 1- Unscrew and pull out the media converter board



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.

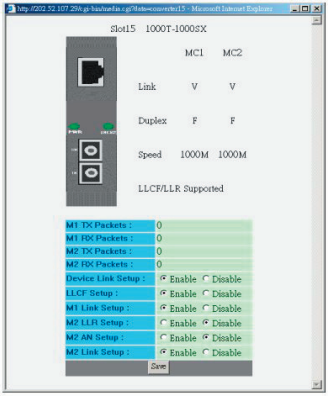



Step 4- Secure the module to the chassis by tightening the thumbscrew.

# *Chapter 7*
# *MANAGE MEDIA CONVERTER*

The Intelligent Media Converter Chassis that can control WGT-702 through the management system, this WGT-702 can be controlled through Web Browser, SNMP management utility and terminal emulation program.

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



# ***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 |
| LINK/ACT | Lights on | Linking |
| | Lights Blinking | Data transmitting and receiving |
| | Lights off | Not Linking |

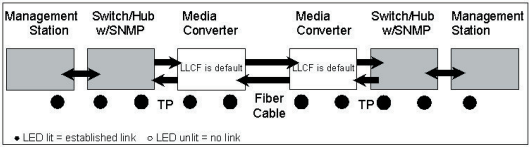
# Chapter 9
# LINK PASS THROUGH FUNCTION

### Link Loss Carry Forward (LLCF)

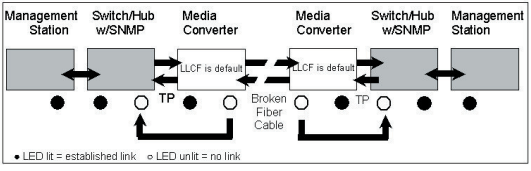
When a device connected to the converter and the TP line loss the link, the converter's fiber will disconnect the link of transmit, so that the other ends will know that there is a linkage error on this end. And when the Fiber line loss the link, the converter's TP will disconnected, and the other end will know that there is linkage problem exist.

***The default LLCF setting on WGT-702 is ON.***

The diagram below shows a typical network configuration with a good link status using WGT-702 for remote connectivity.




If the connection breaks, WGT-702 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.

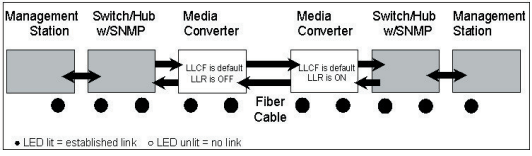


## Link Loss Return (LLR)

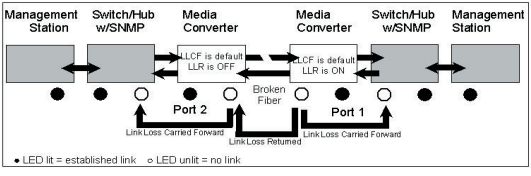
The fiber ports of WGT-702 have been designed with an LLR function for troubleshooting a remote connection. LLR works in conjunction with LLCF.

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 WGT-702 for remote connectivity. Note that LLR is enabled as indicated in the diagram.




If one of the optical conductors is bad (as shown in the diagram box below), WGT-702 with LLR enabled will return a no-link condition to its link partner. With LLCF default, 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

| | |
|---|---|
| Standards | IEEE802.3 10T<br>IEEE802.3u 100TX, 100FX |
| Duplex Mode | Full Duplex Mode |
| LED Indicators | PWR, LINK/ACT |
| Cable | 1000 Base-T --<br>4 pair Cat. 5, EIA/TIA-568 100-ohm screened twisted-pair (STP), up to 100m<br>1000 Base-SX --<br>62.5/125μm multi-mode fiber optic cable, up to 220m<br>50/125μm multi-mode fiber optic cable, up to 550m<br>1000 Base-LX --<br>9/125μm single-mode fiber optic cable, up to 10km |
| Dimensions | L 120 × W 88 × H 25 mm |
| Power | External power adapter 7.5V 1.5A |
| Media Interface | RJ-45, SC |
| EMI Compatibility | FCC Class B, CE Certification Class B |
| Temperature | Storage: -10°C ~ 70°C<br>Operating: 0°C ~ 40°C |
| Humidity | 10% ~90% non-condensing |
| Power Consumption | 7.2 Watts (maximum) |

Part No.:EM-WGT7v1