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FCC Warning

This equipment has been tested and found to comply with the regulations for a Class A 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 A 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 Gigabit Ethernet Converter

For Models: GT-702, GT-702S, GT-705A, GT-706A15, GT-706B15

Rev 4.0 (January. 2005)

Part No: 2010-000006-004

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Chapter 1
OVERVIEW

Thank you for purchasing PLANET GT-70X family Gigabit Ethernet Media Converter products. This Gigabit Ethernet Media Converter is used to convert one type media signal to other type equivalent that allows two type segments connect easily, efficiently and inexpensively. The Giagbit Ethernet Media Converter introduced here provides one channel media conversion between the 1000Base-T and 1000Base-SX/LX, 1000Base-SX/LX through SFP Mini-GBIC(GT-705A only) or the 1000Base-LX WDM(GT-706A15/ B15 only).

This Gigabit Ethernet Media converter can be used as a standalone unit or as a slide-in module to the 10"/19" media chassis (up to 15 units) for a multi-mode and single-mode Fiber combined networks at a central wiring closet. Please contact with your sales representative for more about the 10"/19" media chassis.

About the Gigabit Ethernet Media Converter

This Gigabit Ethernet Media Converter utilizes a netrwork technology specified by IEEE 802.3ab 1000Base-T and IEEE802.3z 1000Base-SX/LX standards. The Gigabit Ethernet Media Converter is used to converter one type media signal to other type equivalent that allows two type segments connect easily, effciently and inexpensively.

Chapter 2
PRODUCT FEATURES

- Comply with IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-SX/LX Ethernet standard
- Full-duplex supports for TP and fiber port
- Auto-negotiation on 1000Base-T port
- Auto-MDI/MDIX on TP port
- LED indicators for simple diagnostics and management
- Provides DIP switch to disable/ enable auto-negotiation by-pass function
- 1000Base-SX interface for up to 550 meters (multi-mode 50/125μm fiber) and 220 meters (multi-mode 62.5 /125μm fiber) on GT-702 and GT-705A
- 1000Base-LX interface for up to 10km (single mode 9/125μm fiber) on GT-702S and GT-705A
- 1000Base-LX WDM interface for up to 15km (single mode 9/125μm fiber) on GT-706A15/B15
- One SFP (Mini-GBIC) slot supporting either multi-mode or single mode fiber, flexibility in Gigabit Ethernet fiber-optic wiring with different Mini-GBIC module installed (GT-705A only)
- Compact in size, easy installation
- Can be installed on PLANET's 10 /19 Media Converter Chassis

Chapter 3
MODEL LIST

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

- ⇨ GT-702: 1000Base-T to 1000Base-SX (SC)
- ⇨ GT-702S:1000Base-T to 1000Base-LX (SC)
- ⇨ GT-705A: 1000Base-T to 1000BaseSX/LX (LC)
- ⇨ GT-706A15: 1000Base-T to 1000Base-LX(WDM)
- ⇨ GT-706B15: 1000Base-T to 1000Base-LX(WDM)

In the following sections, the term "GT-70X" indicates the product family above, the term **"MM"** and **"SM"** represent Multi-Mode and Single Mode fiber-optic mode.

✍ NOTE: Please note GT-706A15/706B15 is designed to work together. It means you must connect GT-706A15 to GT-706B15 from them to work normally. If both ends are GT-706A15 or GT-706B15, they can't work normally and may damage the fiber connectors.

Chapter 4
CHECKLIST

Your GT-70X carton should contain the following items:

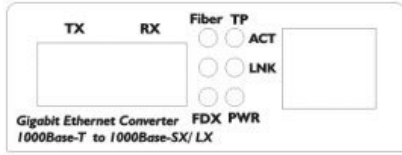
- ⇨ The Gigabit Ethernet Converter.
- ⇨ AC-DC Power Adapter (Output: 5VDC, 2A max.).
- ⇨ This user's manual.

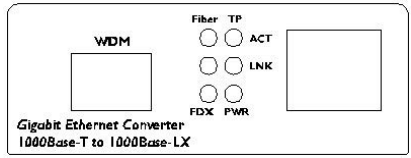
If any item is missing or damaged, please consult the dealer from whom you purchased your Gigabit Ethernet Converter.

✍ Notice: GT-705A is with one vacant SFP module slot. The mini GBIC SFP module is not bundled with in the package

Chapter 5
PRODUCT OUTLOOK

Right View (GT-70X)

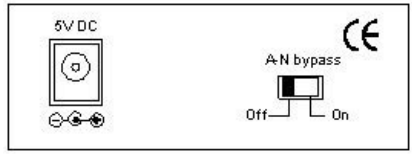




Left: Fiber-optic connector, Right: TP connector.

Three LED indicators per TP, fiber port.

Rear View (GT-70X)



One DC jack for DC power input and DIP switch to disable/enable Auto by pass function.

✍ Notice:

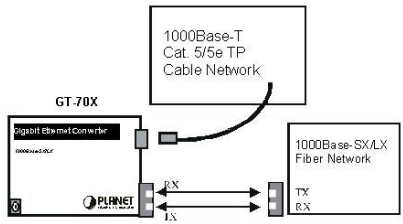
Please to note that if converter is connect with switch which is Auto negotiation, must enable the Auto by pass function.
If both devices are conveters must disable the Auto by pass function.

Chapter 6
INSTALLING THE CONVERTER

Please follow these steps to install the converter:

- Turn off the power of the device/station in a network to which the GT-70X will be attached.
- Ensure that there is no activity in the network.
- Attach fiber cable from the GT-70X to the fiber network. TX, RX must be paired at both ends.
- Connect the 5VDC power adapter to the GT-70X and verify that the Power LED lights up.
- Turn on the power of the device/station; the PWR LEDs should light when all cables are attached.

✍ Notice: Please refers to section 9 for detailed wiring information of the GT-70X.



To prevent from optic acceptor malfunction, check the both wires / transmitter before power on the converter.

Chapter 7
DUPLEX MODE SUPPORT

The GT-70X is one-channel media conversion between 1000Base-T and 1000Base-SX/LX/LX WDM. 1000Base-T port can work under Auto-negotiation and fixed 1000Mbps full duplex mode. 1000Base-SX/LX/LX WDM fiber port only allow to work under fixed 1000Mbps full duplex mode.

✍ Notice:	It doesn't support Auto-negotiation and can not work with 1000Base-SX/LX interface that can not configure to fixed 1000Mbps full duplex.

Chapter 8
LED INDICATION

LED	Color	Description
Fiber / ACT	Green	Lit: when the fiber port run in fix 1000Mbps and packet is traveling.
TP/ ACT	Green	Lit: when the packet is traveling.
Fiber/ LNK	Green	Lit: when fiber connection is good.
TP/LNK	Green	Lit: when TP connection is good.
FDX	Green	Lit: when the TP port runs in 1000Mbps Full duplex
PWR	Green	Lit: when +5VDC power detected

Table 8-1: LED indication of GT-70x

Chapter 9
CABLE CONNECTION PARAMETER

The wiring details are as below:

Cables:

Standard	Fiber Type	Cable Specification
1000Base-SX (850nm)	Multi-mode	50/125μm or 62.5/125μm
1000Base-LX (1300nm)	Multi-mode	50/125μm or 62.5/125μm
	Single-mode	9/125μm

Wiring Distances:

Standard	Fiber	Diameter (micron)	Modal Bandwidth (MHz * km)	Max. Distance (meters)
1000Base-SX	MM	62.5	100	220
		62.5	200	275
		50	400	500
		50	500	550
1000Base-LX	MM	62.5	5	550
		50	4	
		50	5	
	SM	9	N/A	5000*

✍ Notice: The Single-mode port (1000Base-LX port) of GT-702S, GT-705A and GT-706A15/B15 is complied with LX 5 kilometers and provides additional margin allowing for a 10/15 kilometers Gigabit Ethernet link on single mode fiber.

Chapter 10
PRODUCT SPECIFICATION

The GT-70X comes with the following standard features:

Standards	IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-SX/LX
Duplex Mode	Full Duplex Mode
Transfer rate	1000Mbps
Media Interface	RJ-45, SC, single SC(WDM)
LED indicators	PWR, FDX, Fiber/LNK/ACT, TP/LNK/ACT
Cable	1000Base-T: 4 pair Cat. 5, EIA/TIA-568 100-ohm screened twisted-pair (STP), up to 100m 1000Base-SX : 62.5/125μm multi-mode fiber optic cable, up to 220m 50/125μm multi-mode fiber optic cable, up to 550m 1000Base-LX : 9/125μm single-mode fiber optic cable, up to 10km/15km
Dimensions	26 x 70 x 97mm (H x W x D)
Power	External power adaptor 5V 2A max.
EMI Compatibility	FCC Class A, CE Certification Class A
Temperature	Storage: -40°C ~ 70°C Operating: 0°C ~ 50°C
Humidity	5% ~90% non-condensing

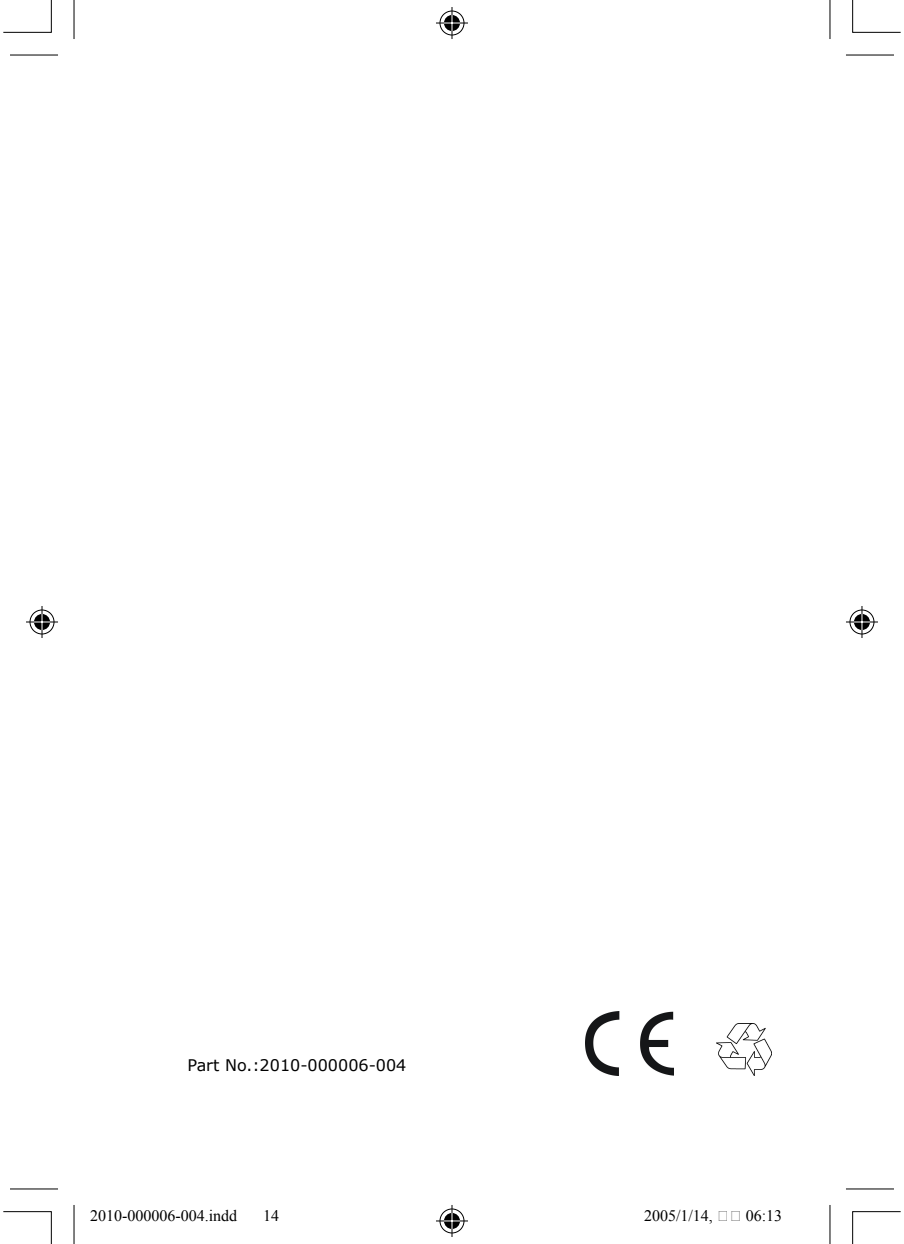
✍ Notice:

Connecting to the Gigabit Ethernet products, please refer to the device s Technical Manual.

Chapter 11
POWER INFORMATION

The power jack of GT-70X is with 2.5mm in the central post and required +5VDC power input. It will conform to the bundled AC-DC adapter and Planet's Media Chassis. Should you have the problem to make the power connection, please contact your local sales representative.

Please keep the AC-DC adapter as spare parts when your GT-70X is installed to a Media Chassis.



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