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FCC Compliance Statement

This equipment has been tested and found to comply with the limits 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 or residential 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.

1. Checklist

The GC-H21 carton should contain following items:

- GC-H21 Converter
- AC-DC Power Adapter
- This User's Guide

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

2. Overview

GC-H21 is designed to meet the needs for optical fiber network deployment and able to extend a legacy copper based network via fiber cable to a maximum distance of up to 100KM (Max. distance varies depending on the model).

GC-H21 is fully compliant with IEEE 802.3 & 802.3u standards; built-in Switching ASIC has turned GC-H21 function more like a 2 ports switch than a traditional converter. User can get all switching benefits such like traffic segmentation, frames checking & error filtering. In addition, Link-Cross-Check allow user to monitor & maintain their critical fiber link more easily and effectively.

The installation & operation procedures of the GC-H21 are simple & straightforward. Operation status can be monitored through a set of Diagnostic LED located in the front panel.

FEATURES

- 10/100Base-TX to 100Base-FX converter
- Store & Forward switching mechanism
- Comply to IEEE 802.3, 802.3u
- MDI/MDIX Auto-Crossover supported
- Auto-Negotiation or Manual mode setting of Speed & Duplex mode
- LED Indication
 - Power, FDX,
 - TX 100, TP Link/Activity
 - FX 100, FX Link/Activity
- Link-Cross-Check function

3. Installation

The installation procedure is simple and straightforward.

- Attach fiber cable from the GC-H21 to the fiber network.
- Attach UTP cable from the 10/100Base-TX network to the RJ-45 port on the GC-H21.
- Connect the power adapter to the GC-H21 and check that the Power LED lights up. The TX Link and FX Link LED will light when all the cable connections are satisfactory.

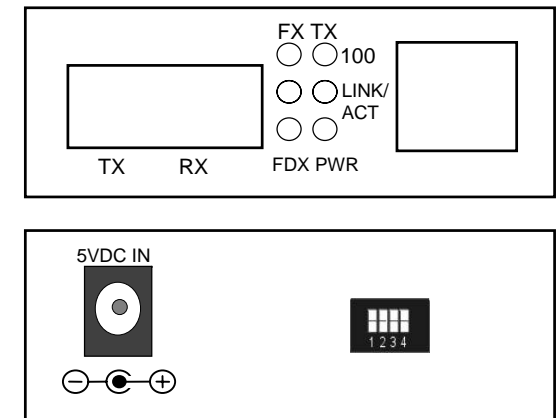


Fig. 1 GC-H21 Converter Front & Rear Panel

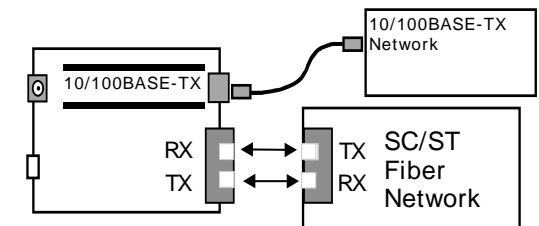


Fig. 2 Basic Network Connection

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 present
FDX	Green	Lit when TP port Full Duplex Mode is enabled
TX 100	Green	Lit when TP port speed is 100M
TX Link/ACT	Green Blink	Lit when TP link is up Blink when traffic 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, TP 100, TP Link/Act, Fiber 100, Fiber Link/Act
Power	DC 5V, 1.6A
Power Consumption	5W
Weight	0.6 Kg
Dimensions	26 X 71 X 94mm
Temperature	Operating: 0 ~ 50 °C Storage: -20 ~ 60 °C
Humidity	5% ~ 90% RH
Safety	UL, CSA
Emission	FCC/CE Class B
UTP	Cat. 5 UTP cable
Fiber	50/125, 62.5/125, or 100/140µm multimode 8.3/125, 8.7/125, 9/125 or 10/125µm single-mode

6. Rear Panel DIP Switch

Pin 1 Off/On	TP Auto-negotiation	Enable/Disable
Pin 2 Off/On	TP Speed	100M/10M
Pin 3 Off/On	TP Duplex	Full / Half
Pin 4 Off/On	Link-Cross-Check	Disable/Enable

Default set OFF from PIN 1 to PIN 4

Please Note - Power-On reset must be performed after changing the Dip Switch setting.

7. Link-Cross-Check

Link-Cross-Check allow user easily to identify and diagnose the linking status. If set Link-Cross-Check switch to Enable, UTP and Fiber port can link up only when both linking conditions are good. In addition, if any of the fiber or UTP port link down during operation, the other port will also turn down link to alert the user and avoid packet loss. Set Link-Cross-Check switch to Enable provide user transparent link indication between two network devices interconnected by GC-H21.

If Disable the Link-Cross-Check, the UTP and fiber port will link up base on their individual linking condition. Further, if fiber port link down during operation, it will not turn down the UTP port link and vice versa.

8. Pure Converter Mode

This converter can also set to operate as a pure converter without switching function by applying the following settings:

Connecting to a 100Mbps Full Duplex:

Link-Cross-Check Enable (Pin 4 On)
TP Speed to 100Mbps (Pin 2 Off)
TP Duplex to Full (Pin 3 Off)

Connecting to a 100Mbps Half Duplex:

Link-Cross-Check Enable (Pin 4 On)
TP Speed to 100Mbps (Pin 2 Off)
TP Duplex to Half (Pin 3 On)

Ordering Information

Multi-mode

GC-H21SC: SC/1310nm/2Km
GC-H21ST: ST/1310nm/2Km
GC-H21MR: MT-RJ/1310nm/2Km

Single-mode

GC-H21SCS: SC/1310nm/10Km



GC-H21

Fast Ethernet Switching Converter

User's Guide

V 2.4