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FCC Warning

This equipment has 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 this device is operated in a commercial environment. This device generates, uses, 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 this device in a residential area is likely to cause harmful interference in which cases the user is responsible for taking appropriate remedial action at his/her own expense.

CE Mark Warning

This is class A products. In a domestic environment this product may cause radio interference in which case the user will need to consider adequate preventative methods.

1. Checklist

The carton should contain the following items:

- GC-G21+ Gigabit Ethernet Media Converter
- AC-DC Power Adapter
- User's Guide

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

2. Overview

GC-G21+ is designed to meet the massive needs for Gigabit network deployment and able to extend a copper based Gigabit network via fiber cable to a maximum distance up to 80KM (maximum distance varies from 550M to 80KM depending on the model type of Gigabit Media Converters used).

GC-G21+ is fully compliant with IEEE802.3, 802.3u, 802.3ab & 802.3z standards. It can be installed into a 16-slot universal converter rack. The installation & operation procedures are simple & straightforward. Operation status can be locally monitored through a set of Diagnostic LED located on the front panel.

Features:

- 10/100/1000Base-T to 1000BASE-X Converter
- Standard: IEEE 802.3, 802.3u, 802.3ab & 802.3z
- Interface: 1X10/100/1000Mbps RJ-45 LAN Connector
1X1000Mbps F/O port, SC Connector
- Auto-Negotiation in TP port
- MDI/MDIX Auto-Crossover supported
- LED: Power, FDX, Status, Speed, FO Link/Act, TX Link/Act
- Plug-and-Play installation
- Support Link Alarm
- Support Jumbo Frame 9K Bytes (under 10,100,1000Mbps)

3. Installation

- Attach fiber cable from the GC-G21+ to the fiber network. The fiber connections must be matched – transmit socket to receive socket.
- Attach a UTP cable from the 10/100/1000BASE-T network to the RJ-45 port on the GC-G21+.
- Connect the power adapter to the GC-G21+ and check that the Power LED lights up. The TX Link/Act and FO Link/Act LEDs will light up when all the cable connections are satisfactory.

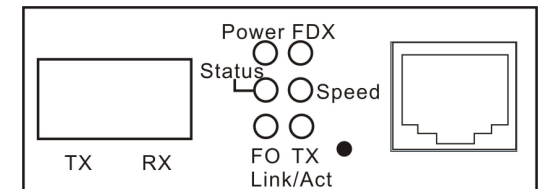


Figure 1. Front Panel

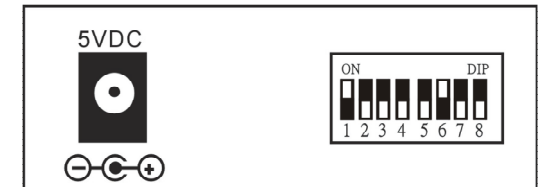


Figure 2. Rear Panel

4. LED Description

LED	Color	Function
Power	Green	Lit when power is available
TX/Link Act	Green	Lit when TP cable connection with remote device is good. Blink when TP traffic is present
FO/Link Act	Green	Lit when Fiber cable connection with remote device is good Blink when F/O traffic is present
FDX	Green	Lit when TP work in Full-Duplex No-Lit when TP work in Half-Duplex
Speed	Green	No-Lit when TP work in 10M or No Link Lit when TP work in 100M
	Orange	Lit when TP work in 1000M
Status	Green	Lit when TP and F/O link up
	Orange	Lit when TP or F/O link down

5. Technical Specifications

Standards:	IEEE 802.3, 802.3u, 802.3ab, 802.3z
Interface:	1 X 10/100/1000 RJ-45 Connector 1 X 1000 F/O port, SC Connector
Operation LED:	Power, TX Link/Act, FO Link/Act, FDX, Speed, Status
Power:	I/P AC 100-240V O/P DC 5V, 1.6A
Power Consumption:	3W
Shipping Weight:	0.6KG
Dimensions:	71mm(W) X 94mm(D) X 26 mm(H)
Temperature:	Operating: 0 ~ 50 °C Storage: -20 ~ 60 °C
Humidity:	5% ~ 90% RH
Emission:	Electrical: UL, CSA EMI: FCC Class A, CE

*Please contact us for further updates.

Cable Required:
TP EIA/TIA-568 Cat 5E, 1000M
Fiber 50/125, 62.5/125um multi-mode fiber (GC-G21SC+)
9/125, 10/125um single-mode fiber (GC-G21SCS+)

6. DIP SWITCH Setting

By default, only PIN 1 & PIN 6 are set to ON.

PIN NO.	Function	OFF	ON
1	TP Auto-Negotiation	Disable	Enable
2	Manual TP Speed	10M	100M
3	Manual TP Speed	N/A	1000M
4	Duplex Mode	Half	Full
5	Flow Control	Disable	Enable
6	F/O Mode	Force	Auto
7	Link Alarm	Disable	Enable
8	Transmission Mode	Store and forward	Pass-through

NOTE:

- Before changing TP Speed, Duplex Mode and Flow Control setting, please make sure PIN 1 is set to OFF.
- If you would like to set TP Speed to 10M or 100M, please make sure Pin 3 is set to OFF.
- The 1000Mbps supports full-duplex mode only.
- When Pin 8 is set to ON, TP speed is forced to 1000M and full-duplex and flow control are disabled.
- Power reset must be performed after changing the dip switch setting.

7. Link Alarm

Link Alarm feature allows users to easily identify and diagnose the link status of TP and F/O segment. When Link Alarm is enabled, TP and F/O ports will link up only when both TP and F/O segment linking conditions are good. If either TP or F/O segment is down during operation, the other port will also shut down link to alert users and avoid packet loss. When Link Alarm is disabled, the TP and F/O port will link up based on their own segment linking condition. For example, if the F/O segment is down during operation, this device will not shut down the TP port link to the TP segment and vice versa.

Ordering Information

Multi-mode 10/100/1000 Gigabit Media Converter

GC-G21SC+: SC/850nm/550m

Single-mode(10KM)10/100/1000 Gigabit Media Converter

GC-G21SCS+: SC/1310nm/10Km



GC-G21+

10/100/1000Base-T to 1000Base-X Gigabit Ethernet Media Converter

User's Guide

Version: 0.92