GIGAMEDIA

Quick Installation Guide
GGM 742

1. Overview
The GGM 742 Converter is used to connect devices with 10/100Base-TX cable to fiber-based Ethernet. The GGM 742 is enhanced with Link Fault Signaling, Loop-back Testing and automatic MDI/MDI-X detection.

2. Package Checklist
Before installing the GGM 742, verify that the package contains the following items:

- 1 x GGM 742 Converter
- Power adapter (Check for area type)
- Quick Installation Guide

3. Hardware Installation Procedure
STEP 1:   Remove from packaging and connect the 12V DC adapter to the power input on rear panel.
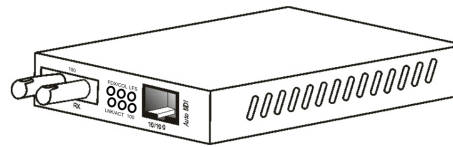
STEP 2:   Connect the Ethernet (RJ-45) port to the networking device. See the LNK/ACT LED to confirm if the connection is established.

STEP 3:   Connect the fiber cable to the fiber port.

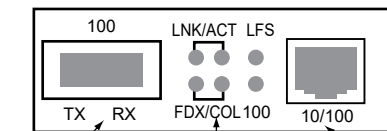STEP 4:   See DIP switches on rear panel to enable/disable the required features per application.
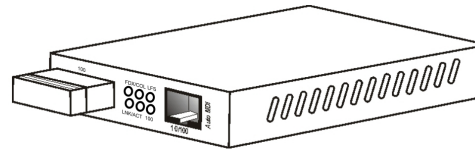
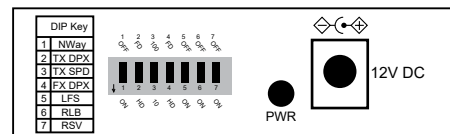
Converter with SC and RJ-45 Connectors

Converter with ST and RJ-45 Connectors

Front Panel View

Fiber Port   **LED Indicators**   **Copper Port**

Rear Panel View with DIP Switches


4. DIP Switches

DIP 1	Enables / disables auto-negotiation (RJ-45)
DIP 2	Copper port duplex mode: full or half-duplex
DIP 3	Copper port data bit rate: 10Mbps or 100Mbps
DIP 4	Fiber port duplex mode: full duplex or half

DIP 5	Enables / disables Link Fault Signaling (LFS)
DIP 6	Enables / disables Remote Loop Back (RLB)
DIP 7	Reserve (RSV)

5. Location
The GGM 742 can be placed on a desktop or horizontal surface, or it can be wall-mounted.

Wall-mounted
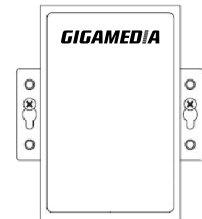
6. About RJ45 Cables
When connecting your network devices, use at least standard Category 3 eight-way cables for 10Base-T configurations and Category 5 cable for 100Base-TX.

Application	Cable Type	Application	
Converter to Converter or Network Adapter	Straight-through Cable	Converter End 1 2 3 6	Hub 1 2 3 6
Converter to Switch	Cross-Over Cable	Converter End #1 1 2 3 6	Converter End #2 1 2 3 6

Note: Automatic MDI/MDI-X selection on RJ-45 port
Please use the above table to determine the correct cable for your serial devices.

7. NWay DIP Switch Setting

Use the NWay DIP switch to activate NWay operations. Factory NWay DIP switch default is set to ON position. Check that the networking device to be connected to the Converter has NWay support.

If YES: Check that the NWay DIP switch is set to the ON position. The Converter will automatically set the optimum speed and duplex mode on the copper segment. Users can skip the settings for DIP switches 2 and 3, when NWay is activated.

If NO: Set the NWay DIP switch to the OFF position. Then Use DIP switch 2 to manually select between half (HD) and full duplex (FD) modes. Use DIP switch 3 to manually select between 10Mbps or 100Mbps speeds. Set NWay switch to OFF position when connecting to an auto-sensing device that only supports 10/100Mbps detection. Some early switch models only support auto-sensing of speed, and NOT auto detection of speed and duplex mode (auto-negotiation).

Setting the duplex mode is feasible while the media converter is "on-line".

8. Link Fault Signaling (LFS)

The LFS LED will immediately light to indicate when a cable has been severed or when some other cause of disruption in service has occurred. The LFS function monitors both copper and fiber segments giving a total connection status report.

Set LFS to **ON** for normal operational use. **OFF** when installing cables or when testing the network connection.

9. Loop-back Test

This Converter features DIP switches to activate both local and remote loopback diagnostic test functions. Use local loop back to check if the copper segment is connected properly, and use remote loop back to check if the fiber segment is connected properly.

Dip Switch 6 ON: enables remote loop-back function

OFF: disables remote loop-back function

Conduct either the local or remote test, not both at the same time.

10. Environmental limits

Operating Temperature	0~50℃
Operating Humidity	10~95%RH (non condensing)

11. LED Indicators

This Converter has LED indicators located at the front of the device. These have been designed to give easy at-a-glance network status. Please see below for an interpretation of their functions:

Unit LEDs		
LED	**Condition**	**Status**
PWR	On (Green)	Converter is receiving power
	Off	Power off or failure
LFS	On (Red)	Disruption of connection in copper/fiber segment

100	On (Green)	Port operating at 100Mbps
	Off	Port operating at 10Mbps
LNK/ACT	On (Green)	Illuminated when connectors are attached
	Blinking (Green)	Traffic passing through port
	Off	No valid link established
FDX/COL	On (Yellow)	Port is operating at full duplex
	Blinking (Yellow)	Indicates collision
	Off	Port is operating at half duplex