

iConverter GX/TM2 Standalone Module QUICK START GUIDE

The *iConverter*[®] GX/TM2 media converter and Network Interface Device (NID) provides 10BASE-T, 100BASE-TX or 1000BASE-T UTP to 1000BASE-X fiber media conversion.



The GX/TM2 has built-in Operation, Administration and Maintenance (OAM) functionality enabling the GX/TM2 to operate as a managed demarcation point at the customer premises and network edge, offering Quality of Service capabilities.

The GX/TM2 can be managed using *NetOutlook*[®] SNMP Management Software, third-party SNMP Client, Telnet or the Command Line Interface (CLI).

For the complete User Manual on this product, access Omnitron's secure download site and request access.

<http://www.omnitron-systems.com/login.php>

INSTALLATION PROCEDURE

- 1) Configure DIP-Switches
- 2) Install Standalone Module and Connect Cables
- 3) Configure Module via Command Line Interface
- 4) Verify Operation

1) CONFIGURE DIP-SWITCHES

DIP-SWITCH BANK 1

SW1 - FIBER AUTO/MANUAL NEGOTIATION "AN/MAN"

When this DIP-switch is in the DOWN "AN" position (factory default), the fiber optic port automatically determines the duplex and pause modes of the connecting fiber optic device. If the connecting fiber optic device cannot provide the proper signal to indicate its own mode of operation, the DIP-switch should be set to the UP fiber optic "Man" position. When Port 1 is in 1000X manual mode, no capabilities are advertised.

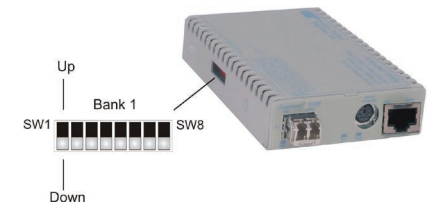


Figure A: DIP-Switch Location

NOTE: The fiber optic port of the GX/TM2 is always in Full-Duplex mode.

SW2, SW3, SW4 AND SW5 - UTP CONTROL

DIP-switches SW2, SW3, SW4 and SW5 control the setting of the UTP port. See Figure C for the UTP Configuration matrix.

NOTE: Refer to the table in Section 3.2.1.2 of the GX/TM2 User Manual for the more detailed information.

```

Management Options                iConverter, Serial Agent
Network Management
 1: Chassis and Module Management
 2: Set Module Name Preferences
Management Module Preferences
 3: IP and Control Preferences
 4: SNMP Preferences
 5: Abandon Preference Changes
 6: Save Preference Changes
 7: Restore Factory Defaults
 8: Restart Management Module
 9: Other Networking Features
Management Module Maintenance
10: Firmware Update
11: Set Date/Time

IP Address = 192.168.1.220
Chassis Number = 1

Enter Choice, <H>elp, E<x>it >
    
```

Figure D: Command Line Interface Menu Options

The CLI interface allows for the detailed configuration of the module. It is recommended to configure the module with an IP address associated with the attached network. Also, SNMP trap host address should be configured if the module is managed with an SNMP-based Management System. See the GX/TM2 User Manual for complete information.

4) VERIFY OPERATION

Once the module has been installed and configured per steps 1 - 3, verify the module is operational by viewing the LED indicators.

The Power LED indicates the module is receiving power.

The Fiber Optic link LED indicates the fiber optic connection has been established.

The UTP link LED indicates the module has established a connection across its UTP port.

LED Function "Legend"	Color	Off State	On / Blinking State
Power "Pwr"	Green	No Power	On: Module has power
1000Mbps Fiber Optics "FO"	Green	No Fiber Link	On: Fiber Link Blinking: Fiber Data Activity
UTP port 100Mbps "100"	Green	Not linked at 100Mbps	On: UTP linked at 100Mbps Blinking: UTP Data Activity
UTP port 1000Mbps "1000"	Green	Not linked at 1000Mbps	On: UTP linked at 1000Mbps Blinking: UTP Data Activity
UTP port 10Mbps "100" + "1000"	Green	Not linked at 10Mbps	On: UTP linked at 10Mbps Blinking: UTP Data Activity
UTP port Full-Duplex "FDX"	Green	Half-Duplex when any UPT link is active	On: Full-Duplex when any UTP link is active

Figure E: LED Indicators

Switch	Down (Factory Default)	Up
SW1	AN: Fiber Auto-Negotiation	Man: Fiber Manual Negotiation
SW2	AN: UTP Auto-Negotiation	Man: UTP Manual
SW3	1000: UTP 1000Mbps	10-100: UTP 10-100Mbps
SW4	100: UTP 100Mbps	10: UTP 10Mbps
SW5	FDX: UTP Full-Duplex	HDX: UTP Half-Duplex
SW6	See Link Mode Selection	
SW7		
SW8		

SW6	SW7	SW8	Link Mode Selection
Down	Down	Down	Link Segment (LS) (Factory Default)
Up	Down	Down	Link Propagate (LP)
Down	Up	Down	Remote Fault Detect + Link Segment (RFD + LS)
Up	Up	Down	Remote Fault Detect + Link Propagate (RFD + LP)
Down	Down	Up	Symmetrical Fault Detect (SFD)
Up	Down	Up	Asymmetrical Link Propagate Port 1 to Port 2 (ALP P1-P2)
Down	Up	Up	Asymmetrical Link Propagate Port 2 to Port 1 (ALP P2-P1)
Up	Up	Up	Pass Remote Link Fault (PRLF)

Figure B: DIP-Switch Bank 1

SW2	SW3	SW4	SW5	Function
AN	1000	100 or 10	FDX	The UTP port is set to auto-negotiation with the following modes advertised: 1000F, 1000H, 100F, 100H, 10F, 10H
AN	1000	100 or 10	HDX	The UTP port is set to auto-negotiation with the following modes advertised: 1000H, 100F, 100H, 10F, 10H
AN	10-100	100	FDX	The UTP port is set to auto-negotiation with the following modes advertised: 100F, 100H, 10F, 10H
AN	10-100	100	HDX	The UTP port is set to auto-negotiation with the following modes advertised: 100H, 10F, 10H
AN	10-100	10	FDX	The UTP port is set to auto-negotiation with the following modes advertised: 10F, 10H
AN	10-100	10	HDX	The UTP port is set to auto-negotiation with the following modes advertised: 10H
MAN	1000	100 or 10	FDX	The UTP port is set to auto-negotiation with the following modes advertised: 1000F, 1000H, 100F, 100H, 10F, 10H
MAN	1000	100 or 10	HDX	The UTP port is set to auto-negotiation with the following modes advertised: 1000H, 100F, 100H, 10F, 10H
MAN	10-100	100	FDX	The UTP port is set to manual negotiation and is forced to: 100F
MAN	10-100	100	HDX	The UTP port is set to manual negotiation and is forced to: 100H
MAN	10-100	10	FDX	The UTP port is set to manual negotiation and is forced to: 10F
MAN	10-100	10	HDX	The UTP port is set to manual negotiation and is forced to: 10H

Figure C: UTP Configuration Matrix

SW6, SW7, SW8 - LINK MODES

These three DIP-switches configure the link mode settings. It is recommended to have link modes DOWN (default) during the initial installation. After the circuit has been tested and operational, configure the module for the desire mode. plication note “*iConverter Link Modes*” available on Omnitron’s web site.

2) INSTALL STANDALONE MODULE AND CONNECT CABLES

- The GX/TM2 Network Interface Device (NID) is available in tabletop and wall-mounting models. For wall-mounting, attach the NID to a wall, backboard or other flat surfaces. For tabletop installations, place the unit on a flat level surface. Attach

the rubber feet to the bottom of the NID to prevent the unit from sliding. Make sure the unit is placed in a safe, dry and secure location.

To power the unit using the AC/DC adapter, connect the AC/DC adapter to the AC outlet. Then connect the barrel plug at the end of the wire on the AC/DC adapter to the 2.5mm DC barrel connector (center-positive) on the chassis. Confirm that the unit has powered up properly by checking the power status LED located on the front of the unit.

To power the unit using a DC power source, prepare a power cable using a two-conductor insulated wire (not supplied) with a 14 AWG gauge minimum. Cut the power cable to the length required. Strip approximately 3/8 of an inch of insulation from the power cable wires. Connect the power cables to the unit by fastening the stripped ends to the DC power connector.

Connect the power wires to the DC power source. The Power LED should indicate the presence of power.

WARNING: Note the wire colors used in making the positive and negative connections. Use the same color assignment for the connection at the DC power source.

NOTE: If mounting with a safety ground attachment, use the safety ground screw at the rear of the unit.

- When using a GX/TM2 SFP model (8939N-0), insert the SFP Fiber transceiver into the Port 1 SFP receptacle on the GX/TM2.

NOTE: The release latch of the SFP Fiber transceiver must be in the closed position before insertion.

- Connect an appropriate multimode or single-mode fiber cable to the fiber port of the installed module. It is important to ensure that the transmit (Tx) is attached to the receive side of the device at the other end and the receive (Rx) is attached to the transmit side. Single-fiber (SF) media converter models operate in pairs. The Tx wavelength must match the Rx wavelength at the other end and the Rx wavelength must match the Tx wavelength at the other end.
- Connect the UTP port via a Category 5 cable to a 10BASE-T, 100BASE-TX or 1000BASE-T Ethernet device.

3) CONFIGURE MODULE VIA COMMAND LINE INTERFACE

To access the Command Line Interface (CLI), connect the GX/TM2 RS-232 Console Port to the COM port of a computer equipped with terminal emulation software such as HyperTerminal. The Console Port (DCE) is a mini DIN-6 female connector which can be changed to a DB-9 connector with the included adapter. The GX/TM2 Console Port is a standard asynchronous serial interface.

Start HyperTerminal and select the correct COM Port in the HyperTerminal “Connect To:” window. Set the serial port to the following:

Bits Per Second	57,600
Stop Bits	1
Data Bits	8
Parity	NONE
Hardware Flow Control	NONE

Once connected, press <ENTER> to bring up a command line prompt on the attached PC.