

***iConverter* 2GXM2 Standalone Module QUICK START GUIDE**

The Omnitron *iConverter*[®] 2GXM2 media converter and Network Interface Device (NID) with integrated management provides Gigabit Ethernet (1000BASE-X) SFP fiber-to-fiber media conversion.



The 2GXM2 conforms to Ethernet in the First Mile (EFM) fiber standards to support Fiber-to-the-X (FTTX) in Metropolitan and Enterprise LAN networks. Built-in Operation, Administration and Maintenance (OAM) functionality enables the 2GXM2 to operate as a managed demarcation point at the customer premises and network edge, offering Quality of Service capability.

The 2GXM2 can be managed using Omnitron's *NetOutlook*[™] SNMP Management Software, third-party SNMP Client, Telnet or the Command Line Interface (CLI).

For more information, including the complete User Manual on the 2GXM2 module, access Omnitron's documentation download web page to view all relevant documents:

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

IMPORTANT

The firmware of the Network Management Module (NMM or NMM2) and *NetOutlook* must be the same or greater than the firmware on the 2GXM2 for the module to be managed.

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, SW2 - AUTO/MANUAL NEGOTIATION "AN/MAN"

When the DIP-switch is in the DOWN Auto-Negotiate "AN" position (factory default), the Port automatically determine the duplex and pause modes of the connecting fiber optic devices. If the connecting fiber optic devices cannot provide the proper signal to indicate their own mode of operation, the DIP-switch

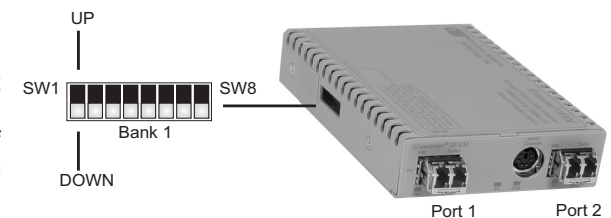


Figure A: DIP-Switch Location

```
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 C: 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 2GXM2 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 LEDs indicate the fiber optic connections have been established. Verify the Link Mode selection is set to Link Segment (LS). Until a stable link is established, leave the Link Mode configured for LS. After a Link presence is established, the Link Mode selection can be modified.

LED Function "Legend"	Color	Off State	On / Blinking State
Power "Pwr"	Green	No power	On: Module has power
Port 1 Fiber Link Activity "P1"	Green	No Fiber Link	On: Fiber link is active Blinking: Fiber Data Activity
Port 2 Fiber Link Activity "P2"	Green	No Fiber Link	On: Fiber link is active Blinking: Fiber Data Activity

Figure D: LED Indicators

should be set to the UP Manual “MAN” position. See Figure B for more information.

NOTE: When Port 1 operates in Auto-Negotiation mode, the port advertises Pause. When the Fiber optic ports (Port 1 and Port 2) operates in Manual mode, Pause is not advertised.

NOTE: The fiber optic ports operate in Full-Duplex mode in both Auto and Manual negotiation modes.

SW3, SW4, SW5 - RESERVED

These DIP-switches are for factory use only and must always remain in the DOWN position (factory default).

SW6, SW7, SW8 - LINK MODES

These three DIP-switches configure the link mode settings. The following table details possible Link Mode DIP-switch configurations. For detailed information on the operation of the different Link Modes, download the application note “iConverter Link Modes” available on Omnitron’s web page:

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

Switch	Down (Factory Default)	Up
SW1	AN: Fiber Port 1 Auto	Man: Fiber Port 1 Manual
SW2	AN: Fiber Port 2 Auto	Man: Fiber Port 2 Manual
SW3	Reserved	Reserved
SW4	Reserved	Reserved
SW5	Reserved	Reserved
SW6	See Link Mode Section	
SW7		
SW8		

SW6	SW7	SW8	Link Mode Selection
Down	Down	Down	Link Sement (LS) (Factory Default)
Up	Down	Down	Link Propagate (LP)
Down	Up	Down	Remote Fault Detect + Link Segemnt (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-Switches

2) INSTALL STANDALONE MODULE AND CONNECT CABLES

a. The 2GXM2 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 standalone 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.

b. Insert the SFP Fiber transceivers into the Port 1 and Port 2 SFP receptacles on the 2GXM2.

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

c. Connect an appropriate multimode or single-mode fiber cable to the SFP fiber ports 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

NOTE: In order to support Remote OAM Management Mode, Port 1 of the 2GXM2 must be connected to the Port 1 on the 2GXM2 or link partner.

3) CONFIGURE MODULE VIA COMMAND LINE INTERFACE

To access the Command Line Interface (CLI), connect the 2GXM2 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 2GXM2 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. A new 2GXM2 module does not have a password, and will skip the **Password Entry** screen and go straight to the **Management Options** screen. If a password has been set, the **Password Entry** screen will be displayed. Type the password and press <ENTER>, the 2GXM2 will respond with the **Management Options** screen: