

iConverter 2GXM2 Plug-in Module QUICK START GUIDE

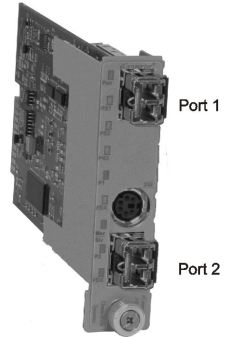
The Omnitron *iConverter*® 2GXM2 Network Interface Device (NID) with integrated management provides Gigabit Ethernet (1000BASE-X) SFP fiber-to-fiber media conversion.

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 module 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 Plug-in module, access Omnitron's documentation download web page to view all relevant documents:

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



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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 >
    
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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 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 from the chassis.

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
Power Supply Status #X	Green	Chassis Power Supply not installed	On: Power available from installed Power Supply #X Blinking: No power available from installed Power Supply #X
Port 1 Fiber Link Activity "P1"	Green	No Fiber Link	On: Fiber link is active Blinking: Fiber Data Activity
Chassis Management Master/Slave "Msr/Slv"	Green	Chassis Slave Mode	On: Chassis Master Blinking: Operating in OAM Mode
Port 2 Fiber Link Activity "P2"	Green	No Fiber Link	On: Fiber link is active Blinking: Fiber Data Activity

Figure E: LED Indicators

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 Module in Chassis 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 LEFT 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 should be set to the RIGHT Manual "MAN" position. See Figure B on page 2 for more information.

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

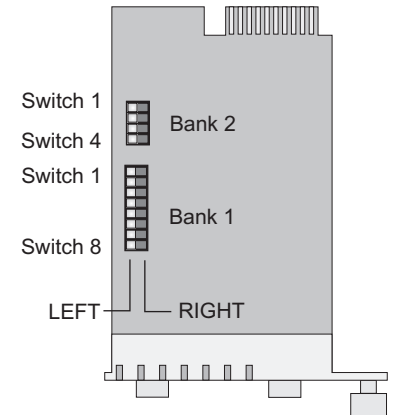


Figure A: DIP-Switch Locations

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 LEFT 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	Left (Factory Default)	Right
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
Left	Left	Left	Link Segment (LS) (Factory Default)
Right	Left	Left	Link Propagate (LP)
Left	Right	Left	Remote Fault Detect + Link Segment (RFD + LS)
Right	Right	Left	Remote Fault Detect + Link Propagate (RFD + LP)
Left	Left	Right	Symmetrical Fault Detect (SFD)
Right	Left	Right	Asymmetrical Link Propagate Port 1 to Port 2 (ALP P1-P2)
Left	Right	Right	Asymmetrical Link Propagate Port 2 to Port 1 (ALP P2-P1)
Right	Right	Right	Pass Remote Link Fault (PRLF)

Figure B: DIP-Switch Bank 1

DIP-SWITCH BANK 2

SW1, SW2 - BACKPLANE ENABLE

When the DIP-switch is in the LEFT “DS” position (factory default), the Backplane Port of the 2GXM2 is isolated from the chassis’ Ethernet Backplane. When the DIP-switch is in the RIGHT “EN” position, the Backplane Port is enabled. This allows Ethernet Backplane connectivity to an adjacent module via the chassis Backplane Link “A” or “B” depending on the switch setting.

Switch	Left (Factory Default)	Right
SW1	A-DS: Port A Disabled	A-EN: Port A Enabled
SW2	B-DS: Port B Disabled	B-EN: Port B Enabled
SW3	M/SL: Auto Select	SL: Slave-Mode Only
SW4	Reserved	Reserved

Figure C: DIP-Switch Bank 2

SW3 - MASTER/SLAVE

When the 2GXM2 module is installed in a chassis with an *iConverter* Network Management Module (NMM), the DIP-switch must be set to the LEFT “M/SL” position (factory default). The assignment of mastership is automatically negotiated by the installed management modules. To designate the 2GXM2 module as the master of the chassis, set the DIP-switch to the LEFT “M/SL” position, and set the DIP-switches on the other installed management modules to the RIGHT “SL” position to enable Slave-Only mode.

SW4 - RESERVED

This DIP-switch is for factory use only and must always remain in the LEFT position (factory default).

2) INSTALL MODULE IN CHASSIS AND CONNECT CABLES

a. Carefully slide the module into an open slot in the chassis. Align the module with the installation guides and ensure that the module is firmly seated against the backplane. Secure the module by fastening the front panel thumbscrew (push in and turn clockwise to tighten) to the chassis front. Verify the “Pwr” LED is ON (indicating the chassis is powered).

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.

d. 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.