

4) VERIFY OPERATION

Once the module has been installed and configured, per steps 1 - 3, verify the module is operational by viewing the status of the LED indicators. The table below provides a description for each indicator.

The Power LED indicates the module is receiving power from the chassis. The NMM2 has an LED indicator for each available power supply in the chassis (19-Module Chassis has three, 5-Module Chassis has two).

The Master/Slave and Management LEDs indicate the operation and configuration of the management channel. A blinking "Mgt" LED indicates the NMM2 is polling the chassis.

The UTP "10" or "100" LED indicates the module has established a connection across its UTP port. A blinking LED indicates the presence of data.

LED Function "Legend"	Color	OFF State	ON / Blinking State
Power "Pwr"	Green	No Power	Module has power
Power Supply Status "PSx"	Green	Power Supply not installed	ON: Power available Blinking: Supply installed but not powered
Master/Slave "Msr/Slv"	Green	Slave Mode	ON: Chassis Master
Management "Mgt"	Green	Not polling chassis	ON: Polling chassis
10Mbps (UTP) "10"	Green	10Mbps not selected or disconnected	ON: Active 10Mbps UTP link Blinking: UTP data activity
100Mbps (UTP) "100"	Green	100Mbps is not selected or disconnected	ON: Active 100Mbps UTP link Blinking: UTP data activity
Full-duplex (UTP) "FDX"	Green	Half-duplex	Full-duplex

Figure D: LED Indicators

The *iConverter* NMM2 provides real-time management, trap notification and remote configuration of *iConverter* equipment. It supports SNMPv1, SNMPv2c, SNMPv3 and Telnet protocols. SMNPv3 provides secure access to devices by a combination of authenticating and encrypting packets over the network.

For more information, including the complete User Manual on the NMM2 module, access Omnitron's documentation download web page to view all relevant documents:

http://www.omnitron-systems.com/downloads_iconverter.php



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-SWITCHES

The location of the DIP-switch is illustrated in Figure A and the description is shown in Figure B.

SW1 - PAUSE

When the UTP port is operating in Auto-Negotiation, its Pause operation mode is determined by the Pause capability advertised during AN between itself and the link partner. The port advertises its Pause capability (Symmetrical or No Pause) during AN based on the Pause Disable/Enable DIP-switch setting.

When a port is operating in Manual mode, its Pause operation mode is based on the Pause Disable/Enable DIP-switch setting.

SW2 - RESERVED

NOTE: DIP-switches marked Reserved must be kept in the Left (factory default) position.

SW3 - UTP AUTO/MANUAL

When this DIP-switch is in the UTP Auto Negotiate "AN" position (factory default), the UTP port automatically determines the speed and duplex mode of the connecting UTP device. DIP-switches SW3, SW4 and SW5 determines the speed and duplex modes advertised by the module. See Figure C on the following page for more information.

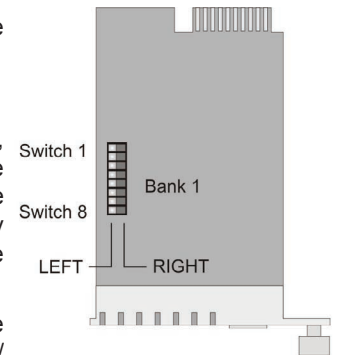


Figure A: DIP-switch Location

Switch	Left (Default)	Right
SW1	OFF: Pause Disable	PAUS: Pause Enable
SW2	RESERVED	
SW3	AN: UTP Auto-neg.	MAN: UTP Manual
SW4	100: UTP 100Mbps	10: UTP 10Mbps
SW5	FDX: UTP Full-duplex	HDX: UTP Half-duplex
SW6	A-DS: Disabled Backplane Port A	A-EN: Enabled Backplane Port A
SW7	B-DS: Disabled Backplane Port B	B-EN: Enabled Backplane Port B
SW8	RESERVED	

Figure B: DIP-switch Description

SW4 - UTP 10/100Mbps

When the UTP “AN/MAN” DIP-switch is in the manual “MAN” position, the “10/100” DIP-switch determines the speed of operation for the UTP port.

SW5 - UTP FULL/HALF DUPLEX

When the UTP “AN/MAN” DIP-switch is in the manual “MAN” position, the UTP Full/Half-Duplex “FDX/HDX” DIP-switch determines the duplex operation mode of the UTP port.

SW3	SW4	SW5	Function
AN	100	FDX	The UTP port is set to Auto-Negotiation with the following modes advertised: 100F, 100H, 10F, 10H
AN	100	HDX	The UTP port is set to Auto-Negotiation with the following modes advertised: 100H, 10F, 10H
AN	10	FDX	The UTP port is set to Auto-Negotiation with the following modes advertised: 10F, 10H
AN	10	HDX	The UTP port is set to Auto-Negotiation with the following modes advertised: 10H
MAN	100	FDX	The UTP port is set to Manual Negotiation and is forced to: 100F
MAN	100	HDX	The UTP port is set to Manual Negotiation and is forced to: 100H
MAN	10	FDX	The UTP port is set to Manual Negotiation and is forced to: 10F
MAN	10	HDX	The UTP port is set to Manual Negotiation and is forced to: 10H

Figure C: Speed and Duplex Settings

SW6, SW7 - A/B BACKPLANE ENABLE

The NMM2 can be configured for In-Band or Out-of-Band management. When the

Backplane Enable switch is in the “DS” position (factory default), the front-panel UTP management port is enabled and the Backplane Ethernet Port is disabled. This is defined as Out-of-Band management. When the DIP-switch is in the “EN” position, the Backplane Ethernet Port is enabled. This is defined as In-Band management. This allows Ethernet Backplane connectivity to adjacent modules via the chassis Backplane “A” or “B” depending on the switch setting. Refer to the full version User Manual for the appropriate A/B backplane configuration settings.

SW8 - RESERVED

NOTE: DIP-switches marked Reserved must be kept in the Left (factory default) position.

2) INSTALL MODULE IN CHASSIS AND CONNECT CABLES

- It is recommended that the NMM2 be installed in Slot 1. Carefully slide the module into the 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).
- Connect the UTP port via a Category 5 cable to a 10BASE-T or 100BASE-TX Ethernet device (Management Station).

3) CONFIGURE MODULE VIA COMMAND LINE INTERFACE

To access the Command Line Interface (CLI), connect the NMM2 RS-232 Serial 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 NMM2 Console Port is a standard RS-232 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 NMM2 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 NMM2 will respond with the Management Options screen.

From the Management Option screen, it recommended to configure:

- serial port password - option 3 from the Management Options screen
- telnet password - option 3 from the Management Options screen
- IP address of the module - option 3 from the Management Options screen
- SNMP parameters - option 4 from the Management Options screen

See the full version of the User Manual for more information.