

iConverter[®] NMM Network Management Module



FEATURES

- Provides real-time management, trap notification and remote configuration of *iConverter* equipment
- Supports SNMP and Telnet protocols
- Supports IEEE 802.3ah and Omnitron's Secure IP-Less OAM management channels
- Managed via the Ethernet backplane, the front-plane RJ45 Ethernet port, or the front plane serial port
- Nineteen chassis can be linked and managed using a single IP address
- SNMP management via Omnitron's *NetOutlook*[™] management software, or third-party SNMP management software
- Hot-swappable in 19-Module, 5-Module, or 2-Module chassis
- Password protected to prevent unauthorized access
- LED displays for immediate visual status of each port
- Lifetime Warranty and Free 24/7 Technical Support

DESCRIPTION

The *iConverter* Network Management Module (NMM) is the heart of the *iConverter* management system. It features a 32-bit, high performance RISC microprocessor executing a real-time operating system. It supports the SNMP and Telnet protocols and is capable of controlling up to 19 managed chassis.

The NMM delivers Operations, Administration and Maintenance (OAM) services for carrier-class network access with comprehensive provisioning and network monitoring. The NMM features IP-based and IP-less management of *iConverter* modules within the management domain (modules and chassis connected to the NMM). IP-less management includes IEEE 802.3ah OAM and Omnitron's Secure IP-less OAM management.

The NMM features a serial port for initial configuration, a front-plane RJ45 Ethernet port, a backplane Ethernet port, and a pair of multi-chassis cascade ports.

The Ethernet backplane port is used to connect adjacent *iConverter* modules, offering direct backplane access to the NMM for other chassis modules. External management is accomplished via the front-plane Ethernet port, facilitating IP based element management using *NetOutlook* or 3rd party SNMP management applications.

The NMM polls all converters and power supplies within its domain, continuously collecting status and module information. It reports its collected status via the SNMP protocol to element management applications.

The NMM can manage multiple chassis with a single IP address. This capability simplifies IP address management, improves network security, and conserves the use of IP addresses.

Chassis Clustering

When managing high-density fiber connections in a Central Office or network core, the NMM clusters up to 19 chassis into a single IP address. In this configuration, NMM modules within each chassis are connected to each other over a IEEE 1394 firewire connection.

IP-Less Management

The NMM supports IP-less management through the IEEE 802.3ah management channel and Omnitron's Secure and encrypted management channel. With IP-less management, an NMM in a chassis at the network core can manage up to 18

iConverter Network Interface Devices (NIDs) at different edge locations with a single IP address. This star configuration with IP-less management requires an NMM in the core master chassis, and a media converter with integrated management (such as an *iConverter* 2FXM, 2GXM, 10/100M or GX/TM) installed at each end of the IP-less managed links. For example, a 10/100M media converter module installed in the master chassis is linked to a 10/100M NID at the network edge. This configuration enables the master chassis at the network core to establish an IP-less management channel between each of the link partners. The IP address stays at the network core, and does not exist on the user network.

SOFTWARE MANAGEMENT FEATURES

Active Controls

- Link Propagate/Link Segment
- Remote Fault Detection
- Module Name
- Chassis Name and Number
- IP Address
- 802.3ah OAM Enable
- Secure IP-less OAM Enable
- Subnet Mask
- Gateway
- Management Port Disable
- Alarm Threshold Setting
- Download Software via FTP
- Reset Chassis
- Telnet
- Trap IP's
- FTP Enable
- Password Selection
- Soft Switch Reload

Module Information

- Media Converter Type
- Slot Occupied
- Part Number
- Serial Number
- Configuration
- Revision
- Ports on Module
- User-defined Identifier

Module Status

- Module Power
- Link Status
- Active Port
- Diagnostic Status
- Management

Alarms / Traps

- Warm Start
- Link Up/Down
- Chassis Insertion/Removal
- Authentication Failure
- DIP-Switch Configuration Change
- Software Configuration Change
- Temperature Out-of-Range
- Power Supply Out-of-Range
- Power Supply Insertion/Removal
- Chassis Reset
- Module Reset
- Module Insertion/Removal
- Port Link State Change
- Redundancy Primary Up/Down
- Redundancy Secondary Up/Down
- FTP Session Open/Close
- Telnet Session Open/Close
- Dying Gasp (Power Loss Trap)

Chassis Information

- Part Number
- Serial Number
- Revision
- Description

Chassis Status

- Power Status
- Power Output Voltage
- Chassis Temperature

MODULE SPECIFICATIONS

Model Type	Protocols	Copper Connectors	Controls	LED Displays	Supported MIBs	Dimensions	Weight	Compliance	Power Requirement	Temperature -Operating -Wide -Storage	Humidity (Non-condensing)	Altitude	MTBF (hrs)
NMM	IP, UDP, SNMP, Telnet, TCP, TFTP, ARP, ICMP, 802.3ah	RJ-45, DB-9	UTP cross-over, Frontplane / Backplane	Power, Power Supply (3), UTP link, Master, Slave, Mgt. Poll	RFC1155, RFC1156, RFC1157, RFC1212, RFC1213, OST MIB	W:0.85" x D:4.5" x H:2.8"	8 oz.	UL, CE, FCC Class A, NEBS 3, MEF 9	1.3 watts	0 to 50 C -40 to +60 C -40 to 80 C	0-90%	0-10,000ft	786,000

ORDERING INFORMATION

Model	Description
8000-0	SNMP and Telnet Management Module (NMM)
8000-1	SNMP and Telnet Management Module (NMM) w/ Dying Gasp Support
8080-3	NMM Cascade Cable (3 ft.)
8081-3	NMM Serial Cable (DB-9, 3 ft.)
8100-0	SNMP NetOutlook Software for Windows 9x/ME/XP/NT/2K and HP OpenView (Single User License)

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