NetOutlook

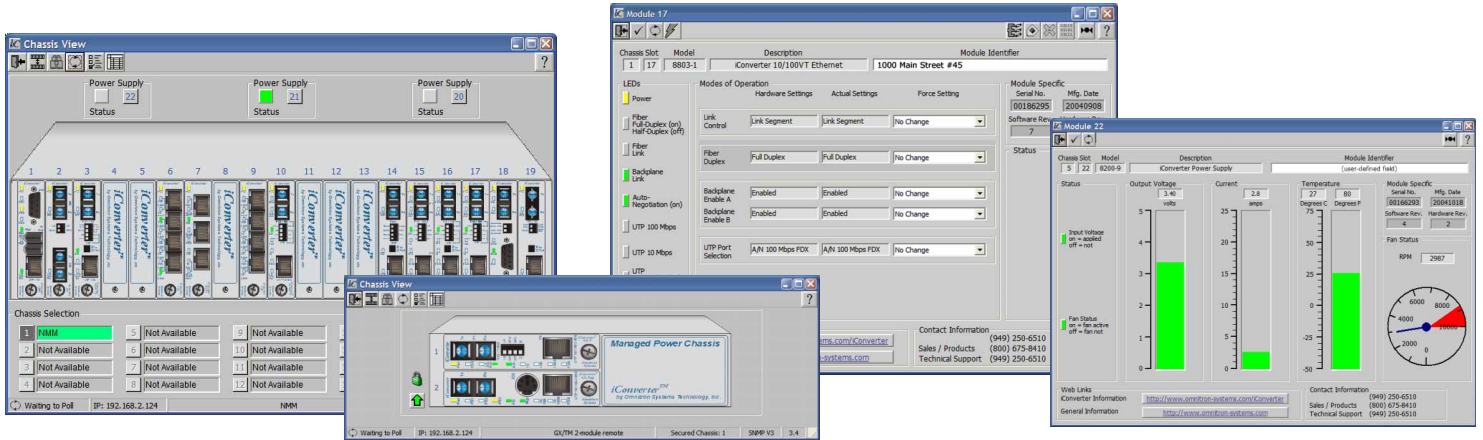## *NetOutlook*® **SNMP Network Management Software for the *iConverter*® Product Family**

- Standard SNMP/IP element management system featuring GUI console and device-side MIBs for use with Omnitron or third-party management systems

- Supports SNMPv1, SNMPv2c and SNMPv3

- GUI interface to management protocols, including IEEE 802.3ah and Omnitron's Secure IP-less Remote OAM management data channels

- Real-time trap notification provides network status to identify specific hardware problems and their locations

- Remote provisioning and monitoring reduces operating costs and enables support of Service Level Agreements

- Intuitive and easy-to-use graphical interface

- Comprehensive Port MIB statistics

- Compatible with Windows XP/2K/Vista

- SNMP Device Discovery utility that automatically detects *iConverter* chassis on the network

- Copy and Paste or Save and Load module configurations for rapid chassis configuration and reconfiguration

- A Print Utility for printing module status and configuration information

- Detailed performance monitoring and configuration for SFP transceivers on *iConverter* NIDs

- Free lifetime upgrades and 24/7 Technical Support

NetOutlook is SNMP-based graphical element management software for Windows that provides real-time management, status monitoring and configuration control of *iConverter* chassis and modules. It provides secure, Carrier-Grade network management services for Metro Ethernet and Enterprise networks.

NetOutlook supports SNMPv1, SNMPv2c and SNMPv3. SMNPv3 provides secure access to network devices by a combination of authenticating and encrypting packets over the network

NetOutlook provides remote visibility of network operations, enabling Network Administrators to remotely monitor network status, configure hardware settings, and receive SNMP trap notifications of network events.

Many service and network maintenance operations, which may require the dispatching of technical personnel to remote locations, can be performed remotely via *NetOutlook*. These remote management capabilities reduce network operating costs and facilitate increased network reliability and availability.

NetOutlook remotely accesses two types of *iConverter* management modules. These include the Network Management Module (NMM), and Network Interface Devices (NIDs) with integrated management, such as the 10/100M2.

By accessing an NMM, *NetOutlook* can manage up to 19 *iConverter* chassis and other modules installed in the chassis using a single IP address. The multi-chassis management system can be a cascade (daisy chain) configuration at the Central Office/Network Core, or at the Customer Premises/Edge in a star configuration through the Remote OAM modes (802.3ah or Secure IP-less).

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Monitoring and Reporting

Status and configuration information is monitored on a variety of module and chassis parameters. On *iConverter* modules equipped to collect individual Port MIB Statistics, real-time packet statistics are available to provide performance and operational monitoring.

Fixed module parameters that can be monitored include module type and model, manufacturing information, hardware and software revisions and serial numbers. Dynamic real-time parameters include link and data receive/transmit status, voltage, current and temperature.

Network Administrators can utilize the user-defined Module Identifier field to describe each module and enter location and function information for subscriber and/or user identification.

NetOutlook supports reporting of optical performance statistics on Small Form Pluggable (SFP) fiber transceivers with a digital diagnostic bus. Port and optical performance statistics reporting provides the ability to monitor bandwidth utilization, network performance and the link signal quality for each individual port.
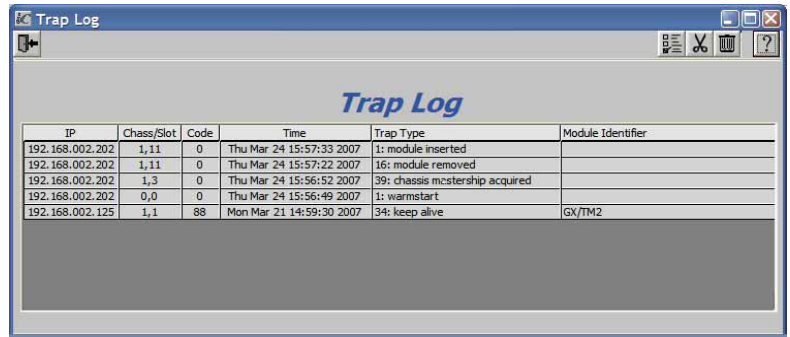
Remote Configuration and Control

Using *NetOutlook*, Network Administrators can remotely configure all hardware functionality, including the ability to override physical DIP-switch settings. Configurable parameters on *iConverter* modules include Auto-Negotiation, data rates (10, 100, 1000), Duplex Modes and a variety of Link Fault Detection Modes.

A Soft-switch Reload setting allows a module to maintain its software-configured DIP-switch overrides after a module has lost power. Other software-configurable parameters on select *iConverter* modules include VLAN membership assignments, Quality of Service (QoS) prioritization, Port Access Control and Bandwidth Control.

Network Administrators can remotely configure network parameters from a single location, providing a convenient and time-saving solution for large-scale deployments.

Configurable parameters include:

- Duplex Mode
- Data Rate
- Auto-Negotiate Mode
- Link Mode
- Bandwidth Control
- Port Access Control
- Password Control
- Fiber and UTP Port Configuration
- IP OAM Mode
- 802.3ah OAM Mode
- Secure OAM Mode
- VLAN Configuration
- Telnet Configuration
- FTP Configuration
- SNMP Configuration
- IP Configuration

Fig. 1   Trap Log window

Trap Generation

A trap is generated when a network event has occurred or a threshold has been exceeded. These events include module insertion or removal, link up or link down, and power and temperature range violations.

Traps can be sent to eight different trap host locations, notifying the Network Administrator of potential network problems even prior to customer awareness of an event. Network Administrators can also specify which network events generate trap notifications, and initiate a pop-up window upon receipt of a trap.

When using a managed chassis or a standalone NID with Dying Gasp support, *NetOutlook* displays a Dying Gasp Trap (sometimes referred to as a Power Loss Trap) which reports the loss of power or power supply failure of the chassis.

Events that are monitored and cause trap notification include:

- Port Link Up/Down
- Insertion or Removal of a Module or Power Supply
- Module Reset
- Module Switch Change
- Hardware/Software Configuration Change
- FTP/Telnet Session Start/Stop
- Security Event (Telnet/FTP intrusion, switch change, software setup change)
- Primary/Secondary Link Up/Down (full redundant links)
- User-defined Data Error Threshold has been exceeded
- Standby Link Up/Down (when in redundancy mode)
- Chassis Insertion/Removal
- Chassis Reset
- Power Supply Voltage or Temperature Out-of-Range
- Dying Gasp Notification

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Chassis Management Windows

The 19-Module Chassis View window in Remote OAM mode shows plug-in modules with their real-time activities represented by LEDs.

Viewing the details of any module in a chassis is achieved by double-clicking on the faceplate of the module, which opens the *iConverter* Module View window. This window allows users to monitor and configure *iConverter* modules (see Figs. 2-4).

The Module View window for the Network Management Module (NMM) in Slot 1 configures network management parameters, including IP addresses, SNMP preferences and passwords.

NetOutlook can save module configuration parameters and apply them to similar type modules. The configurations can be copied and pasted from one module to another, or they can be saved and loaded from file to provide quick installation and set up of multi-module applications.

Remote OAM Chassis View Windows

Remote OAM Mode consists of management channels that allow monitoring and control of up to eighteen remote *iConverter* NIDs through one IP address. Both Omnitron's Secure IP-less and the IEEE 802.3ah Remote OAM modes are supported. Remote OAM modes protect against unauthorized IP address access and Denial of Service attacks, since the management IP address is isolated to a secure management network, and the *iConverter* equipment at remote locations is managed over secure layer 2 protocols within the network.

When a Secure OAM link has been established, the remote link partner can be accessed via the green downward pointing arrow of the local chassis (see Fig. 2).

The Chassis View windows of the remote link partner (see Figs. 3 and 4) provide graphical representations and complete management of the IP-less remote chassis or standalone NIDs.
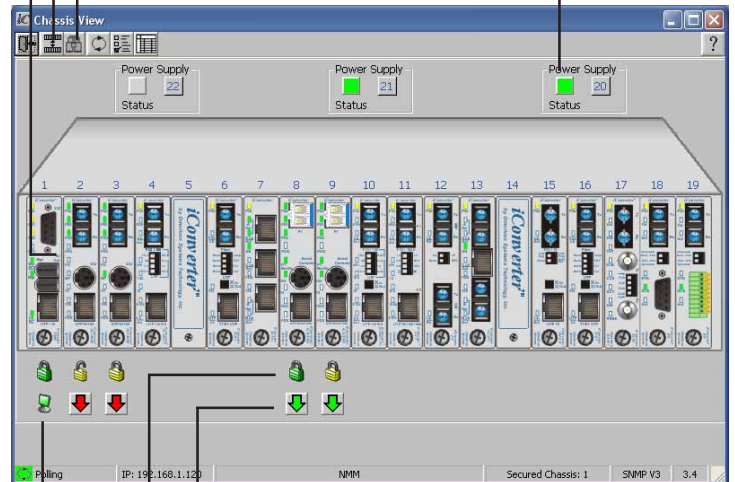
Modules can be monitored and configured by clicking on the faceplate of the module and opening the Module View window (see Fig. 5 on page 4).

Click on the module to open the Module View window

Opens the Chassis Select window

Opens the Traps window

Opens the Power Supply Status window

SNMP Version

The green arrow indicates a Secure OAM link. The Remote Link Partner can be viewed by clicking the arrow (*see Figs. 3 and 4 below*).

The green padlock indicates IP-less management of the Remote OAM link.

The green computer icon indicates that the NMM is the Master Chassis management module.

Fig. 2 Chassis View Window for the 19-module Master Chassis in Remote OAM mode

The green arrow indicates a Secure OAM link. Click on the arrow to return to the Master Chassis View Window.

The green lock indicates the Remote Link Partner Chassis does not have IP-based management.

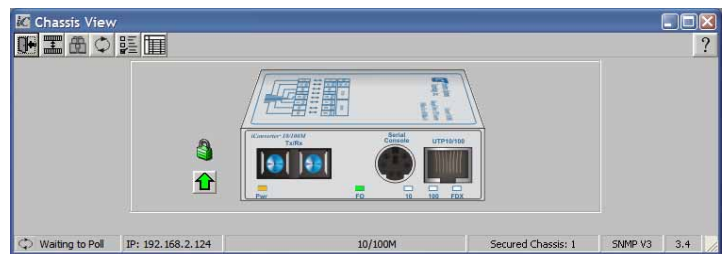*Fig. 3 Chassis View Window for the 2-Module Remote Link Partner Chassis*

Fig. 4 Chassis View Window for the 10/100M Remote Link Partner Standalone module

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iConverter **Module View Window**

The *iConverter* Module View window allows Network Administrators to remotely monitor and configure *iConverter* modules (see Fig. 5).

The LED section provides real-time status of the power, link activity and mode settings of the module.

The labeled Action Buttons across the top of the window open other windows that enable configuration of the advanced module features, including Port Access Control, Port Bandwidth Control and VLAN Membership.

The General Information section provides chassis, slot, module description and module identifier information fields. The module identifier field can be used to describe the location of the module or other information.

The Modes of Operation section allows the Network Administrator to monitor and configure the DIP-switch-controlled modes of operation, which can be overridden via the software. The DIP-switch settings include Link Modes, Fiber Duplex Modes, Enable/Disable Ethernet Backplane A or B, UTP Auto-Negotiation Mode, Duplex Mode and Data Rate.

iConverter **Power Supply Window**

The Chassis Power Supply window provides voltage, current and temperature information for power supplies installed in the 5-Module and 19-Module chassis. The chassis power supplies are given a chassis slot number to identify them. User-definable text can be entered into the Module Identifier field to describe the power supply (see Fig. 6).

When the output voltage, current or temperature status exceeds a normal range, a trap is generated to alert the Network Administrator.

NetOutlook reduces network operating costs and increases reliability with comprehensive performance monitoring, remote configuration and troubleshooting capabilities. *NetOutlook* supports the entire line of *iConverter* modules and chassis.

Real-Time LED Status

Configure and Monitor the Module and Port Settings

User-Defined Module Identifier

Module Info

Opens VLAN Membership Window

Opens Port Bandwidth Control Window

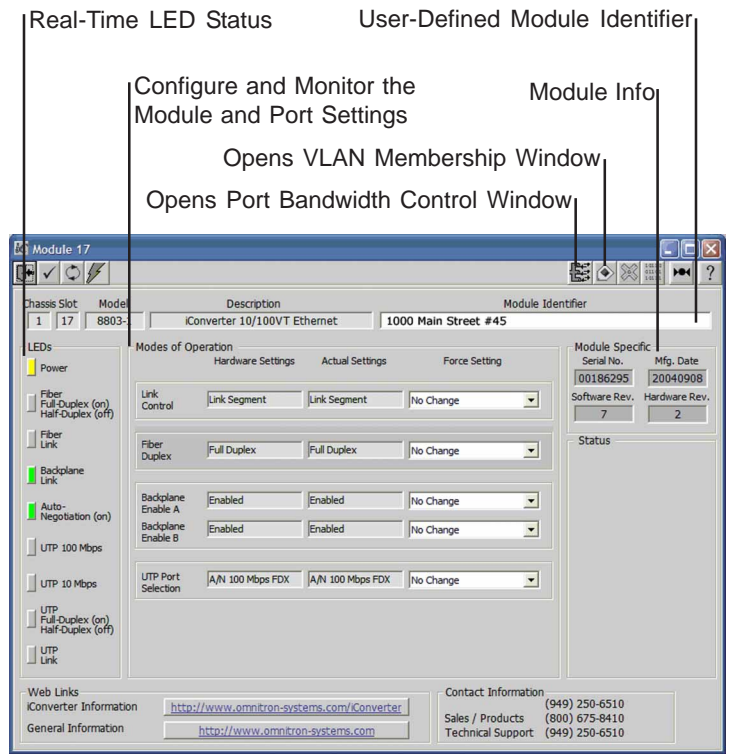*Fig. 5 Module View window for the 10/100VT*
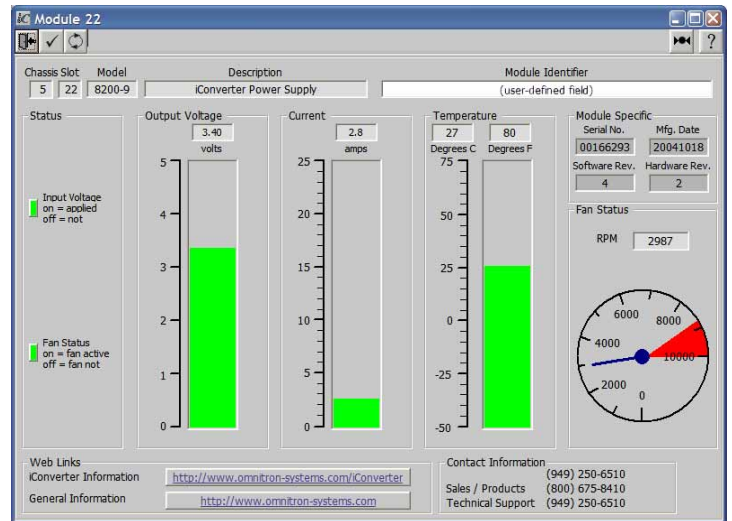
Fig. 6 Chassis Power Supply Window

ORDERING INFORMATION

Model Type	Description
8100-0	*NetOutlook* **for Windows 98/XP/NT/2k/Vista (Single User Liscense)**
8000-0	**SNMP and Telnet Management Module (NMM)**
8000-1	**SnMP and Telnet Management Module (NMM) w/ Dying Gasp Support**

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