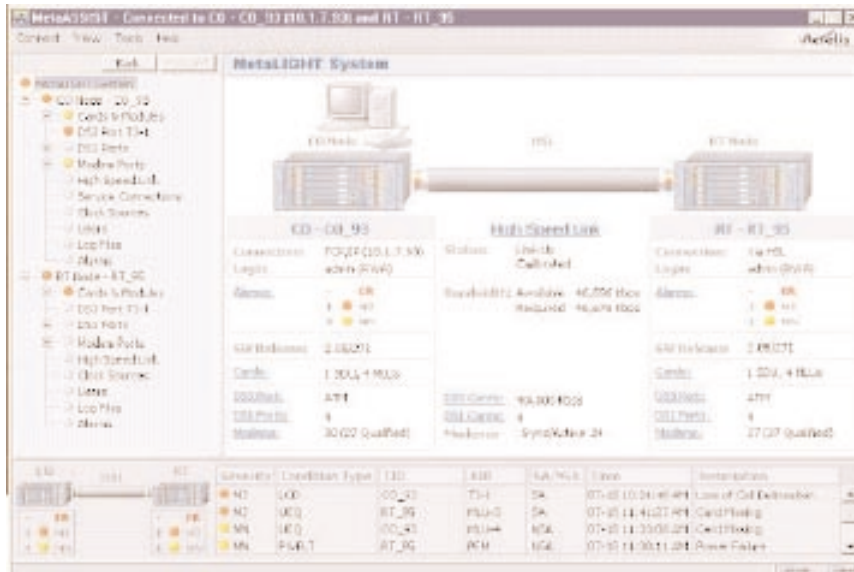


SpeedXtender Management Software (included)



Key Features

- ▶ Secure Configuration
- ▶ Fault Management
- ▶ Performance Management
- ▶ Top-Level Information Graphically Displayed
- ▶ Simple to Install and Use
- ▶ Minimizes Downtime
- ▶ Flexible Software and Architecture
- ▶ Java-Based
- ▶ On-Line Help Features

The management system is a sophisticated Java-based software application that provides seamless integration and management of the modems in carrier environments. It enables simple and user-friendly operations for complete administration, maintenance and provisioning (OAM&P).

The management an intuitive graphical user interface (GUI) for conveniently managing both SpeedXtender systems which form the link, in addition to the built-in command line interface (TL1). The GUI makes installation and management of the SpeedXtender systems straightforward for all users.

The Management Software also includes several stepbystep procedures that guide the user in performing multi-task operations during the installation and start-up of SpeedXtender systems.

Management Software supports secure:

- Configuration
- Fault monitoring
- Performance monitoring

Management Interfaces and Protocols

Management Software communicates with the SpeedXtender systems through the following communications interfaces:

- Serial RS232 - communications rate and protocol as supported by this interface
 - IP - connection through the Ethernet interfaces, either locally or remotely over the IP network
- Management Software allows users to communicate locally via the Craft port or remotely via a TCP/IP connection on any of the out-of-band or in-band interfaces. Using an RS232 or IP interface, the Management Software can manage a pair of SpeedXtender nodes.

The management channel to the remote SpeedXtender system is carried in-band over multiple copper pairs which form the high speed link.

Features

The Management Software graphically displays the complete SpeedXtender system along with status information for each CO, High Speed Link and remote element. Both CO and remote nodes can be simultaneously configured and managed. Links to individual views of each component of the system gives the user quick and easy access to detailed information.

User Friendliness

The Management Software is easy to operate. Actions and operations are intuitive and can be activated easily from the various management views provided by the program. On-Line Help significantly reduces the training time needed for a new operator.

rator to become familiar with Management Software and the result is quicker and simpler turn-up of a SpeedXtender system saving field engineering costs.

Reduces Downtime

Management Software reduces system downtime by enabling effective management based on a clear and immediate view of the whole link and its condition.

Flexible Software and Architecture

Management Software has been designed with a software architecture that allows it to be easily updated to accommodate new services and command languages.

On-Line Help

Management Software On-Line Help contains clear explanations of the various functions available to manage, configure and monitor SpeedXtender systems. For example, users can use the help feature to get started with Management Software, to perform initial setup procedures, software update procedures, to configure various system elements and other tasks.

Platform Features

Fault

The fault management system allows easy access to information on SpeedXtender faults. Fault management features include: - Real-time visual alarm display - Color-coded alarm severity levels - User-defined alarm severity levels - Alarm status with periodic polling - Environmental alarms

management

- History log of active and cleared alarms
- Autonomous reports selective masking

Configuration

The Management Software configuration system offers a comprehensive view of the SpeedXtender configuration and resource availability including system (node, redundancy), equipment (shelf, cards and modules), facilities (service ports, modems, external clocks), services (Ethernet, TDM service connections, bridges, VLANs, HSL), management interfaces, SNMP parameters, user-logs and software administration.

Configuration features include:

- Hierarchical presentation of SpeedXtender systems
- Auto detection and real-time display of configuration changes
- Tools to ease setup and software upgrade procedures
- Remote software download via FTP, TFTP or HTTP
- Command line interfaces
- Configuration back-up and restore

Performance

The Management Software performance system offers network managers the ability to monitor the SpeedXtender performance over time including: - Retrieval and display of standard traffic parameters for DS3 service;

DS1 service; and HSL over current, 15-minute and previous-day intervals

- Standard Ethernet statistics
- Copper pairs qualification data

Security

The Management Software Security system includes the following features:

- Identification - user name
- Authentication - password check
- System Access Control - login/logout/automatic logout after a period of inactivity

- Resource Access Control -Three levels of user access privileges (Read, Write and Administrator)
- Security Administration - management of users

TL1 View and Log

Management Software allows a user to manually enter individual TL1 commands and view the responses. Also, the Management Software log files collect autonomous messages transmitted between SpeedXtender systems and the Management Software. Logs can assist the user in locating possible causes of faults in the SpeedXtender system.

Specifications

Hardware Platform (Minimum Requirements)

- CPU: Personal Computer (desktop or notebook) with pentium processor 133MHz or higher
- Memory: Recommended 64MB, minimum 32MB RAM
- Disk: Recommended 64MB, minimum 40MB
- Screen: Supported Screen Resolutions: 800x600, 1024x768 and 1280x1024

Operating System

- Windows 95/98/2000/Windows NT version 4.0 and higher

Interfaces

- Out-of-band management - Via craft terminal, modem or Ethernet management port
- In-band management - Via Ethernet service port

Capacity

- System Administrator can define up to 20 users per MetaLIGHT node

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