



TECHNICAL DATA

System requirements

Operating System

Windows 8
Windows 7
Windows Vista
Windows XP

RAM

2 GB (4 GB recommended)

Free Hard disk capacity

> 1 GB

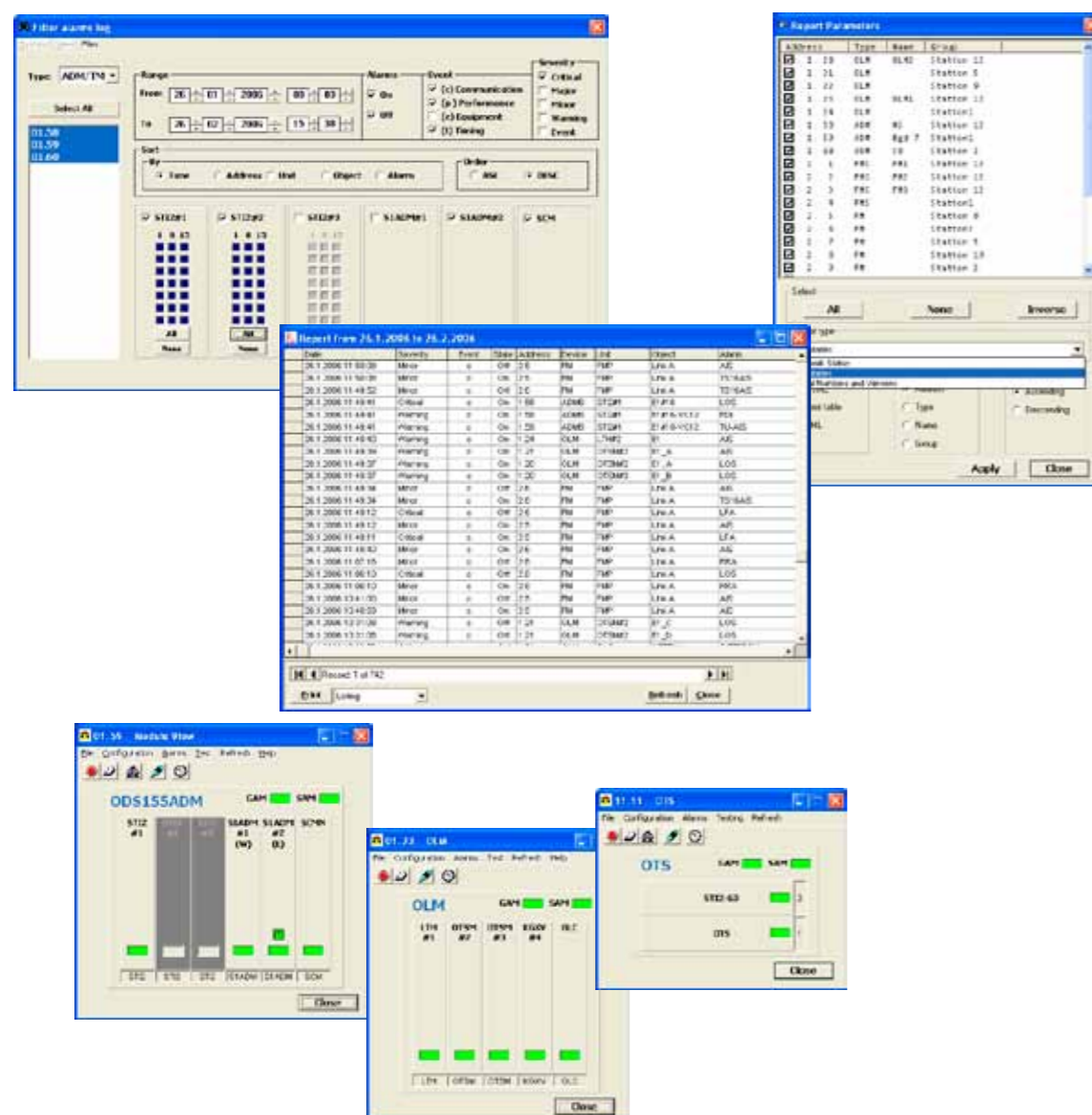
ITU-T Recommendations

G series

G.781, G.783, G.784, G.826, G.841

M series

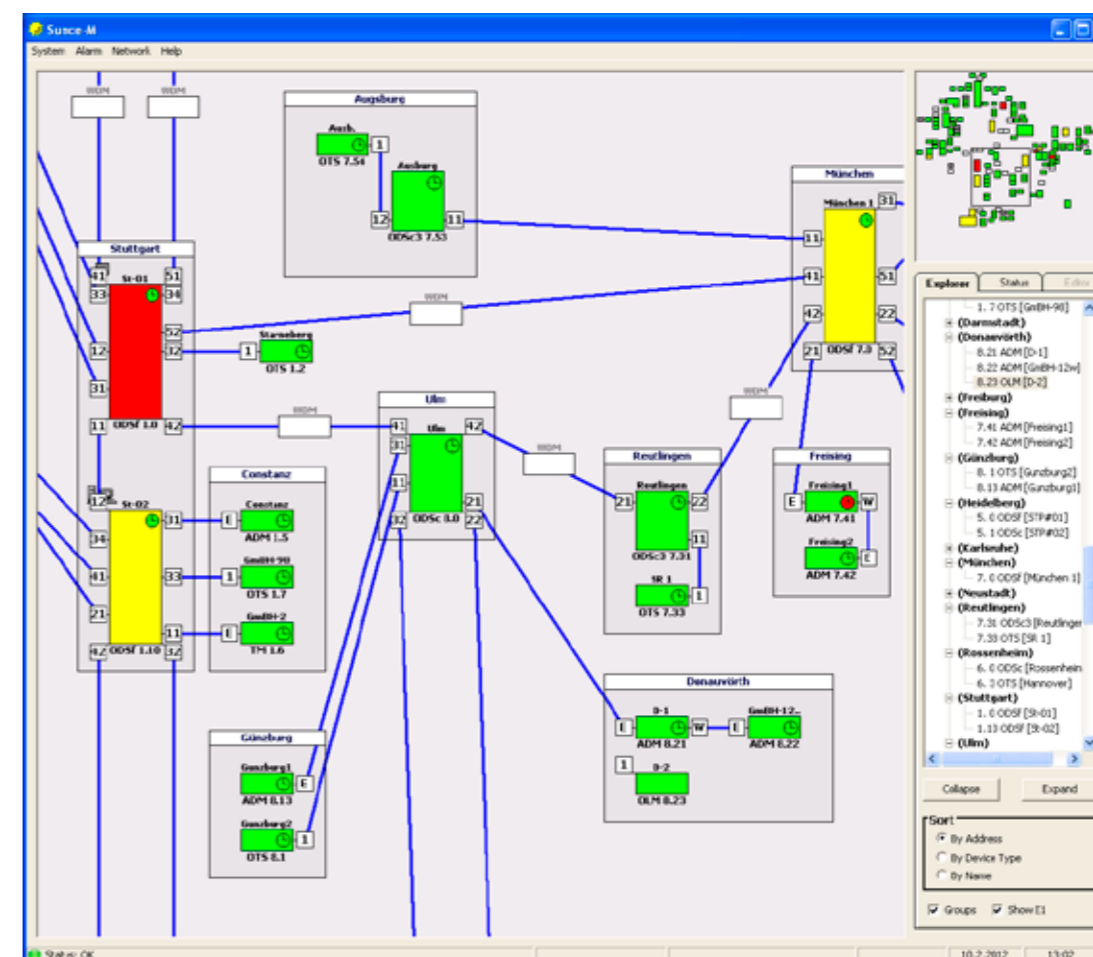
M.3010, M.3300, M.3400



Network Management System

SUNCE-M INTEGRATED NETWORK MANAGEMENT SYSTEM

- Management system covering the full range of IRITEL SDH and PDH equipment
- Easy to use – from network views to functional blocks on a single board
- Trail manager featuring automatic route calculation



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Basic Functions

- Integrated solution for continuous centralized monitoring of the entire network and individual network element
- Intuitive Graphical User Interface facilitates a range of operations, from network view and containment tree view, to functional blocks on a single board
- Enables TMN (*Telecommunications Network Management*) management functions – fault, configuration, performance and security management
- Provides functions of Network Management Layer and Element Management Layer of the TMN functional architecture
- The computer in Management Operations Center is connected to one network element using Ethernet or RS232 serial interface (F interface)
- Provides integration in Network Management System SUNCE+

Network Elements

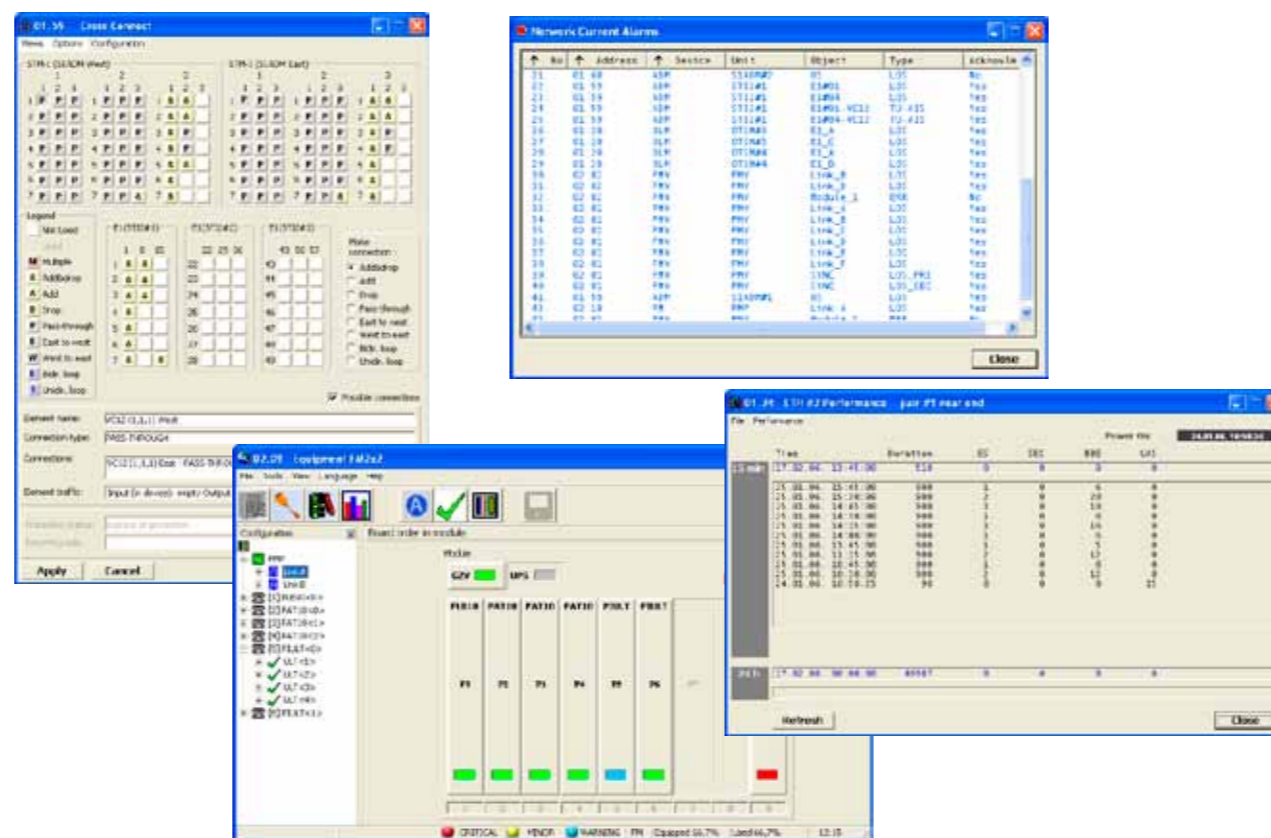
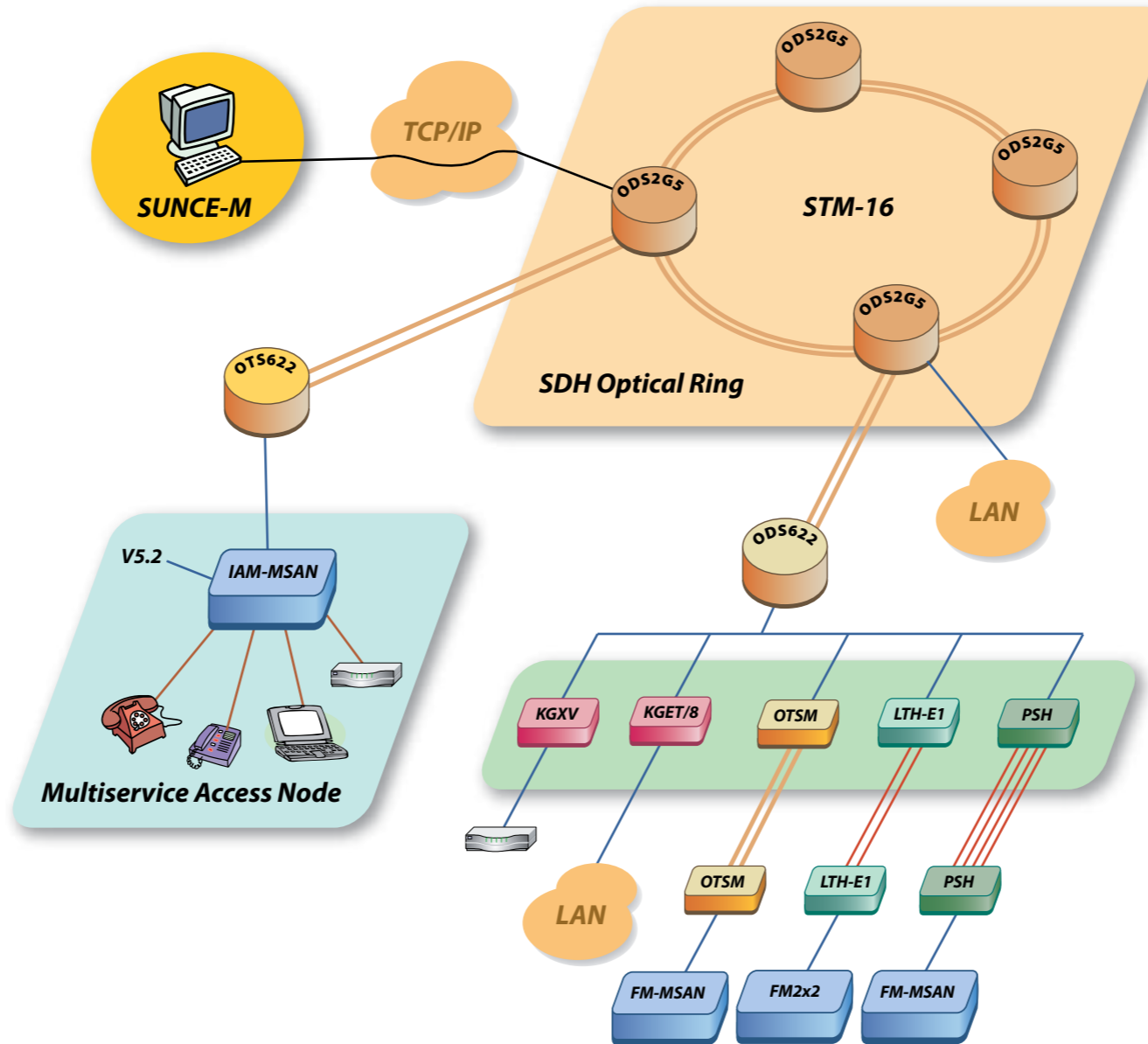
Each network element is equipped with System Management Unit that exchanges information with SUNCE-M. Supported products in Network Management System:

- SDH (STM-16/4/1) Optical Digital Systems: ODS2G5, ODS622/ODS622C, OTS622, ODS155
- Access Systems: FM-MSAN, IP μDSLAM, IAM-MSAN, V5CAS and FM2x2
- DSL modems: PSH (SHDSL) and LTH-E1 (HDSL)
- Optical Terminal and Secondary Multiplexer OTSM 4x2Mbit/s
- Interface Convertors: KGXV, 2 Mbit/s G.703 to X.21/V.35 and KGET, KGET8, 2 Mbit/s G.703 to Ethernet

Fault Management

Alarm reports from each of the network elements are received automatically and displayed as visual and textual information

- Alarms classification:
 - Communication alarms (transmission and synchronization)
 - Performance alarms
 - Equipment alarms
- Alarm summary is available on various layers - from network element to equipment functional blocks
- Assign alarm severity
- Acknowledge active alarms
- Testing:
 - Close local and remote loops on various levels
 - Configure PMP (*Protected Monitoring Point*)
 - Use built-in PRBS generators and detectors



- Fault event history for the entire network is stored in database, with filtering options for any set of network elements categorized by type of network element, time, classification, severity, acknowledgement and status of the event

Configuration Management

- Create and change network topology using visual network editor
 - Create and delete network elements
 - Connect elements using optical and electrical links
 - Elements can be grouped upon their location
- Edit network element properties
 - Network parameters
 - Module equipping
 - Synchronization parameters
 - Cross-connections
 - Quick configuration using configuration files
- Trail manager with complete trail lifecycle management:
 - Simple point and click to create, change and delete trails
 - Automatic calculation of possible trail routes between network elements
 - Visual presentation of existing trails in network topology view
- Inventory management capabilities include:
 - Tributaries - configuration and services
 - Network status
 - Serial numbers, hardware and software versions

Performance Management

- Analyze and aggregate network performance data on a per network element basis
- Collect performance events grouped in 15 minutes and 24 hours intervals according to ITU-T G.826
 - ES – *Errored Seconds*
 - SES – *Severely Errored Seconds*
 - BBE – *Background Block Error*
 - UAS – *Unavailable Seconds*
- Adjust performance alarms thresholds
- Examine UAT (*Unavailable Time*) intervals

Security Management

- User-based security model
- Role based user access control
- User data editing (add, delete, change)
- Review of user actions log with filtering