

UHP NMS

NETWORK MANAGEMENT SYSTEM

SCPC TDM/TDMA Hubless TDMA

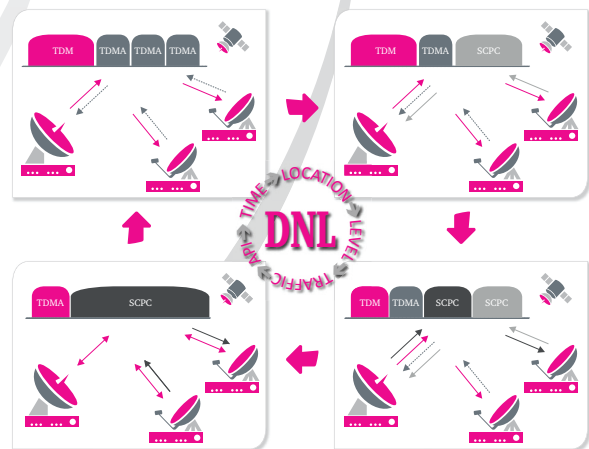
UHP Network Management System (NMS) is a sophisticated and user-friendly tool for monitoring and controlling UHP networks. NMS substantially simplifies configuration of the Hub and of the remote terminals, collects and stores in its database information about current and historical status of the whole network and its individual elements, and also displays that information in graphical and tabular formats. The NMS system supports all UHP configurations and topologies, including TDM/TDMA, SCPC and Hubless TDMA.

UHP NMS system is shipped pre-installed in a server running Linux. NMS is traditionally collocated with the network Hub however availability of Web interface allows collocation at any alternate location. The system provides multi-user, multi-language interface and supports multiple Virtual Network Operators (VNO) sharing common network infrastructure.

The user interface focuses the operator’s attention on the most important events in the system, and also provides the operator with an exhaustive information needed for analysis and trouble-shooting. By selecting most suitable settings for the display, the operator can display the information in the desired format: logs, graphs and/or tables. All key network characteristics are displayed on a single page, known as the dashboard.

UHP Dynamic Network Layout (DNL) - a set of functional extensions for UHP NMS, which allows changing a mode of operation, frequency plan and/or bandwidth assignments on-the-fly depending on different criteria: time schedule, actual traffic load, geo-location of a terminal, quality of reception or by external command via the built-in API interface. DNL is ideally suited for multipurpose satellite networks combining best-effort data transmission with on demand high-throughput real-time sessions like satellite news gathering or videoconferencing. It is also useful for corporate customers that require different network and throughput layouts for working and non-working hours.

- Enhanced, graphical, web-based, multi-user, multi-role user interface
- Main dashboard with complete network overview on one screen
- Dynamic Events Groups – simplify filtering and analysis of network events
- Events correlator showing historical performance graphs and related events
- Customized reports with statistics exported for further analysis
- Individual/Group software upgrade of remote terminals via multicast
- Support for all UHP modes of operation: TDM/TDMA, SCPC, DAMA, Hubless TDMA, and redundant systems
- Management of many networks in a single NMS workspace
- Virtual Network Operator (VNO)– sharing of common network infrastructure between operators
- Ideal for any network size or topology – from a simple link and up to a multi-hub network
- One-way control – allows sending one-way (“blind”) commands to non-responding terminals
- API interface for external devices and software applications (OSS/BSS)
- Simple and robust design – ensures reliability and simplifies further enhancements





Network management system

MEANetwork

- ▶ Controllers
- ▶ Stations
 - ▶ VNO #1
 - Kumasi
 - Cape Coast
 - Yendi
 - Enugu
 - Ataba
 - Douala
 - Batouri
 - Douvala
 - Libreville
 - ▶ VNO #2

LATAM network

- ▶ Controllers
 - ↑ TDM/TDMA Hub
 - ↓ TDMA Inroute
 - ↓ TDMA Inroute
 - ↓ TDMA Inroute
 - ↑ SCPC DAMA
 - ↓ SCPC DAMA
- ▶ Stations

[statistics](#) | [graph](#) | [reports](#) | [log](#) | [stations](#) | [alerts](#) | [configuration](#)

Traffic, Mbps

Carrier to Noise, average dB

Network state

Channel	Stations			C/N	Levels		Traffic
	Enabled	Up	Down		Low	High	
Stations RX	767/780	763	4	12.4 dB	1	0	Stations RX: 15 888.2 kbps
Controllers RX	767/780	763	4	7.6 dB	1	0	Controllers RX: 1 181.3 kbps

UHP NMS SPECIFICATIONS (SW v3.4)

SERVER

Hardware	Rack-mountable 1U, Intel 2.6 GHz, 2GB RAM, 200GB/SATA
Operating System	Linux
Network Interface	1 Fast Ethernet/Gigabit Ethernet
UHP connectivity protocol	UDP
Redundancy	Optional automatic 1:1 redundancy

NETWORK

Supported UHP networks	TDM/TDMA, TDM/TDMA MESH, Hubless TDMA, SCPC DAMA
Maximal number of terminals	500 000
Multi-Hub operations	Up to 64 Hubs / HTS beams
Virtual Network Operators	Up to 25 VNOs per each hierarchy level
Statistics database disc use	20 Mbytes/year/terminal
Statistics gathering interval	From 5 seconds

ORDER CODE / MODIFICATIONS

UHP-NMS-BASE	UHP NMS Server Basic: Support for one network
UHP-NMS-VNO	UHP NMS Server VNO: Support for multiple networks and VNO
UHP-NMS-USCH	UHP NMS DNL Scheduler extension

