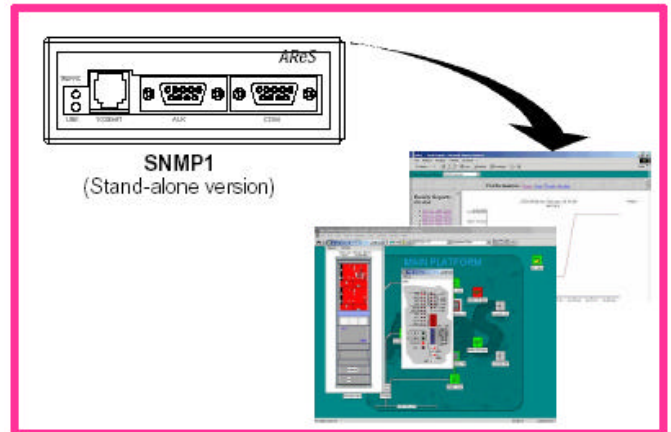


SNMP1 Network Adapter

- **compatible with any RS232-RS485 managed devices**
- **SNMP v1 – v2c compliant**
- **STAND ALONE version**
- **Enterprise MIB with full UNAOHM 2TD radios status, alarms and performances elements**



FOREWORD ON NMS

Thinking at management of 2TD radios, integrated within multi-vendor telecommunication systems spread on wide geographic areas, UNAOHM has developed a dedicated interface adopting SNMP protocol as baseline for the new generation Network Management System.

2TD radios are made compatible with SNMP protocol by means of SNMP1 Network Adapter. To enable the network management of UNAOHM 2TD radios, one SNMP1 Network Adapter is required for every 2TD radio link in the network, to be installed at relevant master terminal.

Practically SNMP1 Network Adapter acts as media/protocol converter between the 2TD Radio series built-in supervisory system and standard LAN/WAN infrastructures. Adoption of widely recognized SNMP protocol permits the standardization of Management software platform, allowing the system to be easily upgraded and offering ready connection virtually to all SNMP compliant devices will, in the future, become part of the network.

Based on Ethernet/IEEE 802.3 networks connectivity, SNMP exploit the power of a strong protocol for polling of network's elements status (radio terminal in our case). In addition, it gives the opportunity to the network's elements to originate 'trap events' as soon as failure, or anomalous occurrence, happens, thus allowing a system to be supervised almost in real time.

GENERAL INFORMATION

SNMP1 Network Adapter acts as Proxy Agent for monitoring a number of UNAOHM 2TD radio terminals from a centralized management server/workstation.

The SNMP1 Network Adapter is developed around an embedded controller, designed to LAN capable products.

The hardware consists of CPU, RAM, Flash, Ethernet, Watchdog, and power-fail detection hardware. The firmware consists of a Real Time Operating System, complete TCP-IP stack with application interfaces for UDP and TCP sockets, FTP server, Telnet server and Hardware interface layer. The file system is used to store application and startup configuration file.

The Adapter is available in two versions:

- **SNMP1 STAND-ALONE** - Device is enclosed in a metallic desktop case, conferring excellent robustness in very contained dimensions, allowing to be utilized in conjunction with any UNAOHM 2TD series radio terminal as external device;
- **SNMP1 INTERNAL (PCB card only)** – to be plugged on new "INR1 – Rev.2" modules [1] inside UNAOHM 2TD radio terminals, providing best NMS system integration.

The device supports Simple Network Management Protocol (SNMP) to provide information to a management server/workstation as follows:

- **MIB Support** - provides information about device up time, contact details and other SNMP statistics,
- **Enterprise MIB** - the customized enterprise MIB consists in a sub tree with the status of UNAOHM 2TD radios manageable parameters, as status information (alarm status) and performances (actual BER) retrieved from local and remote stations.

According to loaded firmware SNMP1 Network Adapter is capable to control two 2TD radio terminals, subject to authorization under license agreement.

STATUS / ALARMS HANDLED BY SNMP1

By means of SNMP1 Network Adapter the following status / alarm conditions are made available for Network Manager monitoring.

MONITORED ALARMS & STATUS

- Tx Power A alarm Squelch Rx A alarm Power Supply alarm
- Tx Power B alarm Squelch Rx B alarm Ext. Alarm 1
- PLL Tx A alarm PLL Rx A alarm Ext. Alarm 2
- PLL Tx B alarm PLL Rx B alarm Ext. Alarm 3
- Modulator A alarm Demodulator A alarm Ext. Alarm 4
- Modulator B alarm Demodulator B alarm Ext. Alarm 5
- Bit Insertion A alarm Bit Extraction A alarm BB Loop Status
- Bit Insertion B alarm Bit Extraction B alarm Remote COMMAND status
- Data Input A alarm AIS Rx A alarm Table Out of Sync alarm
- Data Input B alarm AIS Rx B alarm
- Tx Changeover A>B status Rx Changeover A>B status
- Bit Error Ratio value
(BER from $<1 \cdot 10^{-8}$ to $1 \cdot 10^{-3}$)

Free external alarms are typically used to extend supervision capability on associated multiplex, power supply and other equipment functionality.

Technical Characteristics

SPECIFICATIONS	
ETHERNET INTERFACE - LAN interface	Twisted Pair 10 BaseT, 10 Mbit/s
PROTOCOL	SNMP V1-V2c (According to firmware loaded)
“EXT” and “COM” SERIAL INTERFACES - Line Interface - Nominal level - Allowed line length	RS 232 ± 12 V 15 mts. (max.)
VISUAL INDICATION - LINK - TRAFFIC	GREEN (Link established) YELLOW (Data transmission)
POWER SUPPLY - VDC (positive ground)	12÷36 VDC (max.)
POWER CONSUMPTION - VDC	2,2 Watt typical
CONNECTORS - Ethernet - AUX & COM (serial data) - Power supply	RJ45 DB9 female 12 pin snap ($\leq 1,5$ mm ²)
DIMENSIONS (STAND ALONE version) - Wide - Deep - Height	107 mm 170 mm 38 mm
WEIGHT (STAND ALONE version)	405 g
OPERATIVE ENVIRONMENT	0 ÷ 45°C