Remote Access Manager (RAM)

Management solution for smaller sync networks

All equipment in the Oscilloquartz portfolio features a Local Manager (***LM***) associated to it. The associated software runs on a PC, connected to the equipment through a dedicated RS-232c interface as shown in figure 1. The LM is suited for on-site O & M of the relevant synchronisation equipment.
Although the ***LM*** is a local configuration tool, it supports all relevant security features as included in a Telecom Management System.
The ***LM*** software is generally used for local supervision of relevant synchronisation equipment. Due to characteristics of the connection, the ***LM*** has to be operated close to the equipment.
With the ***Remote Access Manager,*** the ***LM*** software can manage the equipment remotely using either standard analogue, PBX, ISDN-S0 telephone lines or a TCP/IP network.

Multiple synchronisation systems: The ***Remote Access Manager*** is suitable for use in networks with several synchronisation elements, whereby, only one element can be accessed at a given time.

Where there are different types of synchronisation elements, the ***Remote Access Manager*** can be configured to automatically launch the LM software associated to the relevant equipment. The selection of the equipment to be accessed is made via a simple choice in a configuration list as shown in figure 3.

Method of connection: The ***Remote Access Manager*** is ideally suited to manage synchronisation elements located at unmanned sites or at sites where access is difficult due to e.g. long distances.
The ***TCU-NTP*** module is manageable via either the Local Manager (LM) software or via Oscilloquartz' SyncView™ NMS management platform. A typical connection of the computer and the equipment to the telephone network using modems is shown in figure 2. It is also possible to make the connection using point-to-point modems.
Additionally, the ***Remote Access Manager*** can be connected to the remote equipment through a TCP-IP network (e.g. through the existing DCN), by installing an appropriate software modem on the management side and IP-modem on the equipment side.
Operation: Once the equipment is selected from the configuration ? list, the ***Remote Access Manager*** will automatically establish the connection and start the associated ***LM*** O & M applications.

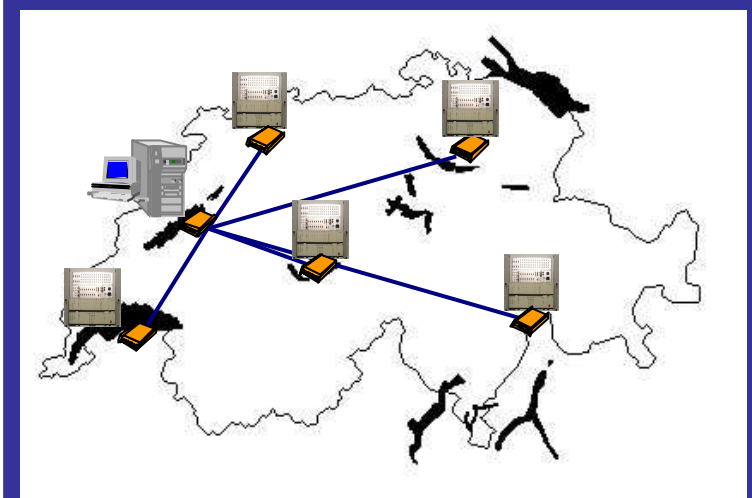
Configuration: The ***Remote Access Manager*** allows the user to define an equipment name, type of equipment, dial-up number (telephone number or IP Address), choice of modem as will as to associate the selected equipment with the appropriate ***LM***. These configurations will be stored in an internal database for future quick dial-up.
Configuration of the modems is possible using the standard configuration tools provided by the operating system.
The ***Remote Access Manager*** will run on any PC equipped with Window'95 / 98 / 2000 / NT.

For further details, please contact your local Oscilloquartz representative.

Highlights:

- **Interoperability :** Runs on MS-Windows'95, MS-Windows'98, MS-Windows'2000 and MS-Windows NT
- **Universal :** Support all Local Manager software from Oscilloquartz issued after January 2000.
- **Modem Independent :**Can use all modem drivers supporting the MS-Operation systems using the TAPI 1.4 protocol or later
- **Cost effective:** Centralises management function.

Modem



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Technical specification Remote Access Manager

Minimal PC configuration :
- All IBM Compatible computers operating Microsoft Windows' 98/2000/NT 4.0 (SP3 or later)

Modem password support :
- Software support for dial-up password where the receiving modem only accepts calls from a specified telephone number (if supported by hardware)

Telephony properties :
- Location dependent dialling properties supported

Type of Modems :
- Analogue, IP and ISDN modem support

Leased line support :
- Permanent leased line supported. No dialling or ringing Both modems must be permanently connected

Recommended modems :
- Analogue modems : ZYXEL U-1496 family, ZYXEL Elite 2864I
- IP modems : W&T Com-Server family
- ISDN modems : ZYXEL OMNI-NET family, ZYXEL Elite 2864I

TCP/IP network support :
- Management side : Appropriate software modem
- Equipment side : IP supported modem

Management side modem requirements :
- Microsoft OS compliant modems (minimum TAPI 1.4)

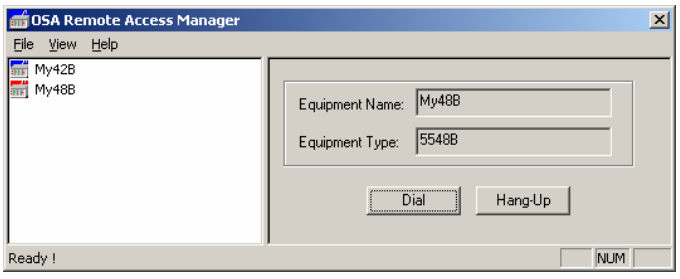
Equipment side modem requirements :
Must support following AT commands (or equivalent) :
- ATS0=x auto-answer mode (x=number of rings)
- ATE0 disable echo
- ATQ1 disable return result code
- AT&B1 DTE/DCE rade fixed at DTE
- AT&C0 assume that the carrier is always present (C0 always ON)
- AT&D0 ignore DTR signal
- AT&H0 disable flow control
- AT&R1 modem assumes RTS always ON

Modem must support 1200 bits/s and 9600 bits/s at DTE/DCE interface.

Compatibility :

Hardware	*Software*
OSA 5530B SDU	LM rel. 1.7 or later
OSA 5533B SDU	LM rel. 1.7 or later
OSA 5533C SDU	LM rel. 2.1 or later
OSA 5542B CTO	LM rel. 2.1 or later
OSA 5548B SASE	LM rel. 1.7 or later
OSA 5581C GPS-SR	LM rel. 2.1 or later
OSA 5240 GPS	LM rel. 1.0 or later

Dial-up window with attached list of pre-configured elements from the below equipment configuration window.



Equipment configuration window for dial-up settings. These settings are stored in a local table for later use/editing.

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