NTP slave clocks with NMI

NMI - Network MOBALine Interface

The latest product for the fusion of NTP and MOBALine technology is the Network MOBALine Interface (NMI). Its interface function helps to combine NTP and MOBALine installations, thus optimizing the advantages of both technologies.

What are the advantages of NMI for you?

- Simple expansion of an existing time system: NMI allows up to 12 additional slave clocks to be connected

- Virtually unlimited expansion options
- No new master clock required, as an existing NTP server can be used
- Very simple configuration, operation and monitoring using MOBA-NMS software
- Less cabling used, as connection is by means of LAN and PoE
- Synchronization by multicast or unicast mode from a NTP server (IPv4 / IPv6)

MOBATIME

NMI - Network MOBALine Interface

The NMI tremendously increases the flexibility and reduces the costs of a time system.

By installing one NMI e.g. in an office or hospital corridor, the costs for twelve Ethernet connectors and several dozen meters of Ethernet cabling can be saved.

Furthermore, the exact location of the clock can be determined after interior installations (e.g. furniture, pictures) have been put in place. The cabling can be implemented with simple two-wire cable.

Ethernet networks are usually in-stalled at the end of the corridors but the clocks are suspended two or more meters above the floor. This distance can be overcome with a MOBALine cable.

Finally, the NMI increases the functionality of MOBALine slave clocks. The disadvantage of limited supervision - only visual control is possible - is eliminated: MOBALine slave clocks (TREND series only) connected to an NMI will display their proper operation in the MOBA-NMS (Network Management System) and guarantee the monito-ring of the entire time system from anywhere in the network.

The NMI offers the following func-tions:

- Synchronization of the NMI by means of NTP (IPv4 / IPv6)

- The NMI provides a MOBALine output for up to twelve self-setting slave clocks

- The NMI is monitored by MOBA-NMS

- The enhanced functionality of the MOBALine output allows the monitoring of the connected slave clocks by MOBA-NMS (TREND series only)

- The NMI is powered over the Ethernet (PoE)

- The slave clocks are powered through MOBALine and connec-ted to the NMI using a simple 2-wire solution (SAM 00, SAM 40 / SEM 40, TREND series)
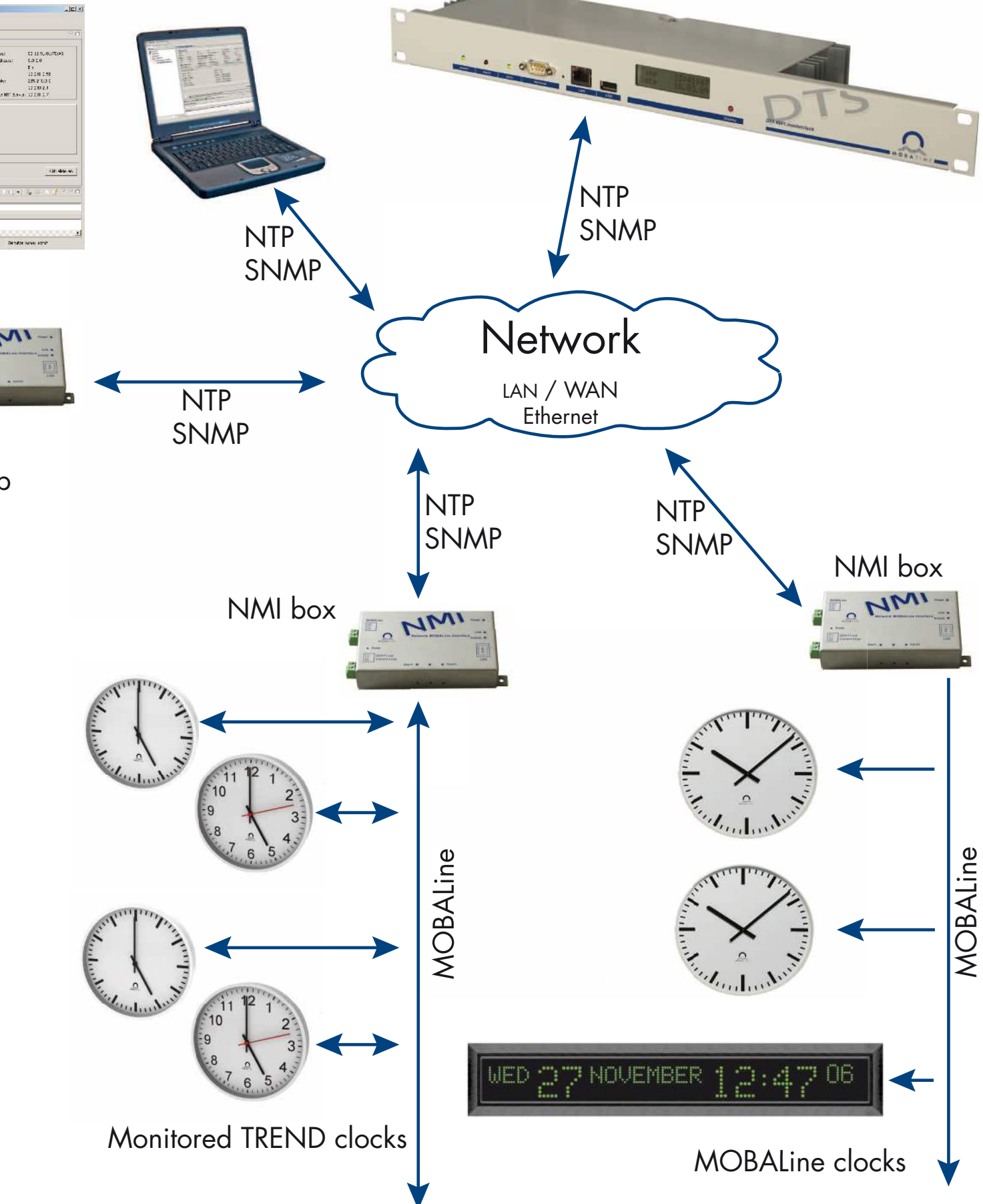
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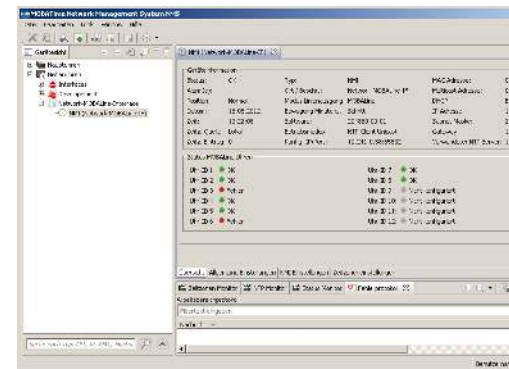
NMI box

DCF 77 current loop

ETC

MOBALine or impulse line

Existing time system

controlled by MOBA-NMS

DTS 4801.masterclock

NTP SNMP

NTP SNMP

NTP SNMP

Network

LAN / WAN
Ethernet

NTP SNMP

NTP SNMP

NMI box

NMI box

MOBALine

MOBALine

Monitored TREND clocks

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MOBALine clocks

MOBATIME

NMI - Technical details

Important facts

- Simple cabling of the last meters (MOBALine 2-wire, free topology)

- Up to 12 MOBALine movements

- MOBALine enhancement (bi-directional data transmission) for the monitoring of the connected movements (TREND series only)

- Direct replacement of NCI (MOBALine and DCF77 OUT series interface)

- NTP synchronization (unicast / multicast)

- PoE powered, class 2

- Configuration, administration and monitoring by MOBA-NMS
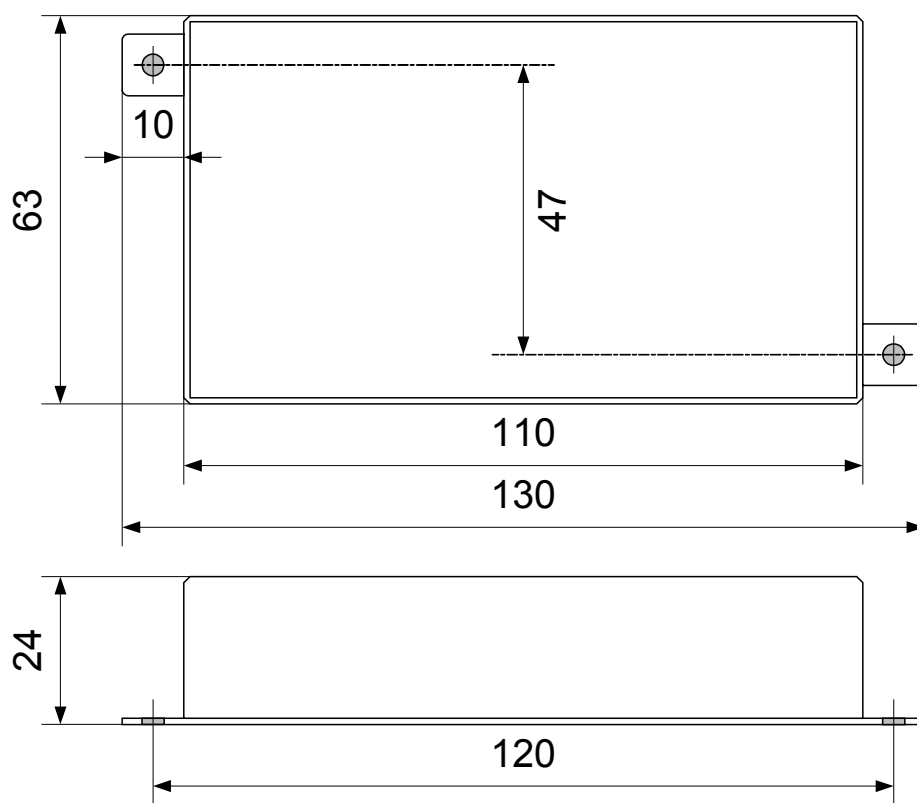
Technical data	NMI - Network MOBALine Interface (Art.Nr. 204757)
Ethernet connection	Ethernet controller 10/100 Mbit/s, RJ45, IPv4 / IPv6
Synchronization	Network Time Protocol (NTP), UTC
Time code output	MOBALine: Output for up to 12 clocks (SAM 00, SAM 40 / SEM 40, TREND series), local time, 20 V / 50 Hz DCF: passive current loop, optocoupler: Umax=30 V, I_{ON}=10..15 mA, I_{OFF}=2 MA @ 20V
Control	Full control via MOBA-NMS
Displays (LEDs)	Power (green) LAN link LAN speed / net traffic Alarm / Synchronization
Power supply	Power over Ethernet, 802.3af, class 2 < 7 Watt
Housing	Stainless steel Measurement (l x b x h): 130 x 63 x 23 mm
Protection class	IP 30
Temperature range	-20 °C.. +60 °C
Accuracy	± 50 ms