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LANTIME M900: NTP Timeserver Platform for Customized Time and Frequency Synchronization Systems

The Meinberg LANTIME M900 Timeserver can be used all around the world to synchronize even the largest networks in computer centers, industrial network infrastructures and telecom environments. The M900 is Meinbergs system platform for customized solutions and offers a wide range of possible configurations, including a wealth of choices for time and frequency inputs and outputs as well as redundancy enhancements for fail-safe synchronization needs.

Important Note

This product is no longer available. We will of course continue to provide support for units that have already been purchased and are still in use. Please contact our [1]Sales Team for further details.

This product has been discontinued and has been replaced with: [2]

Key Features

- Selectable Reference Sources: GPS: Satellite receiver for the Global Positioning System GNS: Combined GPS/GLONASS/Galileo/BeiDou satellite receiver, can also be used for mobile applications PZF: DCF77 correlation receiver for middle europe MSF: Long wave receiver for Great Britain TCR: Time code receiver for IRIG A/B, AFNOR or IEEE1344 codes MRS: (GPS, PPS, 10MHz, NTP): Multi Reference Source - several reference sources, adjustable following priority of signal
- Synchronization of NTP and SNTP compatible clients
- Web-based status and configuration interface and console-based graphical configuration utility
- Supported networking protocols: IPv4, IPv6, HTTPS, HTTP, SSH, TELNET, SCP, SFTP, FTP, SYSLOG, SNMP
- Alert-Notification system of status change by Email, WinMail, SNMP or an external connected display
- Full support for SNMP v1, v2c und v3 with dedicated SNMP daemon for configuring/status monitoring of system using SNMP traps
- USB Port for installing firmware updates, locking frontpanel menu access and backup/restore of configuration and log files
- Included GPSANTv2 antenna uses downconverter technology to enable long transmission routes of up to 1100 m (1200 yards) -- with Ultraflex H2010 cable
- Meinberg's LANTIME time server is available with a variety of additional output options: IRIG Time Code, frequency synthesizer and programmable pulse outputs illustrate some of the many expansion options for your NTP server
- Up to 9 network interfaces

Description

The LANTIME M900 offers a lot of space for output modules and several power supply options in its 3U rackmount chassis. This allows for a large number of different outputs like 1PPS, 10MHz, IRIG, serial timestrings or up to 7 Ethernet ports to support large network infrastructures. Meinberg will create an individual solution based on your specific requirements, please contact us.

As an alternative to GPS a number of other reference time sources are available for inclusion in the M900 system, for example DCF77 (PZF), IRIG (TCR), MSF or NTP (from an upstream server).

An LC-Display shows the status of the reference time source as well as the time service. Additionally three bi-color (green/red) LEDs clearly indicate the state of the three main components (time source, network time service, network) and a red alarm LED signals major system failures.

The configuration and control of the system can be carried out via a powerful yet easily understandable web user interface, a text-based console setup tool is available for easy access to most configuration options and status information when you logged in via SSH, Telnet or the serial front port.

The M900 platform can be combined with all available Meinberg oscillator options, ranging from the cost effective TCXO up to a Rubidium based oscillator with extremely stable holdover capabilities, ensuring a tighly synchronized network environment in the absence of any external reference, even if this situation lasts for days, weeks or even months.

Please note that the technical specifications for pulse, frequency and serial outputs are based on a sample configuration and can be modified in order to fulfill your individual requirements.

Characteristics

Status Indicators	Four bicolor LEDs indicating: - Reference time status - Time service status - Network link status - Alarm states
Display	LC Display, 4 x 16 characters
Control Elements	Eight push buttons to set up basic network parameters and to change receiver settings
Frequency Outputs	10 MHz via female BNC connector, TTL into 50 Ohm Accuracy depends on oscillator (standard: TCXO), look at [3]oscillator list
Pulse Outputs	Pulse Per Second (PPS) via BNC connector (TTL level), pulse width 200 ms
Accuracy of Pulse Outputs	Depends on oscillator option:
Interface	Two independent serial RS-232-interfaces, menu configurable
Optional Output Signals	**Additional Output Options::** This LANTIME can be configured with many additional output options: PPS, 10MHz, programmable pulse outputs (PPS, PPM, PPH, DCF_MARK ...), IRIG modulated and unmodulated time code, T1 / E1 telecom signals, Frequency Synthesizer - to name just a few. Contact us for your specific device configuration.
Serial Time String Output	**COM 0:** Baudrate: 300, 600, 1200, 2400, 4800, 9600, 19200 Baud Data Format: 8E1, 8E2, 8N1, 8N2, 8O1, 7E1, 7E2, 7N2, 7O1, 7O2 Time Telegram: [4]Meinberg Standard Time String , SAT, NMEA RMC, Uni Erlangen (NTP), COMPUTIME, Sysplex, [5]Capture String, SPA, RACAL, Meinberg GPS, NMEA GGA, NMEA RMC GGA, NMEA ZDA, ION, 6021 or IRIG-J
Alarm output	Synchronous state of the module, relay output (changeover contact)
Network Interface	1 x 10/100 MBit with RJ45 (up to 8 additional LAN interfaces possible)
Universal Serial Bus (USB) Ports	1x USB port on front panel for: - installing firmware upgrades - performing backups and restoration of configuration files - copying security keys - locking & unlocking front buttons
Power Consumption	25W
Operating Voltage	100-240 V AC (50-60 Hz) / 100-240 V DC Redundant Power Supplies and other DC input voltage ranges available upon request
Form Factor	Rackmount 3U chassis for standard 19" racks

CPU	
	* AMD Geode
Operating System of the SBC	Linux with nano kernel (incl. PPSkit)
Network Protocols OSI Layer 4 (Transport Layer)	TCP, UDP
Network Protocols OSI Layer 7 (Application Layer)	Telnet, FTP, SSH (including SFTP, SCP), HTTP, HTTPS, syslog, SNMP
Internet Protocol (IP)	IPv4, IPv6
Network Autoconfiguration Support	IPv4: Dynamic Host Configuration Protocol - DHCP (RFC 2131) IPv6: Dynamic Host Configuration Protocol - DHCPv6 (RFC 3315) and Autoconfiguration Networking - AUTOCONF (RFC 2462)
Network Time Protocol (NTP)	NTP v2 (RFC 1119), NTP v3 (RFC 1305), NTP v4 (RFC 5905) SNTP v3 (RFC 1769), SNTP v4 (RFC 4330) MD5 / SHA-1 Authentication and Autokey Key Management
Network Time Security (NTS)	As of LTOS version 7.08, all Meinberg NTP time servers offer full support for NTS (Network Time Security) in unicast client/server mode. **Note:** An MRS-capable reference clock must be used in client mode.
Parallel Redundancy Protocol (PRP)	PRP (IEC 62439-3)
Time Protocol (TIME)	Time Protocol (RFC 868)
IEC 61850	Synchronization of IEC 61850-compliant devices using SNTP
Hypertext Transfer Protocol (HTTP)	HTTP/HTTPS (RC 2616)
Secure Shell (SSH)	SSH v1.3, SSH v1.5, SSH v2 (OpenSSH)
Telnet	Telnet (RFC 854-RFC 861)
Simple Network Management Protocol (SNMP)	SNMPv1 (RFC 1157), SNMPv2c (RFC 1901-1908), SNMP v3 (RFC 3411-3418)
Supported Temperature	Operational: 0 - 50 °C (32 - 122 °F) Storage: -20 - 70 °C (-4 - 158 °F)

Supported Humidity	Max. 85 % (non-condensing) at 40 °C
Contents of Shipment	Included in delivery is a Meinberg outdoor antenna incl. mounting kit, pre-assembled antenna cable (except TCR and RDT models).
Technical Support	Meinberg offers free lifetime technical support via telephone or e-mail.
Warranty	Three-year warranty
Firmware Updates	Firmware is field-upgradeable, updates can be installed directly from the unit or via a remote network connection. Software updates are provided free of charge for the lifetime of your Meinberg product.
RoHS Status of Product	This product is fully RoHS-compliant.
WEEE Status of Product	This product is handled as a B2B (Business to Business) category product. To ensure that the product is disposed of in a WEEE-compliant fashion, it can be returned to the manufacturer. Any transportation expenses for returning this product (at end-of-life) must be covered by the end user, while Meinberg will bear the costs for the waste disposal itself.
Additional Information	Additional information about the Meinberg LANTIME family of NTP time servers and other LANTIME models can be found on the [6]LANTIME overview page .

Manual

There is no online manual available for this product.: [7]Contact us

Links:

[1] mailto:sales@meinberg.de
[2] https://www.meinbergglobal.com/english/archive/ims-lantime-m3000.htm
[3] https://www.meinbergglobal.com/english/specs/gpsopt.htm
[4] https://www.meinbergglobal.com/english/specs/timestr.htm
[5] https://www.meinbergglobal.com/english/specs/capstr.htm
[6] https://www.meinbergglobal.com/english/products/ntp-time-server.htm
[7] mailto:info@meinberg.de