



## Meinberg Radio Clocks

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## LANTIME M200: Compact NTP Time Server with integrated Reference Clock

LANTIME M200 time servers can be installed to provide accurate time to small and medium sized computer networks. This entry level time server synchronizes all systems either NTP- or SNTP-compatible utilizing a built-in MEINBERG radio clock as its primary reference time source. A stable and precise oscillator is capable of bridging interferences or a temporary loss of reception.

### Key Features

- Selectable Reference Sources: GPS: Satellite receiver for the Global Positioning System GNS: Combined GPS/GLONASS/Galileo/BeiDou satellite receiver (L1 frequency band), can also be used for mobile applications GNS-UC: GPS and Galileo Satellite Receiver with Up-Converter for Meinberg GPS Antenna/Converter PZF: DCF77 correlation receiver for middle europe MSF: Long wave receiver for Great Britain WWVB: Long wave receiver for the US time signal
- Synchronization of NTP and SNTP compatible clients
- Web-based status and configuration interface (Demo) and console-based graphical configuration utility
- Supported net protocols: IPv4, IPv6, NTP, (S)NTP, DAYTIME, DHCP, HTTP, HTTPS, FTP, SFTP, SSH, SCP, SYSLOG, SNMP, TIME, TELNET
- Alert-Notification system of status change by Email, WinMail, SNMP or an external connected display
- Full SNMP v1,v2,v3 support with own SNMP-daemon for status and configuration and SNMP Trap messages
- USB Port for installing firmware updates, locking frontpanel menu access and backup/restore of configuration and log files
- Meinberg GPS Antenna/Converter Unit connected with up to 300m of standard coaxial cable RG58

## Description

A large LC display shows the state of the internal receiver and the NTP subsystem. Three LEDs (green/red) indicate the status of the three main components: Reference Time (e.g. GPS), Time Synchronization Service (NTP) and Network (Link status). A fourth red LED is labelled ALARM and can be configured to signal any event that is covered by the notification handling routines.

The configuration of the system can be done by using a standard web browser for accessing the extensive but straightforward html interface. Alternatively a text based and menu driven setup utility can be started from the shell prompt after logging into the unit via Telnet or SSH.

The LANTIME M200 is equipped with a high precision "TCXO" oscillator (please check our oscillator options page for technical specifications). The oscillator determines the holdover characteristics (e.g. when the signal is disturbed or jammed).

## Characteristics

<b>Display</b>	LC-display, 2 x 40 characters, with backlight
<b>Control elements</b>	Eight push buttons to set up basic network parameters and to change receiver settings
<b>Status info</b>	Four bicolor LEDs showing status of: <ul style="list-style-type: none"><li>- reference time</li><li>- time service</li><li>- network</li><li>- alarm</li></ul>
<b>Network Interface</b>	RJ-45 Network Connection 10/100 MBit
<b>Power supply</b>	Standard: 100-240 V AC (50/60 Hz) available DC variants: 100-200 V DC, 12 V DC and 20-60 V DC
<b>Power consumption</b>	20W
<b>Universal Serial Bus (USB) Ports</b>	1x USB Port in rear panel: <ul style="list-style-type: none"><li>- install firmware upgrades</li><li>- backup and restore configuration files</li><li>- copy security keys</li><li>- lock/unlock front keys</li></ul>
<b>CPU</b>	  * AMD Geode

<b>Operating System of the SBC</b>	Linux with nano kernel (incl. PPSkit)
<b>Network protocols OSI Layer 4 (transport layer)</b>	TCP, UDP
<b>Network protocols OSI Layer 7 (application layer)</b>	TELNET, FTP, SSH (incl. SFTP, SCP), HTTP, HTTPS, SYSLOG, SNMP
<b>Internet Protocol (IP)</b>	IP v4, IP v6
<b>Network Autoconfiguration Support</b>	IPv4: Dynamic Host Configuration Protocol - DHCP (RFC 2131) IPv6: Dynamic Host Configuration Protocol - DHCPv6 (RFC 3315) and Autoconfiguration Networking - AUTOCONF (RFC 2462)
<b>Network Time Protocol (NTP)</b>	NTP v2 (RFC 1119), NTP v3 (RFC 1305), NTP v4 (RFC 5905) SNTP v3 (RFC 1769), SNTP v4 (RFC 2030) MD5 / SHA-1 Authentication and Autokey Key Management
<b>Parallel Redundancy Protocol (PRP)</b>	PRP (IEC 62439-3)
<b>Time Protocol (TIME)</b>	Time Protocol (RFC 868)
<b>Daytime Protocol (DAYTIME)</b>	Daytime Protocol (RFC 867)
<b>IEC 61850</b>	Synchronization of IEC 61850 compliant devices by using SNTP
<b>Hypertext Transfer Protocol (HTTP)</b>	HTTP/HTTPS (RC 2616)
<b>Secure Shell (SSH)</b>	SSH v1.3, SSH v1.5, SSH v2 (OpenSSH)
<b>Telnet</b>	Telnet (RFC 854-RFC 861)
<b>Form Factor</b>	Desktop housing (335 x 45 x 240 mm)
<b>Ambient temperature</b>	0 ... 50°C / 32 ... 122°F
<b>Humidity</b>	Max. 85%
<b>Scope of supply</b>	Included in delivery is a MEINBERG outdoor antenna incl. mounting kit, pre-assembled antenna cable (except MRS, TCR and RDT models) and product documentation on USB storage.
<b>Technical Support</b>	Meinberg offers free lifetime technical support via telephone or e-mail.
<b>Warranty</b>	Three-Year Warranty
<b>Firmware Updates</b>	Firmware is field-upgradeable, updates can be installed directly at the unit or via a remote network connection. Software updates are provided free of charge, for the lifetime of your Meinberg product.

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**RoHS-Status of the product** This product is fully RoHS compliant

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**WEEE status of the product** This product is handled as a B2B category product. In order to secure a WEEE compliant waste disposal it has to be returned to the manufacturer. Any transportation expenses for returning this product (at its end of life) have to be incurred by the end user, whereas Meinberg will bear the costs for the waste disposal itself.

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**Additional Information** Additional information about the Meinberg LANTIME family of NTP time servers and other LANTIME models can be found on the [1][LANTIME NTP Time Server Family Page](#)

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#### Manual

There is no online manual available for this product: [2][Contact us](#)

#### Links:

[1] <https://www.meinbergglobal.com/english/products/ntp-time-server.htm>

[2] <mailto:info@meinberg.de>