LANTIME M100/PZF

NTP Time Server with DCF77 Reference Clock for DIN Rail Installations

LANTIME M100/PZF 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 DCF77 radio clock as its primary reference time source.

A stable and precise oscillator is capable of bridging interferences or a temporary loss of reception. Its compact form factor offers an ideal solution to network time synchronization needs in industrial and power generation/distribution networks.

Key Features:

- 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

- USB port for performing updates, lock front panel
  and backup/restore configuration and log files.

- Antenna connected with up to 300m of standard
  coaxial cable RG58

Description:

The GNU/Linux operating system of the LANTIMEs SBC (Single Board Computer) has been optimized to ensure a high level of security and reliability.

Three LEDs (green/red) indicate the status of the three main components: Reference Time (DCF77), Time Synchronization Service (NTP) and Network (Link status). A fourth red LED is labeled 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. Initial configuration can be performed using the RS232 console port and a terminal program.

The security-related features of LANTIME time servers satisfy highest demands. The time synchronization data can be reliably signed and secured by symmetric keys (MD5) and the NTP autokey procedures. This protects the clients against manipulated time and man-in-the-middle attacks and allows them to verify that the NTP packets they received were send by the LANTIME. Additionally the whole LANTIME configuration can be done by using encrypted channels (e.g. SSH, HTTPS or SNMPv3). Every unused/unneeded protocol can be disabled in order to reduce possible points of attack.

In order to support network management systems the LANTIME time servers offer an extensive SNMP interface, which can be accessed by SNMP V1, V2.c and V3. It allows the monitoring of all relevant system parameters (including operating system parameters, network interface statistics, detailed DCF and NTP status information as well as the complete system configuration) and can be used to alter the LANTIME configuration via SNMP set commands, too.

LANTIME time servers are designed to be deployed in IPv6 networks, the NTP time synchronization as well as the configuration interfaces (Web-based, SSH and SNMP) comes with IPv6 support. You can assign several IPv6 addresses and the system supports automatic configuration by IPv6 autoconf.

The LANTIME M100/PZF is equipped with a high precision „TCXO" oscillator. The oscillator determines the holdover characteristics (e.g. when the DCF77 signal is disturbed or jammed).

- Three-Year Warranty
- Lifetime technical support via telephone or E-Mail
  including Firmware Updates

LANTIME M100/PZF Specifications

Front Panel:

1 x RS232 front panel interface, 9pin D-Sub male connector for initial setup and configuration

1 x USB (Rev. 1.1) front panel interface to:
- install firmware upgrades
- backup and restore configuration files
- copy security keys
- lock/unlock front panel keys

3 x Bicolor LEDs: Ref. time (DCF77), Time Synchronization Service (NTP) and Network-Link status

1 x Red alarm LED (configurable)

Network Interface:

1 x LAN interface, RJ45 connector, status LEDs for link, activity, speed (10/100 Mbit)

Synchronization Source Input:

1 x Meinberg DCF77 antenna input, BNC female connector, isolated

DCF77 Antenna AW02 with mounting kit

System Components:

- DCF77 correlation receiver PZF511

- TCXO time base

- Single board computer with Linux operating system
  - NTPv4, SNTP, symmetric Keys, Autokey,
  - Broadcast, SNMPv1,2,3, SNMP Trap, SSH2, IPv6,
  - DHCP, HTTP(S), eMail, FTP, Telnet, Syslog

- Integrated power supply:
  standard: 100 – 240 V AC / DC
  optional: 19 - 72 V DC

- Aluminium profile case for 35mm DIN mounting rail
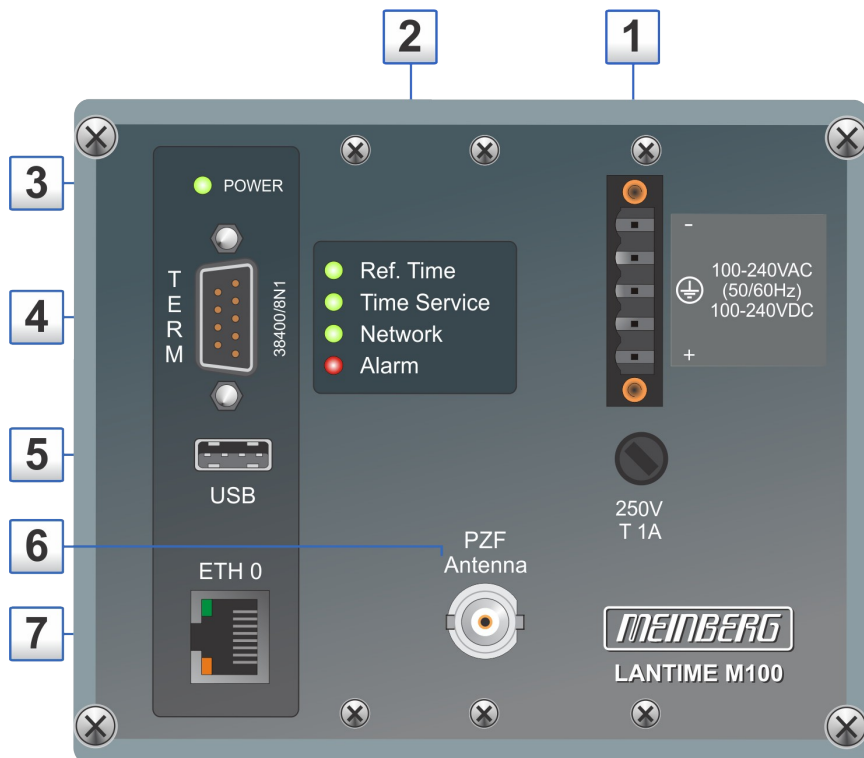 125,5 mm wide x 105 mm high x 189 mm deep

Rear view: LANTIME M100

Scope of Supply:

The system will be delivered with a MEINBERG DCF77 Antenna mounted in a waterproof plastic case, antenna mounting kit, 10 m (32.8 feet) of RG58 coax cable and power cord.

http://www-preview/english/products/aw02.htm

Front View

DEUTSCH
1. Spannungsversorgung / Sicherung: 250V / T1.6A
2. Status LED: Ref.Time / Time Service / Network / Alarm
3. Status LED: Power
4. Terminal / VT100, 38400 Baud, 8N1, 9pol. D-SUB Stecker
5. USB Anschluss
6. PZF Antenne, BNC
7. Netzwerk Anschluss ETH0, 10/100Mbit RJ45

ENGLISH
1. Power supply connector / Fuse: 250V / T1.6A
2. Status LED: Ref.Time / Time Service / Network / Alarm
3. Status LED: Power
4. Terminal / VT100, 38400 Baud, 8N1, 9pin. D-SUB male
5. USB connector
6. PZF Antenna, BNC
7. Network connector ETH0, 10/100 Mbit RJ45