



The Synchronization Experts.

Release Notes

LANTIME Firmware V7.04



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1. Foreword

This document describes the changes & features of the new Meinberg Firmware v7.04. Please read these Release Notes carefully before installing the v7.04 firmware, as they contain information that you will require to successfully install the software on your Meinberg system.

All Meinberg LANTIME time servers shipped as of November 1, 2021 (M Series, SyncFire, IMS) will include the new v7.04 firmware pre-installed. This firmware revision provides many new features and improvements for the LANTIME range of systems and their management tools. These include a variety of security-related improvements.

2. Software Versions

LTOS Firmware V7.04 comprises several software components. The most important third-party software packages included in LTOS are listed below alongside their version numbers.

Linux	Linux kernel 4.14.243
SSL	OpenSSL 1.1.1l
SSH	OpenSSH 8.8p1
LDAP	OpenLDAP 2.4.57
NTP	NTP 4.2.8p15

3. Requirements

3.1. System Requirements

The following requirements must be met in order to be able to install LANTIME Firmware v7.04.

Name of Firmware Revision	Release Version LTOS 7.04
Release Date	November 1, 2021
System Compatibility	
LANTIME Systems	M100
	M200
	M300
	M400
	M600
	M900
	SyncFire 1100
	SyncFire 1200
LANTIME IMS Systems	M500
	M1000
	M1000S
	M2000S
	M3000
	M3000S
	M4000
Modules	¹ CPU-C05F1
	² CPU-C15G2
	³ IMS Modules
Installation Requirements	CPU RAM Module: min. 256MB
	CPU Flash Module: min. 512 MB

¹ LANTIME Firmware v6 and v7 support the use of the CPU-C05F1 CPU module.

² When using a CPU-C15G2 (Q7) CPU module, only LANTIME Firmware v7 is supported.

³ Systems with LANTIME Firmware v7.04 support all current IMS clocks and I/O modules.

3.2. Connection Requirements

Cipher List

To be able to establish an **SSL/TLS connection** once your device is updated, your browser must support at least at least one of the listed cipher suites.

To be able to establish an **SSH connection** once your device is updated, your SSH client must support at least one of the cryptographic algorithms listed below (e.g., SSH ciphers, key exchange algorithms, message authentication codes).

Web Server TLS:	ECDHE-ECDSA-AES128-GCM-SHA256:
	ECDHE-RSA-AES128-GCM-SHA256:
	ECDHE-ECDSA-AES256-GCM-SHA384:
	ECDHE-RSA-AES256-GCM-SHA384:
	ECDHE-ECDSA-CHACHA20-POLY1305:
	ECDHE-RSA-CHACHA20-POLY1305:
	DHE-RSA-AES128-GCM-SHA256:
	DHE-RSA-AES256-GCM-SHA384
SSL	
Cipher Suites:	ECDHE-ECDSA-AES256-GCM-SHA384
	ECDHE-RSA-AES256-GCM-SHA384
	ECDHE-ECDSA-CHACHA20-POLY1305
	ECDHE-RSA-CHACHA20-POLY1305
	ECDHE-ECDSA-AES128-GCM-SHA256
	ECDHE-RSA-AES128-GCM-SHA256
	ECDHE-ECDSA-AES256-SHA384
	ECDHE-RSA-AES256-SHA384
	ECDHE-ECDSA-AES128-SHA256
	ECDHE-RSA-AES128-SHA256

SSH	
Ciphers:	chacha20-poly1305@openssh.com
	aes256-gcm@openssh.com
	aes128-gcm@openssh.com
	aes256-ctr
	aes192-ctr
	aes128-ctr
Key Exchange Algorithms:	curve25519-sha256@libssh.org
	ecdh-sha2-nistp521
	ecdh-sha2-nistp384
	ecdh-sha2-nistp256
	diffie-hellman-group-exchange-sha256
Host Key Algorithms	rsa-sha2-512
	rsa-sha2-256
	ecdsa-sha2-nistp521
	ssh-ed25519
MACs	hmac-sha2-512-etm@openssh.com
	hmac-sha2-256-etm@openssh.com
	umac-128-etm@openssh.com
	hmac-sha2-512
	hmac-sha2-256
	umac-128@openssh.com

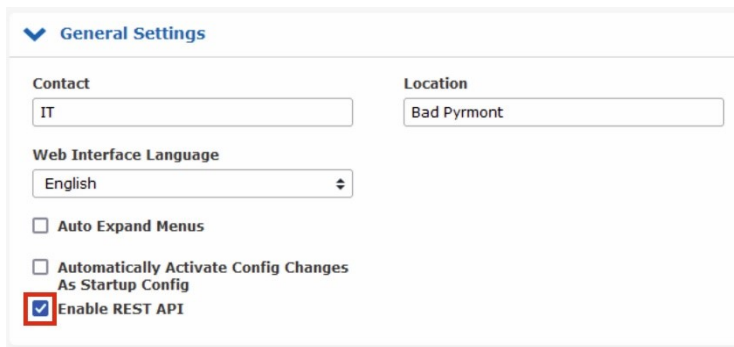


The updated version of OpenSSH in Firmware version 7.04.008 has had "ssh-rsa" removed from the host key algorithms by default.

4. Features

- REST API Support

Version 7.04 now offers a REST API interface to enable status information and configuration changes from external management systems to be communicated via a secure HTTPS connection. The available objects are defined as a tree structure using a syntax based on JSON. The REST API can be enabled and disabled as a service via the configuration settings.



General Settings

Contact: IT Location: Bad Pymont

Web Interface Language: English

Auto Expand Menus

Automatically Activate Config Changes As Startup Config

Enable REST API

For an explanation of all available objects, please refer to the integrated Online Help function in the firmware, which can be accessed via the Web UI.

1. Select the menu - Docs & Support → Available Documents.
2. Then click on “View” under the “Option” column.
3. Wait for CLIHelp to open—this can take a moment.



Filename	Language	Type	Date	Size	Option
cli_and_restapi_reference	english	html	2021-10-20	0.40kb	View
1 Documents available					



The Online Help function is only active on any IMS or SyncFire system with at least 512 MB of RAM.

We have provided an alternative method of access to the Online Help function via our public web server for users who do not have a system that meets these specifications:
http://demo.meinberg.de/lt_cli/

- Dual-Stack Support for HPS100

HPS100 Firmware Version 2.0.3 introduced support for operating two PTPv2 master instances concurrently on a single HPS100 module. Firmware Version 7.04 offers support for the configuration of these two PTP instances and can display the status of the two PTP instances separately.

- LDAP Clients

The status of the LDAP client service is now displayed through the Web Interface. Error messages from the service are now also displayed via the status banner. The LDAP status can be accessed via System -> User Management -> User Administration -> External Authentication -> LDAP.

- IPv6 Features for PTP

There are now further options under PTP Status and Configuration, including the ability to set an IPv6 default gateway and to display the currently configured IPv6 address and the current default gateway for IPv4 and IPv6.

- PTPv1 (IEEE 1588-2002) with four sync messages per second

The audio-over-IP system DANTE uses PTPv1 with a standard sync rate of 4 pkt/s. HPS100 modules with Firmware Version >1.4.8 (or in the case of the V2.0 Release, with Firmware Version >2.0.3) support these higher sync rates.

- New Support VSG181H IMS Module

General support for the VSG181H module for output of video sync signals (now with symmetrical outputs for LTC and DARS)

5. Known Bugs & Issues

There are no known bugs in this version. Please report any bugs you may find to Meinberg Technical Support (techsupport@meinberg.de).

6. Download LANTIME Firmware v7

Our download page is located at the following address:

German <https://www.meinberg.de/german/sw/firmware.htm>

English <https://www.meinbergglobal.com/english/sw/firmware.htm>

You can access the download section by entering your system's serial number and your email address and accepting the Privacy Policy. The download section provides information about the specifications of the most recent Meinberg LANTIME Firmware.

Please note:

When attempting to update, some systems may display a message that the update to Firmware v7.04 is not supported. If this message appears or other problems arise, please do not hesitate to contact Meinberg Support.

Meinberg Support Services

Our support page is located at the following address:

German <https://www.meinberg.de/german/support/tech-support.htm>

English <https://www.meinbergglobal.com/english/support/tech-support.htm>

7. Acknowledgments

Our thanks go to all those who have contributed to helping us improve the functionality and security of our LANTIME Firmware. Each and every bug or security vulnerability that is reported and fixed is a benefit for everyone. So, thank you!