

Lufft CHM8k 15k – Firmware Release Notes, Comments, Newest Release

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Release Notes

V1.150 (16.06.2025)

Changes for CHM15k and CHM8k:

- Additional variant of the cloud detection algorithm to improve cloud detection in precipitation ("modified clouds in precipitation" (mcp)) implemented.
 - Activation via Bit 1 in the "CloudDetectionMode" parameter, i.e., for values 2, 3, 6, and 7.
- Access to AFD log files via the web interface ("Download AFD log files" in the "Config Network" tab as "SuperUser").
- AFD file transfer via SFTP with SSH key authentication:
- Automatic generation of an SSH key pair on each device.
- Retrieval of public SSH keys via the web interface ("Download ssh keys" in the "Config Network" tab as "SuperUser").
- Usage note:
 - Public key must be stored on the server.
 - Specify key file in DIR_CONFIG (afdsettings.txt) instead of the password: <i>/home/.ssh/id_ecdsa (escape special characters with \).
 - Example: sftp://user;fingerprint=3f-ae-37-a4-ba-11-07-5f-01-18-ad-28-c5-b8-13-52:\<i\>\/home\/.ssh\/id ecdsa@192.168.100.100/chm/%h
- Optimized response to "CloudDetectionMode" changes. Seamless aerosol layer height (pbl) calculation if Jet-Filter bit remains unchanged.
- Tooltip for "CloudDetectionMode" adjusted.

Access to the web interface after device start with "StandbyMode" set.

Fixed sporadic, unexplained firmware restarts.

Revised "NTP Status (ntpq)" output in the web interface and ntpq error messages.

Cleaned home partition.

Changes for CHM15k:

- Jet-Filter" variant of the cloud detection algorithm enabled for CHM15k devices (labelled as experimental). Activatable by Bit 2 in "CloudDetectionMode".

Changes for CHM8k:

- Baseline correction" (blc) algorithm variant now controlled by Bit 3 instead of Bit 1 in "CloudDetectionMode". The shift occurs automatically during the firmware update, no manual adjustment needed.

Note: Do not use this algorithm variant for detectors with serial numbers DET22xxxx and higher.

Changes for CHM15k and CHM8k:

- ASCII protocol implemented via LAN (TCP connection):
- Connection is password protected with the SuperUser password.
- The default port is 12000
- The port can be configured with the ASCII parameter "LanCmdifPort" ("LCP").
- Timeout times are 5 minutes during the password request and 15 minutes otherwise.
- Telegrams can only be polled (e.g. "get 16:2").
- The LAN telegram server (default port 11000, see manual section 8.9) is still available for automatically receiving telegrams.
- The parameter for the LAN telegram server port "LanPort" has been renamed "LanTelegramPort" ("LTP") in the "chmsettings.txt" file and in the ASCII protocol.
- For compatibility reasons, the old ASCII parameter "LanPort" ("LPT") can still be used.
- The tooltip for the "LanPort" parameter has been updated in the web interface.
- The error messages in the ASCII protocol have been revised.

V 1.130 (12.12.2023)

Changes for CHM8k:

- Extension of the cloud detection algorithm to filter overflying airplanes ("jet filter"). To activate the jet filter, the parameter "CloudDetectionMode" must be set to 4, 5, 6 or 7.

Information: CloudDetectionMode algorithm types:

0 = standard algorithm

1 = hlc (higher low cloud algorithm)

2 = blc (baseline compensation algorithm, only required for CHM8k detector before 2022 (serial numbers less than DET228000))

3 = blc + hlc

4 = jf (jet filter, only for CHM8k)

5 = jf + hlc

6 = jf + blc

7 = jf + blc + hlc

Changes for CHM15k:

Adaptation to future hardware changes to the RefLED board

Changes for CHM15k and CHM8k:

- Improvements for fan control and LAN telegram processing

- Bug fix: The possible incorrect shutdown behavior of the firmware since version 1.110 has been corrected.

V 1.120 (21.06.2023)

Changes for CHM15k and CHM8k:

- First LAN telegrams are sent immediately after connection is established
- Time synchronisation stabilised when using NTP (especially when using modem or poor network connection)
- Ignore "Zenith" and "UseAltitude" setting in CHM test mode (for CH simulator test)

Bug fix:

- Behavior when sending LAN telegram automatically with hanging clients corrected.
- Correction for storing NetCDF files on SD card
- Incorrect output of visibility measurements of 0 m was corrected
- Cloud detection algorithm in "CloudDetectionMode" 1 or 3 in the range 230 m to 500 m:
- Output of two clouds with the same lower cloud limit corrected.
- Cloud base height of weak clouds improved

V 1.110 (05.04.2022)

- Changes for CHM15k and CHM8k:
- Shutdown time of the firmware reduced to 4s
- Downgrade option of firmware removed
- NTP failure state (Bit 12) is no longer displayed on the red housing (failure) LED

Bug-fixes:

- CHMTestMode can be switched off via web frontend even if it was started from RS485 Parameter "rangeEnd" works for selected ranges < 6000m

Changes for CHM15k:

- Correction aerosol layer detection when using the CH-simulator (bug since version 1.050)

Changes for CHM8k:

- Support for different detector, Detector-dependent voltage control in "ApdControlMode" 1 and 2

V 1.100 (31.05.2021)

Changes for CHM15k and CHM8k

- Future mainboard revisions (up to hardware identifiers 50) are recognized without error message. Instead of the mainboard revision, however, the hardware identifier is output in the web interface, for example "Mainboard (8349.MCB): K024".

Changes for CHM8k:

The CHM8k mainboards with REV7 are recognized by the firmware and output in the web interface as "Mainboard (8349.MCB): 007".

V 1.090 (10.03.2021)

Changes for CHM15k and CHM8k:

- Telegrams: When a telegram field overflows, the field is filled with '?', unless a valid overflow value is set for this field in telegramformat.xml, see document "XML telegram description".
- Telegram 1 and 5: Overflow value "9999" for cloud penetration depth (CPD)
- Telegram 2 and 4: Overflow value "9999" for deviation of penetration depth (CDE)

- Uploading of the telegram description file telegramformat.xml via the web frontend as "SuperUser" possible.
- String parameters (location, institution, etc.) are truncated to their maximum length after input.

V 1.080 (17.12.2022)

Changes for CHM15k and CHM8k:

- Correction to version 1.070:
- The mistake in the number of digits of "cloud height offset" in the standard telegrams number 1 and 5 was fixed.

V 1.070 (26.11.2020)

Changes for CHM15k and CHM8k:

- Re-sorting of the status code. "Note: NTP problem" set to bit 12, see manual section 8.5.
- Changes in telegrams 1 to 5: output of cloud height offset instead of altitude, see manual section 8.3.3ff
- Changes in telegrams 1 to 3: output cloud height offset for non-negative values without "+". This allows to output a maximum value of 9999 instead of only +999 (meters or feet, depending on the setting).

Changes for CHM15k:

- Limits for outdoor temperature warning set to -40°C to 50°C.

Changes for CHM8k:

- Output of the messages of the escalating status code from 0x8000 0000 onwards in the telegrams corrected.

V 1.060 (09.10.2020)

Changes for CHM15k

- none

Changes for CHM8k

- Adaptations to the cloud detection algorithm in "CHMTest" mode due to hardware changes to the CHM cloud simulator.
- Limits for temperature errors have been adjusted to specifed temperature range, internal temperature up to 65°C and external temperature up to 60°C.