

**Last update: December 12.2023**

The firmware 130\_550 is only optional for the CHM15k.

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## Release Notes

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 specified temperature range, internal temperature up to 65°C and external temperature up to 60°C.