

Technical Note | Updating CL31/CL51 Firmware

Updating CL31/CL51 firmware

This instruction describes how to update a new ceilometer firmware version.



This instruction describes how to update the CL31 firmware. The same procedure applies to CL51.

The update requires:

- Serial connection to the ceilometer
- Terminal program
- CL31 firmware from docs.vaisala.com

You can update the firmware through the maintenance port or the data port. Vaisala recommends using a direct serial port connection for best performance, but you can also upload it through RS-485 or modem. The upload time depends on the connection speed.

1. Open a terminal program, such as HyperTerminal or Tera Term.
2. To establish a connection, type **open**.
CL31 prompt opens.
3. To check your current firmware version, type **version**.
4. When prompted, type the password **advanced**.
The ceilometer responds: `Service password accepted.`
5. To start the software update, type **service sw_update**
The ceilometer responds: `SW download. Start the file transfer.`
6. Send the new software, such as `CL31_V2014.bnm`, with the terminal program as a plain text file without any protocol.
The file transfer starts. Depending on the connection type, the file transfer may take 3-15 minutes.

```
Download completed.
Updating flash memory.
```

```
SW update completed.
```

```
CEILO >
```

7. When the new software version is updated, the ceilometer still runs the old version. To boot the ceilometer, type **reset**.
The ceilometer responds `Initializing... Ready.`
8. Wait until CL31 starts sending messages and type **version** to check that the update was successful.



Troubleshooting

Table 1 Troubleshooting software update

Problem	Probable cause	Action
The software transfer takes a long time.	The connection speed is low.	Change the connection speed settings.
	Some terminal programs are slow with file transfers.	Use another terminal program. Vaisala recommends using PuTTY.
Error message Address error or Record format error is displayed.	The received file record format was incorrect.	Upload the software again.
Error message Checksum Error is displayed.	The software image contains checksums that do not match.	Upload the software again.
Flash write error when writing new data.	A hardware failure and the flash memory may be corrupted.	Update the software again. Do not reset the ceilometer before the new update.
The flash memory is corrupted and the ceilometer does not boot.	A power shortage occurring during the flash memory update.	Set a jumper on the ceilometer engine board, boot into a factory software, and update the firmware again. See the instructions <i>Restoring ceilometer factory software</i> in the software package.