

Firmware Update Instructions

Vaisala DIAL Atmospheric Profiler DA10

Firmware update

For the firmware update you need the following equipment and software.

- Administrator username and password to Web UI
- Connection to device through Web UI
For the connection options, see [DA10 User Guide \(M212895EN\)](#).
- Firmware update package (includes the necessary firmware files and release notes); download the package from docs.vaisala.com
- Object for pressing factory reset buttons (if device reset is required)
- Screwdriver for opening instrument doors (if device reset is required)



If the firmware update requires a reset, update the firmware at the installation site.

If a reset is not required, you can update the firmware remotely.

Check the release notes for the requirements for the specific release. Factory reset is typically not needed.

Perform the following procedures in the order stated here unless the release notes instruct something else:

1. [Updating device control modules \(page 1\)](#)
2. [Updating DA10GW \(page 2\)](#)
3. [Factory resetting DA10 \(page 3\)](#) (if required, see the release notes)
4. [Updating DA10 Client \(page 3\)](#)
5. [Setting up data collection \(page 3\)](#)
6. [Verifying operation \(page 4\)](#)
7. [Rerunning device control module firmware update \(page 4\)](#)

Updating device control modules

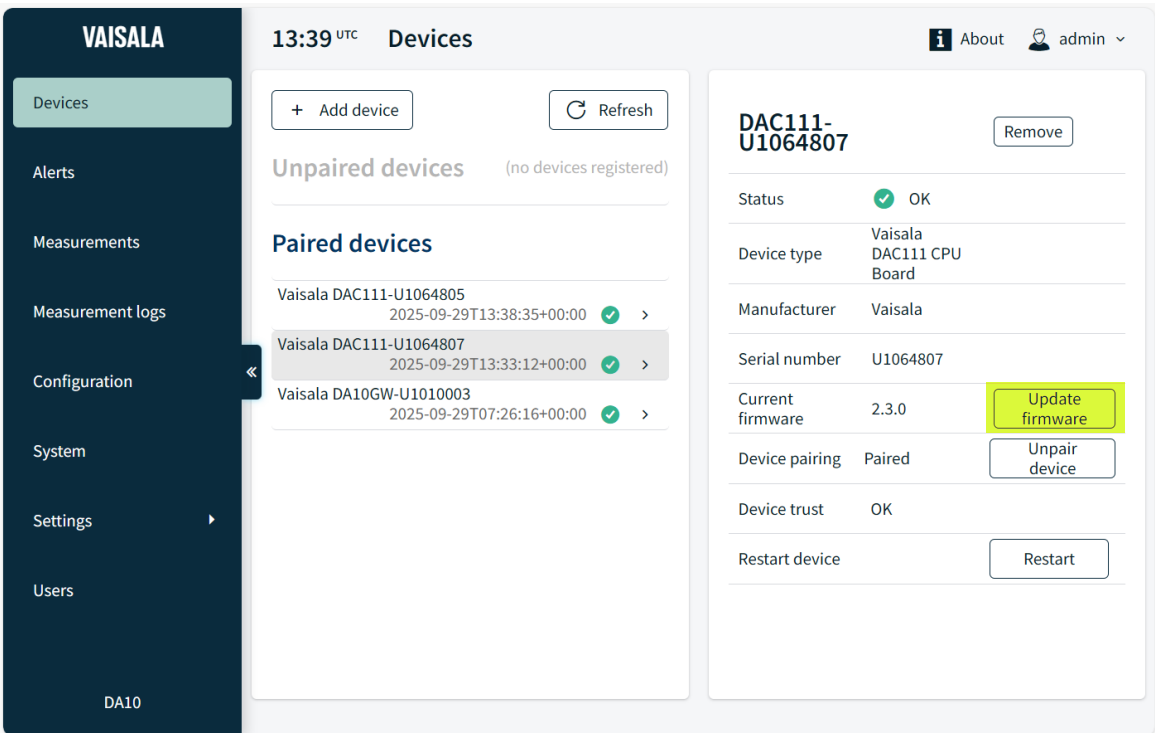


- Administrator username and password to Web UI
- Connection to device through Web UI
- Firmware update package (includes the necessary firmware files and release notes)

1. Save the firmware update file on your computer.
2. Connect to the device.
For the connection options, see [DA10 User Guide \(M212895EN\)](#).
3. Log in to the Web UI as an **Administrator**.
4. In the Web UI, select **Devices**.
5. Select a device from the list of paired devices with name *Vaisala DAC111-xxxxxxx*.
6. Check the current firmware version from **Current firmware**.



7. Select **Update firmware**.



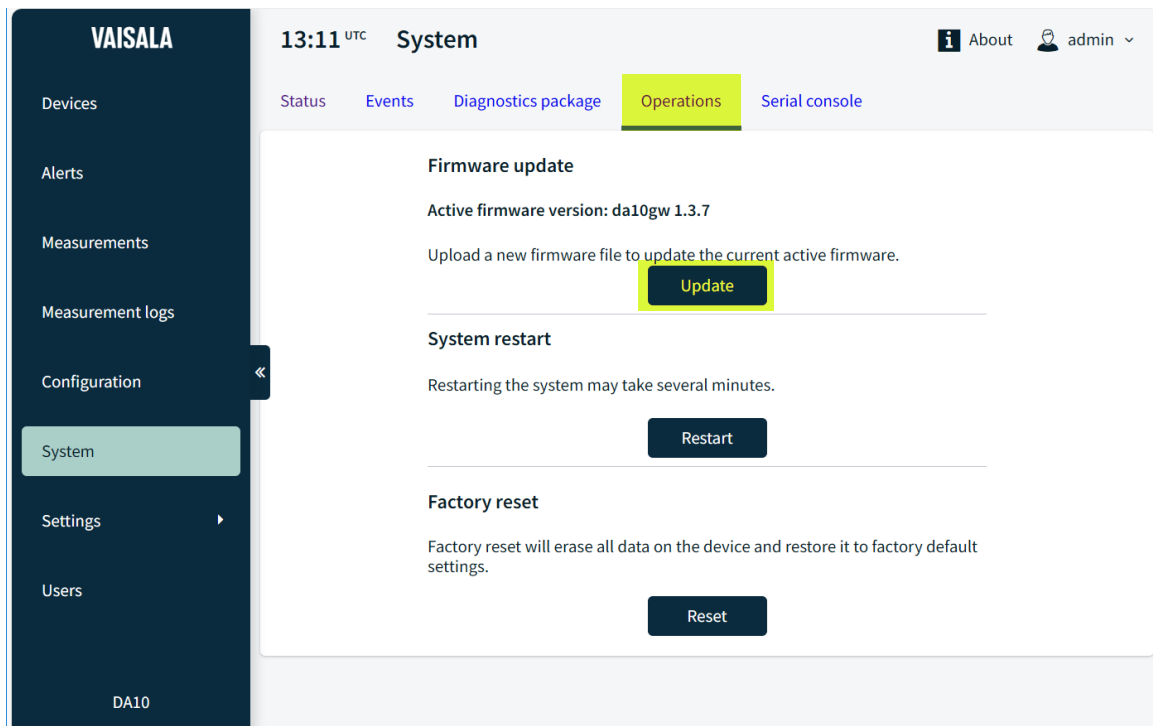
8. Select **Browse**, locate the new firmware file, select the file, select **Open**, and **Update**.
The filename is *DAC111-<version>.firmware*.
Wait for the update to finish and for the following message to appear:
Firmware update successful. The device is now restarting.
The device reboots automatically.
The pairing takes a couple of minutes. When the firmware is updated, the device has a green icon next to it.
9. Update the other device control module in the same way.
10. Check the firmware version from **Current firmware**.
Update the DA10GW without any delay.

Updating DA10GW



- Administrator username and password to Web UI
- Connection to device through Web UI
- Firmware update package (includes the necessary firmware files and release notes)

1. In the Web UI, select **System > Operations** and check the current firmware version. Select **Update**.



2. Select **Browse**, locate the new firmware file, select the file, select **Open**, and **Update**.
The filename is *DA10GW-<version>.firmware*. The update takes a couple of minutes.
When the firmware is updated, the device restarts, and you are directed to the **Login** page.
3. Log in to the Web UI.

If the firmware is not updated, try again to update it. If the firmware is still not updated, see [Troubleshooting DA10 firmware update \(page 5\)](#).

Factory resetting DA10

1. Check the release notes to see if a factory reset is required.
If a factory reset is required, see [DA10 User Guide \(M212895EN\)](#) for the instructions.
If a factory reset is not required, proceed to [Updating DA10 Client \(page 3\)](#).

Updating DA10 Client

Check the release notes for information about the DA10 Client version. If there is a newer version of DA10 Client, install it.

1. Unzip file *DA10 Client <version>.zip* on your computer.
2. To open DA10 Client, double-click file *DA10Client.exe*.

DA10 Client opens. Leave it open in the background.

Setting up data collection



- Connection to device through Web UI

Set up data collection with DA10 Client when either or both of these are part of the firmware update:

- Factory reset of DA10GW.

- DA10 Client update.

This includes, for example, setting the API key in the Web UI and DA10 Client.

- ▶ 1. Set up data collection. See [DA10 Installation Guide \(M212894EN\)](#).

Verifying operation



- Administrator username and password to Web UI
- Connection to device through Web UI

When the informative alert confirms that the device has recently started up, DA10 is fully functional.

- ▶ 1. In the Web UI, select **Alerts**.
Check that there are no active alerts.
2. In the Web UI, select **Configuration > Debug console**.
The view shows the recently occurred warnings and errors. Check that there are no errors. Errors are shown in red color.
You can ignore the following:
 - `netcdf.netcdf_generator WARNING: Missing data for: <item>` (shown until the first MR data is received, which may take up to 40 minutes)
 - `... WARNING: 'abs_netcdf' calculation took a long time: 448ms`
 - `... WARNING: 'cut_mr_and_uc_profiles' calculation took a long time: 261ms`
 - Debug messages.
3. Check that netCDF data is coming through and the data is valid.

If there are alerts, errors, or other warnings or data is not coming through, troubleshoot the device.

See [Troubleshooting DA10 firmware update \(page 5\)](#) and [DA10 User Guide \(M212895EN\)](#).

Rerunning device control module firmware update

You must update the firmware of the device control modules again. The device control modules keep the old firmware for critical error cases and revert to it if the current firmware fails to load.

- ▶ 1. Update the device control modules. See [Updating device control modules \(page 1\)](#).

Troubleshooting DA10 firmware update

The following messages can appear during the firmware update.

Table 1 Info messages during firmware update

Message	Probable cause	Actions
Invalid firmware image file	Incorrect file or file type.	Check that you have the correct firmware file for the device.
Error in firmware installation stage	Incorrect file or no connection to device.	Check that you have the correct firmware file for the device.
Error in firmware activation stage		Check that the device is still online. If the problem persists, see the information about contacting Vaisala Technical Support.

The following troubleshooting can be helpful after the firmware update.

Table 2 Troubleshooting DA10 after firmware update

Problem	Probable cause	Actions
No netCDF files coming to DA10 Client	API key is missing or web API is not enabled.	In the Web UI, select Alerts. - If the message Web API is not running appears, set the API key. - If the message Communication lost with Web API client since <last connection> appears, check that you have the same API key in DA10 Client and in the Web UI in Settings > Station parameters. For instructions, see DA10 Installation Guide (M212894EN). For the full list of possible alerts, see troubleshooting in DA10 User Guide (M212895EN).
	Data sending is not configured on the Web UI.	In the Web UI, go to Settings > Station parameters . Select features and check that WEB-API is enabled.
Alerts do not disappear	Firmware update did not succeed or settings are incorrect.	Select Devices and check that the firmware versions of the devices match the versions listed in the release notes.
		In the Web UI, select Configuration > Debug console and check the messages. To restart the configuration select Configuration > Info and Restart script. Select Debug console and follow the progress. - For information about the alerts, see DA10 User Guide (M212895EN) and try the actions listed there. - Install the firmware update again. - Contact Vaisala Technical Support.

If none of the other actions help, disconnect power from the device and connect it again.

Contacting Vaisala technical support

If the failure persists, contact Vaisala technical support and provide the following information:

- Detailed description of the steps you tried and what did not succeed.
- ZIP file of events: download the file from the Web UI (**System > Events**).
- ZIP file of diagnostics: download the file from the Web UI (**System > Diagnostics package**).