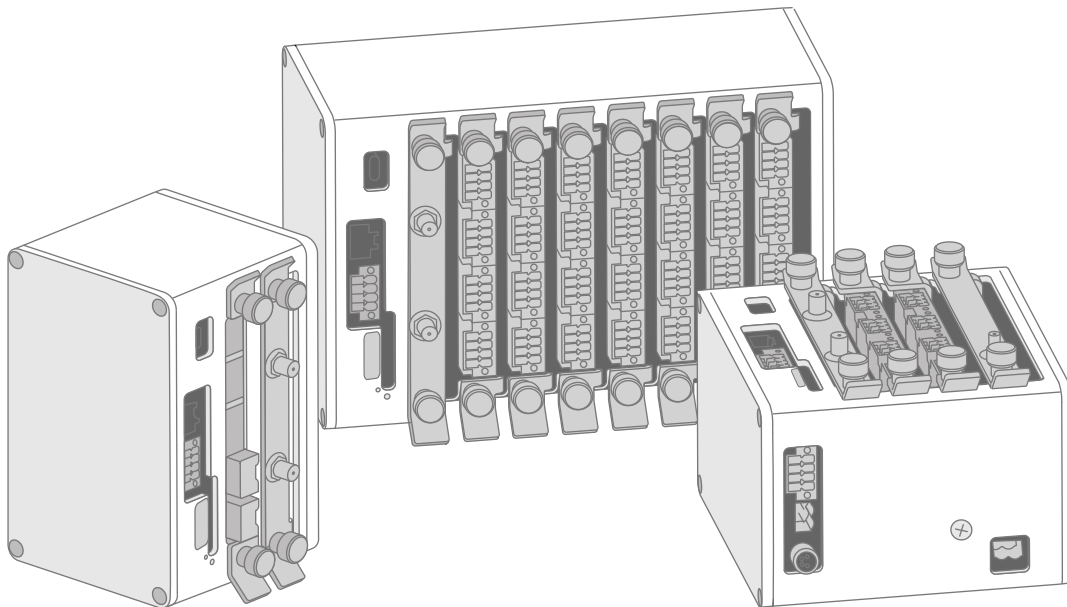


Release Notes

Vaisala Kaiku



VAISALA

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1. About this document

This document contains the firmware release notes for Vaisala Kaiku, starting from release 2.11.1. For older release notes, contact Vaisala.

See [Known issues \(page 10\)](#) for a list of open and resolved issues, and workarounds where available, related to the firmware versions.

Vaisala recommends using the latest versions of Kaiku firmware and Kaiku Designer. You can download them from Vaisala product documentation portal: [Vaisala Kaiku downloads](#).

For the firmware update procedure, see [DMU801 User Guide \(M212436EN\)](#).

For Kaiku Designer release notes, see *Kaiku Designer Release Notes (M213254EN)*. The document is included in the Kaiku Designer download package.

2. Kaiku firmware version 2.14.0

In release 2.14.0, support for AWS810 airport application has been added. In addition, several improvements have been made to other applications and to the firmware.

Release date: June 2026.

Update need

This release does not contain any critical fixes. Updating the firmware is not mandatory but recommended.

Compatibility

Support for Lwm2M (Lightweight Machine-to-Machine) protocol has been removed. The **lwm2m** component in Kaiku Designer was deprecated in Kaiku Designer version 3.6.1. If your application includes an **lwm2m** component, it does not work with Kaiku firmware version 2.14.0 or later.

To be able to update the firmware, remove the **lwm2m** component from your application and implement the functionality using other means. For example, if you have been using the component for device management, use the Kaiku Device Management API instead.

New features and improvements

- Kaiku Application API structure and reference documentation have been updated (documentation available in Kaiku Designer). Vaisala aims to ensure backwards compatibility of existing Kaiku applications. However, due to internal changes required by the introduction of `vaisala.gecko_api` namespace, the change may have some effect on existing applications. If you find any compatibility issues with earlier applications, contact Vaisala technical support (helpdesk@vaisala.com).
- Support for selectable pull-down and hardware filter capacitor included in DMA803 analog measurement module has been added. This helps with direct interfacing with certain wind sensors (such as potentiometer-type wind vanes with High-Z gap) and eliminates the need for external adapters. For more information, see [DMU801 Analog Sensor Integration Guide \(M213275EN\)](#)

Fixes

- Occasional issues with cloud connectivity mainly related to AWS810 solar application have been fixed.
- If you connected your laptop to the DME801 Ethernet switch module, the connection failed in some cases, and the Web UI was showing a blank page. The connection now works as expected.
- Diagnostics package handling has been improved, so that the size of the package does not affect downloading anymore. Earlier, if the package was very big, downloading did not always succeed.
- Several other small fixes.

Document updates

- [DMU801 User Guide \(M212436EN\)](#)
- [Kaiku Designer User Guide \(M212407EN\)](#)

- [DMU801 Analog Sensor Integration Guide \(M213275EN\)](#)
- [DMU801 ASCII Sensor Parser Developer Guide \(M213182EN\)](#)

New documents

- [Kaiku HTTPS Reports API Description \(M213354EN\)](#)

3. Kaiku firmware version 2.13.1

Release 2.13.1 includes updates to the default maritime and solar weather station applications.

Release date: February 2026.

Update need

This release provides updates only to the default maritime and solar applications used by maritime and solar weather stations. However, Vaisala generally recommends updating your firmware to the latest version.

4. Kaiku firmware version 2.13.0

Release 2.13.0 includes brand-related updates: a new name for DMU801 firmware (Vaisala Kaiku), and a new layout to the web user interface. In addition, there are new features available, such as the possibility to poll data from DMU801.

Release date: January 2026.

Update need

This release does not contain any critical fixes. Updating the firmware is not mandatory but recommended.

New features and improvements

- DMU801 firmware has been named Kaiku and Configuration Tool Kaiku Designer.
- The Web UI layout has been updated.
- To clarify and simplify terminology, configurations are now referred to as applications. For example, *standard MET configuration* = *default MET application*.
- It is now possible to poll data from DMU801 to a customer data collection system. There are new components available in Kaiku Designer version 3.6.1 that are needed in the application to enable polling. The actual polling is done through a new HTTPS Report API. For more information on the API, contact Vaisala (documentation will be available later).
- A possibility to restore the default value of a station parameter in the Web UI has been added.

Deprecated features

- The firmware version information is no longer visible in the lower left corner of Web UI. To view the version, go to **Help > About** or **System > Operations**.

Document updates

- [DMU801 User Guide \(M212436EN\)](#)
- [Kaiku Designer User Guide \(M212407EN\)](#)
- [Kaiku Device Management API Description \(M213154EN\)](#)
- [DMU801 Event Description \(M213151EN\)](#)

In addition, all DMU801 documents have been updated for the new DMU801 firmware and Configuration Tool names: Kaiku and Kaiku Designer.

5. DMU801 firmware version 2.12.0

New functions and views are available in the Web UI, and time synchronization options have been further improved.

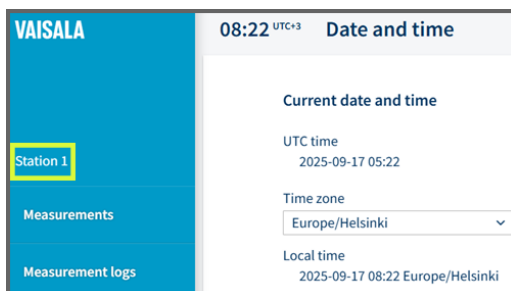
Release date: September 2025.

Update need

This release does not contain any critical fixes. Updating the firmware is not mandatory but recommended.

New features and improvements

- An option to use both GNSS (Global Navigation Satellite System) signals and NTP (Network Time Protocol) for time and location synchronization has been added. When both are in use, the system continuously monitors the quality and availability of each time source and automatically synchronizes to the one offering the best accuracy and reliability at any given time. The options are selectable in the Web UI **Date and time** view.
- Backup and restore functions are now available in the Web UI **System > Operations** view. You can create a backup file containing all settings, user accounts, and the configuration script, and restore the file from your computer.
- An initial version of the **Devices** view has been added to the Web UI. The view shows metadata, such as the serial number, of DMU801 and the connected plug-in modules.
- Station name identifying the observation site is now displayed in the Web UI.



You can edit the name in station parameters, under the parameter group **site**.

Document updates

- [DMU801 User Guide \(M212436EN\)](#)
- [Kaiku Designer User Guide \(M212407EN\)](#)

New documents

- [DMU801 ASCII Sensor Parser Developer Guide \(M213182EN\)](#)
- [DMU801 Analog Sensor Integration Guide \(M213275EN\)](#)
- [DMU801 Modbus RTU Sensor Integration Guide \(M213260EN\)](#)
- [DMU801 Time Synchronization Management Guide \(M213266EN\)](#)

6. DMU801 firmware version 2.11.1

Release 2.11.1 introduces an option to use GNSS signals for time and location synchronization. In addition, the Yocto Linux version has been updated.

Release date: June 2025.

New features and improvements

- An option to use GNSS signals for time and location synchronization has been added. The option is selectable in the Web UI **Date and time** view. For adding the feature to the configuration, there is a new **gnss_device** component available in DMU801 Configuration Tool.
- The performance of DMS801/DMS802 serial ports has been improved.
- The Yocto Linux version has been updated from Kirkstone to Scarthgap.

Fixes

- The number of buffered messages was sometimes exceeding the defined maximum size of the fail queue during TCP timeouts. The fail queue logic now works as expected.
- The issue with reading messages through DMS801/DMS802 SDI-12 port, when there are more than one sensors connected to the port, has been fixed.

Deprecated features

The following features are deprecated and are removed or will be removed in the upcoming releases.

- USB-C connectivity with Windows 7 will not work because the RNDIS (Remote Network Driver Interface Specification) is replaced with a different technology. To be able to connect to DMU801 through USB-C connection, upgrade your Windows operating system version to 10 or 11.
- Non-standard customer configurations: Direct use of `vaisala` namespace is not supported anymore. Modify your code to use `vaisala.gecko` namespace instead.

Document updates

- [DMU801 User Guide \(M212436EN\)](#)
- [Kaiku Designer User Guide \(M212407EN\)](#)

7. Known issues

Table 1 New issues

Issue	Workaround	Affected firmware versions
The true wind calculation used in the maritime application does not account for COG (Course Over Ground).	Contact Vaisala for an application that has a correctly working true wind calculation.	2.14.0
When input for the sunshine duration calculation is taken from Kipp & Zonen Sunshine Duration Sensor CSD3, the sunshine status is currently measured once per minute. The status should be measured 6 times per minute, out of which 4 should have the value Sun on to indicate detected sunshine.	–	2.14.0

Table 2 Existing issues

Issue	Workaround	Affected firmware versions
In the maritime application, wind calculation may provide accepted values even if the wind sensor is disconnected.	–	2.13.1 onward
In station parameters, it is not possible to restore a password-type parameter to an empty default value.	If the purpose is to remove the existing password, you can replace the existing password with a long random string.	2.13.0 onward
If you take a backup of the application and settings, add new users with the same usernames as in the backup file, and restore the backup file, there will be duplicate users in the system.	Remove the duplicates.	2.12.0 onward
If you restore a backup file to DMU801, the passwords of the user accounts are restored, too. If you do not remember your old password, you are not able to log in.	If you want to make sure that you will be able to log in, before restoring the backup file, create a new administrator account with a different username. After restoring, log in with the new administrator credentials.	2.12.0 onward
The issue with the kippzonen_smp component metadata reading causing application script startup errors has been fixed. If you are using a custom-made application including the kippzonen_smp component created with the Kaiku Designer (earlier Configuration Tool) version 3.0.1 or earlier, you need to update the application to implement the fix.	Update your application using the Kaiku Designer (earlier Configuration Tool) version 3.1.5 or later. Delete the old kippzonen_smp component and add a new one. Default weather station applications used in, for example, AWS810 <i>Solar Edition</i> , handle this automatically and do not require manual updates.	When updating to firmware version 2.12.0 or later and you have a custom application created with Configuration Tool version 3.01 or earlier

Issue	Workaround	Affected firmware versions
The pymodbus Python library has been updated from version 2.5.3 to 3.6.7. This causes a compatibility issue with custom-made applications.	If you have a custom-made application where the pymodbus library is used, update your application with Kaiku Designer. For instructions, see Technical Note Updating DMU801 Custom Configurations After pymodbus Library Upgrade (M213256EN) .	When updating to firmware version 2.11.1 or later and you have a custom application created with Configuration Tool version 2.10.1 or earlier
Importing the MeasurementLog component through Kaiku Application API does not work as instructed in the API reference (available in Kaiku Designer Help > Kaiku Application API).	Instead of vaisala.gecko , import the MeasurementLog component from vaisala.gecko.platform.measurementlog .	When updating to firmware version 2.10.0 or later and you have a custom application with custom calculation including MeasurementLog component imported from Vaisala API
From DMU801/Kaiku version 2.8.1 onwards, only a certain set of characters is accepted in usernames. If your username has unacceptable characters, the Users view may freeze when you update the firmware version to 2.8.1 or later.	Edit the username to include only accepted characters before updating the firmware. The acceptable characters are: • Small letters a–z • Capital letters A–Z • Numbers 0–9 • Unicode characters 0x00A1–0xFFFF • The following characters: • @ (at symbol) • = (equal sign) • . (period) • , (comma) • + (plus sign) • – (minus sign) • _ (underscore character)	When updating from firmware version 2.7.2 or earlier to firmware version 2.8.1 or later
Applications including dsc211 or dst111 road sensor components and created with Kaiku Designer (earlier Configuration Tool) version 2.5.1 or earlier do not work with DMU801/Kaiku firmware version 2.7.0 (or later).	Remove the dsc211 and dst111 components from the application and add them again with Kaiku Designer (earlier Configuration Tool) version 2.7.0 (or later).	2.7.0 onward
The internal power consumption of DMU801 control board shows too high values when the CPU is nearly idle, because the CPU always activates for the moment it reads the power consumption sensor. This will be fixed in the next DMU801 hardware revision.	If you need an accurate power consumption value, use an external power measurement gauge.	2.0.0 onward
Changing the serial port mode from RS-485 to RS-232, or vice versa, does not take effect until you have restarted DMU801. Restarting the application alone is not sufficient.	Restart DMU801.	–
Faulty SD memory cards may cause DMU801 startup to fail.	Replace the card.	–

Issue	Workaround	Affected firmware versions
SDI-12 communication does not work on DMU801 COM_X3 port yet.	Use the SDI-12 ports in DMS801 and DMS802 plug-in modules.	–
The lower SFP port in Ethernet Switch Module DME801 is not operative.	Use only one SFP module and the upper SFP port. If you need more fiber connections, use an external switch.	–

Table 3 Resolved issues

Issue	Workaround	Affected firmware versions	Resolved in
Downloading a diagnostics package from the Web UI System > Diagnostics package may fail if the package is very big.	–	2.8.0–2.13.0	2.14.0
If you connect your laptop to the DME801 Ethernet switch module, the connection may fail, and the Web UI shows a blank page.	–	2.8.0–2.13.0	2.14.0
An unstable Internet connection combined with high data transmission from DMU801 may interrupt the connection to the Vaisala cloud and stop the data transfer.	–	2.8.0–2.13.0	2.14.0
In some rare cases, when a sensor is connected to DMU801 port X2 or X3 , DMU801 restarts when sending commands from the Web UI's Serial console view. After the restart, DMU801 is operational again.	Workaround options: • Instead of using the Serial console view, connect to the sensor using your computer and a serial port adapter. • If you want to use the Serial console view, connect the sensor to Serial Module DMS801 or DMS802.	2.8.0–2.12.0	2.13.0
The Kipp & Zonen pyranometer component, kippzonen_smp , has some metadata reading errors that sometimes cause the application script start to fail.	–	2.8.1–2.11.1	2.12.0
When the TCP connection is lost, the number of buffered messages may exceed the defined maximum size of the fail queue.	–	2.7.0–2.10.1	2.11.1
Having several sensors in the same SDI-12 ports of DMS801/DMS802 may sometimes lead to the SDI-12 read function to get stuck.	Connect only one SDI-12 sensor per serial port.	2.7.0–2.10.1	2.11.1

Issue	Workaround	Affected firmware versions	Resolved in
Receiving data at high rates on DMS801 and DMS802 plug-in modules may cause increased CPU load.	–	1.10–2.10.1	2.11.1
In the Kaiku Designer's counter and gpio_input components, the debounce time has been corrected to milliseconds for DMU801 GPIO inputs X2 and X3 (earlier, the unit was already ms in the tool, but the actual time was in seconds). This change may affect the GPIO and counter inputs of DMU801.	If you have a custom-made application that includes counter or gpio_input components with DMU801's GPIO X2 or X3 as input, update the configuration with Kaiku Designer: Set the correct debounce time in milliseconds, make other possible changes, and verify that the application works as expected.	When updating to firmware version 2.10.1 or later and you have a custom-made application created with Kaiku Designer (earlier Configuration Tool) version 2.10.0 or earlier	2.10.1

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