

# Firmware Update

## Update instructions for

- a. SINEAX AM1000, AM2000, AM3000, DM5000
- b. CENTRAX CU3000, CU5000
- c. LINAX PQ1000, PQ3000, PQ5000, PQ5000E, PQ5000-RACK, PQ5000-MOBILE
- d. Option IEC 61850 of the devices a, b and c
- e. LINAX PQ5000CL, PQ5000MOBCL, PQ5000MOBCLM (base unit)
- f. Option CL for LINAX PQ5000CL, PQ5000MOBCL, PQ5000MOBCLM

## Content

|     |   |   |
|-----|---|---|
| 1   | Requirements.....                                   | 3 |
| 2   | Update via device website.....                      | 4 |
| 2.1 | Performing the update.....                          | 4 |
| 2.2 | Starting the update process.....                    | 4 |
| 3   | Update via EasyUpdater software (recommended) ..... | 6 |
| 4   | Final steps.....                                    | 7 |
| 5   | Known problems.....                                 | 7 |

**GMC INSTRUMENTS**

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## Legal information

### Warning notices

In this document warning notices are used, which you have to observe to ensure personal safety and to prevent damage to property. Depending on the degree of danger the following symbols are used:



If the warning notice is not followed death or severe personal injury **will** result.



If the warning notice is not followed damage to property or severe personal injury **may** result.



If the warning notice is not followed the device **may** be damaged or **may** not fulfill the expected functionality.

### Qualified personnel

The product described in this document may be handled by personnel only, which is qualified for the respective task. Qualified personnel have the training and experience to identify risks and potential hazards when working with the product. Qualified personnel are also able to understand and follow the given safety and warning notices.

### Intended use

The product described in this document may be used only for the application specified. The maximum electrical supply data and ambient conditions specified in the technical data section must be adhered. For the perfect and safe operation of the device proper transport and storage as well as professional assembly, installation, handling and maintenance are required.

### Disclaimer of liability

The content of this document has been reviewed to ensure correctness. Nevertheless it may contain errors or inconsistencies and we cannot guarantee completeness and correctness. This is especially true for different language versions of this document. This document is regularly reviewed and updated. Necessary corrections will be included in subsequent version and are available via our webpage <https://www.camillebauer.com>.

### Feedback

If you detect errors in this document or if there is necessary information missing, please inform us via e-mail to:

[customer-support@camillebauer.com](mailto:customer-support@camillebauer.com)

# 1 Requirements

## Ethernet interface

A firmware update is possible for devices with Ethernet interface only. The update can be performed either via the website of the device or by using the EasyUpdater software. However, the EasyUpdater is no longer supported from firmware version 3.20.

**HINT:** Currently an update of the CL option of PQ5000CL, PQ5000MOBCL and PQ5000MOBCLM can be done via website only.



For the firmware update via EasyUpdater port 22 is used, for the update via website port 80. These ports need to be open in a possibly existing firewall.

## Firmware update package

You have to download the firmware update package before starting the update process via the respective product page on our website <https://camillebauer.com>. The package contains:

- ☐ Firmware image (.fit), for updating the firmware version
- ☐ For PQ5000CL, PQ5000MOBCL and PQ5000MOBCLM only: Additional firmware image (.fit) for the CL option
- ☐ Firmware updater upgrade image (.fit), for updating the upgrader firmware if necessary
- ☐ Update instructions D/E

## Update of PQ5000CL, PQ5000MOBCL and PQ5000MOBCLM

The update package of these devices contains two firmware images, one for the base unit and the other one for the CL option, which enables communication with the current modules via the Current Link. The firmware update should be performed in the following way:

1. Possible upgrade of the updater if you are not working with the EasyUpdater
2. Update of the firmware of the base unit
3. Update of the firmware of the CL option

## Update of IEC 61850 interface



The firmware of the IEC 61850 interface must match the firmware of the base device. The update should be carried out after updating the firmware of the basic device.

**HINT:** For the PQ5000CL the IEC61850 interface is part of the firmware of the base unit, therefore no separate update is required

## 2 Update via device website

The device firmware may be updated via its website as well. Dependent on the firmware currently installed in the device, this procedure may require two subsequent steps. The present firmware version can be read via the function Device information | Device version in the service menu:

|                |            |
|----------------|------------|
| Firmware Rev.  | 2.3.6822   |
| Firmware Build | 657        |
| Serial Number  | 1175278002 |

If the new firmware version has a higher basic version, e.g. from version 2.x to 3.x, an upgrade of the updater is required as a first step.



### Update to firmware version $\geq$ V2.04

In any case, the updater must be upgraded first. After the update, it is not possible to return to a version older than V2.04.

*Hint: If the EasyUpdater software is used a required upgrade of the updater is performed automatically.*

### 2.1 Performing the update

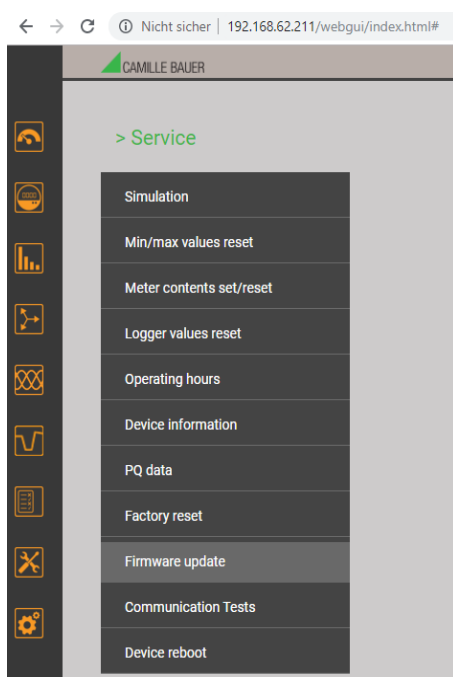







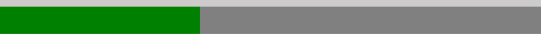
#### Known Problems:

If problems occur during the update, please refer to chapter 5.

### 2.2 Starting the update process

- ☐ Open the web page of your device in a web browser.
- ☐ Start the firmware update process using the menu <Service> <Firmware update>



|   |  |
|---|--|
|  <p><b>Really start firmware update?</b><br/>The device does not operate during this process.</p> <p>Yes No Identify device</p>  | <p>Confirm the start of the firmware update via <b>Yes</b></p>   |
|  <p>Welcome to the firmware update process. This wizard will guide you step by step.</p> <p>If you want to update the device, press next step.</p> <p>You can cancel this process. The device will reboot with the old version of its firmware.</p> <p>cancel (reboot) next step</p>   | <p>In rare cases, the browser does not automatically change to the updater site. If this happens, call the site manually. Enter the following address in the address bar of your browser:</p> <p><i>[DEVICE IP]/index.html</i></p> <p>You can cancel the update via &lt;cancel (reboot)&gt;.</p> <p>Via &lt;next step&gt; you proceed to the selection of the firmware file.</p>                       |
|  <p>Please select a FIT Image file for firmware update.</p> <p>You can cancel this process. The device will reboot with the old version of its firmware.</p> <p>Choose File No file chosen</p> <p>cancel (reboot) upload_file</p>  | <p><b>Updater Update</b><br/>Select the updater upgrade file:<br/><i>[DEVICE TYPE]-updater-upgrade_[VERSION].a.fit</i></p> <p><b>Firmware Update</b><br/>Select firmware update file auswählen:<br/><i>[GERÄTETYP]- image_[VERSION].fit</i></p> <p>Use &lt;upload_file&gt; for uploading the file to the device. Datei ins Gerät laden. This process may take longer depending on network traffic.</p> |
|  <p>Firmware is complete and valid.</p> <p>Actual firmware on the device: 1.10.1509-239<br/>Firmware in uploaded file: 2.0</p> <p>The next step will erase and program the device memory. If this step is interrupted, the device will not work properly until this process is repeated successfully.</p> <p>You can cancel this process. The device will reboot with the old version of its firmware.</p> <p>cancel (reboot) upgrade device</p>                   | <p>After the file has been uploaded to the device, the updater will show you the versions of the firmware:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Firmware version of the device</li> <li><input type="checkbox"/> Version of uploaded firmware</li> </ul> <p>The firmware is programmed into the device by clicking the &lt;upgrade device&gt; button.</p>               |
|  <p>Flash in progress.</p> <p>Please wait and do not interrupt the power supply. If this step is interrupted, the device will not work properly until this process is repeated and completed successfully. The system will reboot automatically after programming.</p> <p>Please have a look at the device monitor to control the reboot process.</p> <p>kernel.fit</p> <p></p> | <p>During the programming the updater shows the progress and information about the restart of the device.</p> <p>When the device is restarted, the web page returns to the normal display.</p> <p>If you have updated the upgrader as a first step repeat the same procedure for the firmware image.</p>   |

### 3 Update via EasyUpdater software (recommended)

By means of the EasyUpdater software the firmware of a device can be updated in one step only. However, the EasyUpdater is no longer supported from firmware version 3.20, because port 22 (SSH) is disabled for security reasons.



For the firmware update via Easy Updater ports 22 is used. This port needs to be open in a possibly existing firewall.



#### Update to firmware version $\geq$ V2.04

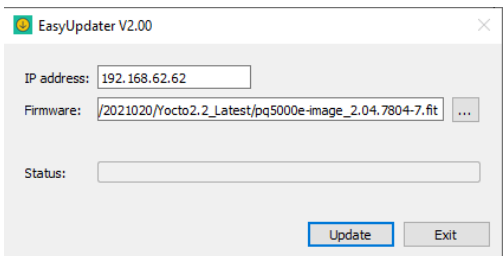
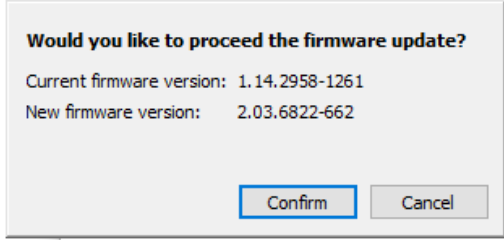
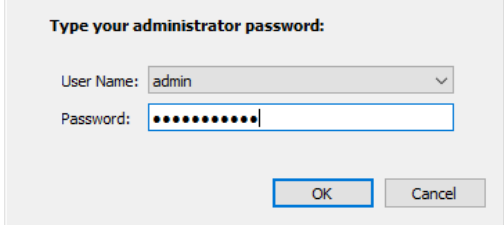
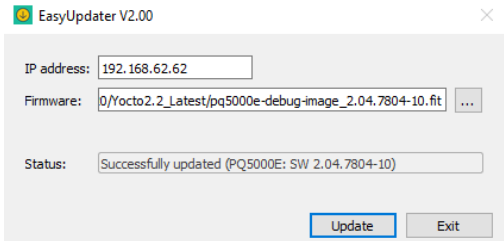
After the update it is not possible to return to a version older than V2.04.



EasyUpdater.exe

The **EasyUpdater V2.00** software can be executed directly, no installation is required.

The software can be started multiple times for updating more than one device at a time.

|   |   |   |
|---|---|---|
| A |   | <p>a) Enter the IP address of the device or the IEC 61850 interface</p> <p>b) Select the firmware image</p> <p>c) <u>Update</u></p>                                     |
| B |  | <p>The current and the new firmware version is displayed.</p> <p><u>Confirm</u></p>   |
| C |  | <p>If the user and permissions management is active you have to login as a user with the required rights.</p> <p><u>OK</u></p>  |
| D |  | <p>The update procedure then runs automatically, no further inputs are required. As soon as the procedure completes the status „Successfully updated“ is displayed.</p> |

## 4 Final steps

It is recommended to restart the device after updating (disconnect the power supply).

The website of the device needs to be updated using <CTRL> <F5>. This ensures that no cached page information from the previous firmware version is used.

## 5 Known problems

Following are some typical problems that may occur during an update.

| Problem  | Solution   |
|--|--|
| After starting the updater (v1.0), the browser does not change to the updating mode.   | Manually enter the updater site:<br><br><i>[DEVICE IP]/index.html</i>  |
| After starting the updater (v2.x), the browser does not change to the updating mode. Possibly a message is displayed, such as connection refused or timeout. | Possible steps: <ul style="list-style-type: none"><li><input type="checkbox"/> Wait at least 1 minute if the updater modus may be started anyway</li><li><input type="checkbox"/> Try to navigate one page back and then forth using the browser navigation</li><li><input type="checkbox"/> If the device is in updater mode, restart the device. It will be start in the updater mode again. Refresh the webpage via &lt;CTRL&gt;&lt;F5&gt;.</li></ul> |
| EasyUpdater software shows an error message such as "Failure establishing session".  | Check if there is a firewall blocking port 22 (SSH).   |
| The browser does not return to the WebGUI.   | <ul style="list-style-type: none"><li><input type="checkbox"/> Press &lt;CTRL&gt; and &lt;F5&gt;: Site will be refreshed and buffered site information deleted.</li><li><input type="checkbox"/> Delete the browser history</li><li><input type="checkbox"/> Use private mode (also called incognito, stealth, private mode, depending on the browser)</li></ul>   |
| Despite previous upgrade of the updater, the start image shows a lower updater version.  | <ul style="list-style-type: none"><li><input type="checkbox"/> Press &lt;CTRL&gt; and &lt;F5&gt;: Site will be refreshed and buffered site information deleted.</li><li><input type="checkbox"/> Delete the browser history</li><li><input type="checkbox"/> Use private mode (also called incognito, stealth, private mode, depending on the browser)</li></ul>   |
| Problems not listed  | Use Chrome as a web browser<br>Chrome was used to create this guide.<br>Get Chrome for free here:<br><a href="https://www.google.com/chrome/browser/desktop/">https://www.google.com/chrome/browser/desktop/</a>   |