



SICAM P855 / P850

FW Upgrade

Readme

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Upgrade Process A1

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1 Overview of Releases – SICAM P855 (7KG855)

Table 1-1 Released Version

Firmware version	Parameter set version	Bootloader version
V01.00.07	V01.00.02	V01.04.01
V01.01.00		
V02.00.05	V02.00.00	
V02.10.08	V02.01.01	
V02.11.03		
V02.12.02		
V02.13.00		



NOTE

Please confirm your device MLFB is 7KG855. You can get MLFB via below approaches:

- HTML: <http://192.168.0.xx/InfoDeviceInfo.html> (example xx = 55), **Order number (MLFB)**
- Display: Settings → Device information, **MLFB**
- Label on device

2 Overview of New Features and Modifications – SICAM P855 (7KG855)

2.1 New Features and Modifications in Firmware V02.11.03

The range of **Secondary rated current** for **AC Measurement** must be specified and selected after upgrade.

- For 1 A current measurement range, range options: 0.5 A to 1 A
- For 5 A current measurement range, range options: 2.5 A to 5 A

2.2 New Features and Modifications in Firmware V02.12.02

In this firmware version, SICAM P855 include below parameter changes. Detailed information refers to SICAM P850/P855 device manual (E50417-H1040-C482-A4).

- The range of **Voltage - Dead band** and **Power - Dead band** for **Protocol IEC61850** is extended. After upgrade, you need select a new range. Detailed information refers to [chapter 7.3.6.2 Communication Ethernet](#) in device manual.

2.3 New Features and Modifications in Firmware V02.13.00

No changes for parameters

3 Upgrade and Downgrade Guidance – SICAM P855 (7KG855)

Table 3-1 Upgrade Guidance

		Firmware Version (after up-/downgrade)						
		V01.00.07	V01.01.00	V02.00.05	V02.10.08	V02.11.03	V02.12.02	V02.13.00
Firmware Version (before up-/downgrade)	V01.00.07	NA	P1,P2,P5 ¹⁾	P1,P3,P5	P1,P3,P5	P1,P3,P5	P1,P3,P5	P1,P3,P5
	V01.01.00	<u>P1,P2,P5¹⁾</u>	NA	P1,P3,P5	P1,P3,P5	P1,P3,P5	P1,P3,P5	P1,P3,P5
	V02.00.05	<u>P1,P3,P5³⁾</u>	<u>P1,P3,P5</u>	NA	P1,P2,P5	P1,P2,P5	P1,P2,P5	P1,P2,P5 ²⁾
	V02.10.08	<u>P1,P3,P5</u>	<u>P1,P3,P5</u>	<u>P1,P2,P5</u>	NA	P1,P2,P5	P1,P2,P5	P1,P2,P5 ²⁾
	V02.11.03	<u>P1,P3,P5</u>	<u>P1,P3,P5</u>	<u>P1,P2,P5</u>	<u>P1,P2,P5</u>	NA	P1,P2,P5	P1,P2,P5 ²⁾
	V02.12.02	<u>P1,P3,P5</u>	<u>P1,P3,P5</u>	<u>P1,P2,P5</u>	<u>P1,P2,P5</u>	<u>P1,P2,P5</u>	NA	P1,P2,P5
	V02.13.00	<u>P1,P3,P5</u>	<u>P1,P3,P5</u>	<u>P1,P2,P5</u>	<u>P1,P2,P5</u>	<u>P1,P2,P5</u>	<u>P1,P2,P5</u>	NA

- 1) P1: Pre-upgrade (Stop recording & Backup recording files)
 P2: Upgrade Firmware from Maintenance Page
 P3: Upgrade Firmware from Boot Loader Page
 P4: Format SD Card
 P5: Post-upgrade (Start recording)
 P6: Upgrade Bootloader from Boot Loader Page
- 2) If the upgrade target firmware version is V02.13.00, first upgrade to V02.12.02 is mandatory. Then upgrade from V02.12.02 to V02.13.00.
- 3) Underline parts is the downgrade area.



NOTE

Before upgrade or downgrade, please confirm your device MLFB is 7KG855. You can get MLFB via below approaches:

- HTML: <http://192.168.0.xx/InfoDeviceInfo.html> (example xx = 55), **Order number (MLFB)**
- Display: Settings → Device information, **MLFB**
- Label on device

4 Overview of Releases – SICAM P850 (7KG850)

Table 4-1 Released Version

Firmware version	Parameter set version	Bootloader version
V01.00.07	V01.00.02	V01.04.01
V01.01.00		
V02.00.05	V02.00.00	
V02.10.08	V02.01.01	
V02.11.03		
V02.12.02		
V02.13.00		
V02.20.02 (P850 only)		



NOTE

Please confirm your device MLFB is 7KG850. You can get MLFB via below approaches:

- HTML: <http://192.168.0.xx/InfoDeviceInfo.html> (example xx = 55), **Order number (MLFB)**
- Display: Settings → Device information, **MLFB**
- Label on device

5 Overview of New Features and Modifications – SICAM P850 (7KG850)

5.1 New Features and Modifications in Firmware V02.11.03

The range of **Secondary rated current** for **AC Measurement** must be specified and selected after upgrade.

- For 1 A current measurement range, range options: 0.5 A to 1 A
- For 5 A current measurement range, range options: 2.5 A to 5 A

5.2 New Features and Modifications in Firmware V02.12.02

In this firmware version, SICAM P850 include below parameter changes. Detailed information refers to SICAM P850/P855 device manual (E50417-H1040-C482-A4).

- The range of **Voltage - Dead band** and **Power - Dead band** for **Protocol IEC61850** is extended. After upgrade, you need select a new range. Detailed information refers to [chapter 7.3.6.2 Communication Ethernet](#) in device manual.

5.3 New Features and Modifications in Firmware V02.13.00

No changes for parameters.

5.4 New Features and Modifications in Firmware V02.20.02

In this firmware version, SICAM P850 also supports new functionality which needs to be configured if you want to use them. Detailed information refers to SICAM P850/P855 device manual (E50417-H1040-C482-A4).

- It supports **Fault Recorder**. Detailed information refers to [chapter 7.3.5.2 Trigger Management](#) in device manual.
- It supports basic **Measurement Recorder**. Detailed information refers to [chapter 7.3.5.3 Recorder Management](#) in device manual.
- It supports memory assignment for **Fault Recorder** and **Measurement Recorder**. Detailed information refers to [chapter 7.3.5.4 Memory Management](#) in device manual.

6 Upgrade and Downgrade Guidance – SICAM P850 (7KG850)

Table 6-1 Upgrade Guidance

		Firmware Version (after up-/downgrade)							
		V01.00.07	V01.01.00	V02.00.05	V02.10.08	V02.11.03	V02.12.02	V02.13.00	V02.20.02
Firmware Version (before up-/downgrade)	V01.00.07	NA	P2 ¹⁾	P3	P3	P3	P3	P3	P3,P4,P5
	V01.01.00	<u>P2¹⁾</u>	NA	P3	P3	P3	P3	P3	P3,P4,P5
	V02.00.05	<u>P3³⁾</u>	<u>P3</u>	NA	P2	P2	P2	P2 ²⁾	P3,P4,P5
	V02.10.08	<u>P3</u>	<u>P3</u>	<u>P2</u>	NA	P2	P2	P2 ²⁾	P3,P4,P5
	V02.11.03	<u>P3</u>	<u>P3</u>	<u>P2</u>	<u>P2</u>	NA	P2	P2 ²⁾	P3,P4,P5
	V02.12.02	<u>P3</u>	<u>P3</u>	<u>P2</u>	<u>P2</u>	<u>P2</u>	NA	P2	P3,P4,P5
	V02.13.00	<u>P3</u>	<u>P3</u>	<u>P2</u>	<u>P2</u>	<u>P2</u>	<u>P2</u>	NA	P3,P4,P5
	V02.20.02	<u>P1,P4,P3</u>	<u>P1,P4,P3</u>	<u>P1,P4,P3</u>	<u>P1,P4,P3</u>	<u>P1,P4,P3</u>	<u>P1,P4,P3</u>	<u>P1,P4,P3</u>	NA

1) P1: Pre-upgrade (Stop recording & Backup recording files)

P2: Upgrade Firmware from Maintenance Page

P3: Upgrade Firmware from Boot Loader Page

P4: Format SD Card

P5: Post-upgrade (Start recording)

P6: Upgrade Bootloader from Boot Loader Page

2) If the upgrade target firmware version is V02.13.00, first upgrade to V02.12.02 is mandatory. Then upgrade from V02.12.02 to V02.13.00.

3) Underline parts is the downgrade area.



NOTE

Before upgrade or downgrade, please confirm your device MLFB is 7KG850. You can get MLFB via below approaches:

- HTML: <http://192.168.0.xx/InfoDeviceInfo.html> (example xx = 55), **Order number (MLFB)**
- Display: Settings → Device information, **MLFB**
- Label on device

Appendix 1 Upgrade Process

Process 1 (P1): Pre-upgrade

Stop Recording

- Navigate to main page via <http://192.168.0.xx/ConfMeasurementControl.html> (example xx = 55).
- Click **Stop recording**.
- Click **Send**.



Figure A-1 Stop recording

- Navigate to the main page via <http://192.168.0.xx/ConfActivation.html> (example xx = 55).
- Click **Activation** (For detailed information, refer to [Page 11 Activate Parameters](#)).

Backup of the PQ Record Files (Only required if Process3 is executed in Guidance)

The power quality values are output on the **Value View and Evaluation** tab in the **Evaluation and Data Management** menu.

For the existing PQ record files CSV, PQDIF and COMTRADE, you have to download these files via following steps:

- Select the **Evaluation and Data Management** menu and click **File transfer**.

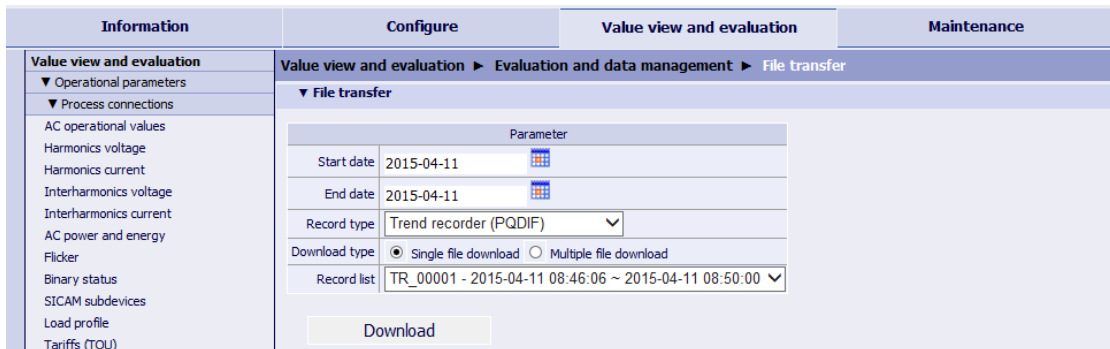


Figure A-2 File transfer

- Select **Start date** and **End date**.
- Select **Record type**.
- Select **Download type**.
- Select files from **Record list**.
- Click **Download**.

- Save files to your folder.

**NOTE**

If SICAM PQS is used, backup is not need. All records will be stored in PQS archive.

Process 2 (P2): Upgrade Firmware from Maintenance Page

Upgrade

To upload a firmware, go to the **Maintenance** page and do as follows:

- Navigate to main page <http://192.168.0.xx/MaintFwUpload.html> (example xx = 55).
- Input maintenance password and click **Enable upload** button.

Information	Configure	Value view and evaluation	Maintenance
Maintenance Firmware upload Format SD card Presets Counters Date/time Min/Max values Load profile Events Message logs	Maintenance ▶ Firmware upload Firmware upload This action is protected. Enter the correct password. Password: ***** <input type="button" value="Enable upload"/>		

Figure A-3 Enable Upload

- Click **Browse**.

Information	Configure	Value view and evaluation	Maintenance
Maintenance Firmware upload Format SD card Presets Counters Date/time Min/Max values Load profile Events	Maintenance ▶ Firmware upload Firmware upload D:\Q100\CMP_out\7KG95x_V01.10.00.pck <input type="button" value="Browse..."/> <input type="button" value="Open"/>		

Figure A-4 Select Pck Package

- Select the firmware (file extension.pck) from **Choose File to Upload** dialog.
- Click **Open**.

The device will restart automatically. After device restarts, access device via <http://192.168.0.xx>.

The **Information** tab opens and **Device information** is displayed:

Information	Configure	Value view and evaluation	Maintenance																		
Information Show device information Save device information and message logs Message logs Operational log Error log	Information ▶ Show device information Device information <table border="1"> <thead> <tr> <th>Device information</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Device name</td> <td>3P3W 118</td> </tr> <tr> <td>Order number (MLFB)</td> <td>7KG95010AA312AA0</td> </tr> <tr> <td>Serial number</td> <td>GF9000090023</td> </tr> <tr> <td>Device type</td> <td>SICAM Q100</td> </tr> <tr> <td>Firmware version</td> <td>V01.10.00</td> </tr> <tr> <td>Bootloader version</td> <td>V02.00.04</td> </tr> <tr> <td>Parameter set version</td> <td>V02.00.00</td> </tr> <tr> <td>Firmware package version</td> <td>V01.10.00</td> </tr> </tbody> </table>	Device information	Value	Device name	3P3W 118	Order number (MLFB)	7KG95010AA312AA0	Serial number	GF9000090023	Device type	SICAM Q100	Firmware version	V01.10.00	Bootloader version	V02.00.04	Parameter set version	V02.00.00	Firmware package version	V01.10.00		
Device information	Value																				
Device name	3P3W 118																				
Order number (MLFB)	7KG95010AA312AA0																				
Serial number	GF9000090023																				
Device type	SICAM Q100																				
Firmware version	V01.10.00																				
Bootloader version	V02.00.04																				
Parameter set version	V02.00.00																				
Firmware package version	V01.10.00																				

Figure A-5 Version Information

- Check the **Firmware version** in **Device information**.

Process 3 (P3): Upgrade Firmware from Boot Loader Page

Memorize Parameters

Before upload a firmware, firstly you need to memorize all the parameters with convenient method, for example screenshot.

Selecting Debugger Page

To open the **Debugger** page, proceed as follows:

- If the device is still energized by the supply voltage, switch off the supply voltage.
- Press the **F4 softkey** on the device (device with display) or the **IP-Addr. push-button** (device without display), switch on the supply voltage while holding the **F4 softkey** or the **IP-Addr. push-button** down.
- Hold the **Softkey F4** or the **IP-Addr. push-button** down until the LEDs **ERROR** (red) and **H2** (yellow) on the device top side are lit (LEDs **RUN** (green) and **H1** (yellow) are off).
- Release the **Softkey F4** or the **IP-Addr. push-button**. Device starts the **Boot Loader**.
- Navigate to the following HTML page via `http://192.168.0.xx` (example `xx = 55`).
- Move the cursor on the user interface of the **Boot Loader** below the SIEMENS logo. Click the **Hidden button** to start the debugger.

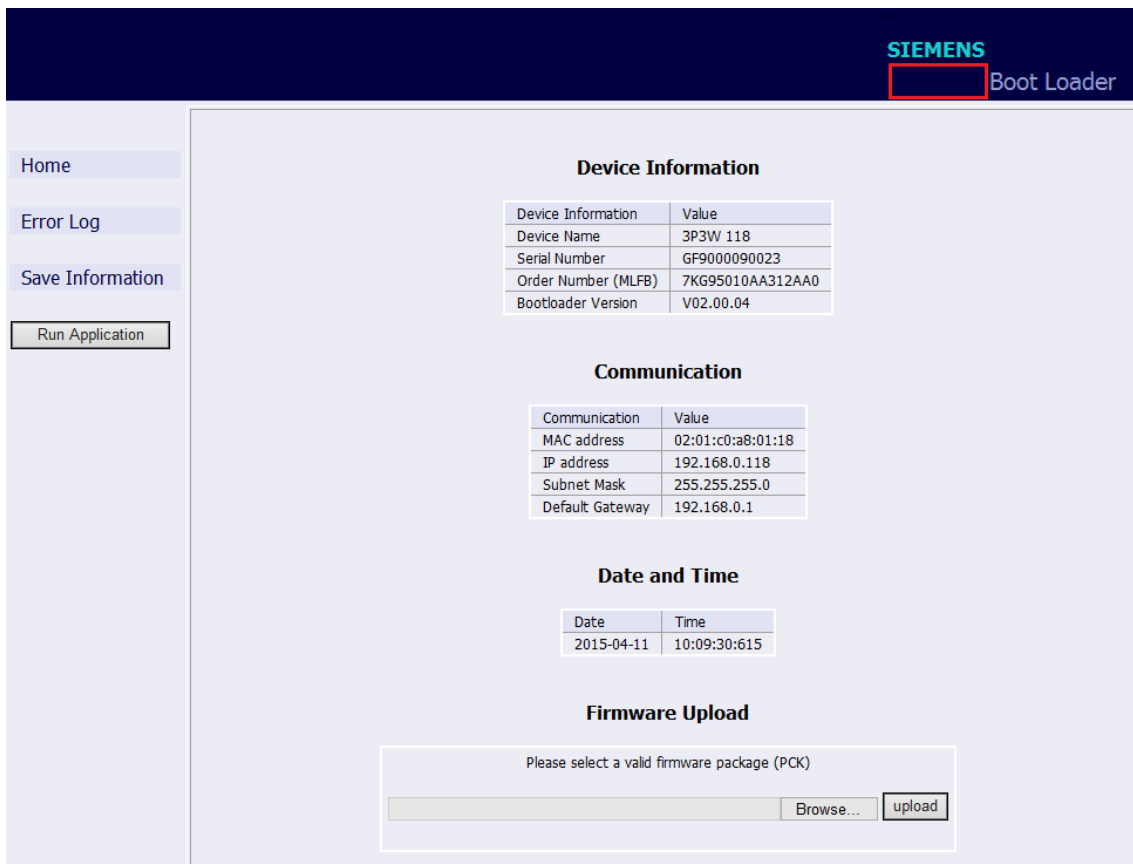


Figure A-6 Starting the Debugger

The **Debug On** button is displayed in the lower section of the user interface of the **Boot Loader**.

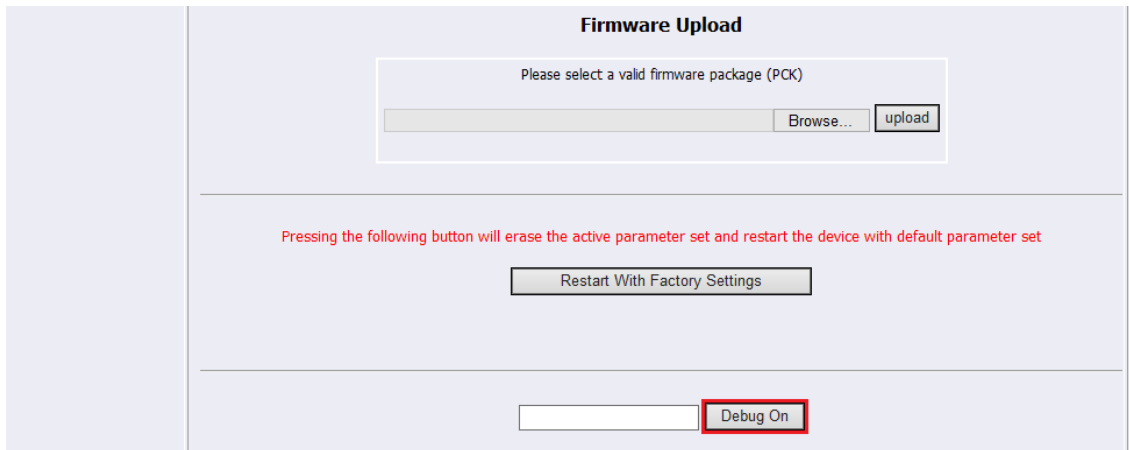


Figure A-7 Debug on Button

- Click the **Debug On** button.
- The debugging mode is activated.

Clear Parameters in RAM Disk a & b

- Click **RTF** in the navigation window of the **Boot Loader**, then **del a:*.*** and **del b:*.***.

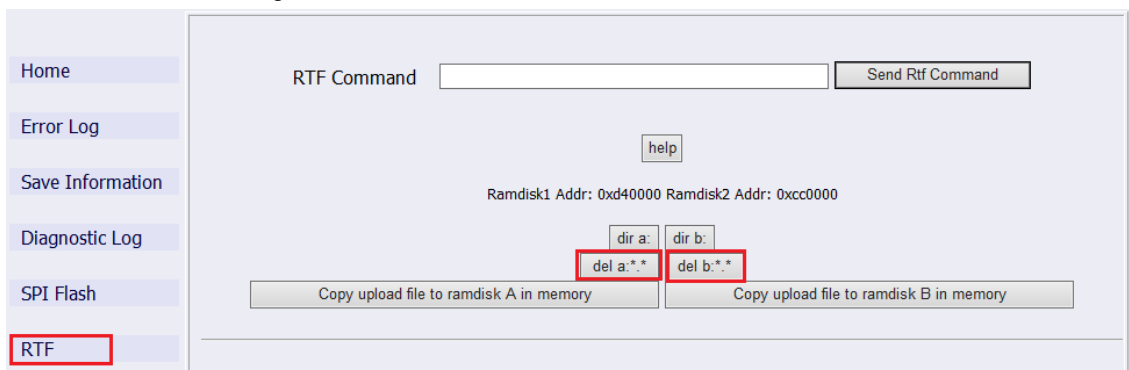


Figure A-8 Deleting the Parameters in the RAM

Erase Parameter Set

- Click **SPI Flash** in the navigation window of the **Boot Loader**, then **Erase** the **Erase Parameter Set**.
 - **Erase** the **Ramdisk A on Flash**.
 - **Erase** the **Ramdisk B on Flash**.
- The parameter set is deleted.

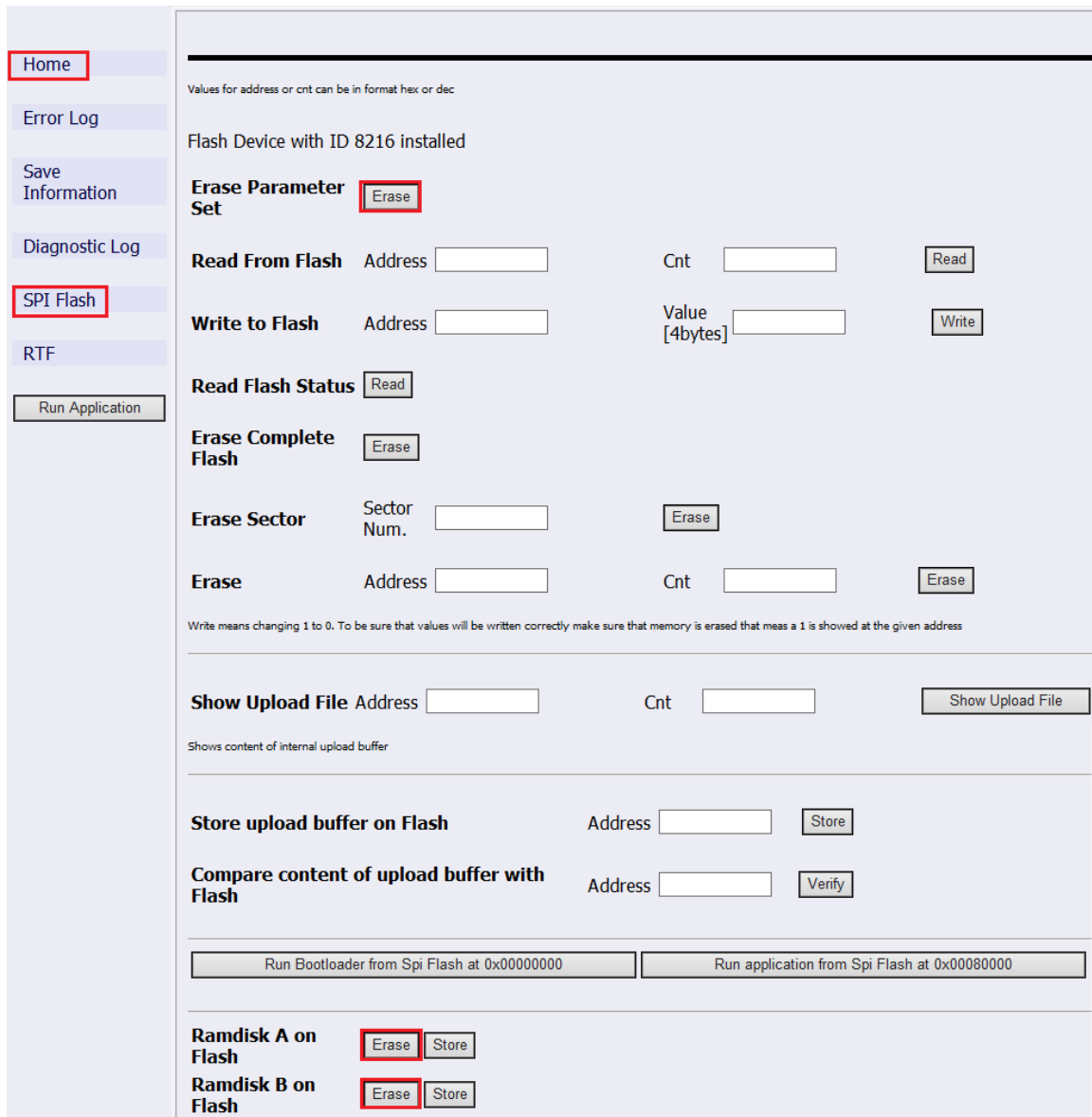


Figure A-9 Deleting the Parameter Set

- Click **Home** in the navigation window of the **Boot Loader**.

Selecting Debugger Page

To upload a firmware, go to the start page of the **Boot Loader** (For detailed information, refer to [Figure A-6](#)) and proceed as follows:

- Click **Browse**.
- Select bootloader (file extension.pck) from **Choose File to Upload** dialog.



Figure A-10 Upload Firmware

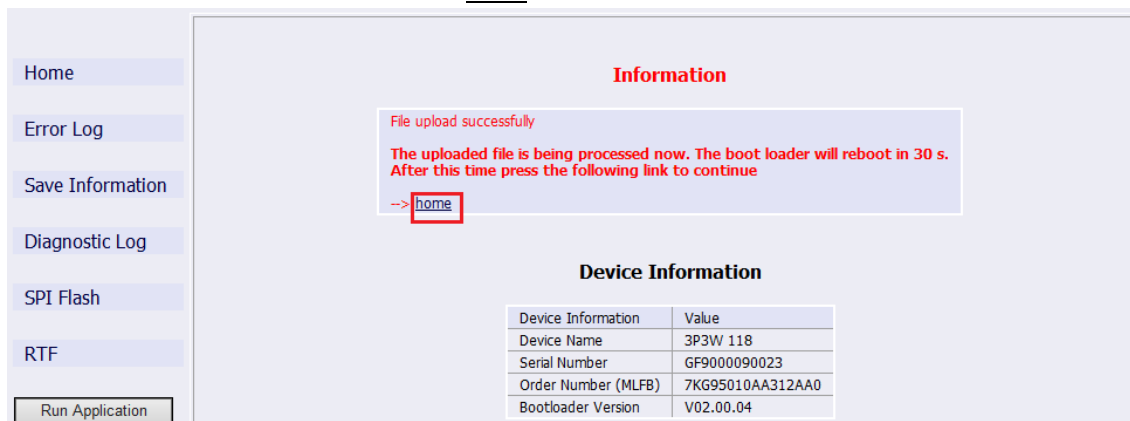
- Click **upload**.

The device then restarts automatically.

**NOTE**

Do not switch off the supply voltage during the upload process as this can lead to data loss.

- Wait for at least 30 s and then click --> **home**.

Figure A-11 Button --> **home**

The **Information** tab opens and **Device information** is displayed (For detailed information, refer to [Figure A-5](#)).

Reconfigure Parameters

Reconfigure all parameters which have been memorized in first step

Process 4 (P4): Format SD Card

Format SD Card

- Navigate to the main page via <http://192.168.0.xx/MaintFormatSDCard.html> (example xx = 55).
- Input **Password**
- Click **Enable Format SD card**

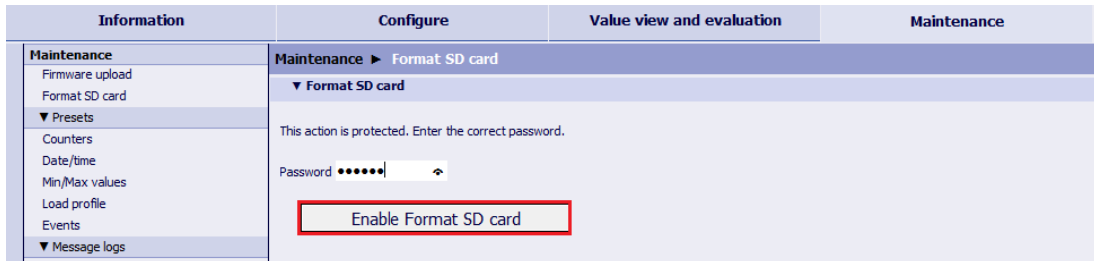


Figure A-12 Enable Format SD Card

- Click **Format SD card**

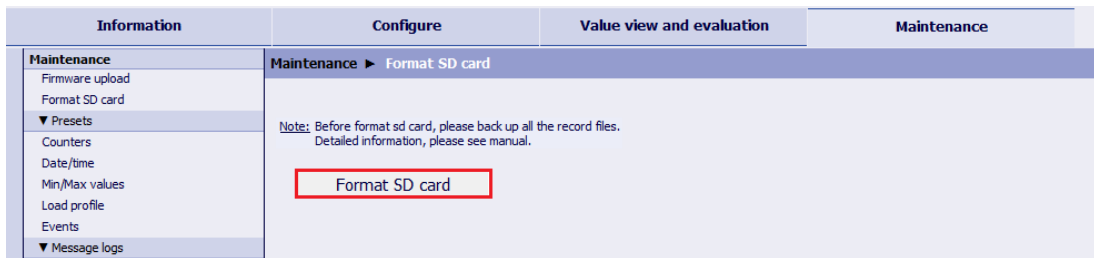


Figure A-13 Format SD Card

- The SD card format successfully.



NOTE

Please backup all data necessary before format SD card.

Process 5 (P5): Post-upgrade

Start Recording

Change the **Start record option** to **Start immediately**, click **Start recording**, and the parameter status will change to modified, activate it.



Figure A-14 Start Recording

Activate Parameters

Input password to activate all the parameters changed.

Information	Configure	Value view and evaluation	Maintenance									
LEDs ▼ Select automation functions Limits 1-8 Limits 9-16 Group indications 1-4 ▼ HMI Display settings User defined screen ▼ Energy management Load profile Tariffs (TOU) ▼ Recording and reporting Event recorders Trigger management Recorder parameters Mains signalling voltage Memory management Report configuration Recording parameters	Configure ▶ Finish configuration ▶ Activation ▼ Parameter set <table border="1"> <thead> <tr> <th>Set</th> <th>Date of activation</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Active parameter set</td> <td>2015-03-24 18:54:57:000</td> <td>Active</td> </tr> <tr> <td>Parameter set for configuration</td> <td>---</td> <td>Equal to active</td> </tr> </tbody> </table> ▼ Activation Now you can activate your parameter changes. Activation takes nearly 20 s. Do not power off the device during this time. This action is protected. Enter the correct password. <input type="password" value="Password"/> <input type="button" value="Activation"/>	Set	Date of activation	Status	Active parameter set	2015-03-24 18:54:57:000	Active	Parameter set for configuration	---	Equal to active		
Set	Date of activation	Status										
Active parameter set	2015-03-24 18:54:57:000	Active										
Parameter set for configuration	---	Equal to active										

Figure A-15 Activate Parameter

Process 6 (P6): Upgrade Bootloader from Boot Loader Page

The process is same as [Process 3](#). In this process, you need to select bootloader (file extension.pck) from **Choose File to Upload** dialog.