Procedure: Updating n-3 BMS Software

1. Purpose

This document provides step-by-step instructions for updating the N-3 Battery Management System (BMS) software to a specified target version.

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2. Prerequisites

Before beginning the update process, ensure the following:

- The target software release package (including firmware, calibration files, and release notes) has been downloaded from the link provided by Sensata.
- BMS Creator software is installed and operational.
- A compatible connection interface is available to connect the n-3 BMS MCU to the BMS Creator software.
- Stable power supply to the BMS during the update process.

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3. Procedure

Step 1 – Download Target Software

1. Download the target software version from the download link provided by Sensata.
2. Extract the release package to a known location on your computer.

Step 2 – Connect the BMS

1. Connect the n-3 BMS MCU to your PC using the BMS Creator software.
2. Navigate to the **Connection** section in BMS Creator.

Step 3 – Verify Bootloader Version

1. Check that the bootloader version displayed matches the version specified in the release notes (included in the release package).

Case A – New BMS (No Firmware or Configuration Flashed)

- The bootloader version will be visible directly in the **Connection** section.

Case B – BMS with Existing Firmware and Configuration

Follow the steps below to reveal the bootloader version:

1. Begin uploading any calibration file via BMS Creator.
2. When prompted to perform a power cycle, **do not** power cycle the device.
3. Click **OK** to proceed.
4. The upload will not continue, and the BMS will remain in boot mode.
5. Return to the **Connection** page.
6. The bootloader version will now be visible.

Note: If the bootloader version does not match the version stated in the release notes, contact Sensata Support before proceeding.

Step 4 – Update Firmware

1. In the **Service** section of BMS Creator, upload the firmware file provided in the release package.

Step 5 – Update Calibration Files

Upload the following calibration files from the **Service** section of BMS Creator, in order:

1. **ASW Calibration File**
2. **BSW Calibration File**
3. **ESW Calibration File**

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4. Verification

After completing the update, verify the following:

1. The BMS enters **Application Mode** successfully.
2. The firmware version matches the version stated in the release notes.

3. The CRC values shown in the **Connection** section for ASW and BSW match the CRC values of the uploaded files.

(example below)

CAN hardware	USB 1		Disconnect		UDS ID Def.	External
Boot CAN speed	500 kbps		FW: 500.1.0.5.51.0 | 103.1.0.18.2.0 | 10002.1.0.3.8.0		Config. CRC	0xF99A
App CAN speed	500 kbps		HW:		Calib. CRC	0x45D4
UDS ECU ID	ECU 1					
Search ECUs	Clear					