



SMARTDASH
User Manual



- **Android:** Google Play Store



- **iOS:** App Store



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Table of Contents

- 1. PURPOSE AND SCOPE 3
- 2. DEFINITIONS AND ABBREVIATIONS 3
- 3. PRODUCT OVERVIEW 3
 - 3.1 Product Description 3
 - 3.2 Key Functions 4
 - 3.3 Product Components 4
- 4. SAFETY WARNINGS 5
- 5. OPERATING INSTRUCTIONS 6
 - 5.1 Activating Smart Dash 6
 - 5.2 LED Indicator Meanings 6
- 6. MOBILE APPLICATION 6
 - 6.1 Application Download and Access 6
 - 6.2 Home Screen Interface 7
 - 6.3 User Login 9
 - 6.4 Cell and Temperature Information 10
 - 6.5 Alarms and Warnings 11
 - 6.6 About Page 12
 - 6.7 Device List – Viewing Over Wi-Fi 13
- 7. MAINTENANCE PROCEDURES 14
 - 7.1 Periodic Inspections 14
- 8. TROUBLESHOOTING AND FAULTS 14

1. PURPOSE AND SCOPE

This document has been prepared to define the following aspects of the Smart Dash Intelligent Dashboard product:

- a technical overview
- safe and correct installation methods
- operating principles
- maintenance and safety requirements.

This document is a mandatory reference intended to ensure that the product is used in accordance with its intended purpose and operates safely, reliably, and with a long service life.

2. DEFINITIONS AND ABBREVIATIONS

Smart Dash	: Intelligent battery display and monitoring unit
CAN Bus	: In-vehicle communication network
LED	: Light Emitting Diode
Unit	: Smart Dash electronic module
BMS	: Battery Management System

3. PRODUCT OVERVIEW

3.1 Product Description

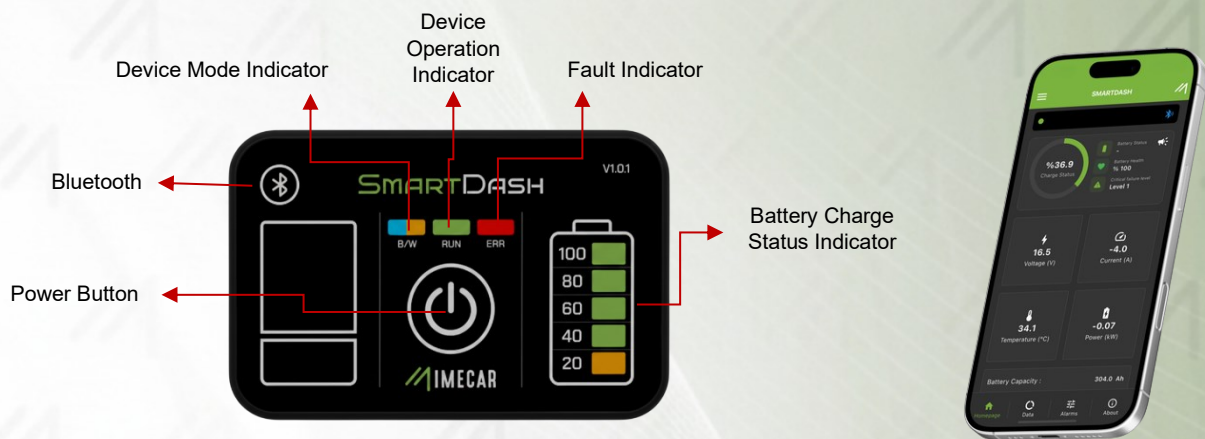
Smart Dash is an intelligent dashboard that monitors the vehicle battery status in real time, provides visual alerts to the driver, and communicates with a mobile application.

By eliminating the need for manual battery checks, the product enhances safety, improves ease of use, and increases overall system efficiency.



3.2 Key Functions

- Power on/off control
- Battery level monitoring
- Charge status display
- Fault and warning notifications
- Bluetooth and Wi-Fi connectivity
- Mobile application integration



3.3 Product Components

- Smart Dash main unit
- LED indicator panel
- Power on/off button
- CAN/power connector
- Optional plastic enclosure housing
- Metal mounting plate

4. SAFETY WARNINGS

The safety warnings provided in this section apply to installation, operation, maintenance, cleaning, and all environmental conditions.

Failure to follow these instructions may result in product damage, system malfunctions, fire hazards, electric shock, or serious injury.

- Installation, removal, and maintenance procedures must be performed by authorized personnel only.
- Use the product only for its intended purpose.
- Unauthorized interventions and modifications void the warranty.
- Observe all labels and warnings displayed on the product.
- Before performing any installation, maintenance, or removal procedures, completely power off the vehicle.
- Do not connect or disconnect any cables while the power supply is energized.
- Route and secure all cables to prevent short circuits.
- Do not use damaged, crushed, or improperly insulated cables.
- Secure all mounting components using appropriate fasteners.
- For applications subject to vibration, periodically check the tightness of all connections.
- After installation, verify that the unit is firmly secured and does not move or loosen.
- Do not perform any mechanical adjustments or connection procedures on the Smart Dash while driving.
- When warning or error indicators are active, inspect the system and discontinue use if necessary.
- Protect the device from excessive force, impact, or dropping.
- Do not clean the product using pressurized water, steam, or solvent-based chemicals.
- Use a dry or slightly damp, soft cloth for cleaning.
- Protect the product from excessive dust, mud, and dirt accumulation.
- Do not allow water, moisture, or foreign objects to enter the device connectors.
- Do not expose the product to direct sunlight, excessive heat sources, or open flames.
- Do not use the product in excessively humid, water-exposed, or poorly ventilated environments.

The manufacturer shall not be held liable for any damages resulting from failure to comply with the safety, installation, operation, and maintenance instructions specified in this document.

5. OPERATING INSTRUCTIONS

5.1 Activating Smart Dash

Step 1: Turn on the vehicle power.

Step 2: Press the Smart Dash power on/off button.

Step 3: Check the LED indicators.

5.2 LED Indicator Meanings

Indicator	Meaning
Green	Battery normal
Yellow	Medium level / caution
Red	Low level or fault
Flashing	Charging in progress

6. MOBILE APPLICATION

The Smart Dash mobile application is used to monitor battery status, view system data, track alerts, and manage device settings.

The application connects to the Smart Dash device via Bluetooth and Wi-Fi.



6.1 Application Download and Access

Download the Smart Dash mobile application using the links below:

- **Android:** Google Play Store



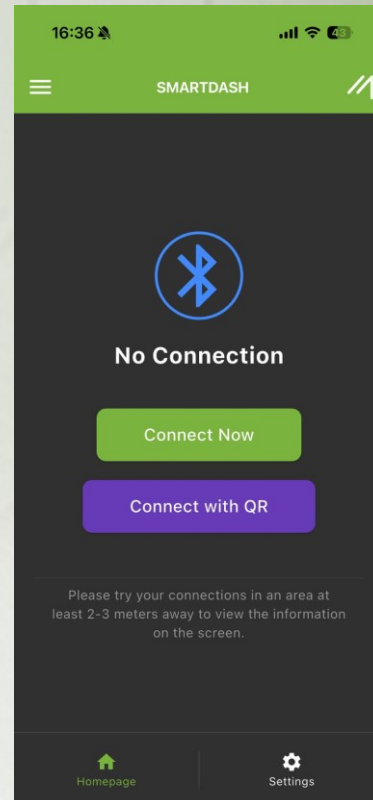
- **iOS:** App Store



The application is compatible with both Android and iOS operating systems.

6.2 Home Screen Interface

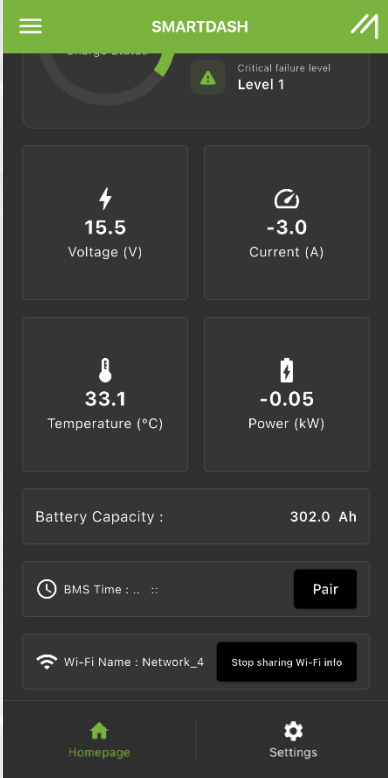
When the application is launched, a Bluetooth connection must first be established.



The login screen interface is shown in the figure. The interface allows real-time monitoring of key parameters, including voltage, current, temperature, and power.

From this screen, the instantaneous status of the connected system can be quickly observed.

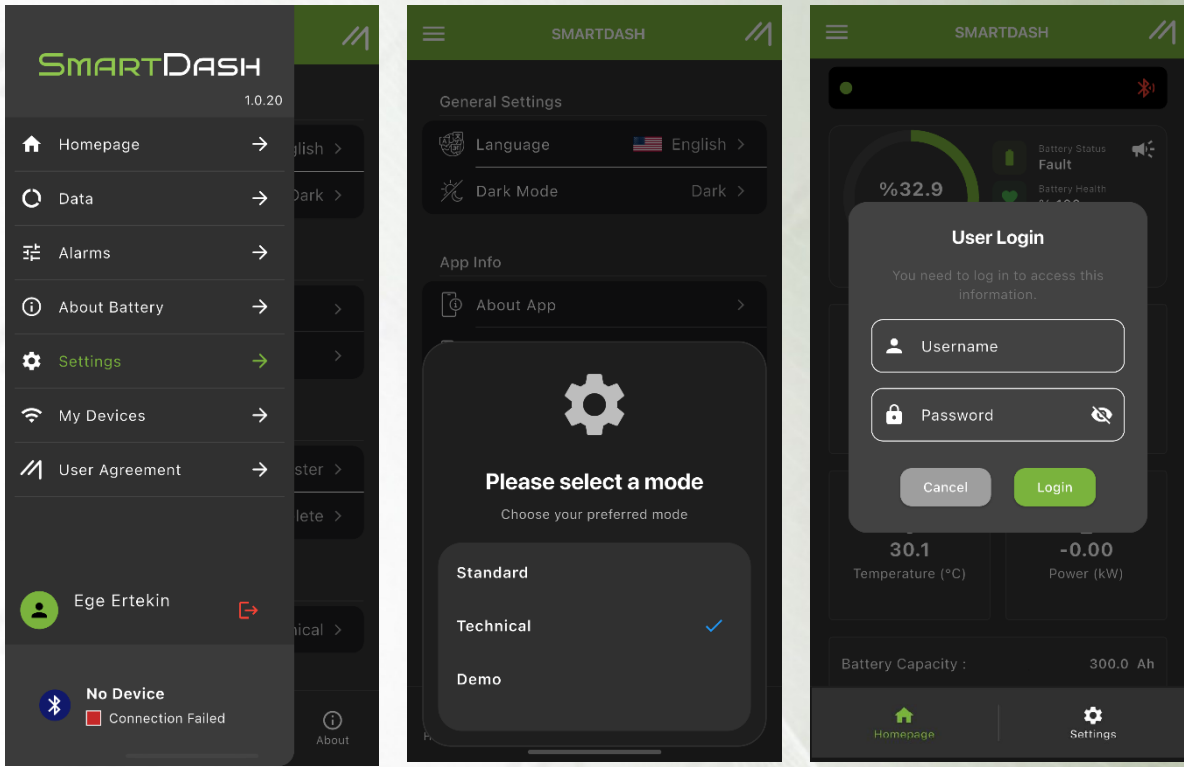
The lower section displays the BMS clock of the connected device. Use the “Pair” button to synchronize the BMS clock with the mobile device time. In the Wi-Fi section located below, the network to which the device is connected is shown. If the device is not connected to a Wi-Fi network, the corresponding button becomes active to initiate a connection.



6.3 User Login

User login is required to access detailed data. To log in, Technical Mode must be activated. After Technical Mode is enabled, users can sign in through the application using their username and password.

Note: The username and password will be provided by IMECAR.

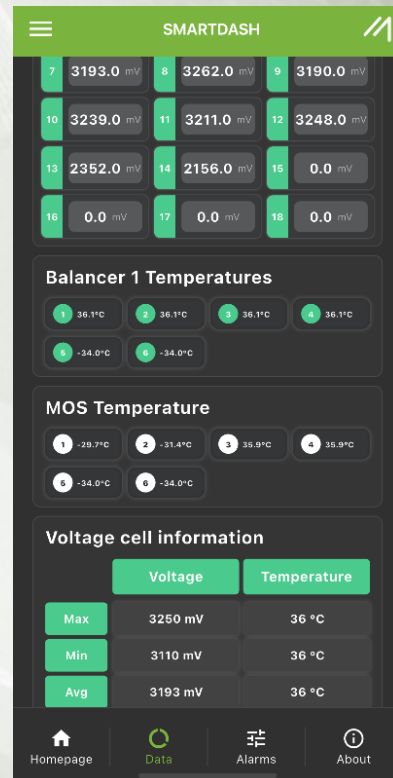
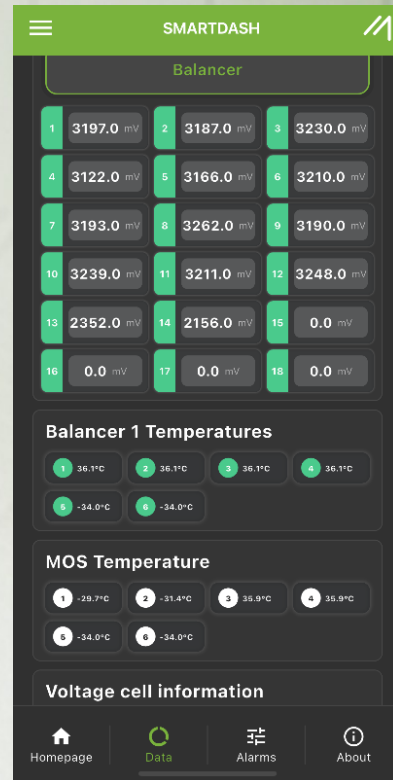


6.4 Cell and Temperature Information

This interface provides detailed information about the connected BMS, including cell voltages, balancing circuit temperatures, and MOSFET temperatures.

Further down the screen, cell temperature data is displayed.

Note: If the user does not log in, these tabs will not be active. Please log in to access detailed information.

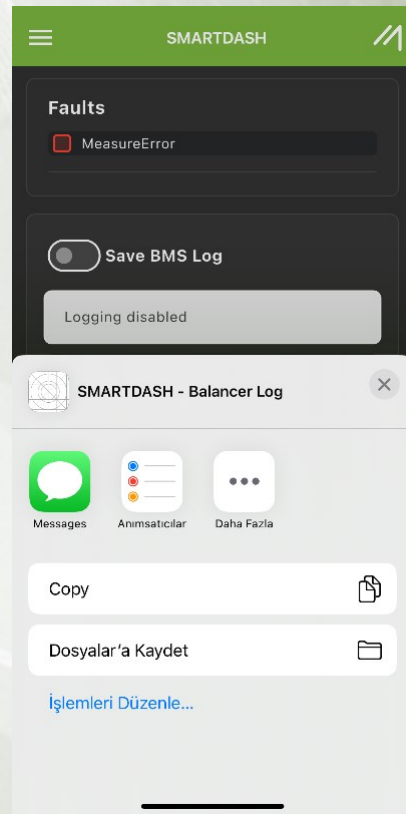
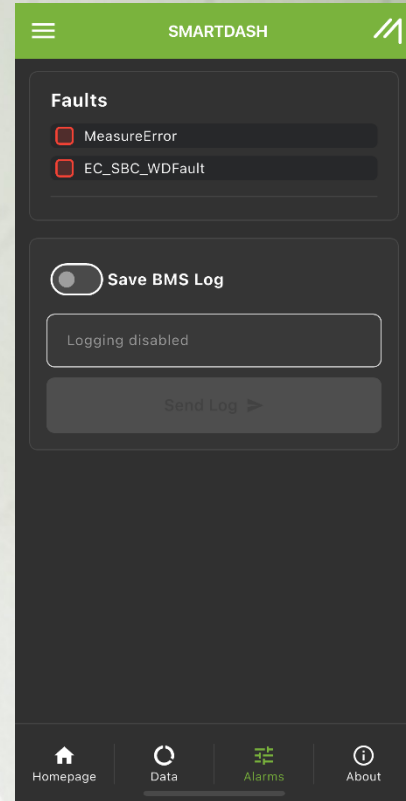


6.5 Alarms and Warnings

On the Alarms page:

- Active faults and warnings are displayed in real time.
- Warnings are categorized by severity using green, yellow, and red color indicators.

When the “Save BMS Log” button at the bottom of the page is activated, general data from the connected device is collected and can be shared as shown in the image below.



6.6 About Page

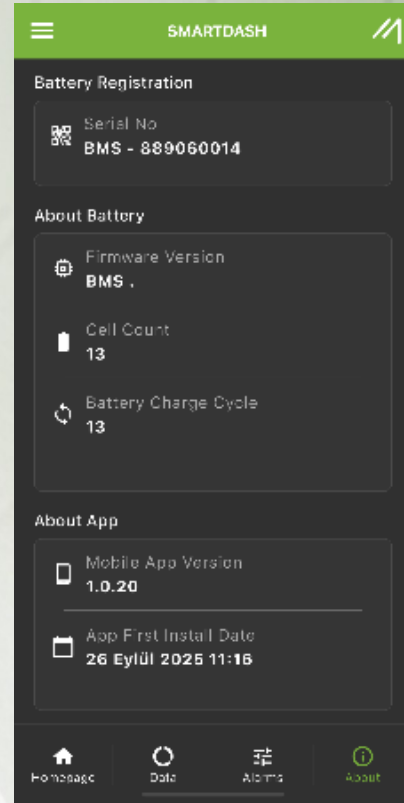
The following information is displayed on this page:

- BMS serial number
- Firmware version
- Number of cells
- Charge cycle count

In addition, the mobile applications:

- Version information
- Initial installation date

can also be viewed on this page.



6.7 Device List – Viewing Over Wi-Fi

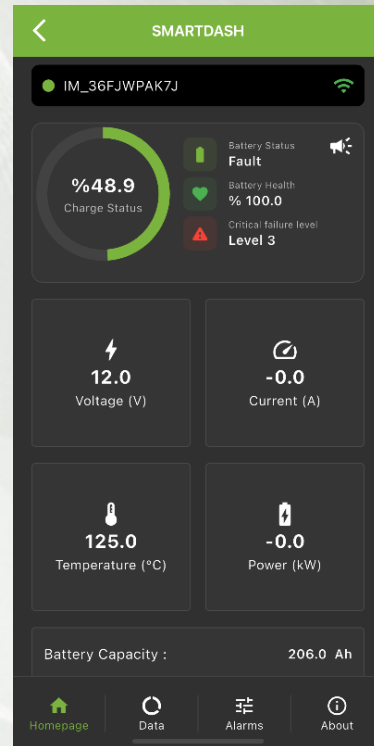
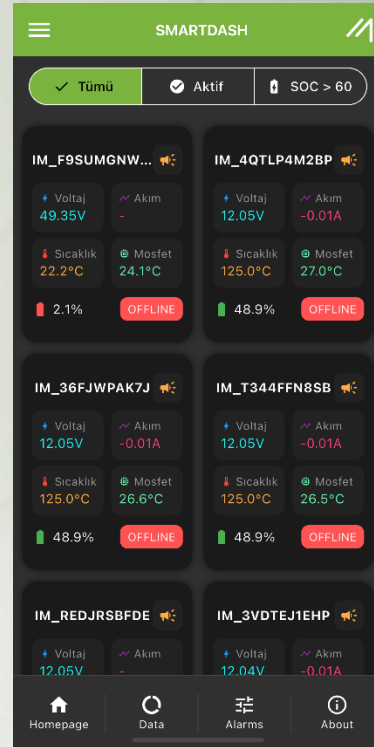
This screen lists all of your devices collectively when their Wi-Fi connections are active.

- Devices can be monitored over Wi-Fi.
- Pressing and holding on a device opens the detailed view, similar to when connected via Bluetooth.

The username and password are the same as those used for the web platform.

Web Access Address:

<https://bmsmanager.imecar.com/>



7. MAINTENANCE PROCEDURES

To ensure long-term and safe operation of the Smart Dash, maintenance procedures must be performed regularly.

Maintenance activities should be carried out at periodic intervals depending on usage intensity.



- Do not clean the Smart Dash using pressurized water.
- Using pressurized water may damage the internal components of the product and cause malfunction.

7.1 Periodic Inspections

Perform the following checks regularly:

- Check that cables and connectors are not damaged.
- Inspect connection points for looseness or contact issues.
- Ensure that there is no moisture or excessive dust accumulation on the device.
- Regularly check for and apply software updates via the mobile application.

Product to Be Maintained	Inspection Frequency	Inspection Method	Description
Cable and Connector Connections	Every 3 months	Visual Inspection	Check for looseness, disconnection, or damage.
CAN Bus Connection	Every 3 months	Visual / Functional Inspection	Verify that there are no communication errors or connection issues.
Mounting Screws	Every 6 months	Physical Inspection	Check that the screws are securely fastened.
Device Stability	Every 6 months	Physical Inspection	Ensure that the unit does not move or loosen.
Moisture and Dust Condition	Monthly	Visual Inspection	Check for excessive dust or moisture accumulation.
Software Update	As needed	Mobile Application	Check the current software version and update it if necessary.

8. TROUBLESHOOTING AND FAULTS

Condition	Possible Cause	Solution
LED does not illuminate	No power	Check the connection.
Red LED	Low battery	Charge the battery.
No connection	Bluetooth disabled	Check the phone settings.



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