



# SMARTDASH

## Installation Manual



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## 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

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

## 3. PRODUCT OVERVIEW

### 3.1 Product Description

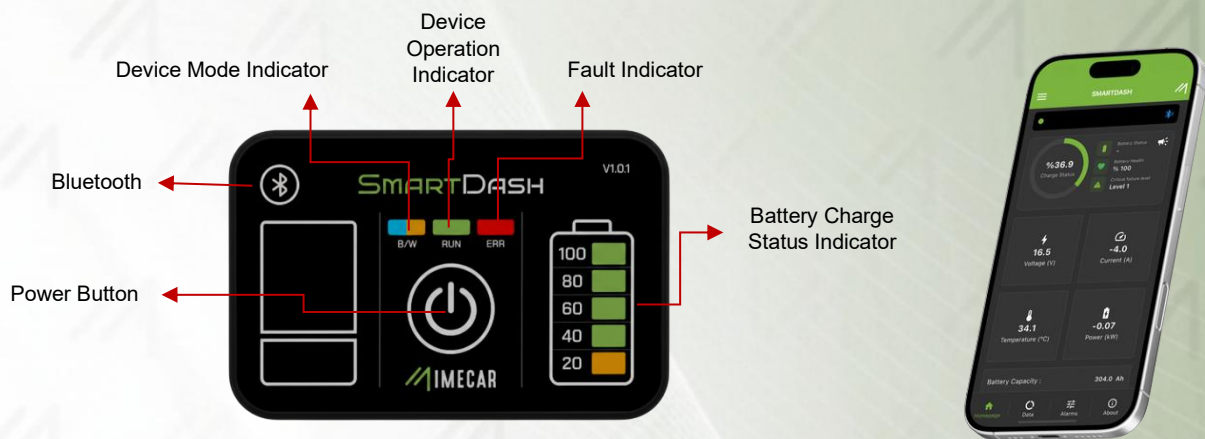
Smart Dash is an intelligent dashboard that monitors the vehicle battery status in real time, provides visual alerts to the driver, and communicates with a mobile application.

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. SMART DASH INSTALLATION PROCEDURES

The Smart Dash Intelligent Dashboard provides three standard mounting options to accommodate different vehicle types and driver ergonomics requirements.

The following general rules apply to all mounting options:

- The Smart Dash must be positioned within the driver's field of view.
- Intermediate mounting components and appropriate mounting hardware must be used during installation.
- The unit must establish communication with the battery pack via the CAN Bus protocol.
- Cables must be protected from vibration, sharp edges, and moving parts.

### 5.1 Vehicle Dashboard Mounting

The Smart Dash must be mounted on the vehicle's front dashboard within the driver's field of view.

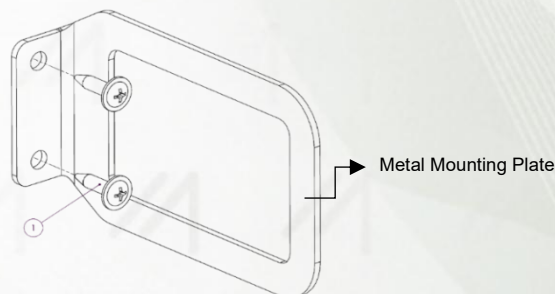
Select a mounting location that does not interfere with steering movements, pedals, or overall driving safety.

#### Materials Used:

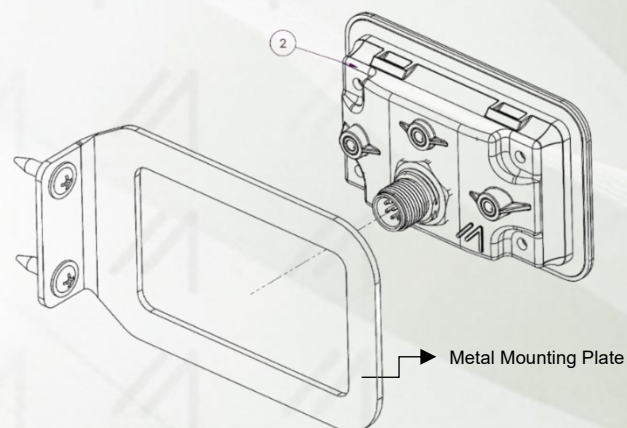
- Side Mounting Bracket
- Material Code (SN): 1811004-1-0009

#### Installation Steps:

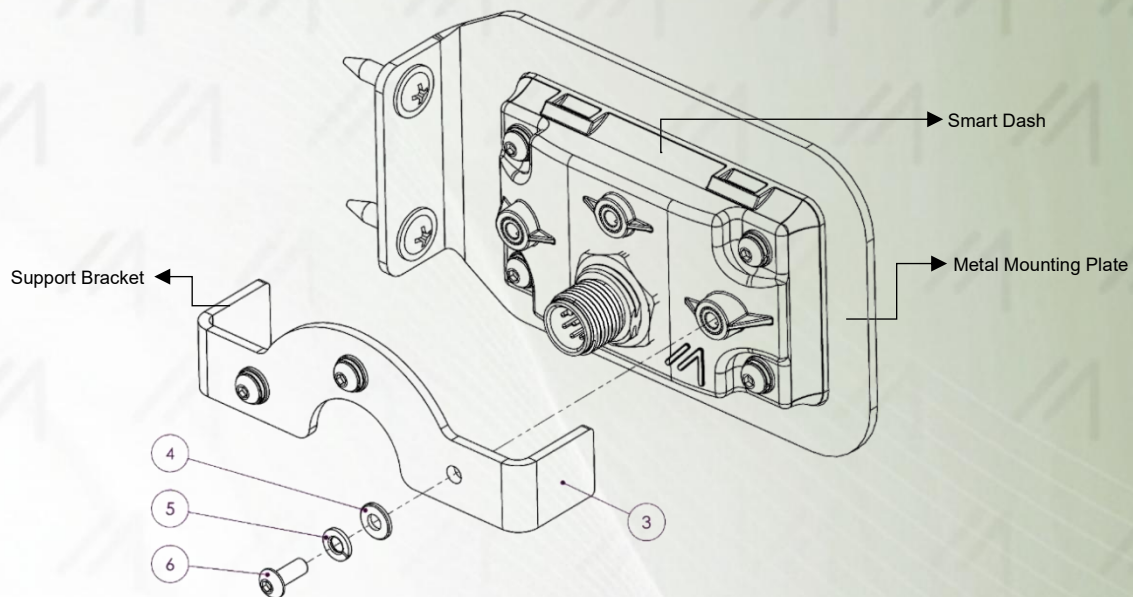
1. Align the metal mounting plate with the designated mounting location on the vehicle body.
2. Using the mounting holes on the plate as reference, secure the plate to the vehicle body with appropriate fasteners.
3. Verify that the plate is fully seated against the surface and that no deformation or misalignment is present.



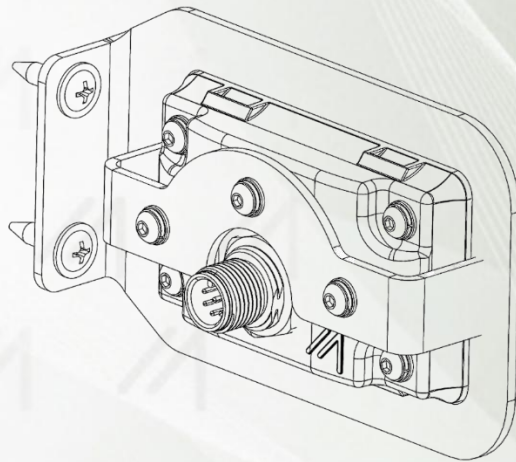
4. Position the Smart Dash (2) by aligning it with the rear surface of the metal mounting plate.



5. Position the support bracket (3) between the metal mounting plate and the rear surface of the Smart Dash.
6. Assemble the connection using the bolt (6), flat washer (5), and spring washer (4), maintaining the specified order.



7. After securing all components, verify that the installation has been completed as shown in the illustration.
8. Check the tightness of all screws and ensure that the unit is securely mounted and does not move.



## 5.2 Steering Column Mounting

The Smart Dash must be positioned around the steering column in a location that does not obstruct the driver's field of view or restrict steering movement.

An appropriate mounting location must be selected by verifying pedal clearance and knee clearance.

### Materials Used:

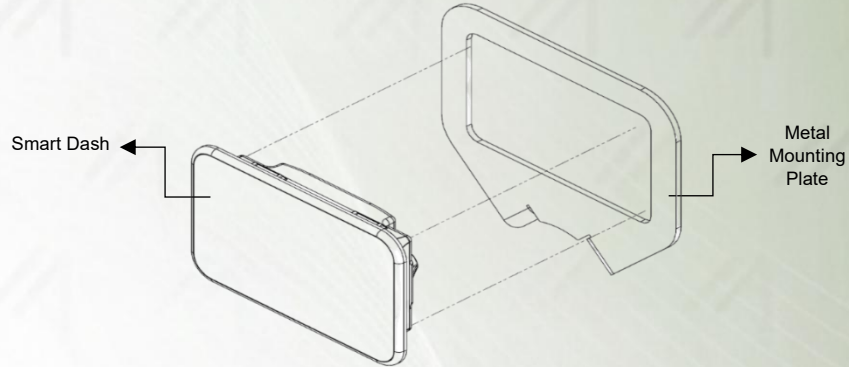
- Steering Shaft Mounting Bracket
- Material Code (SN): 1811004-1-0010

### Installation Steps:

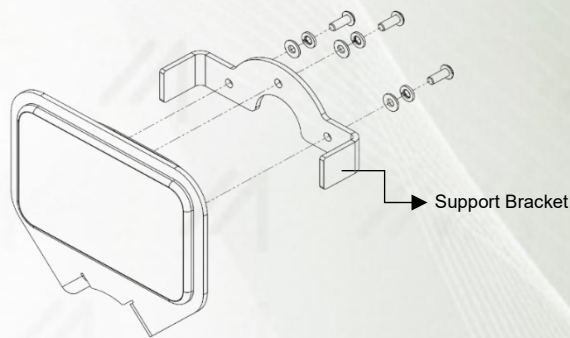
1. Align and place the Smart Dash main unit onto the metal mounting plate.



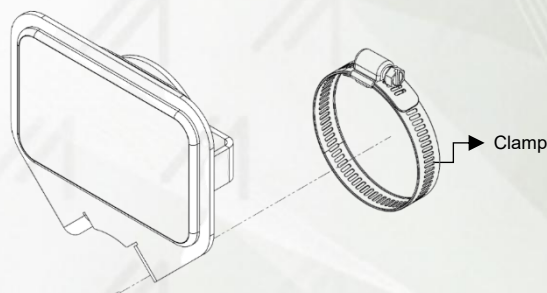
Ensure that the unit is fully seated on the metal mounting plate.



2. Align and place the metal mounting plate onto the support bracket.
3. Install the fasteners in the correct order and in a manner that prevents loosening due to vibration.



4. Position the clamp so that it surrounds the steering column.
5. Align the mounting position and fully tighten the clamp screws.



6. Verify that the Smart Dash unit is within the driver's field of view.
7. Ensure that there is no contact or movement that could affect driving safety.

### 5.3 Panel Mounting Hub

Panel mounting allows the Smart Dash unit to be securely installed by integrating it into the vehicle's front panel.

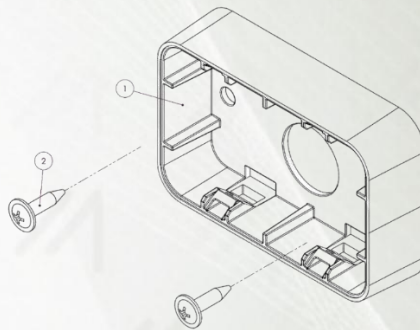
This mounting method enables placement of the unit within the driver's field of view and provides a compact installation that is seamlessly integrated with the dashboard panel.

#### Materials Used:

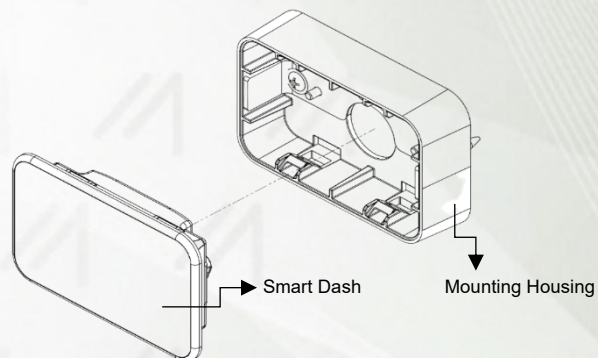
- Panel Mounting Hub
- Material Code (SN): 1811004-1-0008

#### Installation Steps:

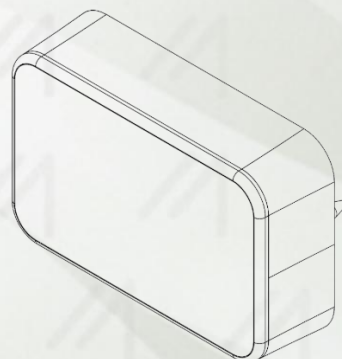
1. Place the panel mounting housing at the designated mounting location on the vehicle's front panel.
2. Using the mounting holes on the housing as reference, secure the housing to the vehicle dashboard with appropriate screws.
3. While securing the housing, ensure that it is fully seated against the surface and that no gaps remain.



4. Align the Smart Dash main unit with the panel mounting housing, ensuring that the display surface faces outward.
5. Verify that the unit is fully seated inside the housing and that the side clips are properly engaged.
6. Confirm that the Smart Dash display is within the driver's field of view and does not affect driving safety.



7. After completing the installation, proceed with the power and communication connections.



## 6. CABLE AND CAN BUS CONNECTION

The Smart Dash operates using power supplied from the vehicle battery and displays system data via the CAN Bus network.

Electrical and communication connections must be made in accordance with the instructions provided below.

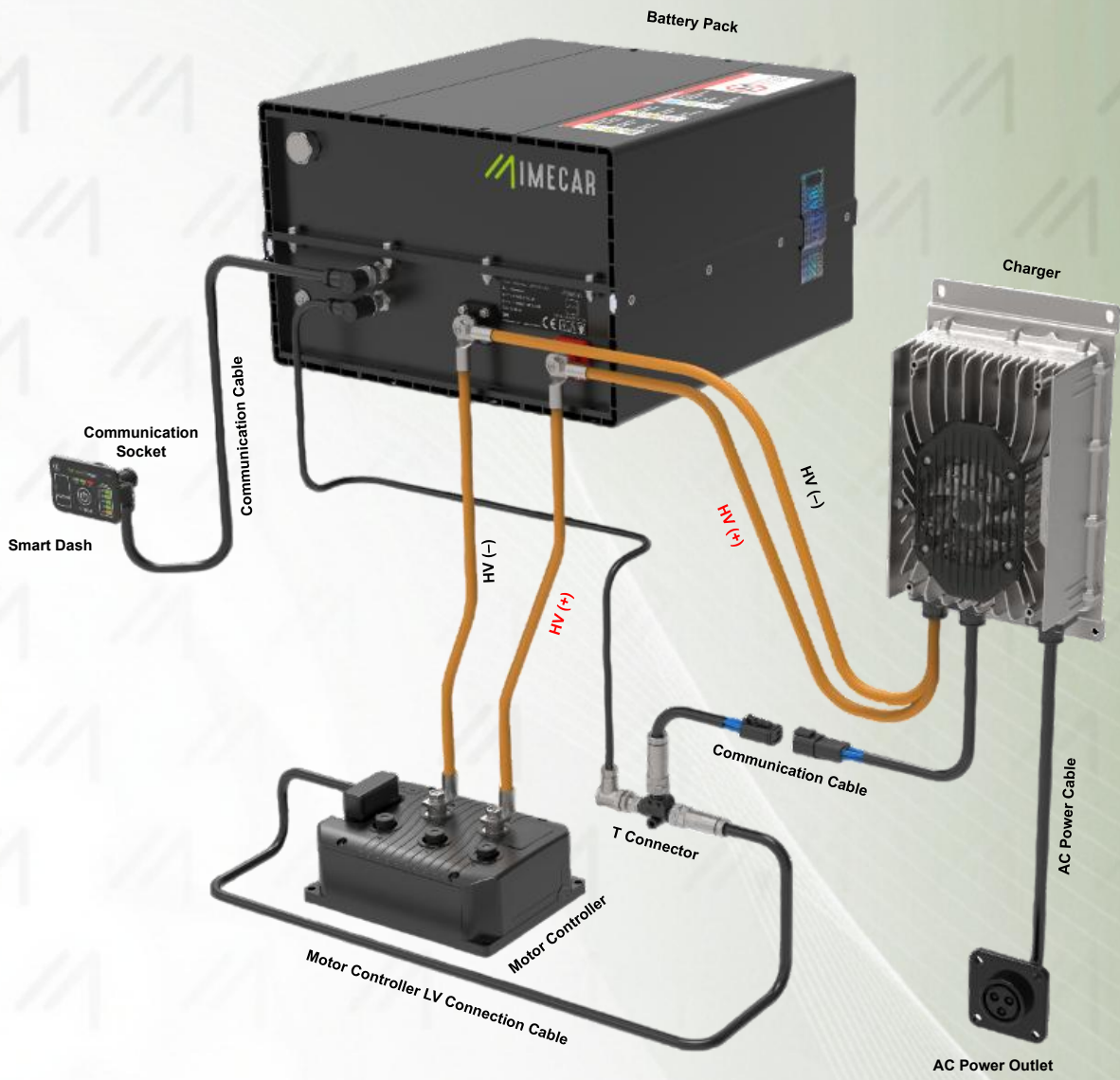
### Installation Steps:

1. Ensure that the vehicle power is completely turned off.
2. Connect the Smart Dash to the battery pack using the power cable.
3. Locate the appropriate connection point on the battery pack and properly install the cable.
4. Then connect the Smart Dash to the CAN bus using the 4 m (13 ft) CAN cable.  
(This cable length is required to ensure safe and reliable communication between the Smart Dash and the battery pack.)
5. Connect one end of the CAN Bus cable to the CAN port/connector on the battery pack.
6. Connect the other end of the cable to the CAN Bus input on the rear side of the Smart Dash unit.
7. Route the cable toward the Smart Dash unit as shown in the illustration.  
(Ensure that the cable is routed without bending and without applying stress to the connection points.)
8. Secure the cable so that it does not come into contact with hot surfaces or heat sources.
9. Verify that all connections are securely fastened and that there are no loose connections.



Power must be completely disconnected before making any connections.







FOCUS ON GREEN TECHNOLOGY



1200 Brickell Avenue, Suite 1950  
Miami, FL 33131

[us.imecar.com](http://us.imecar.com)