EoneBoss

MD SERIES
CAR SMART KEY
ADAPTER BOX



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1 Product Overview









1.1 Product Positioning

The MD Series Mercedes-Benz FBS4 Smart Key Adapter BOX provides non-invasive smart key expansion for compatible Mercedes-Benz vehicles equipped with the FBS4 system.

1.2 Non-Invasive Installation

No OEM key PCB disassembly, wire cutting or vehicle circuit boards is required. The system supports adding up to 3 smart keys.

1.3 Retained Functions

Retains supported OEM functions such as Comfort Access, Auto window up&down, hands-free tailgate, and emergency start without modifying the factory wiring or electronic hardware.

Up to 3	−40 to +85	1 Plug
Smart keys supported	Operating temperature (°C)	Connect to OEM KG module

2 Key Advantages

The MD series combines non-invasive installation, stable sensing, retained OEM functions, and emergency operation.

1 OEM Key PCB Remains Intact
Keeps the factory key PCB unchanged

2 Quick Installation
Dedicated plug for the OEM KG module

3 Emergency Start Support
Resolve starting issues in special situations

4 OEM Remote Functions Retained
Retains remote and convenience features

5 Keyless Entry Compatibility
Keyless Entry and hands-free access

6 Key Detection and Lockout
Retains lockout and departure detection

2.1 Product Specifications

Parameter	Specification
Dimensions	176 × 88 × 30 mm
Processor	ARM Cortex-M4
Bluetooth	BLE 5.0 single mode
Wireless frequency	433.58MHz & 2.4GHz & 125KHz
Receiver sensitivity	−94 dBm (BLE)
Maximum transmit power	+7.5 dBm
Operating temperature	−40°C to +85°C
Green indicator	Key learning mode

3 Vehicle Compatibility

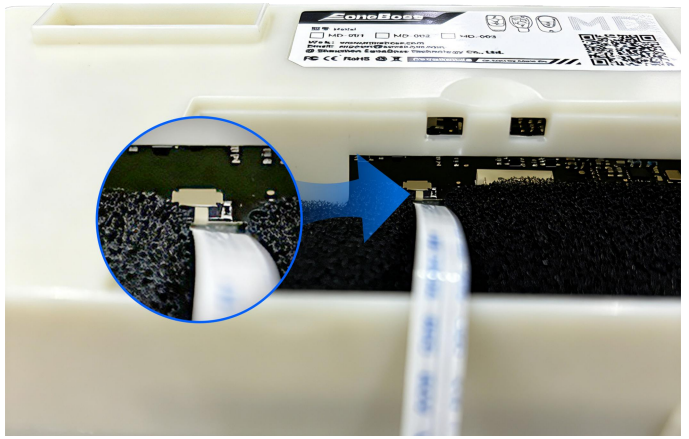
Designed for selected Mercedes-Benz vehicles equipped with the FBS4 immobilizer system. Scan the QR code for the latest compatibility list.

Compatibility Check

- Compatibility may vary by model year, factory hardware, and immobilizer firmware. Before installation, verify the OEM KG module part number and key type.

MD Unit High / Low Configuration

- Set the selector to match the vehicle.
- Left: Low configuration (without Keyless Entry)
- Right: High configuration (with Keyless Entry)



3 Functions and Operation

3.1 Remote Key Functions

Operate the vehicle functions using the buttons on the smart key

Function	Operation	Vehicle Response
Short Press Unlock	With the vehicle locked, press Unlock once.	All doors unlock and the turn signals flash once.
Press and Hold Unlock (Auto window down)	With the vehicle locked, press and hold Unlock for more than 3s.	All side windows open. The panoramic sliding sunroof and roller sunblind open.
Short Press Lock	With the vehicle unlocked, press Lock once.	All doors lock and the turn signals flash twice.
Press and Hold Lock (Auto window up)	With the vehicle unlocked, press and hold Lock for more than 3s.	All side windows, the panoramic sliding sunroof, and roller sunblind close.
EASY-PACK Tailgate	With the vehicle locked or unlocked, press and hold the trunk button.	The power tailgate opens. Press and hold again to close it.

3.2 Vehicle Start and Emergency Functions

Function	Operation	Vehicle Response
Keyless Engine Start	With the smart key inside the cabin, depress the brake pedal and press the Start/Stop button.	The system detects the valid key and starts the engine.
Emergency Start	Place the SmartKey in the marked space in the center console, depress the brake pedal, and press Start.	The vehicle transponder coil energizes the SmartKey chip to authenticate and start the engine.
Power Tailgate Stop	While the power tailgate is moving, press the remote trunk button, interior tailgate switch, or tailgate button again.	The tailgate stops at its current position. Operate the relevant control again to continue movement.

3.3 Keyless Entry and Hands-free Access Functions

Keep the smart key within detection range. No key-button operation is required.

Function	Operation	Vehicle Response
Keyless Unlock	Carry a valid SmartKey and touch the inner surface of the door handle.	The vehicle unlocks; pull the handle to open the door.
Keyless Lock	Carry a valid key, close all doors, and touch the outer handle sensor.	All doors lock; the turn signals flash twice.
Convenience Closing	Touch and hold the outer handle sensor for more than 3 seconds.	The windows, panoramic roof, and sunshade close.
Hands-Free Access	Carry a valid SmartKey and perform a kicking motion beneath the rear bumper.	One kick opens the tailgate; repeat to close it.
Interrupting Convenience Closing	During comfort closing, pull the door handle.	Closing stops and the windows begin to lower.

3.4 Key Detection and Lockout Protection

Protection Function	Trigger / Condition	System Response
Key Detection While Engine Is Running	With the engine running, take the key outside and close the door.	The display message "Key Not Detected" appears on the instrument cluster.
In-Cabin Key Anti-Lockout Protection	Leave the key in the cabin, close all doors, and try to lock from outside.	The doors remain unlocked, preventing the key from being locked inside.
Trunk Key Anti-Lockout Protection	With the vehicle locked, leave the key in the trunk and close the tailgate.	The power tailgate reopens to prevent the key from being locked in the trunk.
In-Cabin Key Shielding	Leave one paired key inside. Carry a second valid key away and lock the vehicle.	After locking, Keyless Entry is disabled for the key left inside. That key cannot unlock the vehicle from the door handle.

4 Installation and Precautions

4.1 Pre-Installation Check

Vehicle check: Confirm compatibility and verify that OEM remote lock, unlock, and push-button start operate correctly.
Parts check: Confirm that the MD unit, harness, and smart keys match the target vehicle.

4.2 Configuration and Plug-In Installation

Follow the vehicle-specific guide and connect the dedicated plug to the OEM KG module. Follow the guide for installation location, mounting, and key placement.
Note: Set the High / Low Trim to match the vehicle before connecting the harness.

4.3 OEM Key Power and Mounting

Remove the battery from the OEM smart key and place it in the reserved slot in the MD unit. Install the supplied rechargeable battery in the key battery compartment, close the cover, and secure the key in the foam recess.









4.4 Key Pairing

One unit supports up to **3 smart keys**.
Enter learning mode: Press and hold the red button for 3 seconds. Release it when the green indicator remains on.
Pair a key: Press any button on the smart key once. One green flash confirms successful pairing. Repeat for each additional key.

4.5 Exiting Learning Mode

The unit exits learning mode when you press the red button once, when no operation occurs for 30 seconds, or after 3 keys have been paired. Each successful pairing restarts the 30-second timer.

4.6 Antenna Installation

Do not attach the sensing antenna directly to metal body panels. Keep the antenna and MD unit away from high-current wiring, high-power cables, and onboard chargers.

4.7 Function Check and Vehicle Handover

Test remote lock and unlock, in-cabin key detection, Keyless Entry, and push-button start with every paired key. Hand over the vehicle only after all checks pass.

4.8 Troubleshooting

If key detection is slow, the tailgate operates unexpectedly, or the first lock attempt fails, check antenna placement and all harness and ground connections. Correct the issue and repeat the full function check before handover.

5 Package Checklist

Verify every item after opening the package. Contact the dealer if an item is missing or damaged.

Item	Quantity
MD series main unit	1
Compatible smart key	2
KG module connection harness	1
High-frequency receiver antenna	1



MD series main unit



Smart keys ×2



KG connection Cable
(Varies by Main Unit)



HF receiver antenna

Optional Smart Key Models
(Consult your dealer)



EMD01



EMD02



EMD03

6 Warranty and After-Sales Support

The MD series comes with an one-year warranty, effective from the date of purchase as shown on the receipt or transaction certificate. If no proof of purchase is available, the manufacturer's delivery date will be used as the warranty start date.

Warranty Exclusions

The free warranty does not cover:

· Failure caused by improper use or not following the operating instructions;
· Damage from unauthorized repair or modification;
· Failure due to dropping, collision, or use of incorrect voltage;
· Damage caused by force majeure (natural disasters, etc.);
· Damage from long-term use in harsh environments or in vehicles and ships;
· Cosmetic damage (dirt, wear, or discoloration of the outer casing).

Service and Technical Support

Contact us below for installation guidance or after-sales support. Before contacting us, prepare the vehicle model, model year, chassis number, and OEM KG module part number.

Website	www.eoneboss.com
Support	**S**upport@Eoneboss.com
Manufacturer	Shenzhen EoneBoss Technology Co., Ltd.

Scan for Official Resources
Scan the QR code to access product information, installation guides, and online technical support. You may also contact the dealer for installation assistance.