

# MBFM SC/DC User Manual

## 1 Product System Overview

The MBFM SC/DC BCM is designed to control several body functions. The major body functions controlled by the BCM are listed below:

No	Feature Name	Ignition Status
1	Central Door Lock	OFF, ACC, RUN
2	Remote Keyless Entry	OFF (without Key-in)
3	Front Wiper and Washer Control	RUN
4	Automatic Wiper Control	RUN
5	Head Lamps Control	OFF, ACC, RUN
6	Hazard Lights	ALL
7	Turn Lights	RUN
8	Brake Lights Control	ALL
9	Position Lamps and License Plate Lamps	ALL
10	Follow Me Home	OFF (without Key-in)
11	Lead Me to the Vehicle	OFF (without Key-in)
12	Front Fog Lamps Control	RUN
13	Rear Fog Lamps Control	RUN
14	Roof Lamp Dimming	ALL
15	Rear Defroster	RUN
16	Battery saver	ALL
17	Horn Control	ALL
18	Diagnose	RUN

**Table 1 Function list**

## 2 BCM Function Block Diagram:

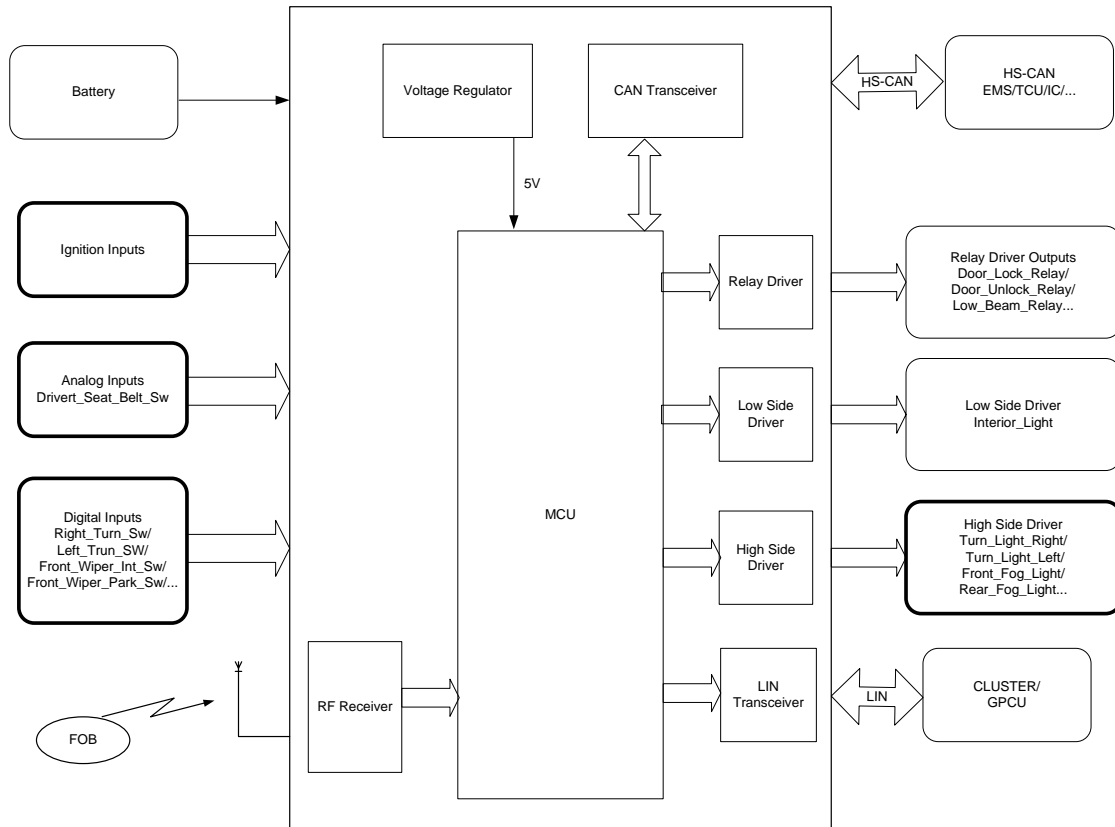


Figure 1 Function Block Diagram

## 3 Operating Voltage Range

The normal operating voltage range: 8V to 16.0V (all the voltage value from the power supply for BCM)

When battery voltage is below 8 Volts, outputs shall follow the Battery Saver functionality.

When battery voltage above 16 Volts, outputs shall follow the load protection/functional classification requirements.

When Voltage returns to normal operating range, active outputs will return to normal operation states as defined in related functional requirements.

Time hysteresis is 200ms and has a tolerance of +/-20ms.

- High Voltage protection
  - If Battery Voltage is above 18 Volts, Outputs shall be turned off for protection of the lamps and BCM.
  - If battery goes back to 17 Volts, the outputs shall return to normal operation.
- Low Voltage protection
  - If battery voltage is below 7 Volts, outputs shall be turned off for battery saving, except CAN communications channels.

The lowest voltage for the CAN communication is 6.5v.

- If battery voltage is return to 8 Volts, outputs shall return to normal operation.

## 4 Operating Temperature Range

Operational Temperature : -40°C to +85°C

The Storage temperature : -40°C to +85°C

## 5 General Function Requirements

Functions of each module which need to be incorporated in the BCM are described below.

- RKE Receiver  
BCM receive RF signal from key fob, it shall use the signal to driver door lock/unlock motor and control the left/right turn light flash.
- Tire-Pressure-Monitoring-System (TPMS) Integrated
- Key in Detection
- Battery Saver
- Interior and Exterior Light Control
- Front/rear Wiper Control
- Washer Control
- Central Lock/unlock Control
- Rear Defroster Control
- Anti-theft and Alarm Function
- Others

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.