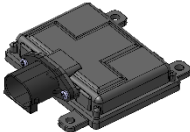


MAR110

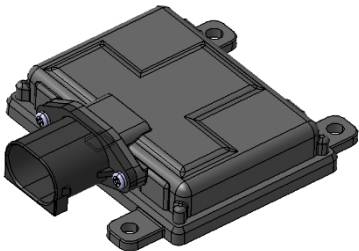
1. Specification

1-1. Feature and main spec

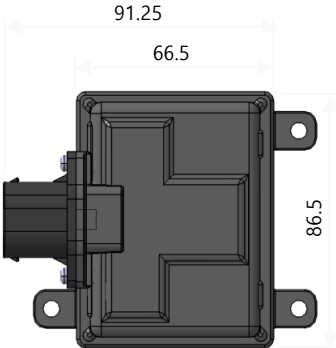
		Rear Radar
Appearance		 Corner radar radar LH
Main spec	sensor	• Individual SRR
	S/W	• Radar signal processing DSP SW • Warning logic (BSM/RCTA) SW
Note		• New sensor (Individual SRR) applied

Radar Specification (Dimension)

Size	666.5 x 86.5 x 23.96 mm(Not including connector) 91.25 x 86.5 x 23.96 mm(Including connector)
Weight	110 g



3D Modeling appearance

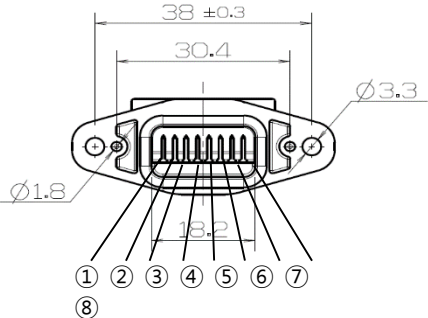


Top view



Bottom view

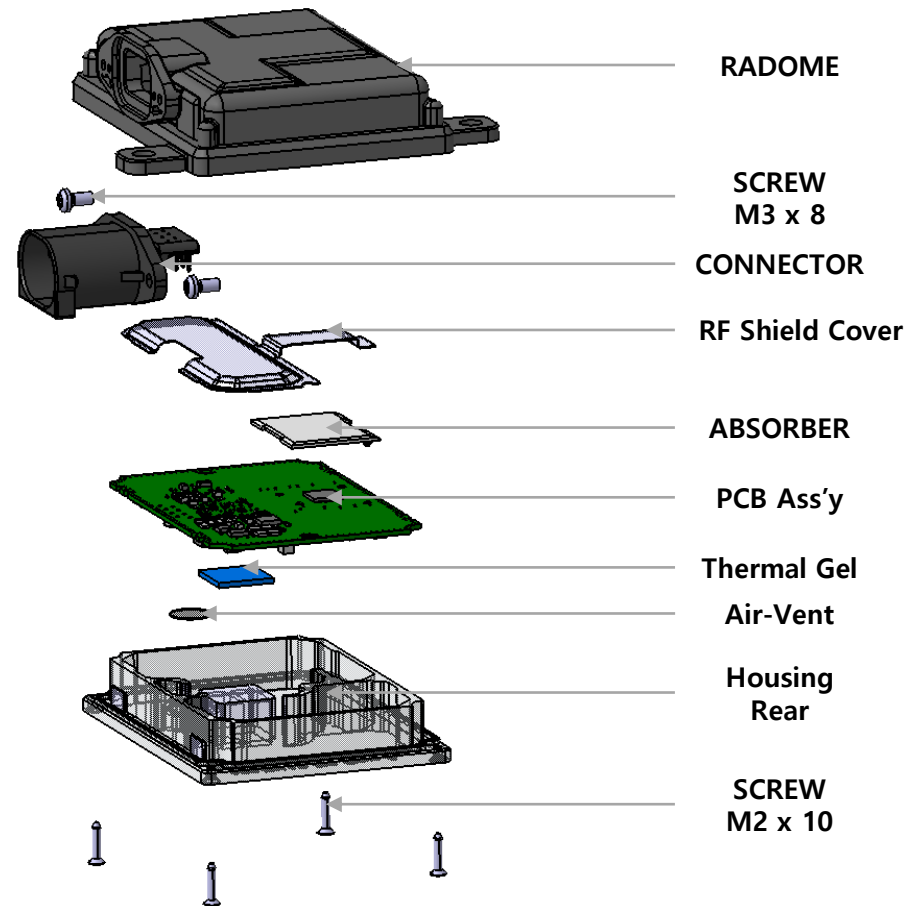
Connector terminal arrangement (Connected Side View of UNIT)



No.	Signal	Signal name	No.	Signal	Signal Name
1	Ground	시스템 GND	5	V_CAN-L	Vehicle CAN-L
2	P_CAN-H	Private CAN-H	6	V_CAN-H	Vehicle CAN-H
3	P_CAN-L	Private CAN-L	7	CAN-Lo	CAN-L
4	CAN-Hi	CAN-Hi	8	Ignition	POWER LINE

Composition of Component (MAR110)

Radar Spec(H/W)



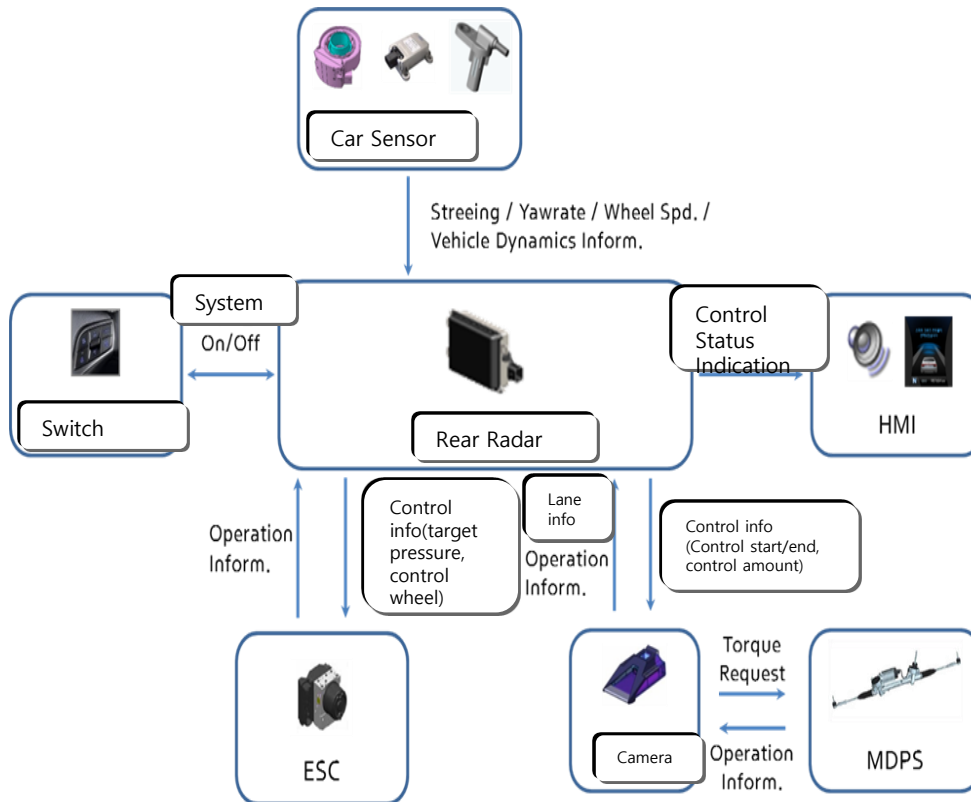
CAN FD Supported

1. 2CH CAN FD supported
2. 1CH Selective Wake Up supported (Vehicle CAN FD transceiver)
3. Maximum speed 2Mbit/s

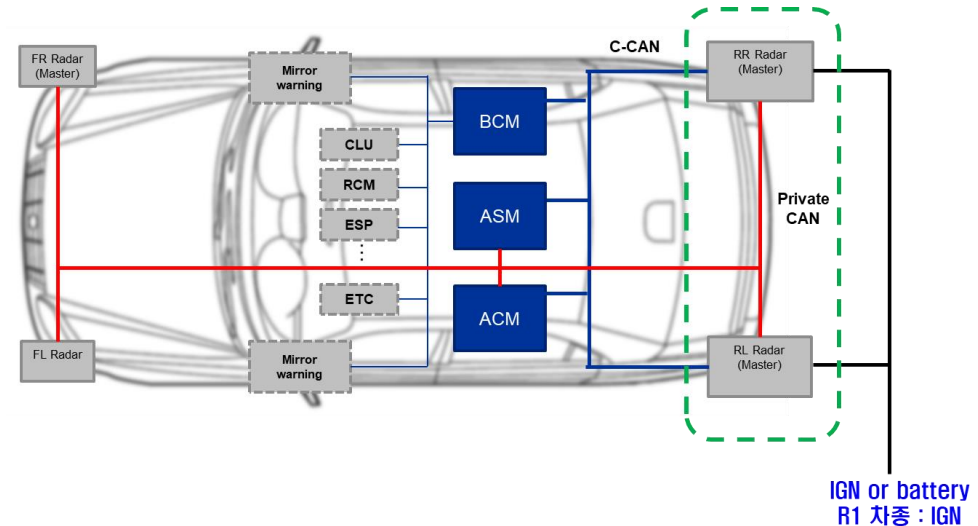
1. Specification

1-2. System composition

System composition



System Architecture Composition



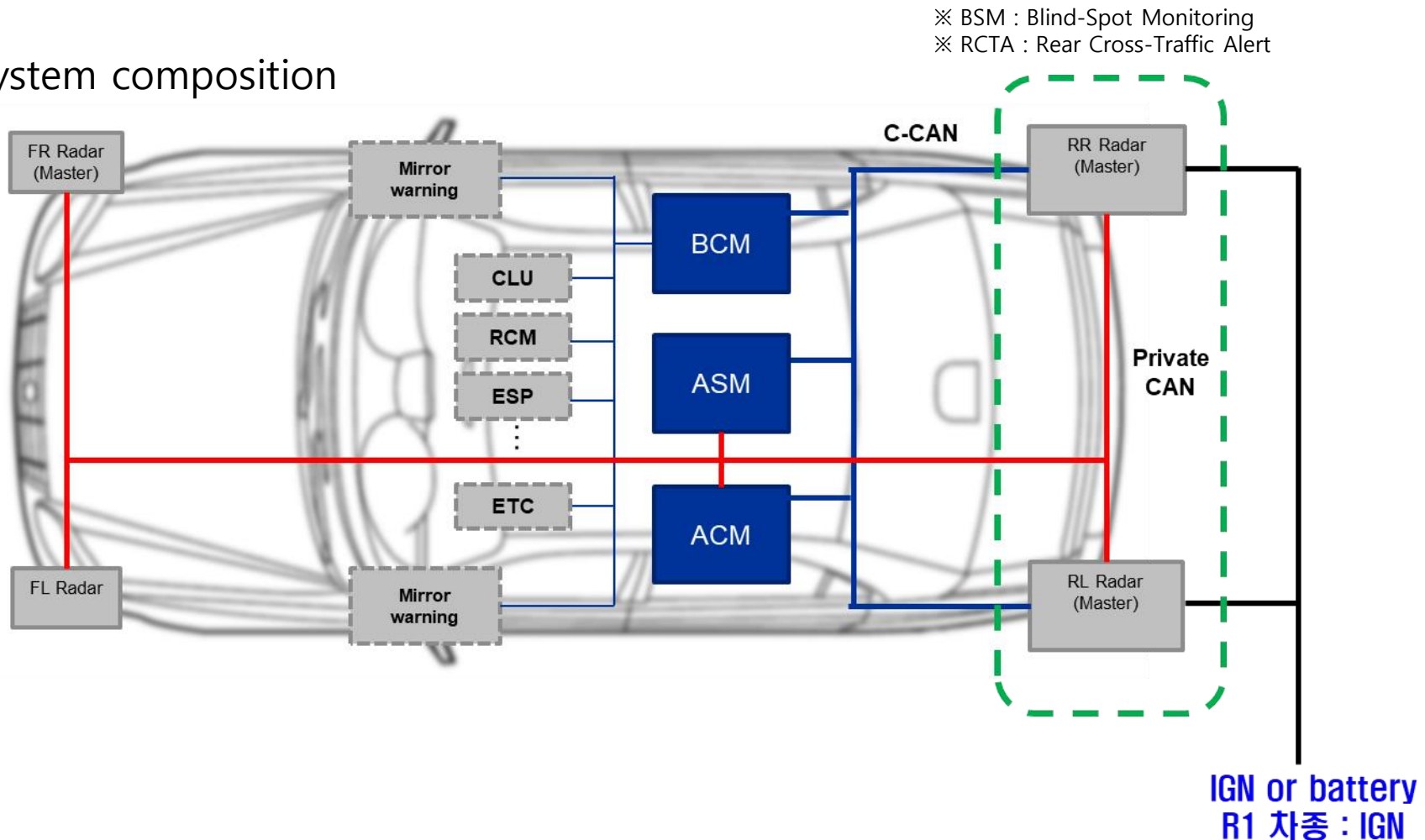
Cavity ID	Circuit ID	Circuit Function
1		Power
2		Radar Location
3		C-CAN -HI: CHASSIS CAN HI
4		L-CAN-HI: LOCAL CAN HI
5		Radar Location
6		C-CAN-LO: CHASSIS CAN LOW
7		L-CAN-LO: LOCAL CAN LOW
8		GROUND

2. Corner Radar Function

1. Brief

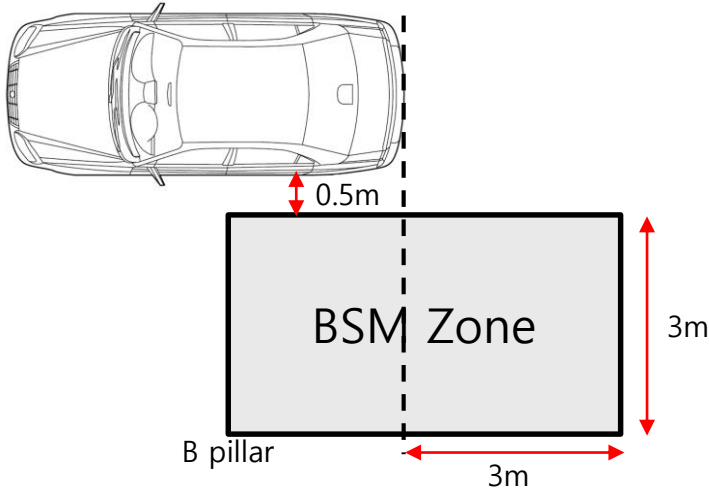
- Detect objects around a car with 360 degree, and provide to a car (360 Tracks)
- Detect the driver's blind spot or car approaching rear lateral with radar, and give information to users(BSM)
- When going back ward, it will give alert for approaching car left/right side

2. System composition



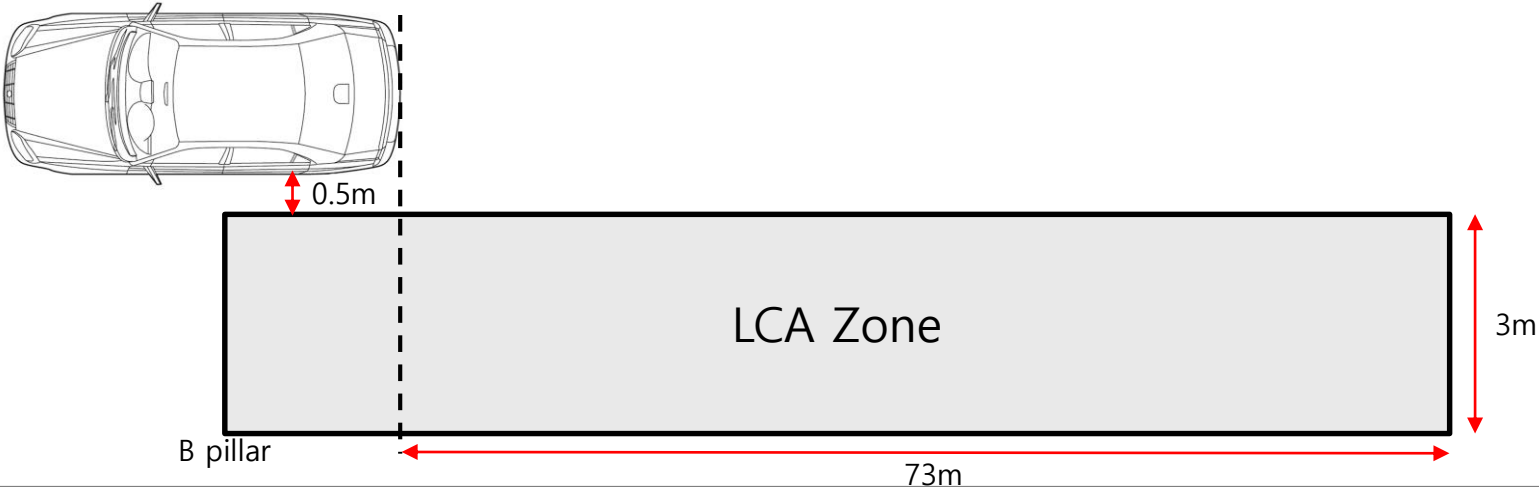
2. Rear Lateral Radar Function

2-1. BSM (Blind spot)

Functionality	■ Detects vehicle in blind spots by radar and alerts driver - Warning method: First – Passive warning, second – Active warning  The diagram shows a top-down view of a car with a dashed vertical line extending from its rear end, labeled 'B pillar'. To the right of this line is a shaded rectangular area labeled 'BSM Zone'. A red double-headed arrow indicates the lateral width of this zone is 3m. Another red double-headed arrow indicates the longitudinal distance from the B-pillar to the rear of the BSM Zone is 3m. A third red double-headed arrow indicates the vertical distance from the car's rear end to the top of the BSM Zone is 0.5m.
Activation Condition	• Host Speed : over 30 kph • Curvature Radius over 125m
Warning Zone	• Lateral: 0.5 ~ 3.5m • Longitudinal: B-pillar of host vehicle ~ 3m(from rear end)
Warning Condition	• Target vehicle exists in alert zone • Target vehicle relative speed within -10 ~ 255kph

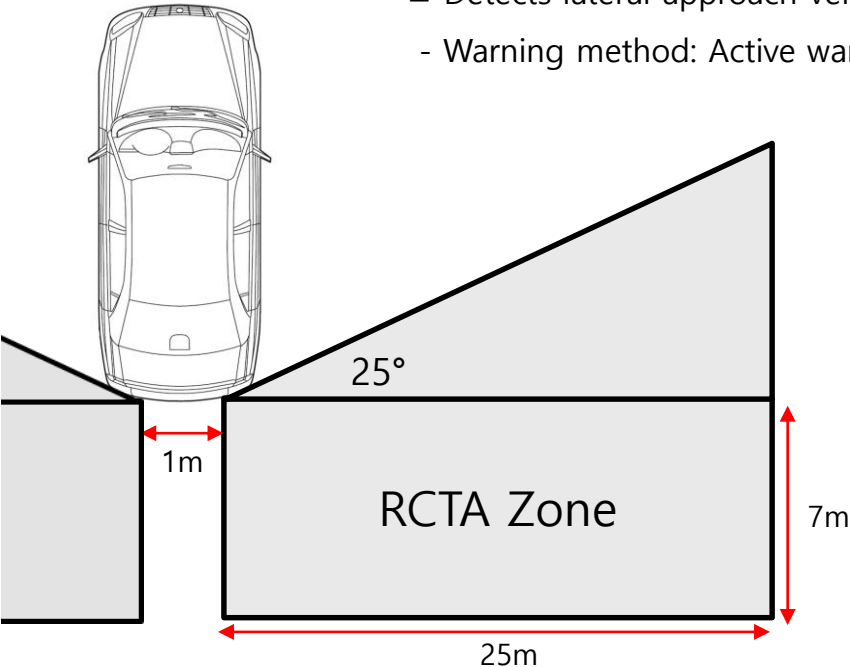
2. Rear Lateral Radar Function

2-2. BSM (Fast approaching)

Functionality	■ Detects fast approaching vehicles by radar and alerts the driver - Warning method : First – Passive warning, second – Active warning 
Activation Condition	• Host Speed : over 30 kph • Curvature Radius over 125m
Warning Zone	• Lateral: 0.5 ~ 3.5m • Longitudinal: {B-pillar of host vehicle} ~ {Rear 73m}
Warning Condition	• Target approaches to alert area • Target relative speed within -10 ~ 255kph • Time to collision : $TTC \leq 3$ seconds

2. Rear Lateral Radar Function

2-3. RCTA

Functionality	■ Detects lateral approach vehicle by radar and alerts driver when reversing - Warning method: Active warning 
Activation Condition	• Gear R stage, within 0kph to -10kph of host speed.
Warning Zone	• Lateral: 25m • Longitudinal: 7m
Warning Condition	• Target approaches to alert area • Target relative velocity between 4 kph and 40 kph • Time to collision expected within under 3 seconds

USA

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 undesired operation. CAUTION TO USERS Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Statement (MPE)

The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : 1) L'appareil ne doit pas produire de brouillage; 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Statement (MPE)

The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times. This device must not be co-located or operating in conjunction with any other antenna or transmitter.