Contents [hide]

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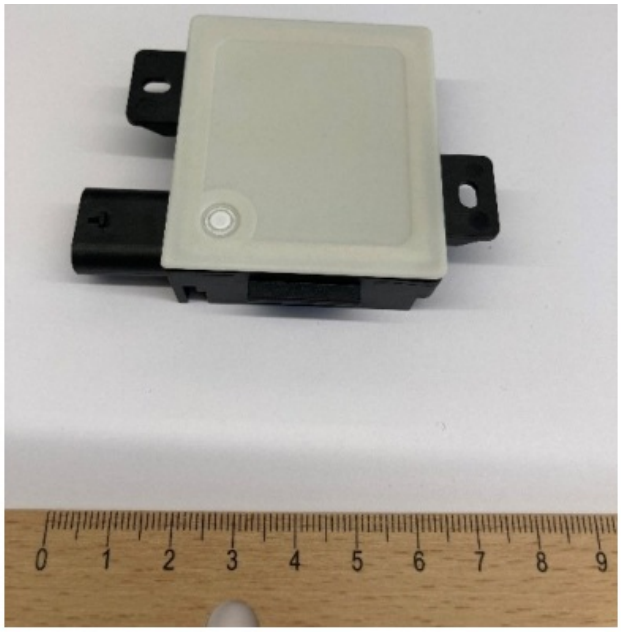
Excellence in Mechatronics

brose R-HFA GEN2 Kick Sensor Based

Specifications

- Voltage: Min 8.0V, Mean 12.0V, Max 16.0V
- Temperature: Min 77.005°C, Max 78.995°C
- Communication Bus: Radar
- Min Frequency: 77.005 GHz
- Max Frequency: 78.995 GHz
- Modulation: Chirp Sequence FMCW
- Sampling Rate: 5 MSps
- Chirp Slope: 111.79f
- Peak Transmit Power at Boresight (EIRP): +13.9 dBm

Product Usage Instructions



Concept

R-HFA GEN2 is a kick-sensor based on AWRL1422 radar chip installed behind the rear bumper of a car, used for hands-free access to the trunk.
With an automatic tailgate operation, the trunk can be opened or closed with no-touch activation. The Radar sensor detects a forward-directed foot motion in the central rear area and the trunk lid can be opened or closed automatically.

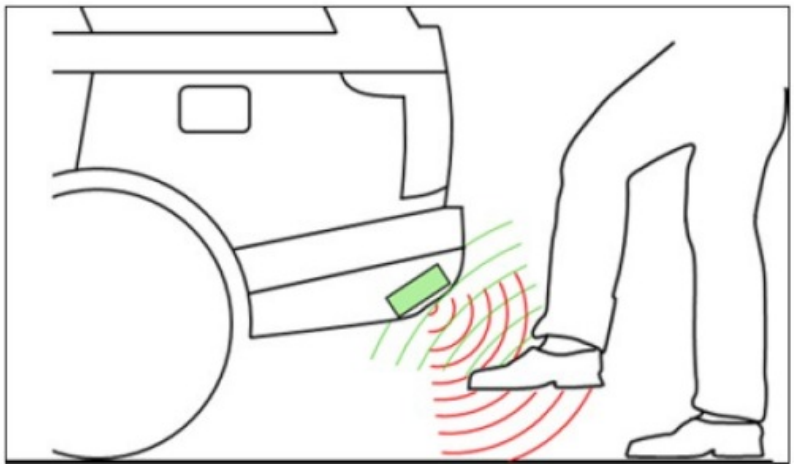
Installation and Maintenance

The product is factory fitted in the bumper of the vehicles. It is not possible to buy this product separately. The status of the product can be read via diagnostic connections

using special workshop tools. In addition, the Central Electronic Module in the vehicle monitors the communication (LIN bus) from the product and in case of missing or invalid communication, it is alerted and will display a warning to the driver. Maintenance and replacement of the product can only be performed by certified workshops.

Performing the Foot Movement

1. Stand in the middle behind the vehicle at approx. one arm’s length away from the rear of the vehicle.
2. Wave a foot under the vehicle in the direction of travel and immediately



Performing the foot movement: Minimum safety distance for the device and the antenna is 20 cm.

Operating Modes

R-HFA GEN2 has different operating modes, shown on figure 2.

Mode	LIN	Radar
Sleep/Off	OFF	OFF
Standby	ON	OFF
Gesture Detect	ON	ON (25ms Sampling)

Power mode RadarHfA (AWRL1422)

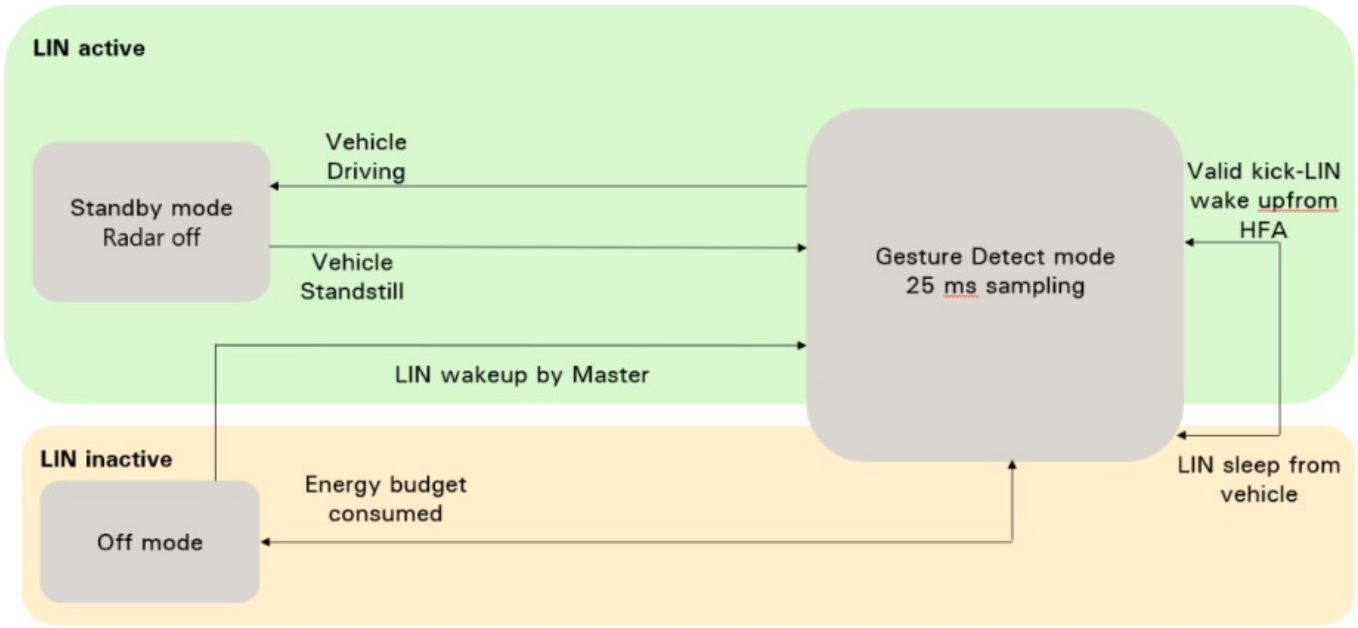


Figure 2 Operating modes

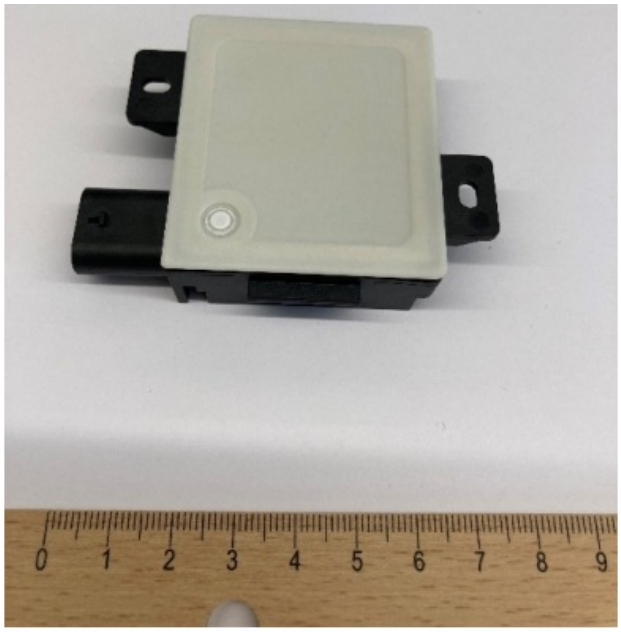
Device characteristics

Voltage Min Mean Max	8,0V 12,0V 16,0V
Temperature Min Max	-40°C +105°C
Communication Bus	LIN (2.x)

Radar Min Frequency Max Frequency Modulation (32 Chirps per radar cycle) Sampling rate Chirp Slope Peak transmit power at boresight (EIRP)	77,005 GHz 78,995 GHz Chirp Sequence FMCW 5 MS ps 111.79f +13.9 dBm

Device Photographs

- **Top side of the device is given**



- **Bottom side of the device is given**

Refer to the provided images for a visual guide to the top and bottom sides of the R-HFA GEN2 device.

Japanese Radio Law compliance

The device R-HFA GEN2 is granted under the Japanese Radio Law. This device should not be modified (otherwise the granted designation number will become invalid).

Canada

NOTICE:

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.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiators and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

United States of America

NOTICE:

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
2. This device must accept any interference received, including interference that may cause undesired operation.

Radio frequency radiation exposure Information: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Changes or modifications made to this equipment not expressly approved by Brose

Fahrzeugteile SE & Co. Kommanditgesellschaft, Bamberg may void the FCC authorization to operate this equipment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Regards,
Brose Fahrzeugteile
SE & Co. Kommanditgesellschaft, Bamberg

FAQs

Q: What should I do if the trunk does not open or close automatically?

A: Ensure that you are standing at the correct distance and performing the foot movement as instructed. Check for any obstructions that may be blocking the sensor.

Q: Can I adjust the sensitivity of the kick-sensor?

A: The sensitivity of the kick-sensor is pre-set and cannot be adjusted manually.

Q: Is it safe to use the kick-sensor in all weather conditions?

A: The kick-sensor is designed to function in various weather conditions, but extreme weather may affect its performance.

Documents / Resources

	brose R-HFA GEN2 Kick Sensor Based [pdf] User Manual G69634, 2AHV8-G69634, 2AHV8G69634, R-HFA GEN2 Kick Sensor Based, R-HFA GEN2, Kick Sensor Based, Sensor Based, Based

References

- User Manual

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2AHV8-G69634, 2AHV8G69634, Based, brose, G69634, Kick Sensor Based, R-HFA GEN2, R-HFA GEN2 Kick Sensor Based, Sensor Based

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