

BMW ZIM IP Vehicle Access system User Manual

Scope: The following document is a technical manual for RF Homologation purpose



TITLE

BMW ZIM IP Vehicle Access system
User Manual

PRODUCT RF ENGINEER:

N/A

DATE

N/A

DATE

Table of Contents

BMW ZIM IP VEHICLE ACCESS SYSTEM USER MANUAL

1	SCOPE	3
2	MODULE INFORMATION	3
2.1	MODULE DESCRIPTION	3
2.2	MANUFACTURE INFORMATION	3
2.3	MODULE INFORMATION AND SPECIFICATIONS	4
3	MODULE DRAWINGS	5
4	MODULE EXTERNAL AND INTERNAL PHOTOS	5-6
5	EXTERNAL ANTENNA	6
6	BLOCK DIAGRAM	7
7	CE MARK	7
8	UKCA MARK	7
9	FCC COMPLIANCE STATEMENTS	7
10	ISED COMPLIANCE STATEMENTS	7-8

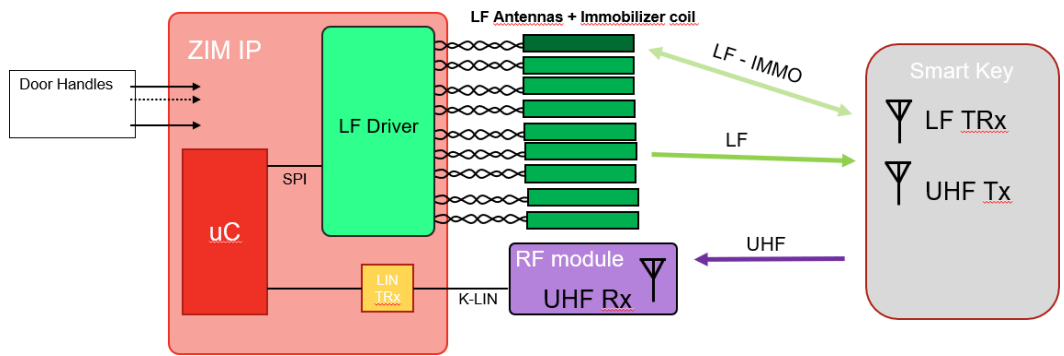
1 SCOPE

The following document present a technical manual for RF homologation

2 MODULE INFORMATION

2.1 Module Description

ZIM IP is an electronic Zone Control Module able, whit the help of other modules, to locate with certain accuracy and authorize a key via LF and RF and, in case of emergency, via transponder located in the key



The vehicle system(s) on which the vehicle immobilizer acts:

- Ignition system
- Central Locking
- Vehicle comfort configuration

Method of setting/unsetting the device:

By pushing the Start Stop Motor button or by opening/closing door, trunk lid, or bonnet the ZIM IP will look for key and will proceed to the identification. If positive, key is authorized and car functions are available

2.2 Manufacturer Information

Manufacturer Name	Lear Corporation Holding Spain SLU
Address	C/ Fusters, 54, 43800 Valls, Tarragona, Spain
Contact Person	Xavier Secall
Phone	+34 977 617 100
Email	XSecall@lear.com
Website	https://www.lear.com/

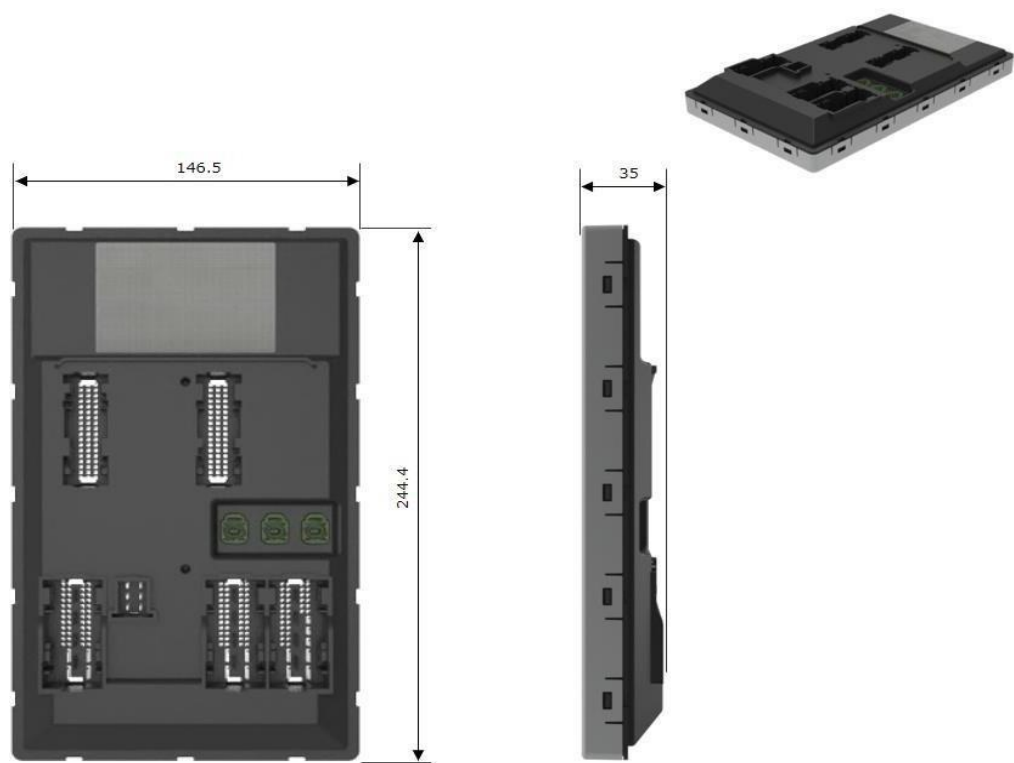
2.3 Module Information and specifications

Product Name	Integration Platform Basis
Model	IPB-01
Brand or Trademark	Lear
HW version	013.000.00X
SW version	020.016.184
Radio Services	Low Frequency (LF) RFID
Frequency Band	Transmit: 119-135 kHz
Frequency of operations	125 kHz Tx
Maximum radio-frequency power transmitted	Mag. Field strength radial: $B(r = 1.5\text{ m}) \geq 3\text{ nT}$ (at $I = 1.0\text{ App}$)
Modulation Type	Manchester & CW
Antenna Type	LC (for CA/CG-Antenna)
Antenna Gain	-25,9 dBi

Electrical Performance Parameters

Operating Voltage	DC 13.5 V
Transmit Power	14.4 dBuA/m @10m
Operating Frequency	125 kHz
Operating Temperature	-40°C / +80°C

3 MODULE DRAWINGS

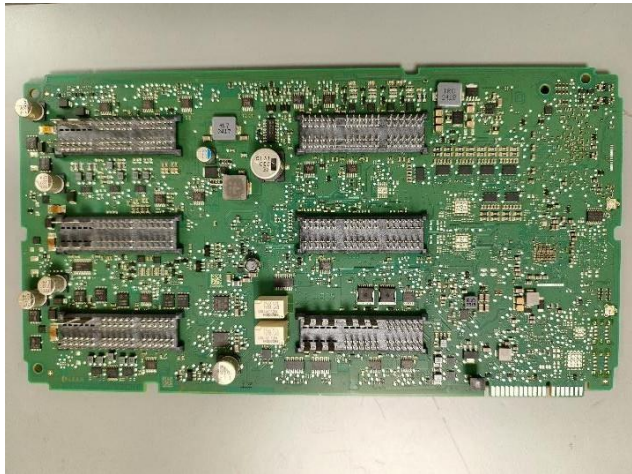


4 MODULE PHOTOS

EXTERNAL PHOTOS:



INTERNAL PHOTO:



5 EXTERNAL ANTENNA

Antenna type: LC antenna

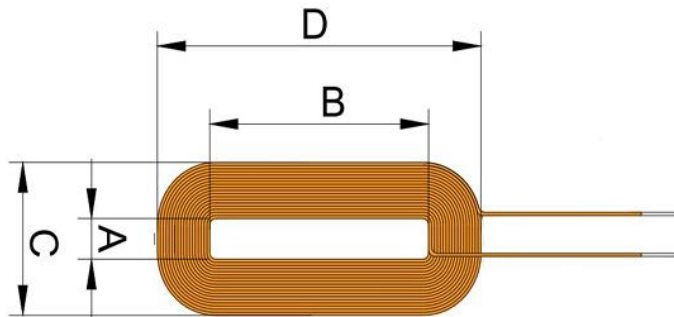
Resonance frequency: 123,6 KHz ($\pm 2\%$)

Tuning capacitance: 3,9 nF ($\pm 5\%$)

Inductance: 425 μ H

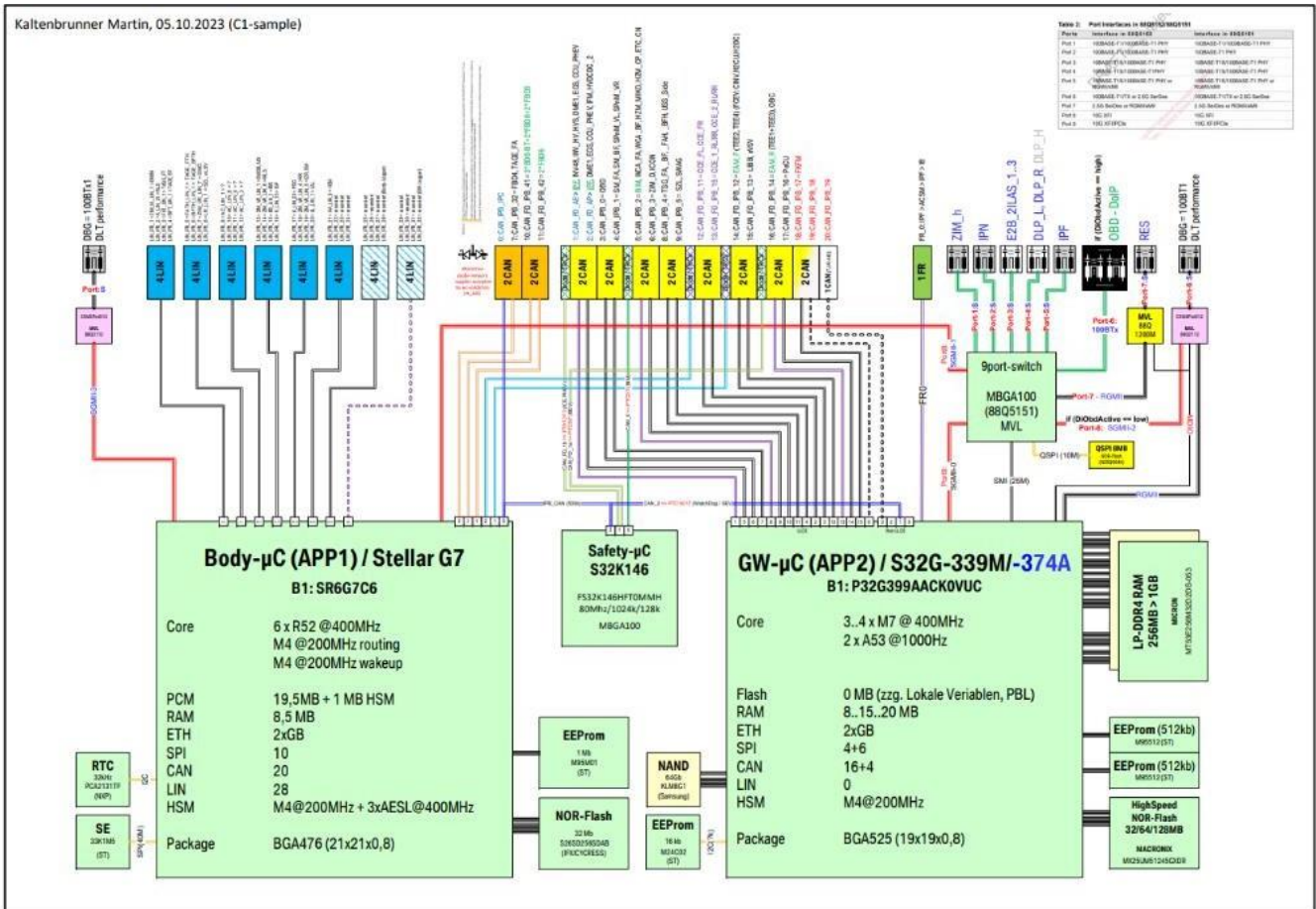
Antenna gain: -25,9 dBi

The external loop antenna should have the following dimensions:



A = 5,03
B = 17,09
C = 6,02
D = 17,61

6 BLOCK DIAGRAM



7 CE MARK

Hereby, Lear Corporation Holding Spain SLU declares that this IPB-01, is compliant with essential requirements and other relevant provisions of Directive 2014/53/EU



8 UKCA MARK

In accordance with the RADIO EQUIPMENT REGULATIONS 2017 (S.I.2017/1206).



9 FCC COMPLIANCE STATEMENTS

FCC ID: 2BNFAIPB-01

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.

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 designated 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.

15.21. Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

10 ISED COMPLIANCE STATEMENTS

IC ID: 33467-IPB01

IC Caution:

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSS standard(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 Class [B] digital apparatus complies with Canadian ICE-003.

This equipment complies with FCC & RSS radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

L'appareil a été évalué pour répondre aux exigences générales d'exposition RF.

L'appareil peut être utilisé dans des conditions d'exposition fixes / mobiles.

La distance de séparation minimale est de 20 cm.