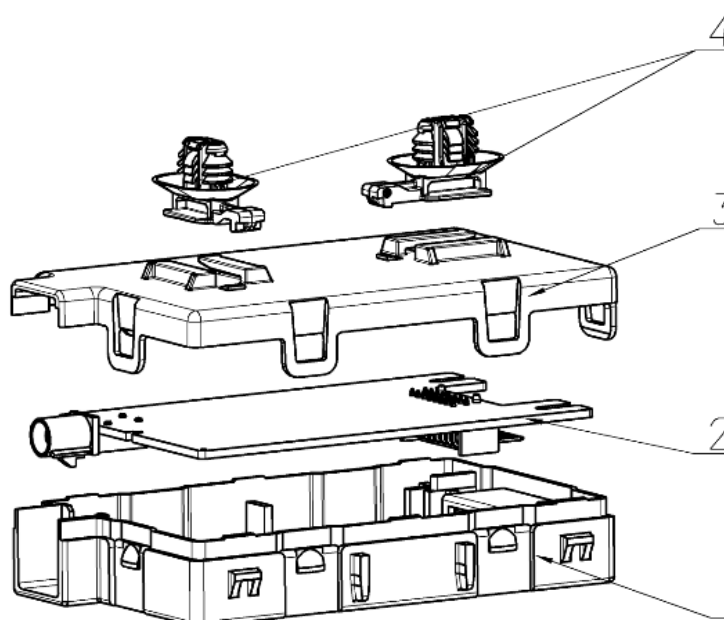


GE1

Technical Description



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Version :	1.0

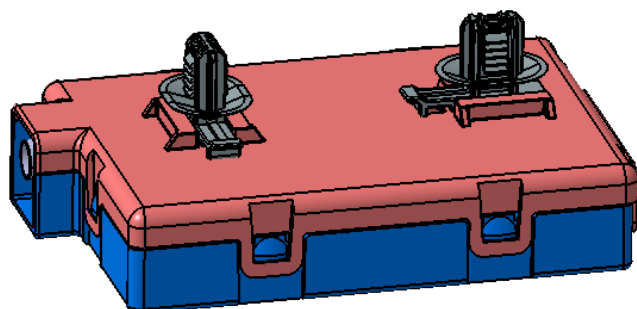
Functional description

The **GE1** (body controller module) is a component of a driving authorisation system of a car which further comprises of the car key **GK1**, and the UWB anchor **GU1**.

The components exchange encrypted data for car access, to start the engine and to locate the key. The **GK1** is the keyfob. The **GK1** sends authorization data over Bluetooth LE to the control unit to execute the access request like Door lock/unlock.

This device is not freely available on the market and is installed only by trained specialized personnel from the car manufacturer.

Outside View



Technical Data:

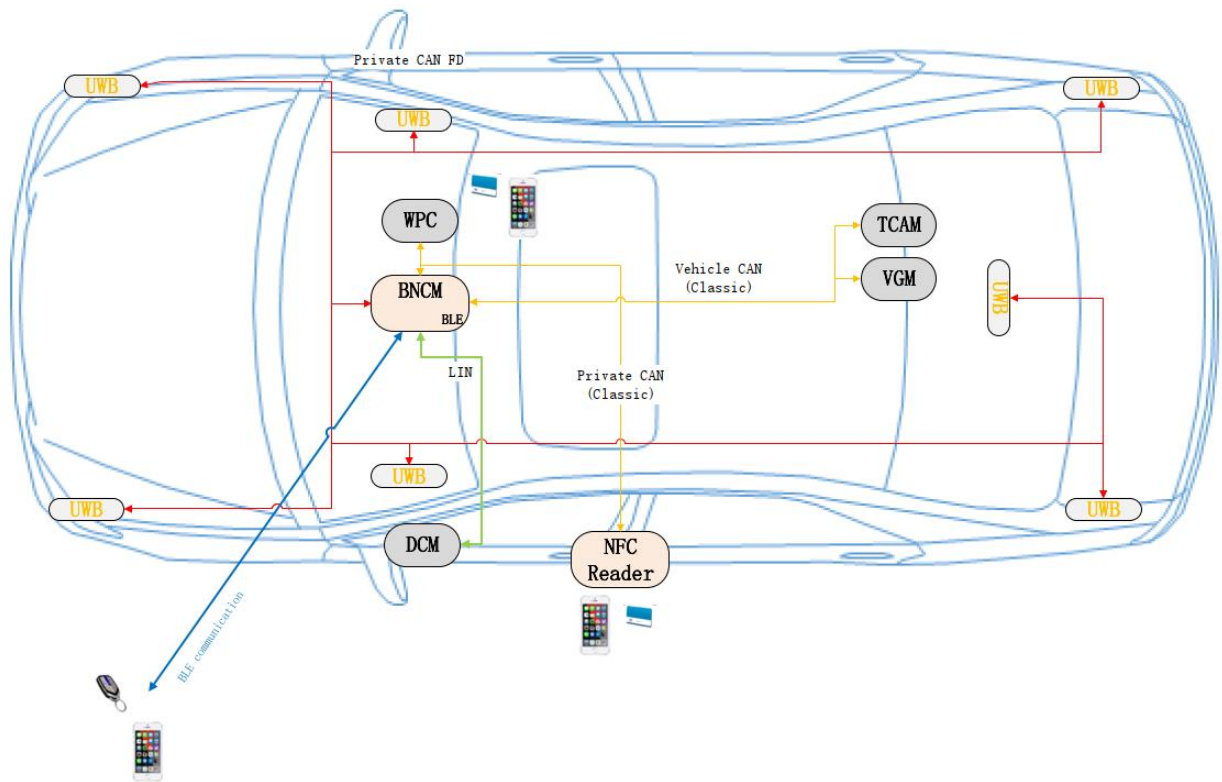
Operating Voltage: 8 ~ 16v DC
Operating temperature: -40 ~ +85 degree
Rough mechanical dimensions: 107 * 69 * 20 mm
Weight: 75 +/- 15g

Bluetooth LE parameters

Frequency: 2402MHz ~ 2480MHz
Bandwidth: 2MHz
Pavg: -20dBm ~ 10dBm
Ppk-Pavg: 0 ~ 3dBm
Frequency offset: 0 ~ 150 kHz
Frequency Drift: -50 ~ 50 kHz
Modulation Characteristics: 225 ~ 275 kHz

Tan Baiyan
Update on 27-Mar-2022

Vehicle System Overview



FCC Regulations:

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 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 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.

FCC Caution:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Radiation Exposure Statement:

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 & your body.

ISED Notice

- ① This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
 - 1) this device may not cause interference, and
 - 2) this device must accept any interference, including interference that may cause undesired operation of the device.
- ① Le présent appareil est conforme aux CNR d'Industrie 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.
- ② This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter, except tested built-in radios.
- ② Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.
- ③ The County Code Selection feature is disabled for products marketed in the US/ Canada.
- ③ La fonction de sélection de l'indicatif du pays est désactivée pour les produits commercialisés aux États-Unis et au Canada.

Radiation Exposure Statement:

This equipment complies with IC 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.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.