

Continental
Continental
BNCM Smart
Access BLE
Module



Continental BNCM Smart Access BLE Module Owner's Manual

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Continental BNCM Smart Access BLE Module



1.1 Versions List

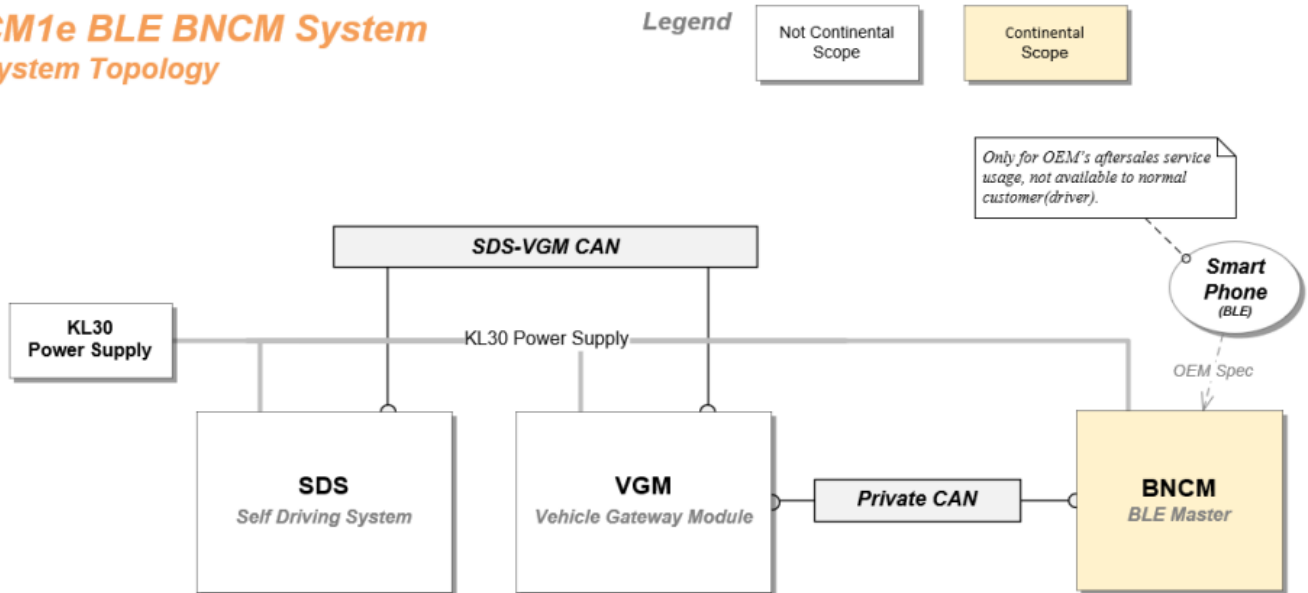
Version	Date	Author	Comment, Description
V0.1	14/10/2021	Peng Yu	Draft 0.1
V0.2	21/03/2024	Lu Yanggu	Draft 0x2
V0.3	31/07/2024	Lothar Weiger t	Model name on first page, User manual based on Technical Description

Related Documents

Document	Version	Date	Author	Comment, Description

Abbreviation Register

CM1e BLE BNCM System System Topology



Mechanical design

Car mounting position

The mounting location is inside the compartment

Description of BLE system

The master node performs BLE advertising, the user's mobile phone discovers the master node of the vehicle through BLE Scanning in the close range of the vehicle, and establishes the data link with the master node through a secure connection, and establishes the bonding with the master node. Then the mobile APP can start the BLE digital key functions.. In specific scenario, the master node calculates the location of the mobile phone according to the BLE connection RSSI values derived from BLE chip.

Wireless services:

BLE

Interfaces:

CAN

internal Antennas:

One BLE ant.

There are no connectors for external antennas. Antennas are integrated into the module.

Wireless services technical data

BLE technical data

Wireless service:	BLE (Bluetooth Low Energy)
Frequency bands / range:	2400-2483.5MHz
Data Rate:	1Mbps
Electrical output power (conducted into 50 Ohm):	2.0dBm
Modulations:	GFSK
Number of channels:	40
Channel (occupied) bandwidth:	2 MHz
Antenna name:	PCB loop Antenna
Antenna type:	Direct feed (main PCB)
Antenna gain (efficiency, gain incl. losses):	antenna efficiency max.:2400-2483.5MHz: -5.2 dB

Bluetooth Low Energy							
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

USA Statement

- Product name: Smart Access BLE System
- Model: BNCM
- FCC ID: KR5BNCM

FCC Compliance Statement

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 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.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

Frequently Asked Questions


- **Q: How do I establish a connection with the master node?**

A: To connect with the master node, ensure your mobile device is within close range of the vehicle and initiate a BLE scan on your phone to discover the master node. Establish a secure connection and bonding to access the features.

- **Q: Can I use external antennas with this system?**

A: No, the system comes with integrated internal antennas and does not support external antenna connections.

Documents / Resources

	Continental BNCM Smart Access BLE Module [pdf] Owner's Manual BNCM, BNCM Smart Access BLE Module, Smart Access BLE Module, Access BLE Module, BLE Module, Module
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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