

Product name: OBD II-BLUETOOTH

Product model number: OBD II

Hardware version: BH8308

Issue Date: 2020-06-01

一、 product presentation:

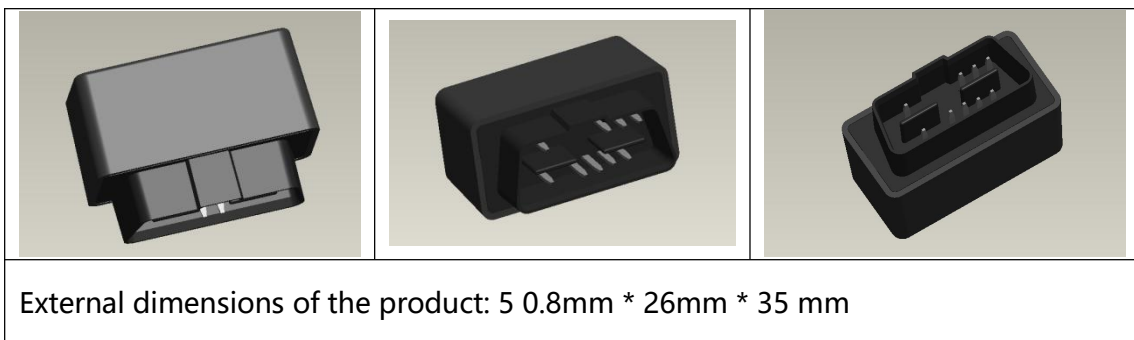
- Scope: The corresponding product of this document is BH8308, which describes the basic information, functional interface design and characteristics of BH8308. Adapted for use in 12V passenger cars.
- Product description: Based on Bluetooth communication, the driver control data such as vehicle operation status, vehicle condition data, vehicle fuel consumption data, exhaust emission data and other electronic control data are uploaded to the management platform / mobile phone / vehicle terminal through Bluetooth module. The product has the functions of reading vehicle data, checking, data collection and data analysis
- Communication mode: communicate with the vehicle through the on-board OBD interface, read the vehicle diagnosis data & bus data, and transmit the data by Bluetooth. Support CAN line communication and K line communication, VPW, PWM communication, etc.
- Hardware form: OBD BLE (Bluetooth Low Energy)
- Function: the most fully support OBD protocol, support more than 98% of the vehicles on the market
- Scalability: Support OTA Bluetooth online upgrade, support local upgrade and mobile terminal application upgrade
- Safety: lossless installation low power consumption, intelligent dormancy technology, do not hurt the vehicle battery
- Support for the storage of the test data

二、 size of product

2.1 Product appearance

Bluetooth version

BH8308



2.2 Product complete machine parameters

Communication mode: BLE (Bluetooth Low Energy)

Master control chip: national technology

Software platform: Support for Android / Windows / WINCE / IOS /

Operating voltage: 9-16V

Operating current is 18 mA

Standby current is <2 mA

Operating temperature: -40°C ~80°C

Working humidity: less than 60%

Product size: 50.8mm * 26mm * 35mm

三、 product function

3.1 Basic functions of the product

1. Standard OBD 2 protocol has full functional support for 95% vehicles on the market and 9 protocol types:
 - (1) SAE J1850 PWM (41.6Kbaud)
 - (2) SAE J1850 VPW (10.4Kbaud)
 - (3) ISO9141-2 (5 baud init, 10.4 Kbaud)
 - (4) ISO14230-4 KWP (5 baud init, 10.4 Kbaud)
 - (5) ISO14230-4 KWP (fast init, 10.4 Kbaud)
 - (6) ISO15765-4 CAN (11bit ID, 500 Kbaud)
 - (7) ISO15765-4 CAN (29bit ID, 500 Kbaud)
 - (8) ISO15765-4 CAN (11bit ID, 250 Kbaud)
 - (9) ISO15765-4 CAN (29bit ID, 250 Kbaud)
2. Vehicle warning is read in real time
 - (1) Vehicle fault code (read fault code, clear fault code)
 - (2) Battery voltage (low-voltage alarm)

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- (3) Water temperature report (abnormal water temperature alarm)
 - (4) Report the relevant data of annual inspection (warning of abnormal annual inspection data)
 - (5) Fatigue driving alarm
 3. Vehicle data is read in real-time.
 - (1) Real time speed, real time speed,
 - (2) Instantaneous fuel consumption,
 - (3) Engine load, etc
 4. Real-time statistics of vehicle data.
 - (1) Average vehicle speed, average fuel consumption, etc
 - (2) Driving behavior analysis (emergency refueling, emergency deceleration, etc.)
 - (3) Mileage data analysis (total mileage, current travel mileage)
 - (4) Engine run data analysis (run time, idle time,)
 5. Read out the basic vehicle information
 - (1) VIN, code reads
 - (2) Read out the basic vehicle information
 6. Vehicle performance test
 - (1) The 100 km acceleration test
 - (2) Brake distance test, etc
 - (3) Fuel consumption test
 7. Intelligent dormancy technology
 - (1) Perfect intelligent start and dormancy working mechanism, automatically judge the vehicle status, adjust the power consumption of equipment, avoid excessive consumption of vehicle battery power
 - (2) After the vehicle is heated, the on-board OBD terminal will automatically identify the start state of the vehicle, read the real-time data of the vehicle, and upload the data at a certain interval.
 - (3) After the vehicle stalls, the on-board OBD starts the low-power mode and does not diagnose the communication with the vehicle sometimes. To protect the vehicle battery.
 8. Data encryption function
Support hardware encryption, as well as Bluetooth protocol encryption and other required ways.

OBD Data (Common data items)

Battery voltage	Intake manifold pressure	Throttle pedal position
Total mileage category	Fault lamp status	Engine running time
Total mileage	Number of fault codes	Fault mileage

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cumulative fuel consumption	coolant temperature	The remaining amount of oil
engine speed	Actual engine torque	Engine load
Vehicle speed	Fuel pressure	Long-term fuel correction (Group 1)
air flow rate	atmospheric pressure	ignition advance
inlet temperature	throttle position	Total vehicle running time

3.2 Product extension function

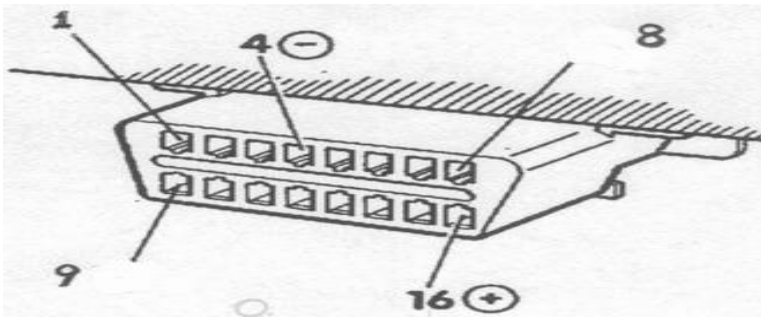
- 1. Protocol OTA upgrade, customized extension, available for private protocol support. Special car special instruction window up, maintenance light zero, brush hidden function, etc.

四、Adapt to the model

The on-board OBD terminal adopts the automatic recognition technology of vehicle data protocol, which can be applied to all the mainstream models in the domestic and foreign markets

五、Interface definition

The car equipped with the OBD II system has a unified 16pin diagnostic seat, generally located under the dashboard or near the steering wheel, the shape is shown in the figure below, and each pin foot has been specified by SAE.



The foot definition

Pin	definition	P in	definition
1	For the use of the factory	9	For the use of the factory
2	SAE-J1850 data transmission	10	SAE-J1850 data transmission

	For the use of the factory	11	For the use of the factory
4	The body ground	12	For the use of the factory
5	The signal loop takes iron	13	For the use of the factory
6	CAN-H	14	CAN-L
7	ISO-9141 data transmission	15	ISO-9141 data transmission
8	For the use of the factory	16	Connect battery positive electrode

FCC Caution

FCC ID: 2BHGX-BTOBDII

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.

Information to user.

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

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.

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.