# **IDD-215B User Manual**

(Rev.1.0)



China Aerospace Telecommunications (Shenzhen) Ltd September,

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# 1. Introduction

IDD-215B is an intelligent on-board diagnostic device with OBD II and J1939 compliant, it could read various kinds of data including diagnostic info, mileage, fuel consumption and driving behavior, and real-time display on Android and IOS devices via Bluetooth.

**Packing List** 

Parts name	Quantity	Note
IDD-215BOBD Dongle	1	•
User Manual	1	•
OBD extension cable	1	0

Note: • Standard configuration • Optional configuration

(Optional accessories will not be included if there is no indication in the order)

# 2. Specifications

### 2.1 External Interface

Product appearance as follows:



#### **Standard OBD Connector**

It is used to connect to the 16 pin on-board Diagnostic Link Connector (DLC).

The vehicle OBD system is able to communicate with an external device which has the same protocol via this connector.

# 2.2 Status Indicator

Indicator	Color	Status	
Power LED	Red	Solid on -normal work	
		Solid off: sleep status	
		Blinking every 1 time— wait for Bluetooth try to connect	
Bluetooth Blue		Blinking every 2 times– Bluetooth connected successfully	
		Blinking every 3 times—connecting to the Bluetooth	
		Solid off – Bluetooth off	
000150		Blinking—Trying to communicate with on-board system	
OBDLED	Green	Solid on – Successful OBD communication	

Solid off– No OBD communication

# 2.3 Technical Parameters

Mechanical  Weight 30g  Color White, Grey  Interface OBDII interface  Data transmission Bluetooth  Storage 8MB FLASH, store up to 200 hours trip data  ISO 9141-2 ISO 14230-4 ISO 15765-4 SAE J1939  Power Working Voltage 9-36VDC  Power Working Current Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy Frequency: 2.4-2.48GHz Modulation: GFSK Range: 10m (Max. no shield) Sensitivity: -93dBm@BLE Antenna: built in  6 axis Acceleration/Gyroscope Driving behavior detection	Size		28mm (L) x 44mm (W) x 26mm (H)		
Interface  Data transmission  Bluetooth  Storage  8MB FLASH, store up to 200 hours trip data  ISO 9141-2 ISO 14230-4 ISO 15765-4 SAE J1939  Working Voltage  Power  Working Current  Bluetooth  Bluetooth  Bluetooth  Bluetooth  Average: <50mA@13.8VDC Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy Frequency: 2.4-2.48GHz Modulation: GFSK Range: 10m (Max. no shield) Sensitivity: -93dBm@BLE Antenna: built in	Mechanical	Weight	30g		
Data transmission  Bluetooth  Storage  8MB FLASH, store up to 200 hours trip data  ISO 9141-2 ISO 14230-4 ISO 15765-4 SAE J1939  Power  Working Voltage  9-36VDC  Average: <50mA@13.8VDC Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy Frequency: 2.4-2.48GHz Modulation: GFSK Range: 10m (Max. no shield) Sensitivity: -93dBm@BLE Antenna: built in		Color	White, Grey		
Storage  8MB FLASH, store up to 200 hours trip data  ISO 9141-2 ISO 14230-4 ISO 15765-4 SAE J1939  Working Voltage  9-36VDC Average: <50mA@13.8VDC Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy Frequency: 2.4-2.48GHz Modulation: GFSK Range: 10m (Max. no shield) Sensitivity: -93dBm@BLE Antenna: built in	Interface		OBDII interface		
OBD protocol  ISO 9141-2  ISO 14230-4  ISO 15765-4  SAE J1939  Power  Working Voltage  9-36VDC  Average: <50mA@13.8VDC  Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy  Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in	Data transmission	on	Bluetooth		
OBD protocol  ISO 14230-4 ISO 15765-4 SAE J1939  Working Voltage 9-36VDC  Working Current Average: <50mA@13.8VDC Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy Frequency: 2.4-2.48GHz Modulation: GFSK Range: 10m (Max. no shield) Sensitivity: -93dBm@BLE Antenna: built in	Storage		8MB FLASH, store up to 200 hours trip data		
OBD protocol  ISO 15765-4  SAE J1939  Working Voltage 9-36VDC  Average: <50mA@13.8VDC  Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy  Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in			ISO 9141-2		
ISO 15765-4  SAE J1939  Working Voltage 9-36VDC  Working Current Average: <50mA@13.8VDC Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy Frequency: 2.4-2.48GHz Modulation: GFSK Range: 10m (Max. no shield) Sensitivity: -93dBm@BLE Antenna: built in	OBD protocol		ISO 14230-4		
Power  Working Voltage  Average: <50mA@13.8VDC  Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy  Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in	OBD protocor		ISO 15765-4		
Power  Average: <50mA@13.8VDC  Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy  Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in			SAE J1939		
Working Current  Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy  Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in		Working Voltage	9-36VDC		
Sleep mode: <10mA@12VDC  Specification: Bluetooth low energy  Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in	Power	Working Current	Average: <50mA@13.8VDC		
Frequency: 2.4-2.48GHz  Modulation: GFSK  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in			Sleep mode: <10mA@12VDC		
Modulation: GFSK  Bluetooth  Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in	Bluetooth		Specification: Bluetooth low energy		
Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in			Frequency: 2.4-2.48GHz		
Range: 10m (Max. no shield)  Sensitivity: -93dBm@BLE  Antenna: built in			Modulation: GFSK		
Antenna: built in			Range: 10m (Max. no shield)		
			Sensitivity: -93dBm@BLE		
6 axis Acceleration/Gyroscope Driving behavior detection			Antenna: built in		
	6 axis Acceleration/Gyroscope		Driving behavior detection		
LED Indication Bluetooth/OBD/Power indication	LED Indication		Bluetooth/OBD/Power indication		

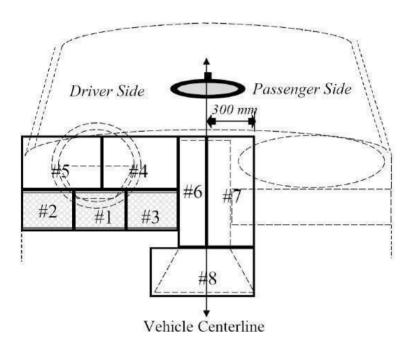
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Accessories		OBD II extension cable
Environment	Working Temperature	-30℃ ~ +70℃
	Storage Temperature	-40°C ~ +85°C
	Humidity	5%~95% (no frog)

## 3. Installation Instruction

### 3.1 OBD Port

In general, the OBD port is located in the driver or passenger cabin, from the edge of dashboard on driver side to the border of 300mm. It is easy to touch by sitting in the driver's seat; the preferred location is within the area from steering post to the vehicle center line.







### 3.2 Device Installation

Plug the device into OBD port



Start engine, with successful OBD communication the OBD light changes its status to solid on. Then device begins to connect app, with successful network registration the Bluetooth light change its status to blinking every 2 times.

# 4. Functions

### **4.1 OBD Protocols**

The device supports all the OBDII standards below:

**SAE J1939** 

ISO 9141-2

ISO 14230-4(KWP2000)

ISO15765-4(CAN)

# 4.2 Regular Diagnostic Data Reporting

Device is able to read variety of vehicle diagnostic data, including vehicle speed, engine RPM, engine coolant temperature, mass flow air, etc, and reports up to 10 types of diagnostic data according to configured time interval.

# 4.3 DTCs Reporting

Device is able to read vehicle pending and stored DTCs, and freeze frame data. The back end server analyzes and displays the DTCs for users on time to avoid high repairing cost.

## 4.4 Diagnostic Functions

The device is able to read vehicle pending DTCs and stored DTCs, freeze frame data and a variety of diagnostic data. The back end server analyzes and displays the DTCs for users on time to avoid high repairing cost.

It is also able to clear vehicle DTCs and MIL according to customer's requirements.

# 4.5 Data storage/Supplementary Report in Dead zones

When there is no Bluetooth signal or Bluetooth signal is poor, GPS and OBD information are stored, and reported after signal recovery.

# 4.6 Trip Mileage

At the end of the trip, device will report the driving mileage to the server.

## **4.7 Trip Fuel Consumption**

At the end of the trip, device will report the fuel consumption to server.

# 4.8 Driving behavior monitoring

Real-time monitor bad driving behavior, including Speeding, High RPM, Hard Acceleration, Hard Brake, Excessive Engine Idle Time

# 4.9 Alarms and Events Reporting

- ♦ High ECT
- ♦ Speeding
- ♦ High RPM
- ♦ Hard acceleration
- ♦ Hard brake
- ♦ Sharp turn
- ♦ Quick lane changing
- ♦ Crash
- ♦ Vibration
- ♦ Idle engine
- ♦ Towing
- ♦ Plug indication

# 4.10 Remote Configuration

Users can configure device via app.

#### 5. Disclaimer

This user manual only applies to IDD-215B device.

This product only applies to the vehicles with OBDII/EOBD equipped.

This product strictly follows the standard of ISO 15031, it shall not cause any harm or affect Vehicles, if there is an exception, please remove the device immediately.

The device has a built-in wireless communication module. It should be used as far as possible away from fuel depots, chemical plants and other areas could cause an explosion. Most sensitive to external RF sites (such as gas stations, hospitals and school, etc.) may be equipped with radio frequency jamming equipment; some functions maybe affected in the interference area.

To make sure the products works well, please use the original accessories. This manual is based on the "as-is" situation. Sinocastel will not guarantee the accuracy, reliability, content of the hand book. Also Sinocastel reserves the right to a mend or drawn this manual without any prior notification.

# **FCC** warnings

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

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# 6. Warranty

**Maintenance Records** 

If product got quality problem with in the warranty period, please bring the product together with avoid warranty card and purchase invoice to the dealer for checking. Please do not disassemble this product, this may result in damage, Sinocastel will not be responsible for those problem.

1 year of warranty since purchase time and life-long maintenance. For Failure or damage due to incorrect operation or not following the instruction, Sinocastel will provide paid maintenance within warranty period.

User name:		
Contact number:		
Address:		
Post code:		
Purchasing date:		
Serial number:		
Remark:		
Please keep this card	carefully in order to better serve you.	
Distributor (Company Chop)		
Product Model		

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Data	Faults and maintenan	ce of records	Maintenance	User
Date	Fault Description	Maintenance	(Signature)	(Signature)

Note: This form must be carefully completed.

## 7. Statement

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