



DX-CP35

Bluetooth beacon

Version: 2.0

Date: 2025-12-10





Updated records

Version	Date	Instructions	Author
V1.0	2025/06/14	Initial version	YXR
V1.1	2025/09/08	Updating parameters	YXR
V2.0	2025/12/10	Add power meter	YXR

Contact Us

SHEN ZHEN DX-SMART TECHNOLOGY CO.,LTD,

Email: manager@szdx-smart.com

Tel: 0755-2997 8125

Whatsapp: +86 15798463070

Website: en.szdx-smart.com

Address: 601, A1 Block, Huafengzhigu, Hang Kong Road, Hang Cheng Street, Baoan District, Shenzhen

Contents

1. Introduction.....	- 5 -
1.1. Overview.....	- 5 -
1.2. Product Features.....	- 5 -
1.3. Bluetooth default parameters	- 6 -
2. Product schematic.....	- 7 -
3. Description of hardware construction.....	- 8 -
3.1. Indicator light.....	- 8 -
4. Electrical characteristics and reliability	- 8 -
4.1. Operating and storage temperatures	- 8 -
4.2. Drain flow.....	- 9 -
4.3. Rf Characteristics.....	- 9 -
4.4. Distance meter.....	- 10 -
4.5. Static protection.....	- 10 -
5. APP usage flow.....	- 10 -
5.1. How to use the mobile APP to modify the device parameters.....	- 10 -
5.1.1. Android APP operation process (details can be previewed in the APP user manual) -	11 -
5.1.2. Apple APP operation process (details can be previewed in the APP user manual)	- 12 -
6. Peripheral function list	- 14 -
7. Considerations.....	- 14 -

Table index

Table 1: Table of basic Parameters	- 5 -- 6 -
Table 2: Working and Storage Thermometer	- 7 -- 8 -
Table 3: Power Consumption Meter.....	- 7 -- 9 -
Table 4: Enable ACC broadcast Power consumption Meter	- 7 -- 9 -
Table 5: RF Characteristic Table	- 8 -- 9 -
Table 6: Range measured table	- 8 -- 10 -
Table 7: ESD withstand voltage situation table of module pins	- 8 -- 10 -
Table 8: Peripheral function Table	- 12 -- 14 -

Picture index

Figure 1: CP35 product schematic	- 7 -
Figure 2: Android APP interface diagram	- 12 -
Figure 3: Apple APP interface Figure.....	- 14 -

1. Introduction

1.1. Overview

DX-CP35, a compact Bluetooth beacon developed by Shenzhen DX-SMART Technology Co., Ltd., is a low-power Bluetooth product specially designed for asset management, indoor positioning and advertising push. It complies with the Bluetooth BLE 5.1 specification and supports both iBeacon and Eddystone protocols. Featuring a card-style design with a PC material shell, it is powered by a lithium battery and boasts a long service life. The company can provide SDK and technical support, and accept OEM & ODM customization according to customer requirements..

1.2. Product Features

- DIALOG 14531 master chip
- ARM Cortex-M0 processor
- Bluetooth BLE 5.1 protocol
- Low power, low cost
- Default operating power consumption: 38.61uA
- Enable ACC broadcast operating power consumption: 34.41uA
- Service life: 9 months
- Powered by a lithium battery, the battery is removable
- Open visual communication distance: 50-70m
- Support iBeacon & Eddystone
- 7 UUID carousels are supported
- Small size
- Protection grade: IP67

1.3. Bluetooth default parameters

- Bluetooth name: CP35-XX (XX: last two bytes of MAC address)
- Transmit power: +2.5dBm
- Broadcast interval: 500ms
- Default iBeacon broadcast packet data:
UUID: E2C56DB5-DFFB-48D2-B060-D0F5A71096E0
MAJOR: 5
MINOR: 6
- Default Eddystone broadcast packet data:
UID: Namespace id: e5a4a7e5a48f31323334
Instance id: 44584c29191a
URL: URL: http://en.szdx-smart.com
- Default restart password: dx1234
- Default factory reset password: 1234

Table 1: Table of basic parameters1

Parameter names	Details	Parameter name	Details
Chip model	DA14531	Model number	DX-CP35
Bluetooth Specifications	BLE 5.1	Protocol	GATT, iBeacon, Eddystone
Battery model	CR2032	Broadcast interval	100ms to 1500ms
Battery level	210mah	Transmit power	-19.5 ~ + 2.5 dBm
Power supply method	Button cell battery	Sensitivity	- 94dbm@0.1% BER
Modulation	GFSK	Frequency band	2.402GHz -2.480GHz ISM band
Rf input impedance	50 Ω	Frequency hopping and	1600hops/s 2MHz space 40 channels

		channel hopping	
Antenna interface	Onboard antenna	Product dimensions	40*25*5.6MM
Operating temperature	MIN:-40°C - MAX:+85°C	Humidity	10%-95% non-condensing

2. Product schematic



Figure 1: CP35 product diagram1

3. Description of hardware construction

3.1. Indicator light

- Connection status indicator: Light off when not connected, red light flashes when connected.
- The connection status indicator blinks once after the module is powered on/powered on

Remarks:

Please refer to the peripheral function sheet and APP user manual for details

4. Electrical characteristics and reliability

4.1. Operation and storage temperatures

Table 2: Operation and Storage thermometer2

Parameters	Minimum	typical	Max	Units
Normal operation temperature	-40	-	40	°C
Storage temperature	-50	-	150	°C

4.2. Current consumption

Table 3: Power consumption meter3

Modes	Current	Units
Job status	38.61	uA
Connect APP status	732.89	uA

Remarks:

The power consumption in the above table is the transmission power +2.5dBm, and the broadcast interval is 500ms. It is for reference only. The power consumption of this module is different in different transmit power and broadcast interval, and the specific power consumption is subject to the actual

Table 4: Open ACC broadcast power consumption table4

Modes	Current	Units
Job status	34.41	uA
Connect APP status	728.89	uA

Notes:

The power consumption in the above table is the transmission power +2.5dBm, and the broadcast interval is 500ms. It is for reference only. The power consumption of this module is different in different transmit power and broadcast interval, and the specific power consumption is subject to the actual

4.3. Rf Characteristics

Table 5: Table of RF characteristics5

Functions	Taking values
BLE transmit power	-19.5-2.5dBm
BLE sensitivity	- 94dbm@0.1% BER

4.4. Distance meter

Table 6: Distance measurement table6

Test subjects	Connecting objects	Connection distance	Broadcast distance	Units
CP35	iphone12	55	65	m
	Google Pixel 6	65	73	m

Remarks:

Test default parameters: (transmit power: +2.5dBm broadcast interval: 500ms)

4.5. Static protection

In the application of modules, due to the static electricity generated by human body static electricity and charged friction between microelectronics, it may cause some damage to the module through various ways, so ESD protection should be paid attention to. ESD protection measures should be taken in the process of research and development, production, assembly and testing, especially in product design. For example, at the interface of the circuit design and the point susceptible to electrostatic discharge damage or influence, anti-static protection should be increased, and anti-static gloves should be worn in production.

Table 7: 7Table of ESD tolerant voltage of module pins

Test interface	Contact discharge	Air discharge	Units
VBAT and GND	+2	+4	kV
Main antenna interface	+2	+4	kV

5. APP usage flow

5.1. How to use the mobile APP to modify the device parameters

5.1.1. Android APP operation process (details can be previewed in the APP user manual)

1. Step 1: Download DX-SMART.apk from our official website or contact customer service to obtain it, then install it on your Android device;
 2. Step 2: Open our APP and enter the search interface;
 3. Step 3, after searching the Bluetooth name, click "Connect" to connect;
 4. Step 4: Once connected, you can modify various frame parameters;
 5. Step 5: Modify the parameters according to the specified format and range, then click Save. The configuration is complete when the "Saved successfully" prompt appears.;
- (The Android APP interface is shown in Figure 2.)





Figure 2: Android APP interface diagram2

5.1.2. Apple APP operation process (details can be previewed in the APP user manual)

1. Step 1: Open our APP;
 2. Step 2: For the iOS test APP, download DX-SMART from the Apple App Store, open the Beacon interface to search and connect, and use this APP to modify parameters;
 3. Step 3, after searching the Bluetooth name, click the name to connect;
 4. Step 4: Once connected, you can modify the iBeacon and Eddystone parameters..
- Step 5: After modifying according to the specified format and range, tap Restart, enter the restart password, and the modification is complete.
- (iOS APP interface is shown in Figure 3.)



功能选择



敬请期待

←

iBeacon 详情

iBeacon

Eddystone

设置电量

100%

UUID

E2C56DB5-DFFB-48D2-B060-D0F5A71096E0 >

MAJOR

0 >

MINOR

0 >

校验距离

-59 >

广播功率

7 >

广播周期

5 >

设置序列号

8899 >

设置名称

CP27- >

重启 iBeacon

>

设置重启密码

>

恢复出厂设置

>

←

Beacon 设备列表

CP29-AA48

00:00:00:00:00:00

RSSI: -62

MAJOR: 0

CONN: YES

Tx: -19.5dBm

MINOR: 0

0%

3.98m

UID

Namespace id

e5a4a7e5a48f31323334

Instance id

44584c29191a

RSSI@0m

-24dBm

URL

URL

http://www.szdx-smart

RSSI@0m

-24dBm

TLM

电池电量

3313mV

温度

25°C

广播计数个数

215574

开机累计时间

1天+05:56:22

CP27-8899

00:00:00:00:00:00

RSSI: -62

MAJOR: 0

CONN: YES

Tx: -19.5dBm

MINOR: 0

0%

3.98m

URL

URL

http://www.szdx-smart

RSSI@0m

-24dBm

TLM

电池电量

3283mV

温度

25°C

广播计数个数

30264

开机累计时间

0天+20:59:08

CP29-47D8

00:00:00:00:00:00

RSSI: -63

MAJOR: 0

CONN: YES

Tx: -19.5dBm

MINOR: 0

0%

4.47m

←

Eddystone 详情

iBeacon

Eddystone

UID

Namespace ID

e5a4a7e5a48f31323334

Instance ID

44584c29191a

校验距离

-24 >

广播功率

7 >

URL

URL

http://www.

szdx-smart

校验距离

-24 >

广播功率

7 >

TLM

电池电量

3283

温度

25

广播计数个数

30205

开机累计时间

0天+20:58:39

广播间隔

5 >

重启 eddystone

>

设置重启密码

>

系统信息

>

Figure 3: Apple APP interface diagram3

6. Peripheral function list

Table 8: Peripheral function 8Table

Indicator light	
Phenomenon	Triggering events
Blink once	Module turns on
Blink twice	Module restores connectable enable
Continuous blinking	Android APP Connection module/Apple APP connection module

7. Considerations

- Avoid squeezing the product with external forces
- Use in indoor and outdoor room temperature environment, do not use in humid and water environment
- Non-professionals do not disassemble and repair by themselves

FCC Caution:

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.

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.
- The device has been evaluated to meet general RF exposure requirement.
The device can be used in portable exposure condition without restriction.