Skylab M&C Technology Co., Ltd

TD05C Bluetooth

Gateway With PoE Datasheet

Document Information	
Title	TD05C Bluetooth Gateway With PoE Datasheet
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This document applicable to the following products：

Product name	Type number	Product status
TD05C	TD05C	Mass Production

Contents

Bill of Materiel

Name	Mdel	Quantity	Remark
Bluetooth Gateway	TD05C	1	TD05C
AC-DC Adapter	BSF-137F	1	IN:AC100-240V/OUTPUT: 5.0V±10%

1 General Description

TD05C is a Bluetooth Gateway with POE or DC power supply. It can be used in various scenarios flexibly. For example, the remote control BLE device, receives the data sent by the BLE device and sends it to servers. The WiFi data rate of TD05C can be up to 100Mbps and BLE data rate can be up to 1Mbps. TD05C also supports the POE switch power supply and 5.0V adapter power supply.

Figure1: TD05C
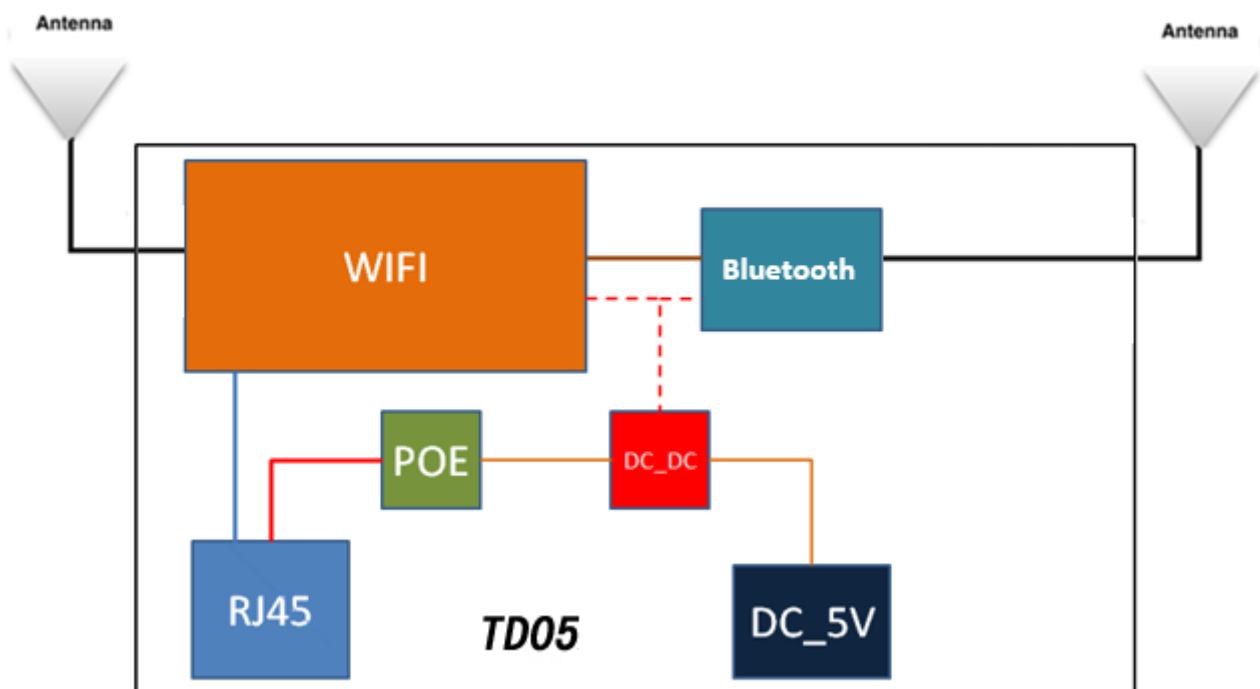
1.1 Application Block Diagram

Figure 2: TD05C Block Diagram

1.2 Features

Supports the POE switch power supply and 4.5~12Vadapter power supply.

Support IEEE802.3-2012 Type 1 , the IEEE802.3-2012 Type 1 requires a power supply device (PSE) to provide 44 to 57 V, and the power of the powered device (PD) must not exceed 12.95 W and the current does not exceed 350 mA

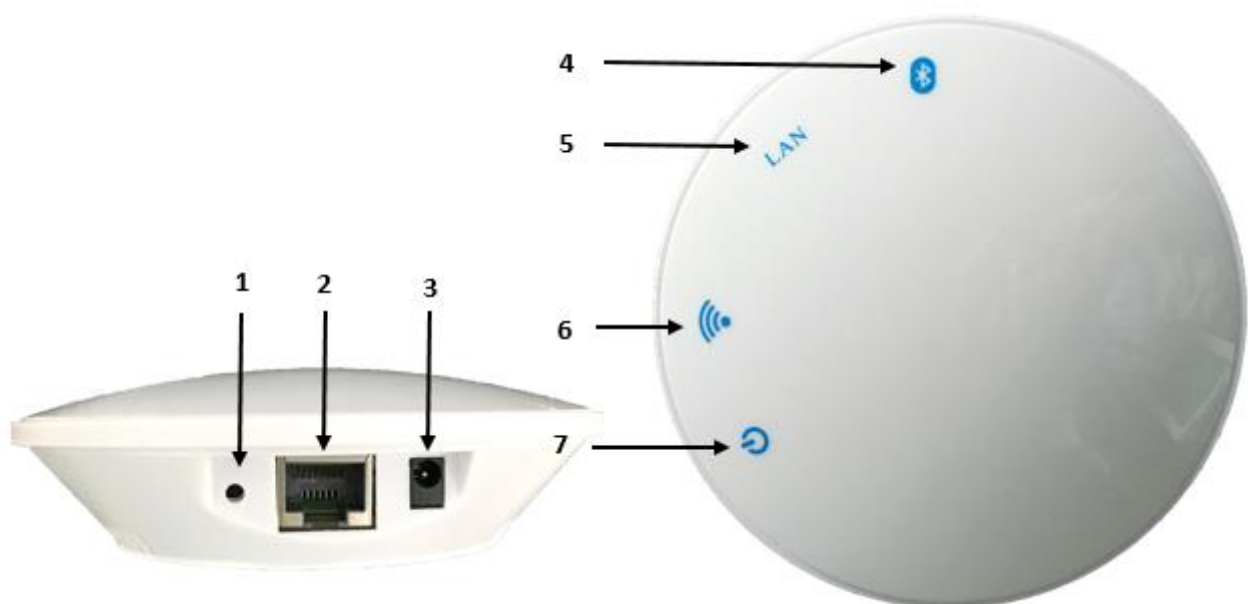Support IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol

Support Bluetooth ® 5.0

One WAN/LAN variable network port

RoHS compliance (Lead-free)

FCC,CE compliance

1.3 Interface

1：Reset

2：Network Interface

3：Power Interface

4：Bluetooth LED

5：Network LED

6：WiFi LED

7：Power LED

1.3.1 WAN/LAN

The TD05C network interface supports CAT-5/CAT-5E to transmit data and POE Power Supply(voltage range is 44~ 57V). It is WAN/LAN variable.

Working Mode	Network Interface
AP Client	LAN
Getway	WAN

1.3.2 Power Supply Port

The TD05C power interface supports DC_4.5~12V input, and the current is greater than 1000mA.The voltage interface adopts the DC-005 power socket, and power seat aperture is 5.5mm. The needle diameter is 2.1 mm and is positive.

Remark: The input voltage of the 5V power adaptor is AC 100-240V and 50/60Hz, output voltage is 5V 2A.The power connector is positive inside and negative outside.

1.3.3 Reset

The TD05C WiFi part will resume factory setting after pressing the reset button for more then 5 seconds.

1.3.4 LED

Power LED normally on when powered on

Network LED normally on when connected

WiFi LED normally on after connecting to WiFi for 1-2sec

Bluetooth LED flashing once power on

1.4 Applications

1.4.1 Indoor Positioning

1)TD05C Bluetooth module collects information about Beacon nearby, including RSSI, MAC, etc., once per second.

2)Bluetooth module send the Beacon information to WiFi module through UART serial port, once per second.

3)WiFi module transfers the Beacon information to the specified UDP server, and accepts the information returned by the server.

4)Beacon locations can be displayed on the front page after the UDP server analyze and calculate the beacon information. An order can also be delivered to the WiFi module, then sent to the bluetooth module to develop different functions (such as: Lighting lamps and lanterns etc.).

Schematic of Positioning:
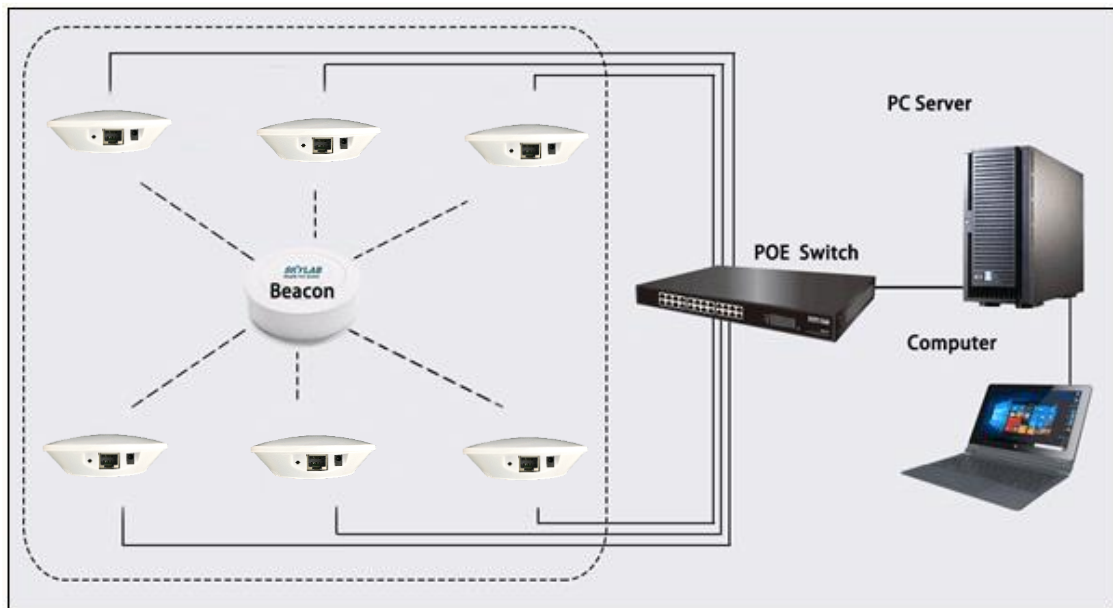
Remark：TD05C can be connected to the Internet via the POE switch or the wireless router.

2 Module Specification

Dimension	Diameter: 110mm; Height: 35mm
Power Supply	DC4.5~12V、POE Switch up to 57V
Currents	200mA@5V
Operating Temperature	-20℃~70℃
Interface	WAN Port and Power Supply Port
WiFi	
WiFi Protocol	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
Data Rate	IEEE 802.11 b Standard Mode: 1,2,5.5,11Mbps
	IEEE 802.11g Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n : 72Mbps @ HT20 150Mbps @ HT40
Sensitivity	HT40 MCS7 : -67dBm@10% PER(MCS7)

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	HT20 MCS7 : -73dBm@10% PER(MCS7)
	54M: -76dBm@10% PER
	11M: -91dBm@ 8% PER
Transmit Power	IEEE 802.11n: 15dBm @HT40 MCS7
	15dBm@HT20 MCS7
	IEEE 802.11g: 16dBm
	IEEE 802.11b: 18dBm
Wireless Security	WPA/WPA2, WEP, TKIP, and AES
Working mode	Bridge、Gateway、AP Client
Bluetooth	
Bluetooth Protocol	Bluetooth ® 5.0
Data Rate	Uncoded:1Mbps/2Mbps,Coded:125kbps(S=8)/500kbps(S=2)s
Wireless Security	AES HW Encryption
Connection Distance	100m
Transmit Power	Tx Power -20 to +8 dBm in 4 dB Steps

3 Configuration

3.1 Gateway

3.1.1 Connect to TD05C by WLAN

3.1.2 Enter to the page http://10.10.10.254

http://10.10.10.254/

3.1.3 Input Account and Password <admin/admin>

3.1.4 Select Language

3.1.5 Click the Operation Mode and choose Gateway
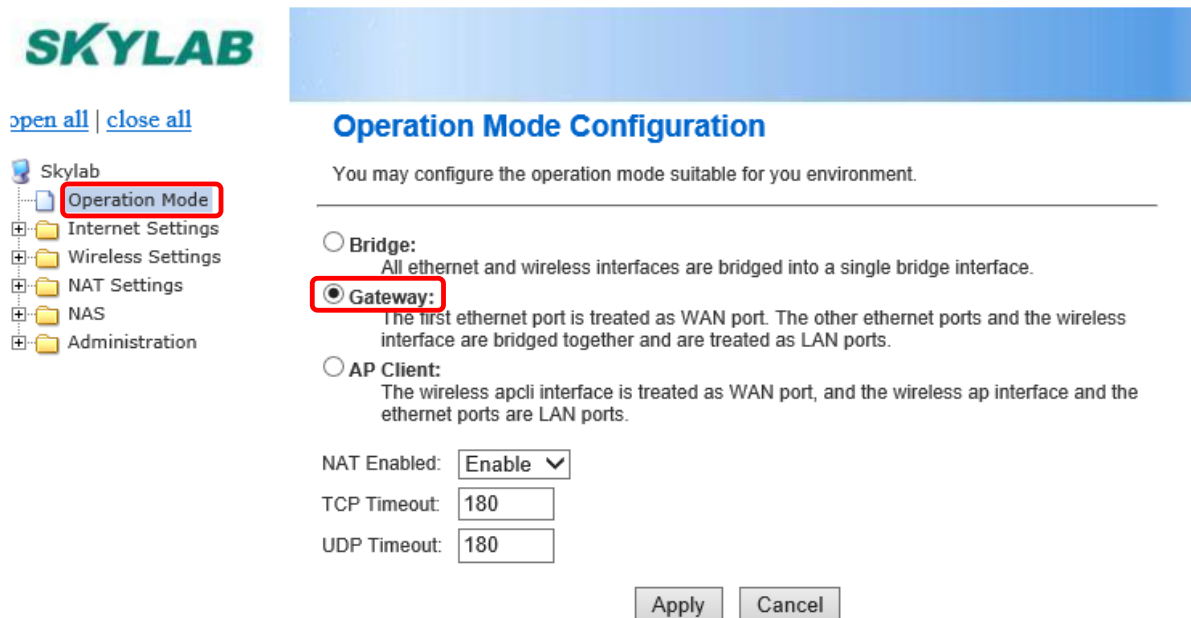
3.1.6 Click **Administration->Settings Management**, then input the UDP Server address in **UDP Server Init IP Setting**, **UDP Server Init Port Setting** default is 3333.

3.1.7 Click **Administration ->Status** to check the Access Point Status.

3.2 AP Client

3.2.1 Click the **Operation Mode** and choose **AP Client**.

3.2.2 AP Client Parameters Setting

3.2.3 Click **Administration->Settings Management**, then input the UDP Server address in **UDP Server Init IP**

Setting, **UDP Server Init Port Setting** default is 3333.

3.2.4 Click **Administration ->Status** to check the Access Point Status.

4 Reversion History

Revision	Description	Approved	Date
V1.01	Initial Release	George He	20190220

5 Contact Information

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