

# VDB2605 规格书

## 带 4G 调制解调器的蓝牙网关/ VDB2605 Datasheet Bluetooth Gateway With 4G LTE Modem

### 文档信息/Document Information

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V1.01	Initial Release.	George	20180820
V1.02	Update BLE Specification.	George	20181227
V1.03	Update new shell and Dimension	Sherman	20200415
V1.04	Add Chinese version	Wendy	20211126

## 物料清单/ Bill of Materiel

名称/ Name	型号/ Model	数量/ Quantity	备注/ Remark
Bluetooth Gateway	VDB2605	1	VDB2605
AC-DC Adapter	BSF-137F	1	IN:AC100-240V/OUTPUT: 5.0V±10%

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## 1 产品描述/General Description

VDB2605 是一款带 4G 调制解调器的蓝牙网关，它可以在各种场景中灵活使用。例如，远程控制 BLE 设备，接收 BLE 设备发送的数据并将其发送给服务器。VDB2605 还支持 POE 开关电源和 5.0V 适配器电源。

VDB2605 is a Bluetooth Gateway with 4G Modem. 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. VDB2605 also supports the POE switch power supply and 5.0V adapter power supply.



**Figure1: VDB2605**

## 2 应用框图/Application Block Diagram

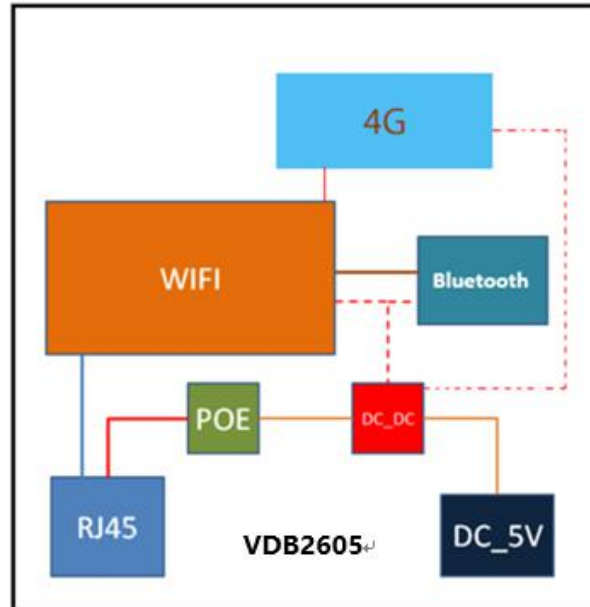


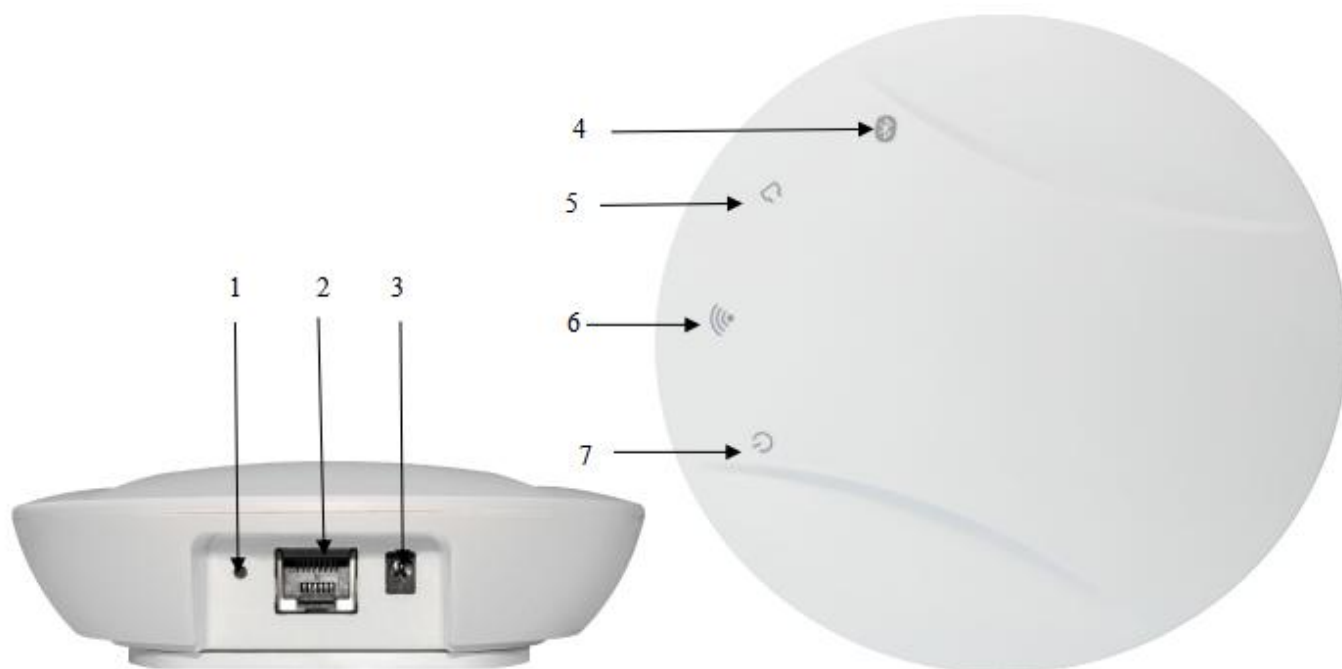
Figure 2: VDB2605 Block Diagram

## 3 特性/Features

- ◆ 支持 POE 开关电源和 5V 适配器电源。 / Supports the POE switch power supply and 5V adapter power supply.
- ◆ 支持 IEEE 802.3 标准兼容解决方案，包括预标准 POE 支持。 / Support IEEE 802.3 standard-compliant solution, including Pre-Standard POE support.
- ◆ 支持 IEEE 802.11n, IEEE 802.11g, IEEE 802.11b 协议。 / Support IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol.
- ◆ 支持蓝牙® 4.2/5.0(Long-Range is not supported)。 / Support BLE 4.2/5.0(Long-Range is not supported).
- ◆ 支持 LTE-TDD / LTE-FDD / TD-SCDMA / UMTS/ Support LTE-TDD/ LTE-FDD/ TD-SCDMA/ UMTS
- ◆ EVDO/EDGE/GPRS/GSM/CDMA
- ◆ 1 个 WAN/LAN 可变网口。 / One WAN/LAN variable network port.

- ◆ RoHS compliance (Lead-free).
- ◆ FCC,CE compliance

## 4 接口/ Interface



- 1: Reset
- 2: POE Interface
- 3: Power Interface
- 4: Bluetooth LED
- 5: RJ45 POE LED
- 6: WiFi LED
- 7: Power LED

## 电源接口/ Power Supply Port

VDB2605 电源接口支持 DC\_5V 输入，电流大于 500mA。电压接口采用 DC-005 电源插座，电源座孔径 3.5mm。针径为 1.35 毫米，作为正极。

**备注:** 5V 电源适配器的输入电压为 AC 100-240V, 50/60Hz，输出电压为 5V 2A。电源连接器内部是正的，外部是负的。

The VDB2605 power interface supports DC\_5V input, and the current is greater than 500mA. The voltage interface adopts the DC-005 power socket, and power seat aperture is 3.5mm. The needle diameter is 1.35 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.

## 复位/ Reset

VDB2605 WiFi 部分按下复位键 5 秒以上将恢复出厂设置。

The VDB2605 WiFi part will resume factory setting after pressing the reset button for more than 5 seconds.

## LED

上电时，电源 LED 正常亮起/ Power LED normally on when powered on

RJ45 POE LED 连接时正常点亮/ RJ45 POE LED normally on when connected

连接 WiFi 1-2 秒后，WiFi LED 正常亮/ WiFi LED normally on after connecting to WiFi for 1-2sec

蓝牙 LED 上电后闪烁/ Bluetooth LED flashing once power on

## 5 应用/ Applications

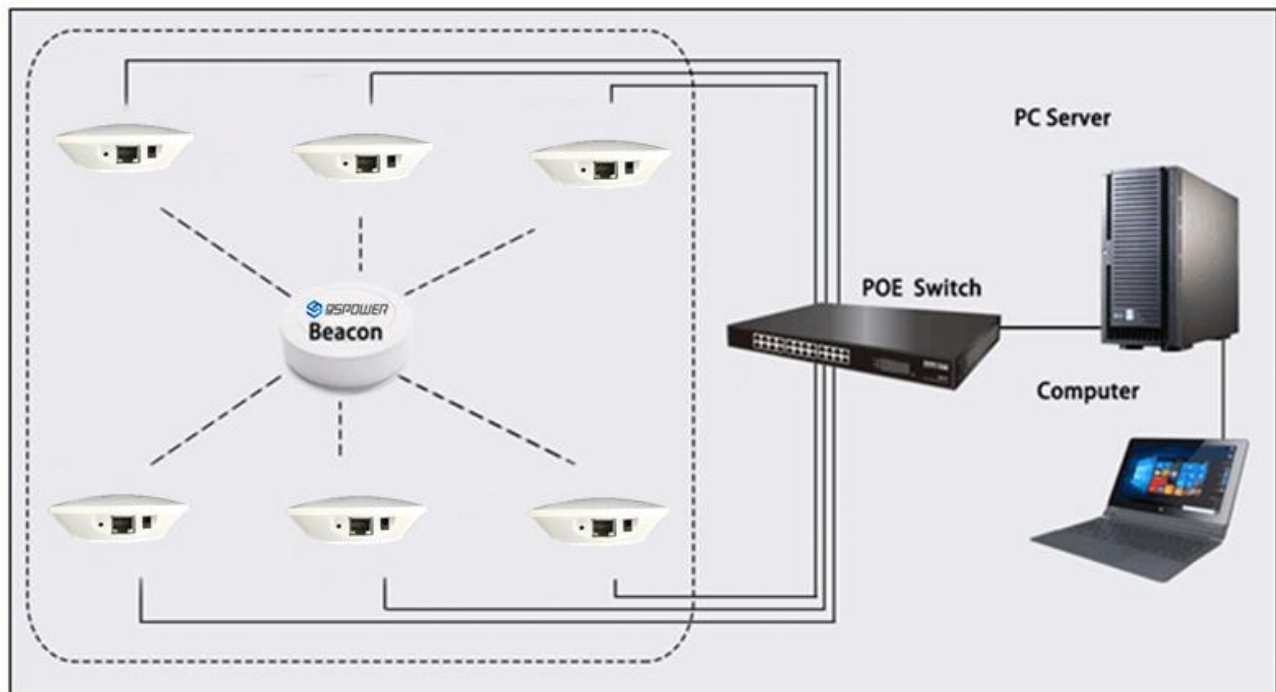
### 室内定位/ Indoor Positioning

1) VDB2605 蓝牙模块每秒采集一次附近信标信息，包括 RSSI、MAC 等。/ VDB2605 Bluetooth module collects information about Beacon nearby, including RSSI, MAC, etc., once per second.

- 2) 蓝牙模块通过 UART 串口向 WiFi 模块发送 Beacon 信息，每秒发送一次。 / Bluetooth module send the Beacon information to WiFi module through UART serial port, once per second.
- 3) WiFi 模块将 Beacon 信息传输到指定的 UDP 服务器，并接受服务器返回的信息。 / WiFi module transfers the Beacon information to the specified UDP server, and accepts the information returned by the server.
- 4) 通过 UDP 服务器分析和计算信标信息后，信标位置可以显示在首页上。 也可以将订单发送到 WiFi 模块，然后发送到蓝牙模块开发不同的功能(如:点亮灯具等)。

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 blue-tooth module to develop different functions (such as: Lighting lamps and lanterns etc.).

#### 定位的原理/ Schematic of Positioning:



备注: VDB2605 支持 POE 供电。

Remark: VDB2605 can be powered by POE.



## 6 模块描述/ Module Specification

尺寸/ Dimension	直径/ Diameter: 124mm; 高度/ Height: 40mm
电源/ Power Supply	DC 5V、POE Switch up to 57V
电流/Currents	WiFi: 200mA@5V 4G: 59~839mA@5V (depending on the network signal)
工作温度/ Operating Temperature	-20℃~70℃
接口/ Interface	Power Supply Port
<b>WiFi</b>	
WiFi 协议/ WiFi Protocol	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
传输速率/ 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
灵敏度/ Sensitivity	HT40 MCS7 : -67dBm@10% PER(MCS7)
	HT20 MCS7 : -73dBm@10% PER(MCS7)
	54M: -76dBm@10% PER
	11M: -91dBm@ 8% PER
发射功率/ Transmit Power	IEEE 802.11n: 15dBm @HT40 MCS7 15dBm@HT20 MCS7
	IEEE 802.11g: 16dBm
	IEEE 802.11b: 18dBm
无线安全/ Wireless Security	WPA/WPA2, WEP, TKIP, and AES
工作模式/ Working mode	Bridge、Gateway、AP Client
<b>蓝牙/ Bluetooth</b>	
蓝牙协议/ Bluetooth Protocol	BLE 4.2/5.0(Long-Range is not supported)
传输速率/ Data Rate	Uncoded:1Mbps/2Mbps,Coded:125kbps(S=8)/500kbps(S=2)
无线安全/ Wireless Security	AES HW Encryption

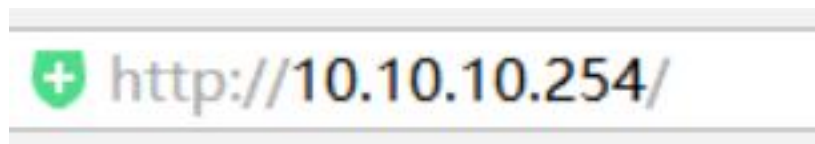
连接距离/ Connection Distance	200m
发射功率/ Transmit Power	0~+20dBm
<b>4G LTE</b>	
模块型号 Module Number	Longshang U9300C
工作模式/ Working Mode	LTE-TDD/LTE-FDD/TD-SCDMA/UMTS/ EVDO/EDGE/GPRS/GSM/CDMA
频段支持 Band support	3 网通，支持移动、联通、电信网络 • LTE-TDD Band 38/39/40/41 • LTE-FDD Band 1/3/5/8 • TD-SCDMA Band 34/39 • UMTS Band 1/8 • EVDO BC0 • CDMA1x BC0 • GSM Band 3/5/8

## 7 配置/ Configuration

(1) 通过 WLAN 连接 VDB2605/ Connect to VDB2605 by WLAN



(2) 进入网站 <http://10.10.10.254> 页面/ Enter to the page <http://10.10.10.254>



(3) 输入帐号和密码<admin/admin>/ Input Account and Password <admin/admin>

## (4) 选择语言/ Select Language



(5) 单击“Administration->Settings Management”，在“UDP Server Init IP Settings”中输入 UDP Server 地址，“UDP Server Init Port Settings”默认为 3333。

Click Administration->Settings Management, then input the UDP Server address in UDP Server Init IP Setting, UDP Server Init Port Setting default is 3333.



[open all](#) | [close all](#)

- V-Power+
  - Operation Mode
  - Internet Settings
  - Wireless Settings
  - NAT Settings
  - NAS
  - Administration
    - Management
    - Upload Firmware
    - Settings Management**
    - Status
    - Statistics

## Settings Management

You might save system settings by exporting them to a configuration file, restore them by importing the file, or reset them to factory default.

### Export Settings

Export Button

Export

### Import Settings

Settings file location

浏览...

Import

Cancel

### Load Factory Defaults

Load Default Button

Load Default

### UDP Server Init

UDP Server Init IP Setting

192.168.1.117

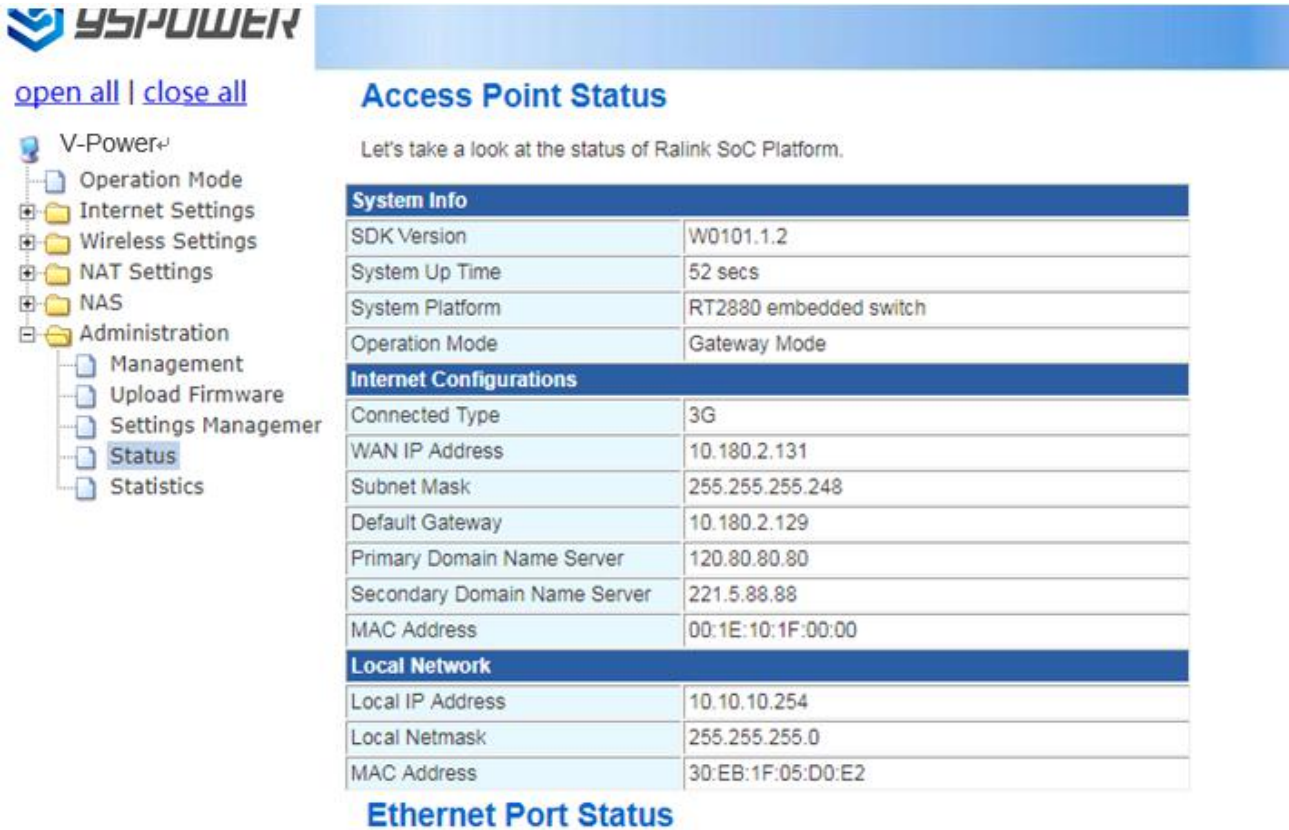
UDP Server Init Port Setting

3333

Apply

Cancel

(6) 单击 “ Administration ->Status” 检查接入点状态。 / Click Administration ->Status to check the Access Point Status.



**Access Point Status**

Let's take a look at the status of Ralink SoC Platform.

System Info	
SDK Version	W0101.1.2
System Up Time	52 secs
System Platform	RT2880 embedded switch
Operation Mode	Gateway Mode

Internet Configurations	
Connected Type	3G
WAN IP Address	10.180.2.131
Subnet Mask	255.255.255.248
Default Gateway	10.180.2.129
Primary Domain Name Server	120.80.80.80
Secondary Domain Name Server	221.5.88.88
MAC Address	00:1E:10:1F:00:00

Local Network	
Local IP Address	10.10.10.254
Local Netmask	255.255.255.0
MAC Address	30:EB:1F:05:D0:E2

**Ethernet Port Status**

## 8 联系信息/ Contact Information

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