



Product Name	GAOTek Smart 4G IoT Gateway
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Contact us: sales@gaotek.com



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GAOTek Smart 4G IoT Gateway

1. General Description

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. Application Block Diagram

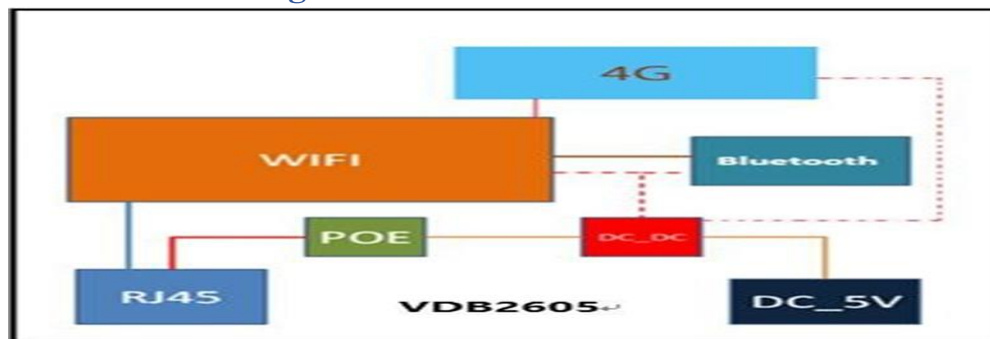


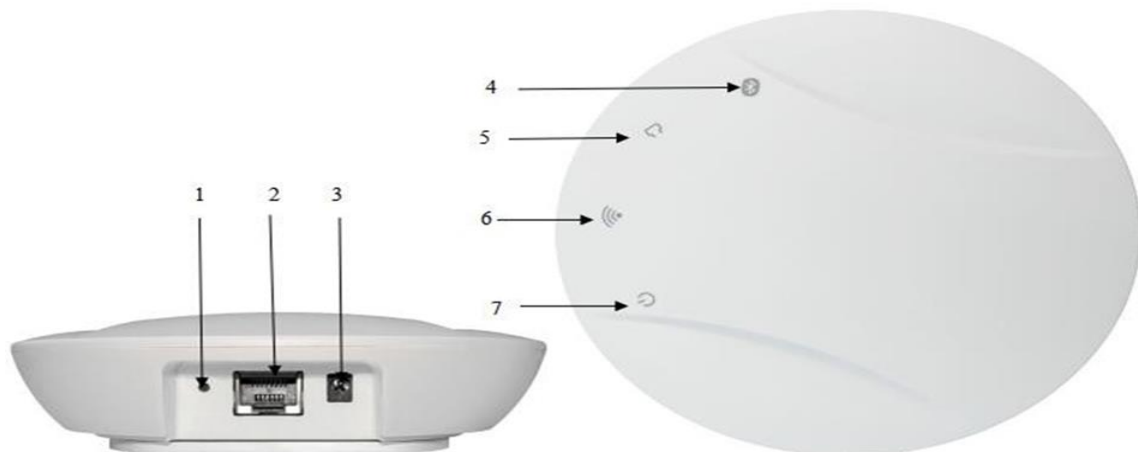
Figure 2: VDB2605 Block Diagram

3. Features

- ◆ POE 5V Supports the POE switch power supply and 5V adapter power supply.
- ◆ IEEE 802.3 POE Support IEEE 802.3 standard-compliant solution, including Pre-Standard POE support.

- ◆ IEEE 802.11n, IEEE 802.11g, IEEE 802.11b / Support IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol.
- ◆ ® 4.2/5.0(Long-Range is not supported). / Support BLE 4.2/5.0(Long-Range is not supported).
- ◆ LTE-TDD / LTE-FDD / TD-SCDMA / UMTS/ Support LTE-TDD/ LTE-FDD/ TD-SCDMA/ UMTS
- ◆ EVDO/EDGE/GPRS/GSM/CDMA
- ◆ 1 ↑ WAN/LAN One WAN/LAN variable network port.
- ◆ RoHS compliance (Lead-free).
- ◆ FCC,CE compliance

4. Interface



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

6: WiFi LED

7: Power LED

4.1. Power Supply Port

VDB2605 DC_5V 500mA。 DC-005

3.5mm。

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.

4.2. Reset

VDB2605 WiFi

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

4.3. LED

Power LED normally on when powered on

RJ45 POE LED RJ45 POE LED normally on when connected

Wi-Fi 1-2 Wi-Fi LED normally on after connecting to Wi-Fi for 1-2sec Bluetooth LED flashing once power on.

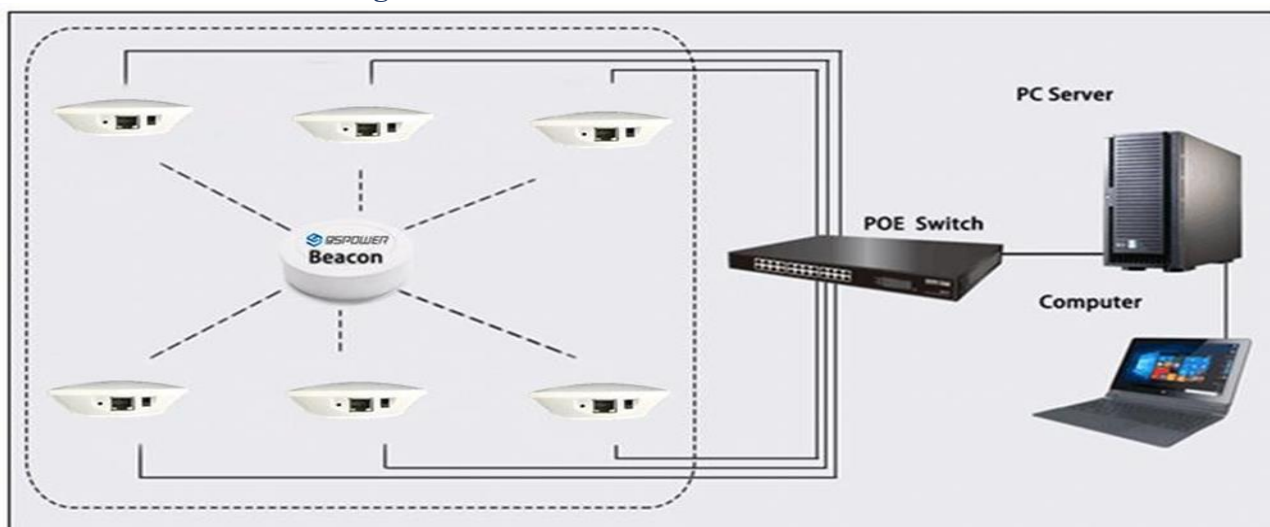
5. Applications

5.1. Indoor Positioning

- 1) VDB2605 RSSI、 MAC VDB2605 Bluetooth module collects information about Beacon nearby, including RSSI, MAC, etc., once per second.
- 2) Bluetooth module send the Beacon information to Wi-Fi 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.

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 Wi-Fi module, then sent to the blue-tooth module to develop different functions (such as: Lighting lamps and lanterns etc.).

5.2. Schematic of Positioning:



VDB2605 POE

Remark: VDB2605 can be powered by POE.

6. Module Specification

Dimension

Diameter: 124mm; Height: 40mm

Power Supply	DC 5V、 POE Switch up to 57V
Currents	WiFi: 200mA@5V 4G: 59~839mA@5V (depending on the network signal)
Operating Temperature	-20°C~70°C
Interface	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
	HT40 MCS7 : -67dBm@10% PER(MCS7) HT20 MCS7 : -73dBm@10% PER(MCS7)
Sensitivity	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	BLE 4.2/5.0(Long-Range is not supported)
Data Rate	Uncoded:1Mbps/2Mbps,Coded:125kbps(S=8)/500kbps(S=2)

Wireless Security AES HW Encryption

Connection Distance 200m

Transmit Power 0~+20dBm

4G LTE

Module Number	Longshang U9300C
Working Mode	LTE-TDD/LTE-FDD/TD-SCDMA/UMTS/ EVDO/EDGE/GPRS/GSM/CDMA

- 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

Band support

7. Configuration

- (1) WLAN VDB2605/ Connect to VDB2605 by WLAN
- (2) http://10.10.10.254/ Enter to the page http://10.10.10.254



- (3 <admin/admin>/ Input Account and Password <admin/admin>

- (4 Select Language



- (5) “Administration->Settings Management”, “UDP Server Init IP SettingsUDP Server , “UDP Server Init Port Settings

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



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- 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

Import Settings

Settings file location

Load Factory Defaults

Load Default Button

UDP Server Init

UDP Server Init IP Setting

UDP Server Init Port Setting

6) Administration ->Status/ Click Administration ->Status to check the Access Point Status



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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