VDB2613规格书

VDB2613 Datasheet

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设备清单/Product List

名称/Item	型号/Model Number	数量/Number	备注/Remark
4G 隔爆型蓝牙 5.0 网关+UWB 基站 4G LTE Exid BLE 5.0 Gateway + UWB base station	VDB2613	1 pcs	
AD-DC,24V 适配器 AC-DC,24V Power Adapter		1 pcs	
抱杆安装套装/Tighten-to-rod installation set	1*U 型螺杆，1*L 型角铁/1*U-bolt,1*L-shaped steel	3 pcs	选配，壁挂或吸顶安装时可不用

目录/Content

1. 产品介绍/Product Induction

VDB2613 是一个集成 4G、WiFi、蓝牙 5.0/ZigBee（未来兼容 Lora）、超宽带的扩展型蓝牙 5.0 网关。产品使用隔爆标准金属外壳，可应用于矿井、加油站、化工厂等Ⅰ类防爆等级要求场所。

VDB2613 is an extended Bluetooth 5.0 gateway integrating 4G, WiFi, Bluetooth 5.0/ZigBee (Lora in the future) and UWB.Products use explosion-proof standard metal shell, can be applied to mine, gas stations, chemical plants and other places of Ⅰ type explosive-proof grade requirements

.VDB2613 的基本功能是蓝牙/ZigBee 网关，可以用来做室内定位，也可以作为蓝牙/ZigBee 网络中枢来发送指令到蓝牙/ZigBee 设备或者接收蓝牙/ZigBee 设备（如蓝牙传感器、报警装置等）的信号并上传到后台服务器，其互联网接入方式可以是 WiFi 也可以是以太网。供电方式上，可以使用 24V 1A 电源适配器，兼容 48V 标准 POE 供电（因为隔爆型 POE 交换机不常用，不推荐Ⅰ类场所应用）。

VDB2613 Is the basic function of VDB2613 bluetooth/ZigBee gateway, can be used to make indoor positioning, can also be used as a bluetooth/ZigBee network center to send instruction to the bluetooth/ZigBee devices or receive a bluetooth/ZigBee devices (such as bluetooth sensor, alarm device, etc.) of signals and uploaded to the backend server, it can be a WiFi Internet access way can also is Ethernet.Power supply on the way, you can use the 24 v 1 a power adapter, compatible with standard POE 48 v power supply (flameproof POE switches is not commonly used because it is over, do not recommend Ⅰ places application).

在此基础上 VDB2613 可以选配 4G PCIE 模块，插入 Micro SIM 卡即可实现 4G 网络通讯，省去复杂的网络布线，并且使用 4G 或者网线接入互联网时，可以把 WiFi 配置成 AP 模式，为其他 WiFi 设备提供网络接入，同时可以通过 WiFi 配置网关参数等。

On this basis, VDB2613 can be equipped with 4G PCIE module, and 4G network communication can be realized by inserting a Micro SIM card, which eliminates the need for complex network wiring. In addition, when 4G or network cable is used to access the Internet, WiFi can be configured into AP mode to provide network access for other WiFi devices, and gateway parameters can be configured through WiFi.

与此同时，VDB2613 可以使用 LAN 口方式挂载我司 UWB 基站板，在原有网关的基础上额外实现 UWB 定位基站的功能。

Meanwhile, VDB2613 can use LAN port mode to mount our UWB base station board, on the basis of the original gateway to achieve additional UWB positioning base station function.

另外 VDB2613 支持隔离型 485 接口，可以连接工控机、程控机，实现串口数据到网络的上传或下发。该串口不做 485 用途时还可以兼容 Molex 接头的 GMOUSE，实现 GNSS 定位。

In addition, VDB2613 supports the isolated 485 interface, which can connect industrial PC and program-controlled computer to realize the uploading or sending of serial data to the network.If the serial port isn't used for 485 purposes, it can also be compatible with external GMOUSE Molex connector for GNSS positioning.

网关另外开放 2 路 USB 口，可外接其他支持 Linux2.6.36 操作系统及以下版本驱动的 USB 外设，如 U 盘、打印机等等，方便扩展外设。

In addition, the gateway reserve 2 USB ports, which can be connected to other USB peripherals that support Linux2.6.36 operating system and the following versions, such as USB disk, printer, and so on, making it easy for extended peripheral connections.

VDB2613 内部支持最大 64GByte 的符合 SD-XC (class 10)协议标准的 SD 卡，从而可以实现长时间断网时的离线数据存储。

VDB2613 supports the SD card conforming to the STANDARD of SD-XC (Class 10) protocol with the maximum 64GByte internally, so that offline data storage can be realized when the network is disconnected for a long time.

关键词 Keyword：

Exd/ia BLE5.0 WiFi UWB LAN/WAN Zigbee Lora 4G RS485 SD-Card USB GMOUSE(GNSS)

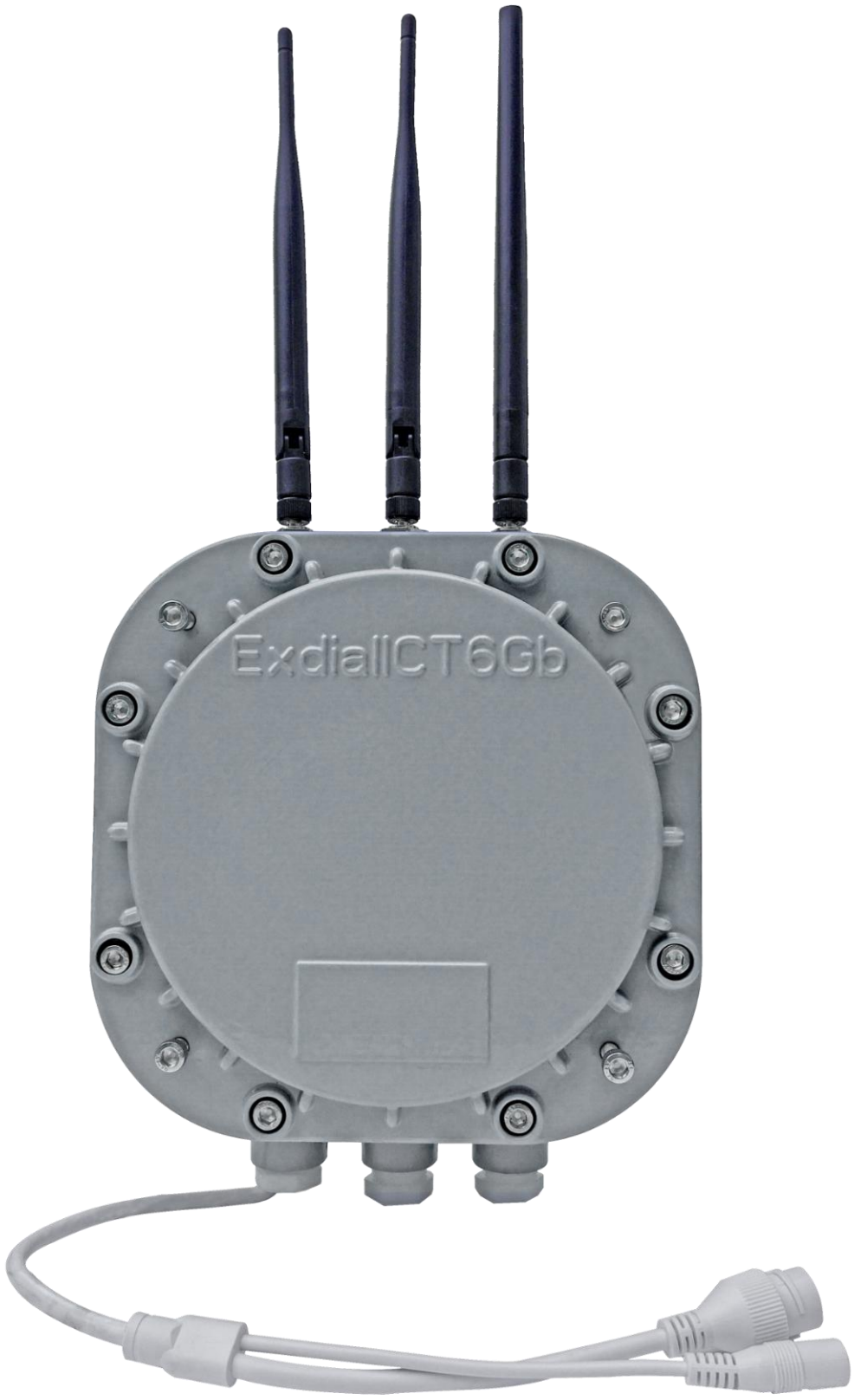


图 1 Figure1:VDB2613

1.1 应用框图/Application Diagram

VDB2613 内置 4G、WiFi、网口和蓝牙多种通信方式。WiFi 与蓝牙之间通过串口通信，4G 与 WiFi 之间通过 USB 通信。VDB2613 支持 POE 供电和 24V 电源供电两种供电方式。

VDB2613 contains 4G LTE, WiFi, Ethernet, BLE multiple communicating system. BLE is connected to WiFi by UART, and 4G modem is connected to WiFi by USB. VDB2613 support both POE and 5V power adapter 2 ways of power supply.

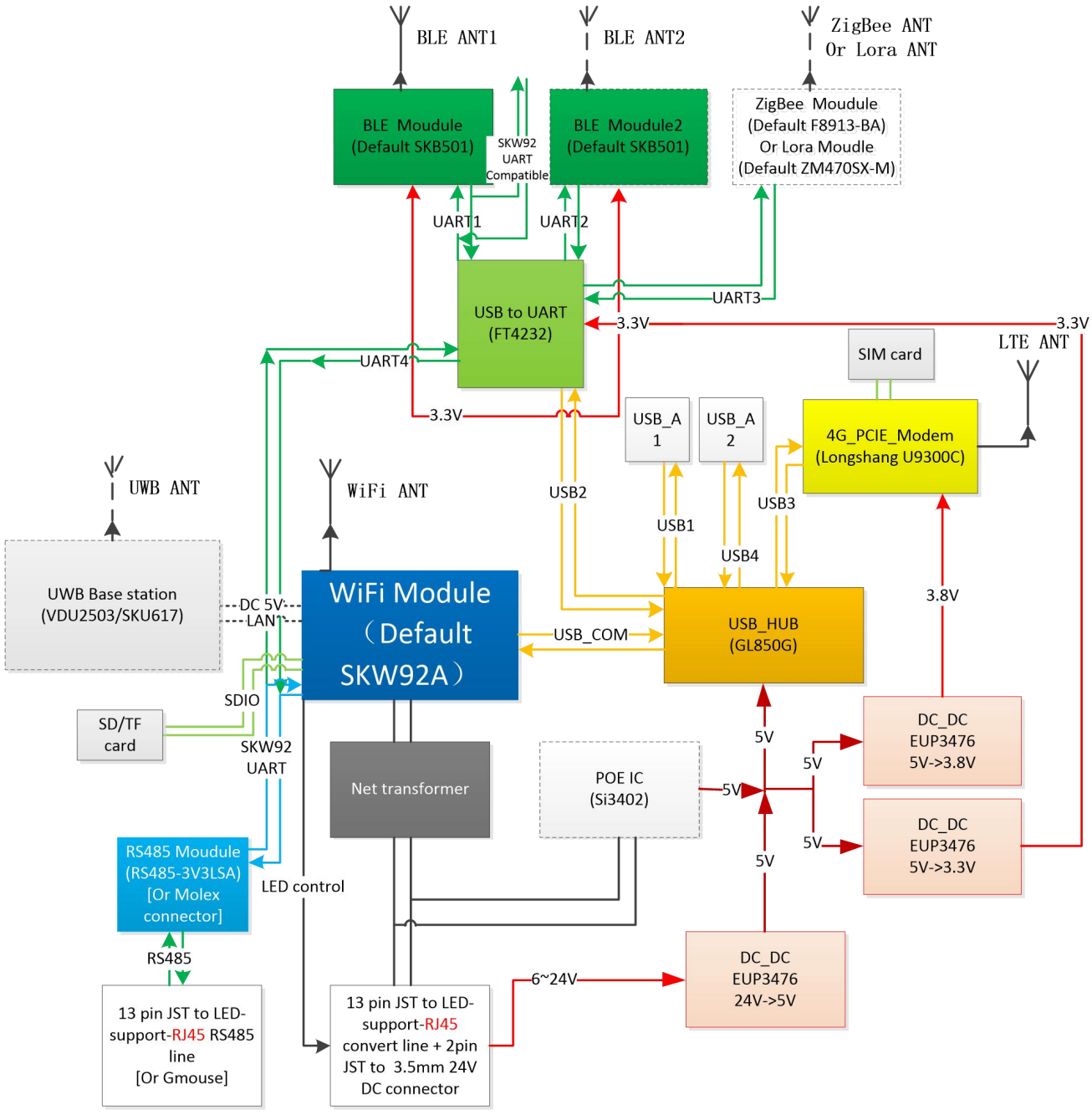


Figure 1.1 系统框架图/Application Diagram

1.2 特性/Features

支持 POE 供电和 DC 5V 供电
Supports POE power supply and 5V DC power supply

4G 全网通 / 4G modem support All Netcom

WiFi 协议/protocol: IEEE 802.11n, IEEE 802.11g, IEEE 802.11b

Bluetooth ®5.0

蓝牙发射功率最大可达+8dBm / BLE Max Transmission Power is +8dBm

体积小，易安装 / Small and easy to apply

WAN/LAN 自适应网口/ Self-adjust WAN/LAN port

UWB TOF and TDOA Support

符合 RoHS, FCC, CE 标准 / Fit RoHS, FCC, CE standard

1.3 接口/interface

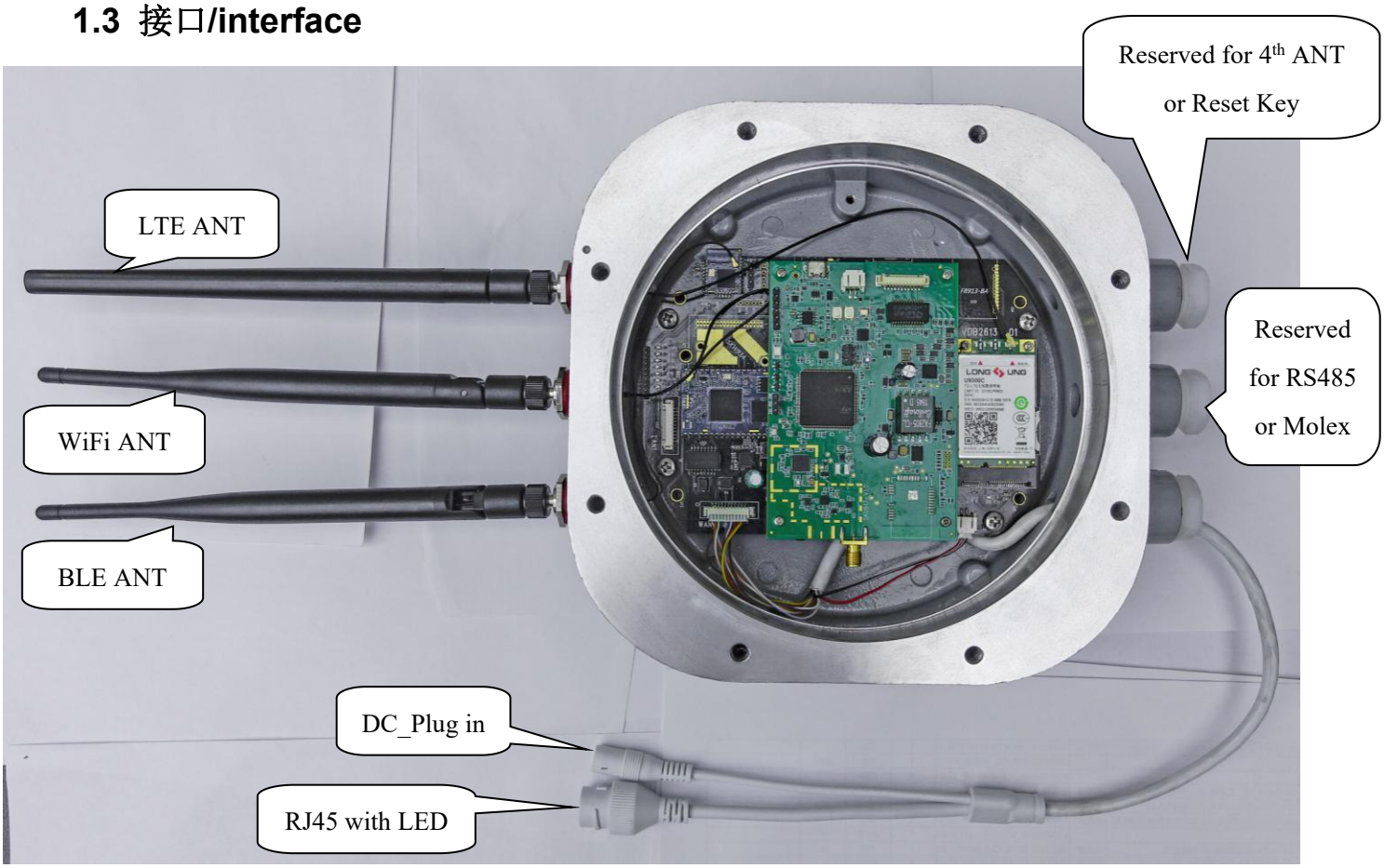


Figure 1.3 VDB2613 interface with UWB base station

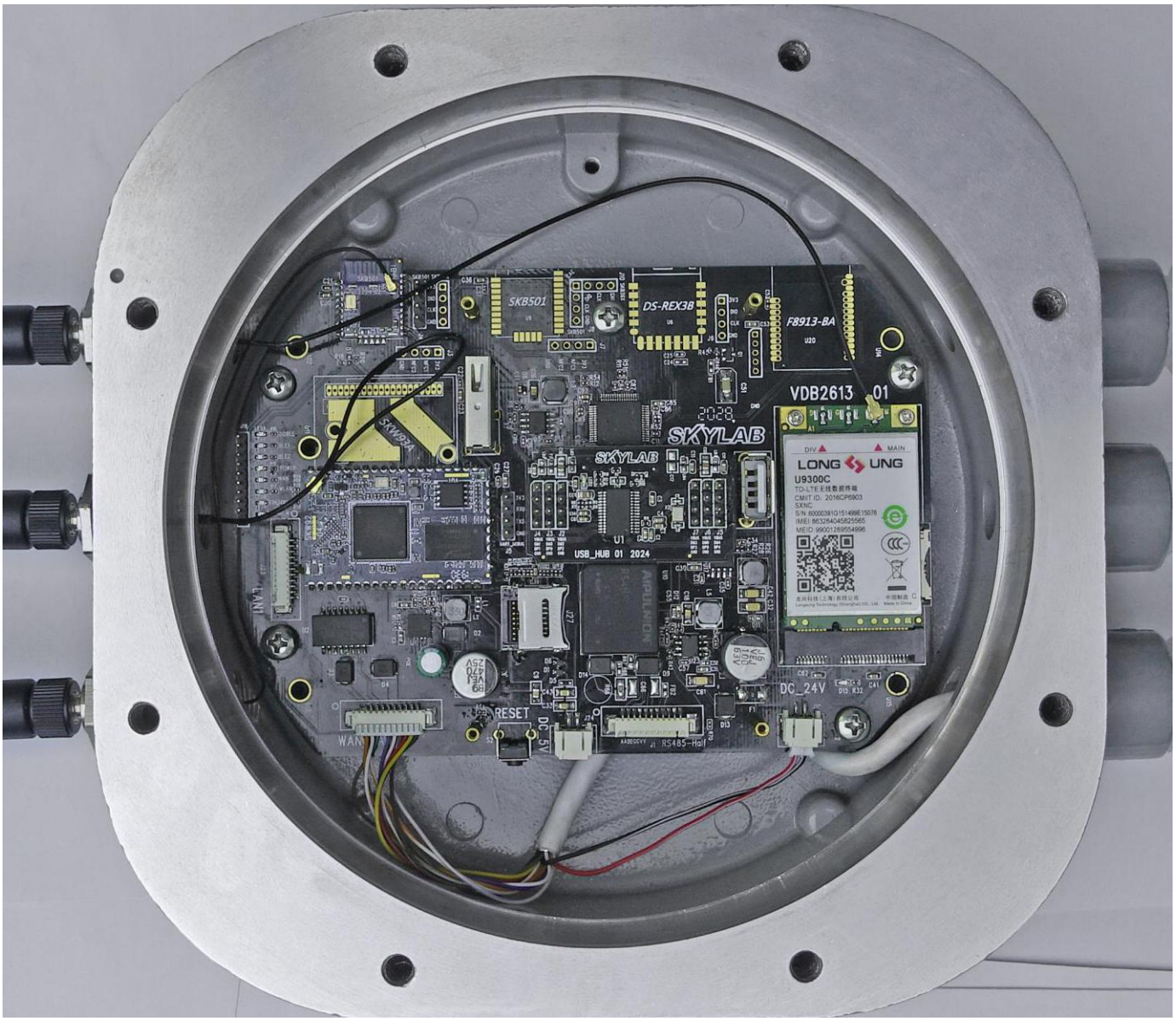


Figure 1.4 VDB2613 interface without UWB base station

1.3.1 RJ45 网口/ RJ45 port for Ethernet

VDB2613 网口支持五类线和超五类线，可传输数据同时也能支持 POE 供电。网口为 WAN/LAN 自适应网口，且支持 LED 网口灯。

VDB2613 support cat.5 and cat.5+ Ethernet cable, which can transmit both data and power.

Meanwhile the Ethernet port support WAN/LAN switch and WAN LED.

工作模式/Working Mode	网口/Ethernet Port Type
AP Client	LAN
Gateway	WAN

Table 1.3.1 Ethernet port working mode

1.3.2 DC 电源接口/DC plug in

VDB2613 的电源接口支持 DC 输入，输入电压范围 6-24.0V，电流不小于 1A，接口采用 DC 电源插座，电源座孔径 6.4mm,针径为 2mm，针头为正极。

VDB2613 support DC power input, and the voltage range is 5~24V. The interface is a 6.4mm female DC-plug-in,of which the positive needle is 2mm in diameter.

说明：出厂配备的 24V 电源适配器输入电压为 AC 100-240V,50/60Hz 输出电压为 24V 1A。电源接头为外负内正。

Attention: The attached 24V power adapter's output voltage and current is 24V/1A, and AC input is 100~240V, 100mA.

1.3.3 复位按键(默认内置，如需外置需要定制)/Reset key(Default internal placed，outside placed needs customization)

短按复位，长按 VDB2613 的复位按钮 5 秒钟以上，内部的 WiFi 模块会恢复出厂设置。

Short press for reset . Long press Reset key for 5 more seconds, the inside WiFi module will recover to factory mode.

1.3.4 电源指示灯（按键内置灯圈，保留选项）/Power LED（LED ring inside key，Reserved）

上电 LED 灯常亮/ LED ring will be always on when DC power or POE power is applied

1.3.5 天线/Antennas

蓝牙/ZigBee、WiFi、Lora、UWB 及 4G 柱状全向高增益天线，必须安装才可以收发无线信号。

BLE/ZigBee, WiFi , Lora, UWB and 4G antenna must be applied in order to send or receive wireless signals.

1.3.6 RS485/Molex

如有需求可接出 RJ45 接口的 RS485 数据线接头.

该接头如果不用时可以接出 Molex 接头的 Gmouse，进而可以实现网关的高精度定位(只用一次即可定位网关位置，用完即可以拆下 GMouse)。

RS485 in RJ45 interface type supported, which is compatible with Molex interface.

It can support GMouse for the gateway's high accuracy positioning（Only one-time-using, the Gateway can get its position. And you may remove it after positioning）.

1.3.7 USB 扩展/ USB extention

网关内部预留两个 USB 接口，可以外接 USB 设备如 U 盘，打印机等。

The Gateway support 2 USB female connector, which can connect external equipment like U-Flash, Printer, itc.

1.3.8 UWB 定位基站/ UWB positioning base station

网关内部可通过排线连接 UWB 定位基站 VDU2503，进而实现 UWB 高精度定位。

The Gateway can connect UWB positioning base station, VDU2503, for UWB high accurate positoning support.

1.3.9 4G PCIE 通信模组支持/ 4G PCIE modem support

网关内部预留 PCIE 接口的 4G 通信模组，如 LongShang U9300C 等,可以实现 4G 上网功能。

The Gateway integerate 4G modem in PCIE interface, like Longshang U9300C, which make 4G internet connection easier.

1.3.10 SD/TF card

网关内部预留 SD 卡接口，可支持最大 64G，符合 SD-XC (class 10)协议标准的 SD 卡。

The Gateway integerate SD card reader, which support up to 64GB SD card that support SD-XC (class 10) protocol.

1.4 应用/Application

应用场景 1：传感器信息采集、指令下发/Scene1: Sensor data collection or command deliver

1) VDB2613 里蓝牙模块收集附近蓝牙传感器的信息，如温湿度、光照度、CO_2 浓度等，一秒一次。
VDB2613 Bluetooth module collects information about BLE sensor, such as Humidity and Temp., brightness, CO_2 density itc., once per second.

2) 云平台的控制信息，通过网关发给蓝牙控制器模块或蓝牙开关，用来调节温湿度等，一秒一次。
The cloud controlcenter send the command information to BLE control module or BLE switch through VDB2613 , so as to adjust the Temp. and Humidity, once per second.

图 1.4 蓝牙网关采集蓝牙传感器信息

Figure 1.4 BLE Gateway collect BLE sensor data

应用场景 2：室内定位/Scene2: Indoor positioning

3) VDB2613 里蓝牙模块收集附近 Beacon 的信息，包括 RSSI，MAC 等，一秒一次。
VDB2613 Bluetooth module collects information about Beacon nearby, including RSSI, MAC, etc., once per second.

4) 蓝牙模块将收到 Beacon 信息，通过 UART 串口发给 VDB2613A 里面的 WIFI 模块，一秒一次。
Bluetooth module send the Beacon information to WiFi module through UART serial port, once per second.

5) WIFI 模块通过串口接收到蓝牙模块传过来的信息，并通过 WiFi、网线或者 4G 模块联网，传输到指定的 UDP 服务器，并能接受服务器返回的信息。
WiFi module transfers the Beacon information (received from BLE module by UART) to the specified UDP server through WiFi, Ethernet or 4G module, and accepts the information returned by the server.

4) UDP 服务器收到来自某个 IP 的探针数据后，通过解析数据和计算，得到 Beacon 的位置信息，可以显示在前端页面，并能下发命令到 WIFI 模块，WIFI 模块透传到蓝牙模块，定制性的工能开发（比如：结合灯具使灯亮起来、触发门铃等）。
Beacon locations can be displayed on the front page after the UDP server after analyzing and calculating the beacon information. UDP server can also delivered orders to the WiFi module, then sent it to the bluetooth module to develop different functions (such as lighting lamps, ringing door bell etc.).

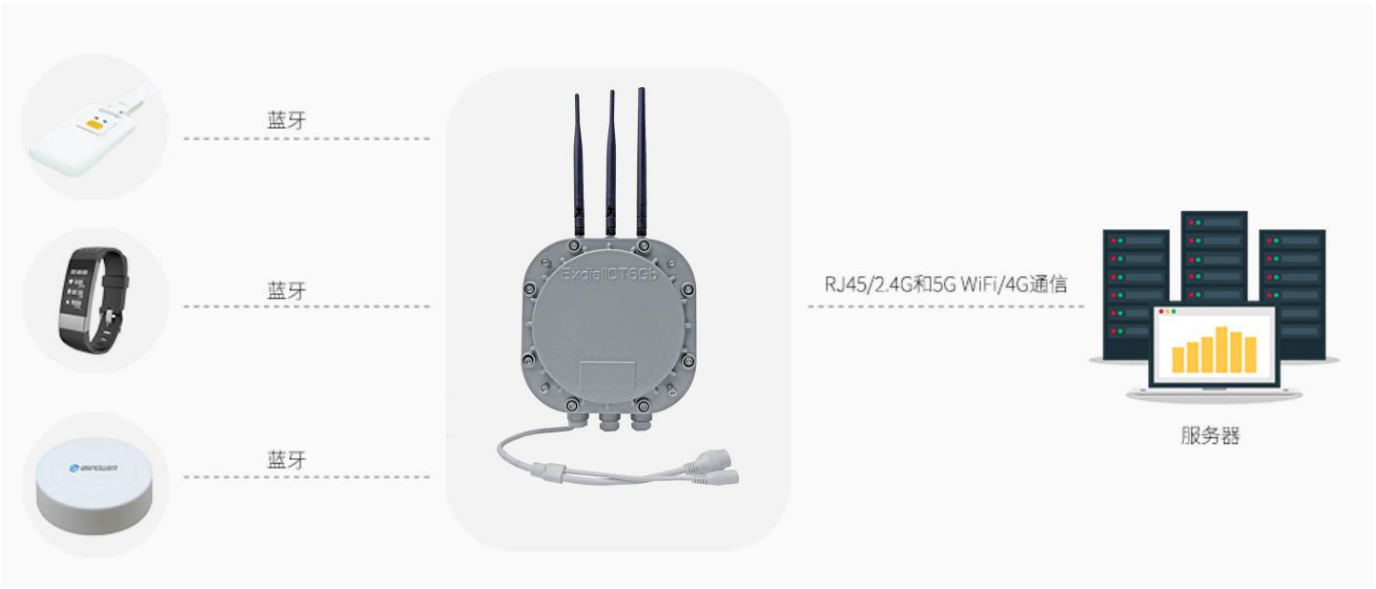


图 1.5 蓝牙网关采集蓝牙信标信号强度

Figure 1.5 BLE Gateway collect BLE Beacon RSSI

说明：VDB2613 可通过网线或者 LTE 实现联网，也可以通过 WiFi 连接无线路由实现联网。

Remark：VDB2613A can be connected to the Internet via the POE switch or the wireless router or LTE modem.

2. 硬件参数/Hardware Specification

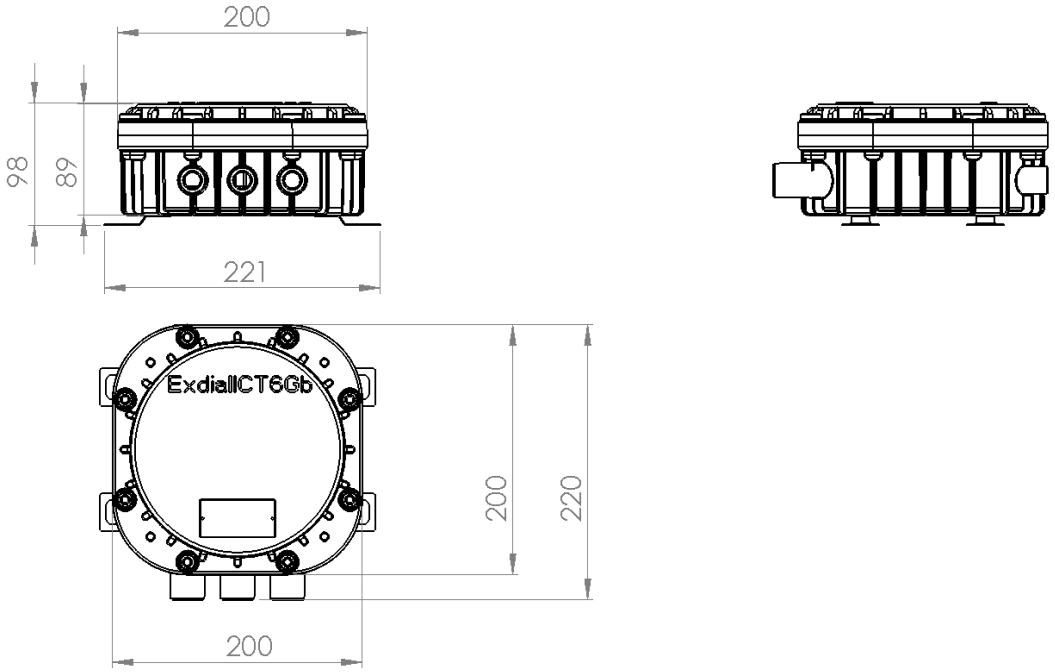
通用参数 General parameter	
尺寸 Dimension	L220mm*W200mm*H89mm (不含壁挂或者抱杆套件天线 Install componant and antenna not included)
重量 Weight	3.1kg (无抱杆套件 Without holding pole conponant)
供电方式 Power supply	DC 6~24V or POE
平均电流 Average current (no 4G)	200mA@6V（无 UWB，无 4G）
工作温度 OP. Temp	-20℃~70℃
物理接口 Physical	Ethernet port *1、DC port *1、RS485/Molex 接头
WiFi	
Wifi 协议/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
接收灵敏度 Rx Sensitivity	HT40 MCS7 : -70dBm@10% PER(MCS7)
	HT20 MCS7 : -73dBm@10% PER(MCS7)
	54M: -77dBm@10% PER
	11M: -89dBm@ 8% PER
发射功率 Tx Power	IEEE 802.11n: 14dBm @HT40 MCS7 15dBm@HT20 MCS7
	IEEE 802.11g: 15dBm
	IEEE 802.11b: 18dBm
无线安全 Wireless security	WPA/WPA2, WEP, TKIP, and AES
工作模式 Workig mode	Bridge、Gateway、AP Client
蓝牙参数 BLE parameters	

蓝牙协议 BLE Protocol	Bluetooth ®5.0
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
发射功率 Tx Power	默认/Default 8dBm±1.5dBm (Can be adjusted from -20 to 8dBm in 4dBm step)
接收灵敏度 RX Sensitivity	-93dBm@1Mbps BLE
覆盖范围/Coverage	Out door 80m，Indoor 30~50m（No sheild）
ZigBee参数（F8913S-E）	
通信协议及频段 Communication Protocol and Frequency	IEEE 802.15.4　　ISM 2.4～2.5GHz
覆盖范围/Coverage	Outdoor 500m, Indoor 30m @4.5dBm
理论带宽/Baudrates	250Kbps
接收灵敏度/Sensitivity	-97dBm
Lora参数（ZM470SX-M）	
使用频率/Frequency used	450~480MHz, typical 470MHz
发射功率/Tx Power	12.5dBm
接收参数/Receive character	Max 0dBm, Min -110dBm@2kbps
传输速率/Datarate	0.78~150kbps, typical 2kpbs
4G参数/4G parameters	
模块型号 Module Number	Longshang U9300C
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
UWB 无线参数/UWB Parameters	
支持协议 Protocol Support	IEEE802.15.4-2011 UWB

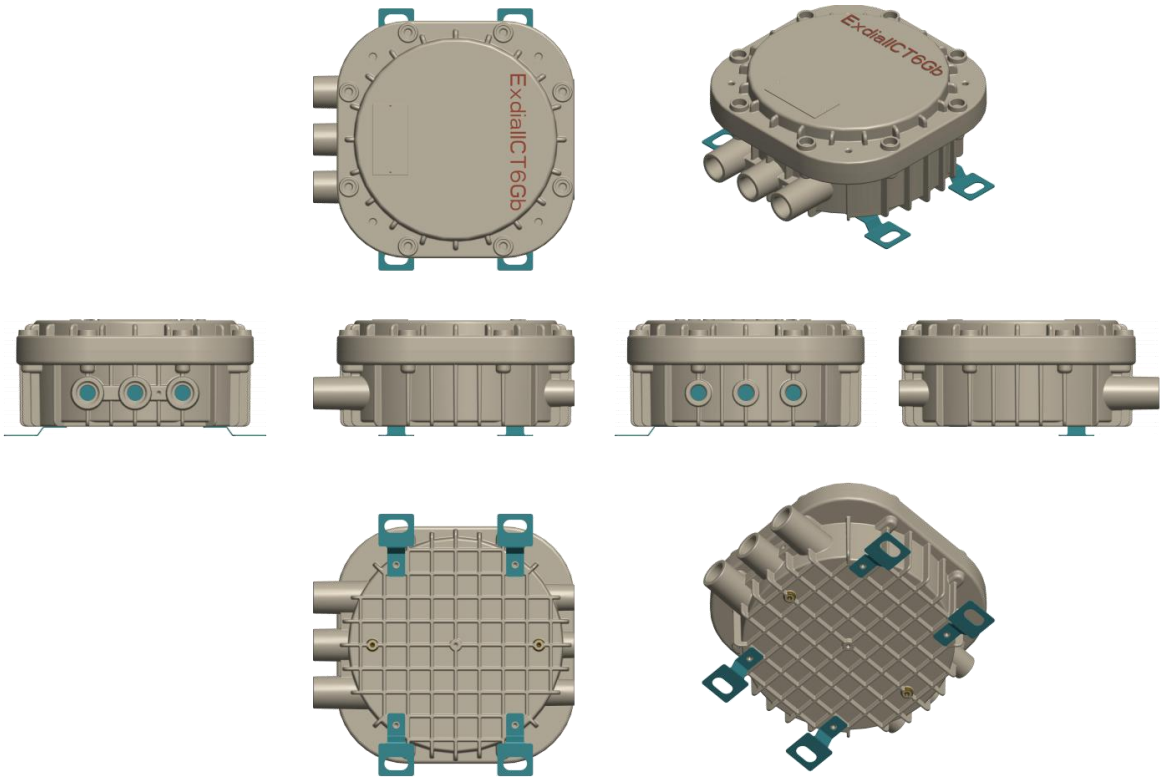
频率/Frequency	Support full channels CH1-5: CH1:3244.8 – 3744MHz **CH2:3774 – 4243.2MHz(Default)** CH3:4243.2 – 4742.4MHz CH4:3328 – 4659.2MHz CH5:6240 – 6739.2MHz
典型发射功率 Tx Power	-6dBm@CH2 （-16dBm@Other Channels without PA）
接收灵敏度 Rx sensitivity	-105dBm@CH2(BER 10%,With LNA) (Other CHs TBD)
数据传输速率 Datarate	Default 6.8Mbps Support 110Kbps,850kbps
UWB 定位性能	
定位精度 Position accuracy	<30cm （基站标签无遮挡/Tags and Anchors are not sheiled）
推荐基站布局间隔 Suggested Anchor distance	20m~50m **基站天线安装位置应与墙面或天花板等反射物体至少保持 15cm 的距离** **Anchor antenna should be away from ceilings or walls for at least 15cm**
数据上传方式 /Data uploading path	10/100M Ethernet
基站时钟同步方式 /Anchor clock sychoronizing way	UWB Wireless clock sychoronizing

3. 结构参数/Dimension parameter

尺寸信息



六面视图



4.安装方法/Installation method

抱杆式安装方法/Holding pole installation method

4.1 使用十字螺丝，把三个 L 型角铁按照下图方向固定在 VDB2613 外壳上。

Fix the 3 L-shape 90°steel on the bottom side of VDB2613 using 3 hexagon screw, like below.

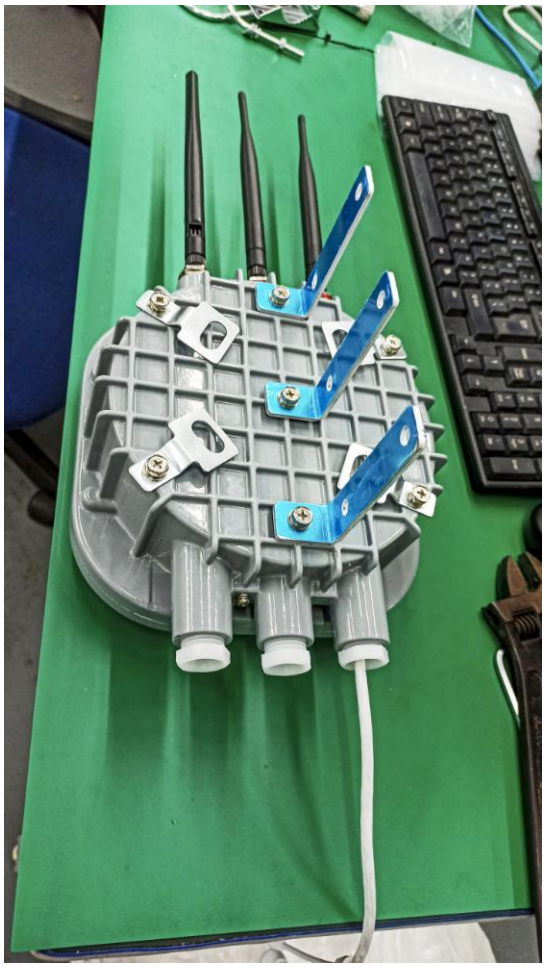


Figure 3.1-L fix L-shape steel on the bottom side

Figure3.1-R Insert the U-bolts to the L-shape steel

4.2 把 U 型螺丝及配套卡扣卡在安装杆上，上下各一个 U 型卡扣，然后把 L 型角铁长边插入 U 型螺丝，如上右图。然后拧上螺丝固定，如下页图。

Put the U-bolts and its matching zigzag-arc buckle on the rod , then put it into the hole of the long side of the L shaped steel and then tighten the nuts to fix it on the rod

Figure 4.2 Holding pole installation method

壁挂式/吸顶式安装方法 /Hanging to wall or ceiling

4.3 使用扳手或螺丝刀把背部的 4 个壁挂铁片旋转到铁壳外侧。

Using screw driver or wrench to loose the tighten screw and move the spin the screw gasket in the opposite side.

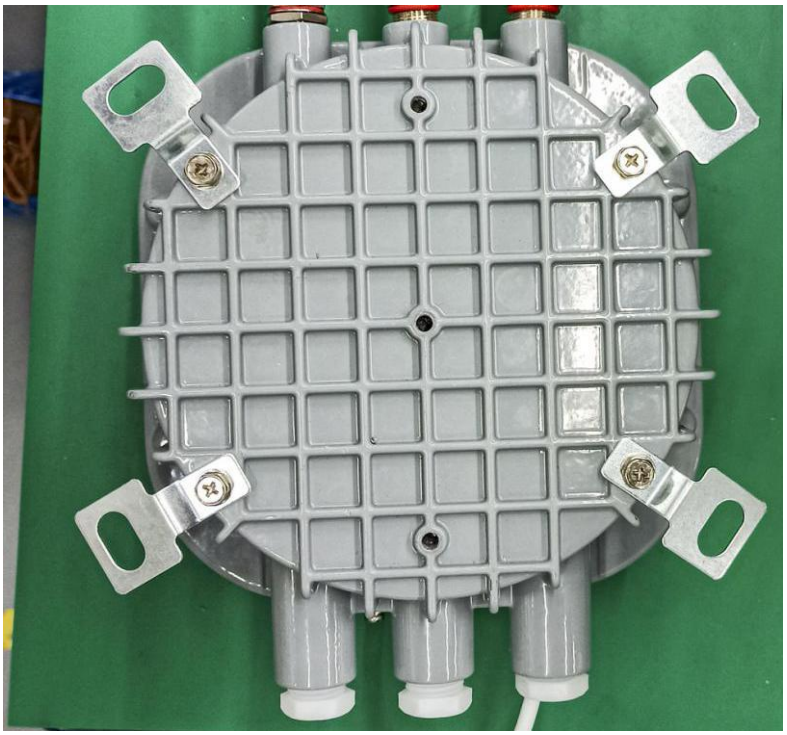


Figure 4.3 Screw gasket spined in the opposite side of the default setting

4.4 在墙上打好膨胀螺丝后，把螺栓套入壁挂铁片并拧紧。

Drill holes on the wall/ceiling, put the expansion screws inside the hole and fix the gateway with the attached nut of the expansion screws.

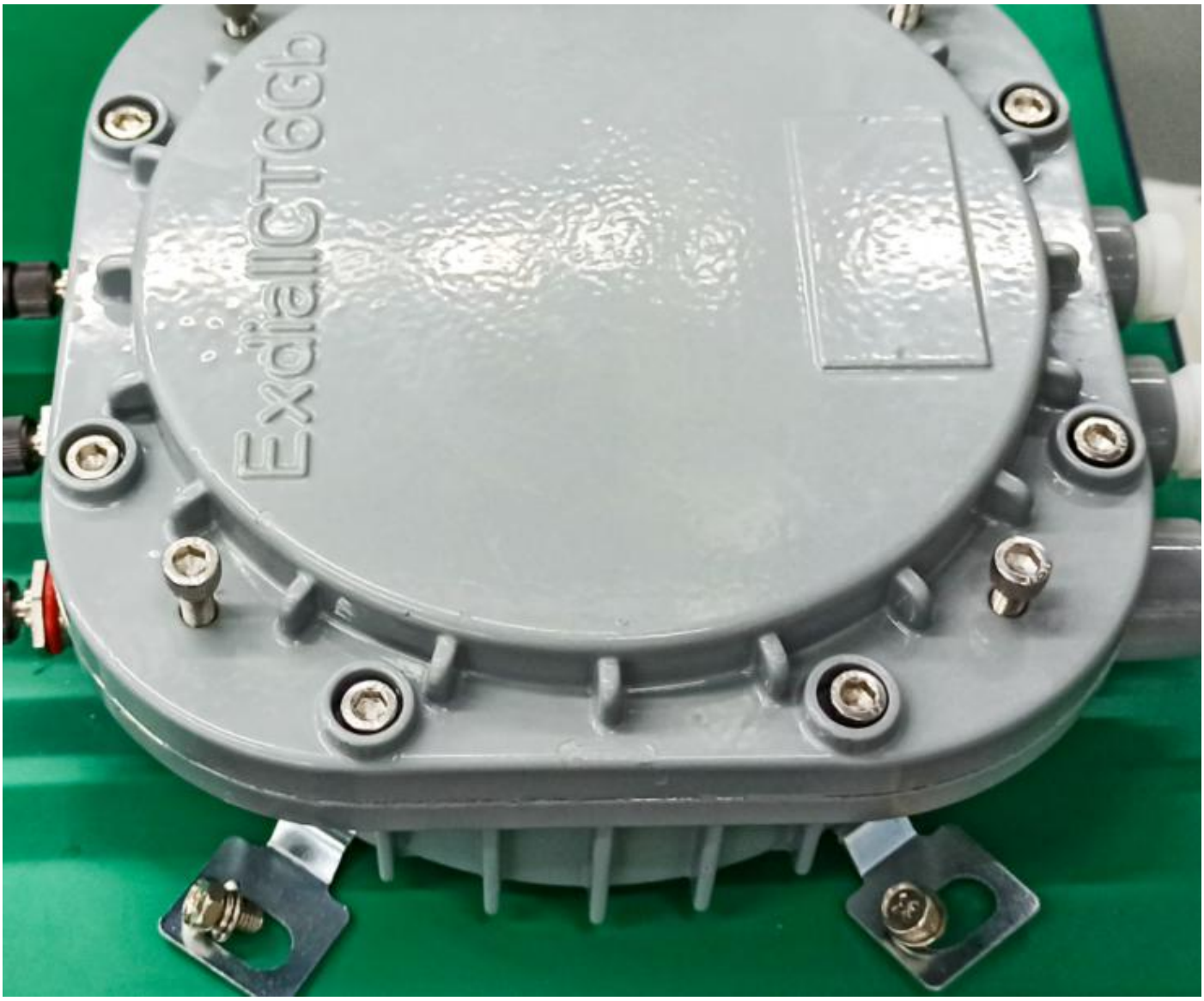


Figure 3.3 Holding pole installation method

5. 配置参数/Configuration

5.1 网络拓扑/network topology

5.1.1 通过上级路由网段访问/Access through the superior routing network segment

VDB2613 在 gateway 模式下，唯一的网口为 WAN，，PC 与 VDB2613 连接相同的上级路由，访问 VDB2613。

VDB2613 工作在 apcli 模式下，PC 通过与 VDB2613 连接相同的上级路由，访问 VDB2613。

下图是网络连接的拓扑图，VDB2613 的 wan 口连接路由器的 lan，个人 PC 也连接到路由器的 lan 口或者无线热点，此时在 PC 上使用浏览器可以访问 VDB2613 的管理界面；

In the Gateway mode of VDB2613, the only network port is WAN,, PC and VDB2613 connect the same superior route, access VDB2613.

VDB2613 works in APCLI mode, where the PC accesses VDB2613 through the same superior route as VDB2613.

The following figure is the topology of the network connection. The WAN port of VDB2613 is connected to the ROUTER's LAN port, and the PERSONAL PC is also connected to the router's LAN port or wireless hotspot. At this point, the management interface of VDB2613 can be accessed through the browser on the PC.

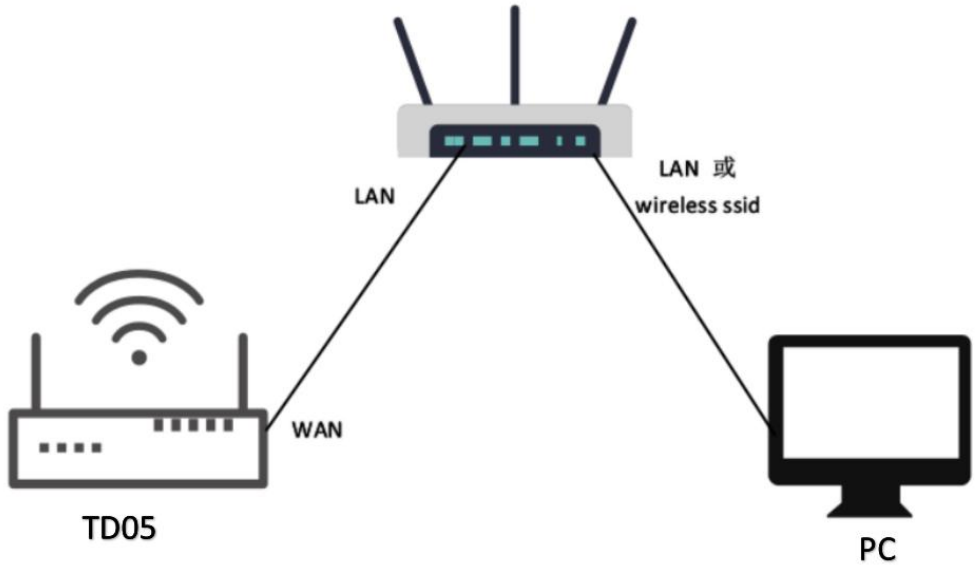


图 5.1 通过上级路由网段访问/Access through the superior routing network segment

下面假设此时路由器分配给 VDB2613 的 IP 地址为 192.168.0.106，PC 分配的 IP 为 192.168.1.118，此时在 PC 上使用浏览器访问 192.168.0.106，可以进入 VDB2613 的 web 认证界面。如下图所示

It is assumed that the IP address assigned to VDB2613 by the router is 192.168.0.106, and the IP assigned to THE PC is 192.168.1.118. At this time, the browser can access 192.168.0.106 on the PC, and the Web authentication interface of VDB2613 can be entered.As shown in the figure below

VDB2613 的管理账号密码分别为 admin/admin。

The password of VDB2613 is admin/admin.

5.1.2 通过局域网连接/Connect via LAN

VDB2613 在 gateway 模式下，PC 通过 VDB2613 的 WIFI 热点访问 WIFI 模块。

VDB2613 在 ap-cli 模式下，PC 可通过 VDB2613 的 WIFI 热点和唯一的网口访问 WIFI 模块。

通过以上方式连接 VDB2613 后，VDB2613 会分配 ip 地址给 PC。用户可在 PC 上，通过访问网关 IP，登录到 VDB2613 的管理界面。默认的 IP 地址网段为 10.10.10.0/24，假设用户没有修改 VDB2613 的 IP 网段，那么，可在 PC 上通过浏览器 10.10.10.254，来到 VDB2613 的管理界面。

VDB2613 in Gateway mode, the PC accesses the WIFI module through the WIFI hotspot of VDB2613.

VDB2613 In AP-CLI mode, THE PC can access the WIFI module through the WIFI hotspot of VDB2613 and the unique network port.

After connecting to VDB2613 in the above way, VDB2613 will assign the IP address to the PC.Users can log in to the administration interface of VDB2613 on a PC by accessing the gateway IP.The default IP address network segment is 10.10.10.0/24. Assuming that the user has not modified the IP network segment of VDB2613, then the user can go to the management interface of VDB2613 through the browser on the PC at 10.10.10.254.

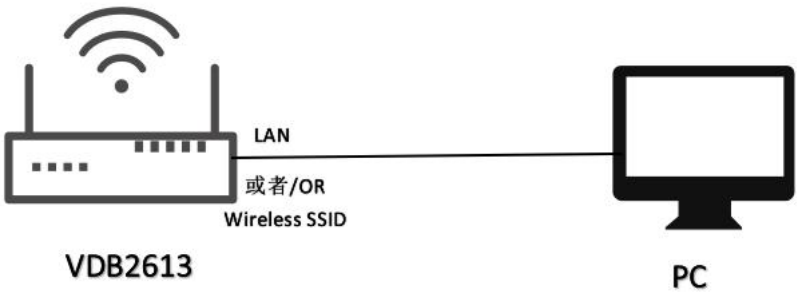
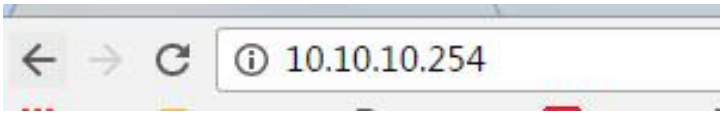


图 4.2 通过 VDB2613 局域网访问/Access via VDB2613 LAN

下图是 PC 上的访问截图：/The following is a screenshot of the access on PC:



5.2 广域网配置/Wan configuration

5.2.1 wan 口上网/Wan port access to the Internet

（1）系统工作默认为 gateway 模式；/The system works in gateway mode by default;

说明：点击 Save，可以保存配置，但不会立即生效，可以在系统配置完后，再一次性确定；

点击”确定”，会立即生效，网络会重启，需要等待网络恢复；

Note: Click Save, the configuration can be saved, but it will not take effect immediately. It can be determined once the system is configured.

Click "OK", it will take effect immediately, the network will restart, need to wait for the network recovery;

（2）广域网为动态地址分配；/Wan for dynamic address allocation;

（3）查看状态/Check the status

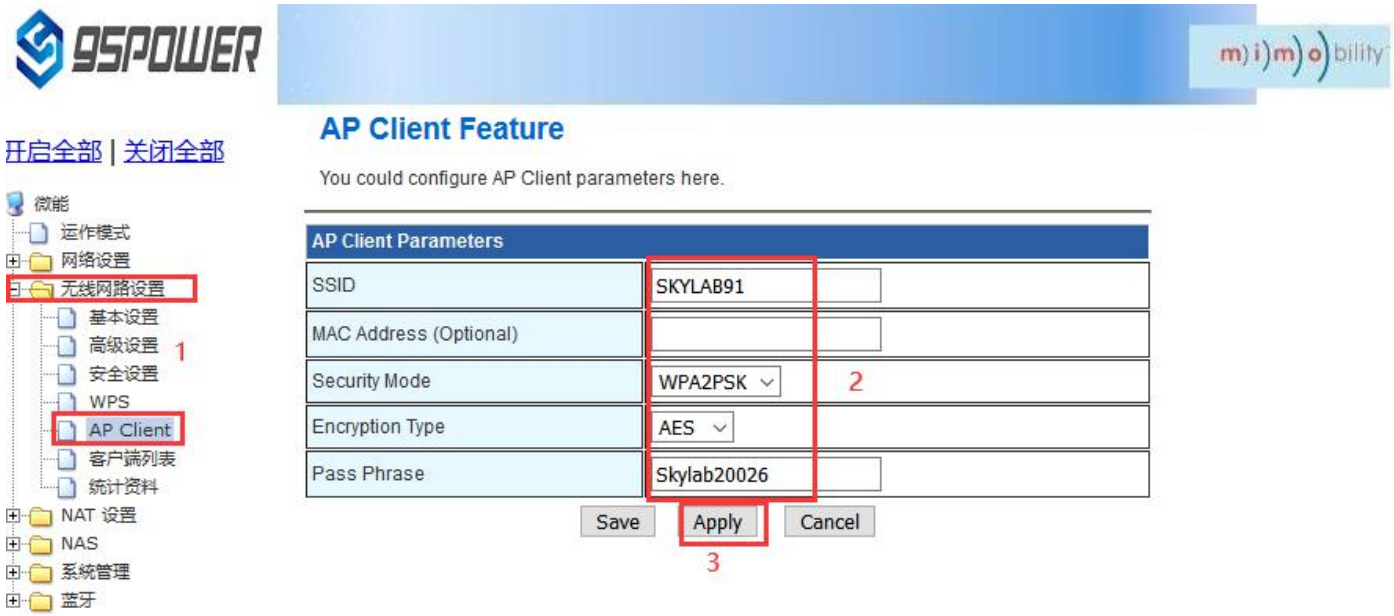
5.2.2 无线上网/wireless internet

（1）系统模式配置为 apclient 模式，按下图操作，点击”Save”后，需要刷新

The system mode is configured as APCLI mode. Follow the operation as shown in the figure below and click "Save" to refresh

（2）广域网配置为动态地址分配；/The WAN is configured for dynamic address assignment;

（3）配置上级 AP 信息；/Configure superior AP information;



5.2.3 移动 4G 上网/Mobile 4G Internet

（1）保证移动上网卡和 4G 天线接好，系统配置为 Gateway 模式；

Ensure that the mobile network card and 4G antenna are connected well, and the system is configured as Gateway mode;

（2）广域网配置 3G 上网方式；/Wan configuration 3G network mode;

（3）查看联网状态；/Check the network status;

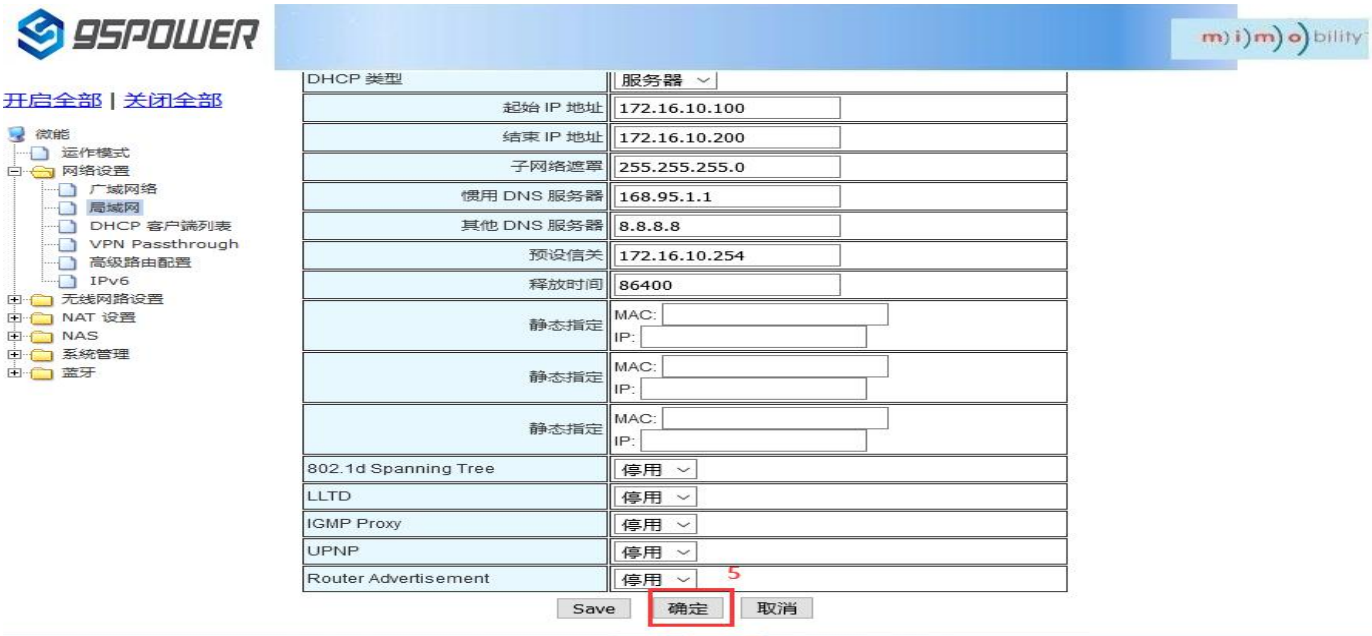
5.3 局域网配置/LAN configuration

5.3.1 更改局域网 IP 地址/Change the LAN IP address

VDB2613 默认的局域网网段为 10.10.10.254/24，客户可以根据需求修改局域网 IP 地址，下面介绍其操作步骤：

The default LAN segment of VDB2613 is 10.10.10.254/24. Customers can modify the LAN IP address according to their needs. The following steps are described:

（1）按照下图步骤操作；/Follow the steps below;



（2）修改完 IP 地址后，网络会重启，如果使用 WIFI 热点连接，可能出现断网情况，再次连接到热点，使用新设置的 IP 地址访问模块。

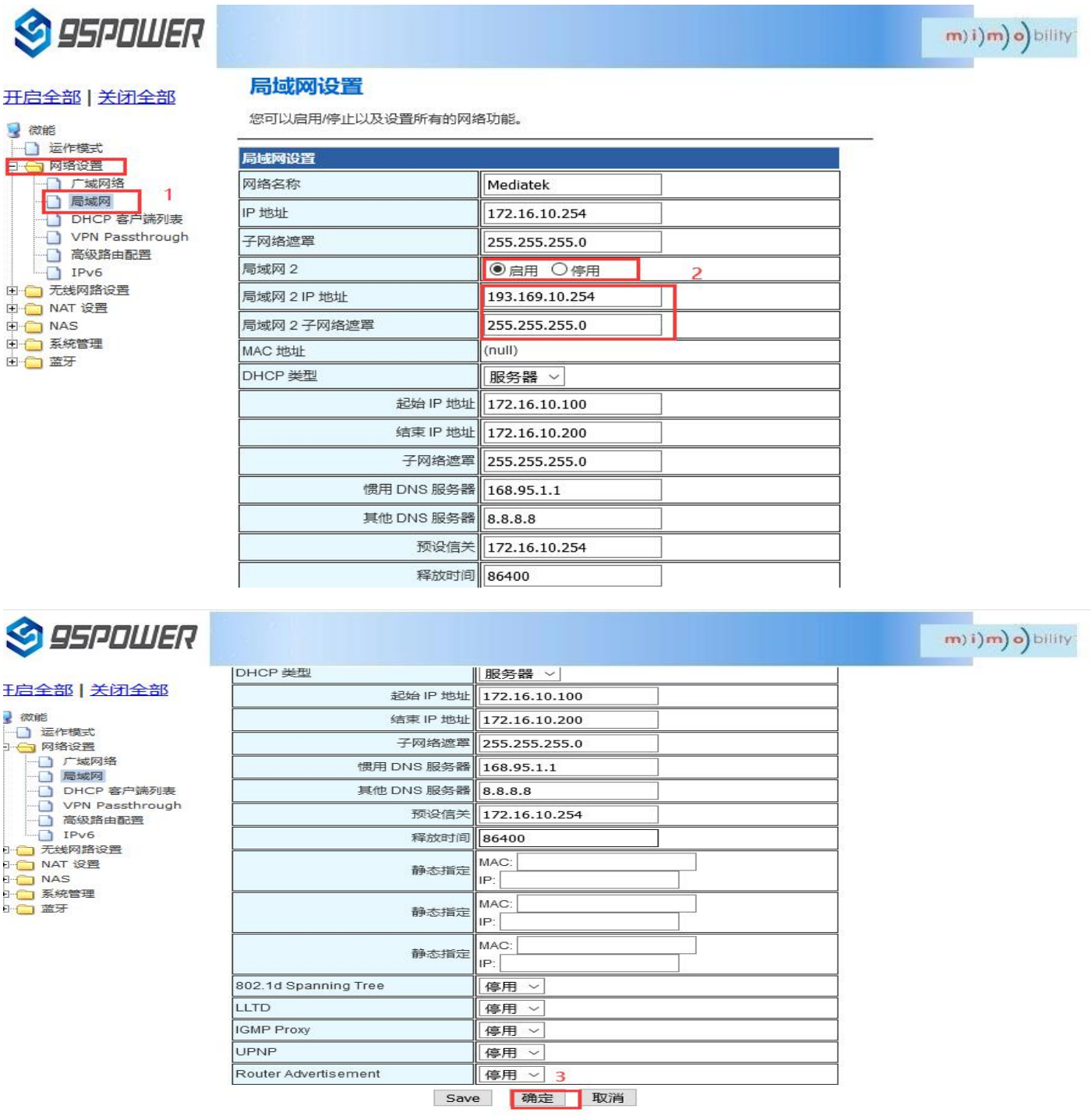
After the IP address is modified, the network will restart. If the WIFI hotspot is used to connect, the network may be disconnected. Connect to the hotspot again and use the newly set IP address to access the module.

5.3.2 增设局域网网段/Add LAN segment

VDB2613 可以增设局域网网段 lan2，默认没有开启 lan2。

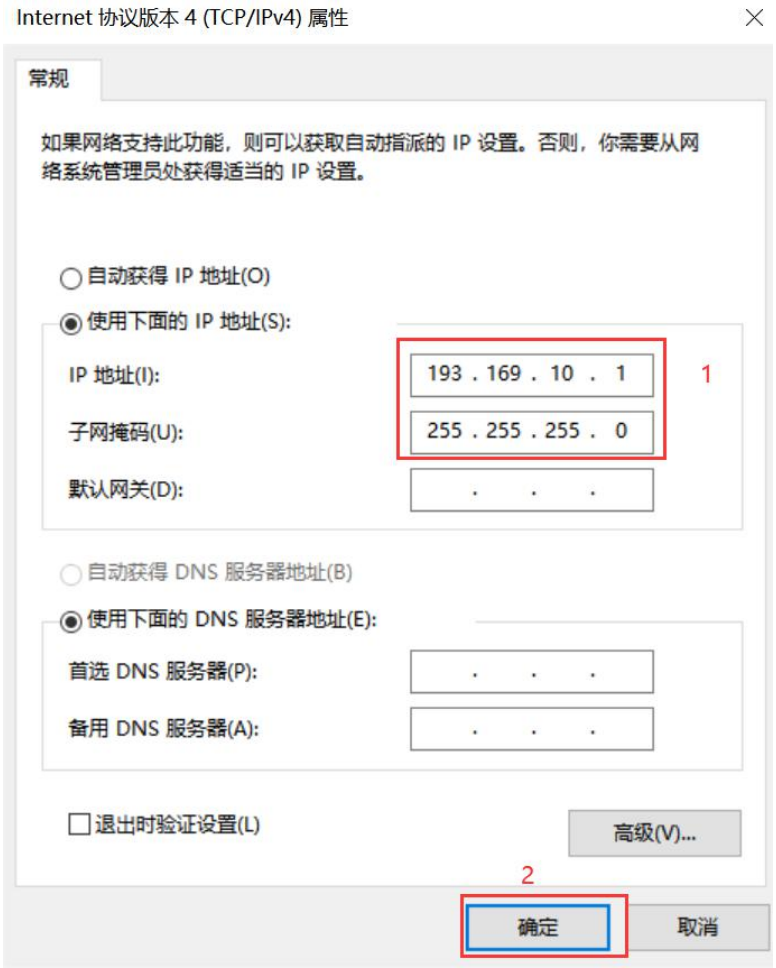
Lan2 can be added to LAN segment in VDB2613. Lan2 is not enabled by default.

（1）按下图步骤设置 lan2。/Follow the steps below to set up LAN2



（3）lan2 设置完成后，用户可以使用设置静态 IP 为该网段，与设置通信，通过 lan2 的 IP 访问网关。

After lan2 is set up, the user can set the static IP for the network segment and communicate with the set through lan2's IP access gateway.



5.3.3 配置 DHCP 参数/**configuration DHCP**

VDB2613 支持用户修改 DHCP 的各个参数，包括起始 IP、结束 IP、IP 地址租赁时间等参数，也支持用户关闭 DHCP 功能，使用静态 IP 连接。

VDB2613 supports users to modify various DHCP parameters, including starting IP, ending IP, IP address lease time and other parameters, and also supports users to turn off DHCP function and use static IP connection.

（1）下面是关闭 DHCP 服务的步骤；/The following steps are to close the DHCP service

下面是设置 DHCP 服务器参数的步骤：/Here are the steps to set the DHCP server parameters:

（1）按图示步骤设置/Set according to the steps shown in the diagram

5.3.4 绑定 IP 地址/Bind IP address

在调试过程中，在 PC 上模拟服务器端进行测试时，可绑定 PC 的 IP 地址，使服务器在测试中 IP 地址固定。

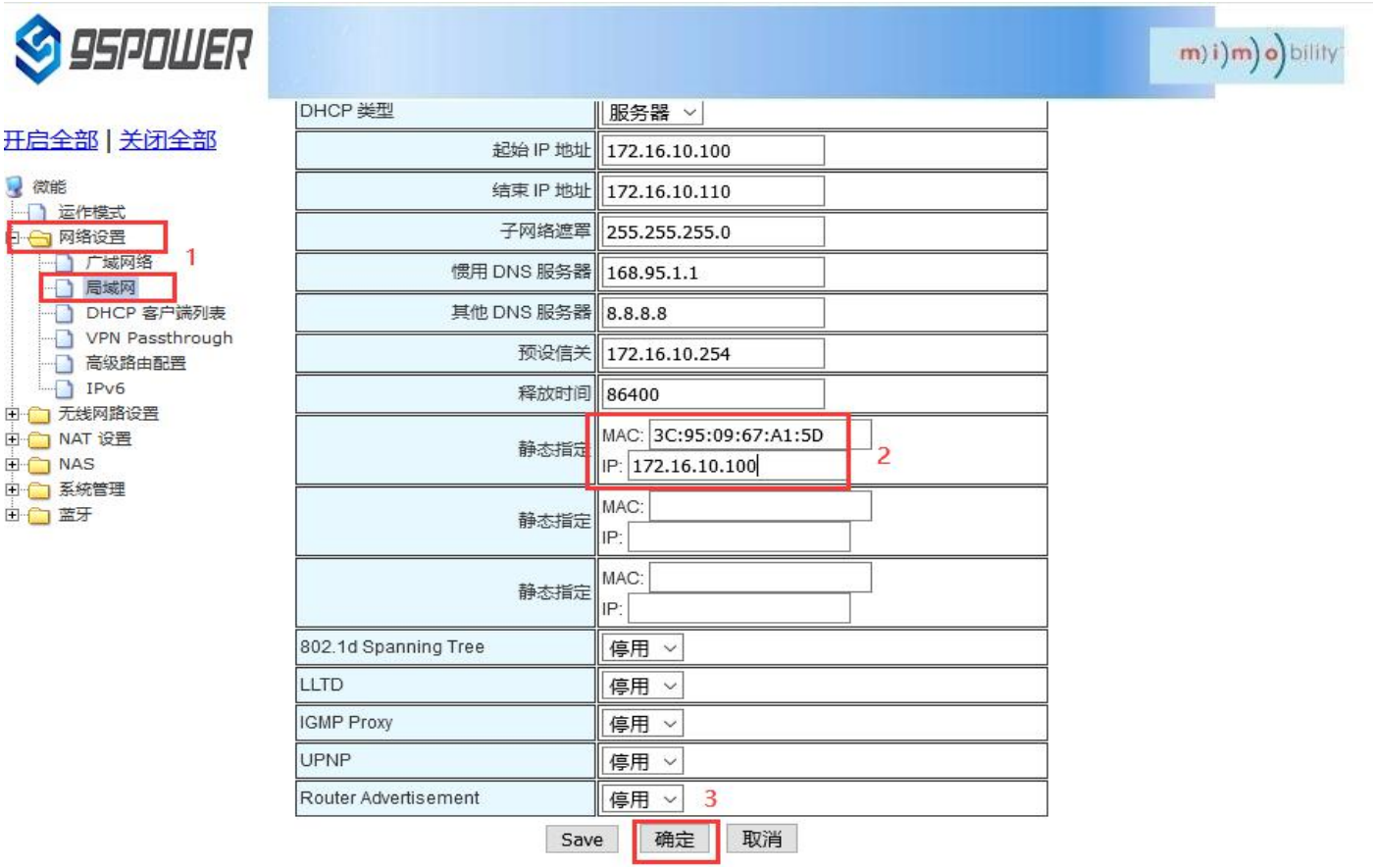
In the debugging process, when the server side is simulated on PC for testing, the IP address of THE PC can be bound so that the IP address of the server can be fixed during the test.

（1）可以先查看 VDB2613 的 DHCP 列表，复制对应 PC 的 MAC。下图是查看 DHCP 列表的步骤：

You can first check the DHCP list of VDB2613 and copy the MAC corresponding to PC.The following is the steps to view the DHCP list:

（2）通过下图方式绑定 PC 的 IP 地址，绑定后对应 PC 连接到 VDB2613，获取的 IP 就是绑定的 IP 地址。

Bind THE IP address of PC through the following method. After binding, the PC is connected to VDB2613, and the IP obtained is the binding IP address.



5.4 无线参数配置/Wireless parameter configuration

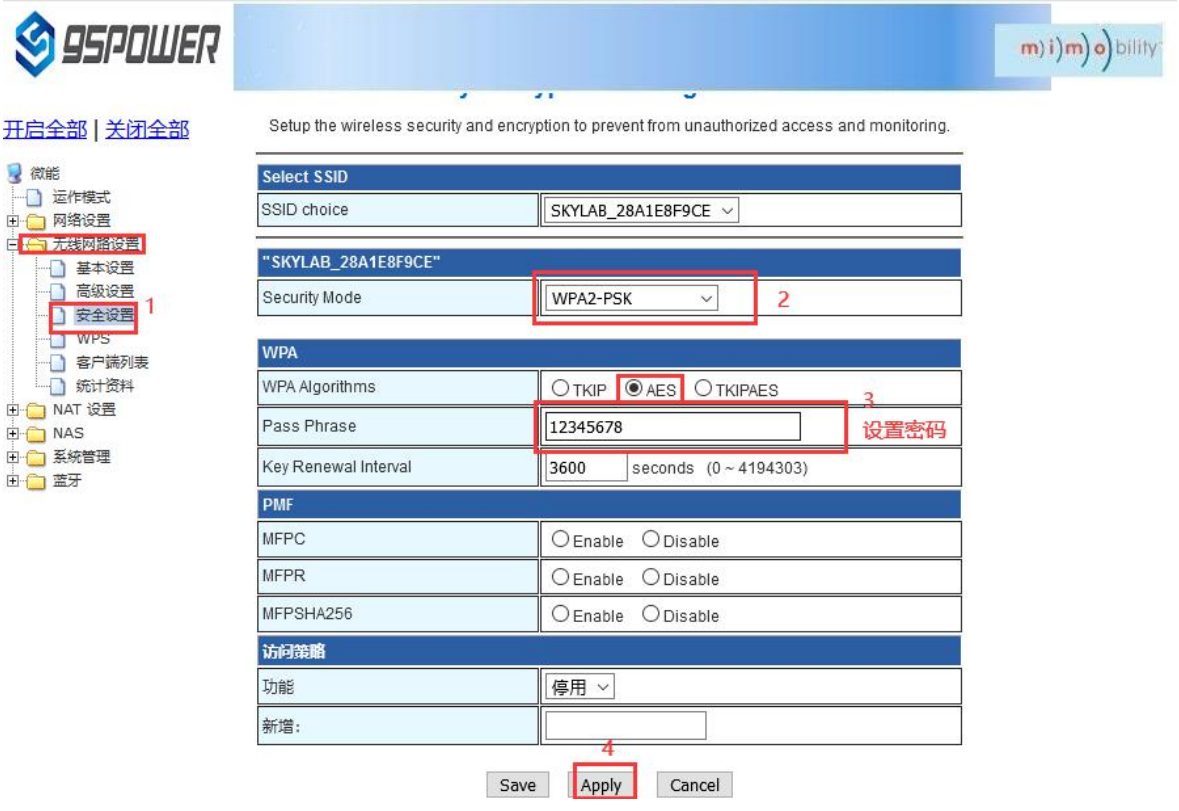
5.4.1 修改 WIFI 热点名、设置固定信道/

Modify WIFI hotspot name and set fixed channel

5.4.2 设置热点加密/不加密/Set hotspot encryption/unencryption

下面是设置开放热点的步骤图：/Here is the step-by-step diagram for setting up an open hot spot:

下面是介绍设置密码连接的配置图：/Here is the configuration diagram for setting up a password connection:



6、 服务器信息配置/Server information configuration

用户可以通过 web 界面配置服务器地址和端口信息，配置的服务器地址和端口需要 VDB2613 可以访问到。此外，VDB2613 默认的上网方式为 UDP 协议，在 web 界面可以自定义通信协议，可以选择的协议有 TCP/UDP/MQTT。配置方式如下：

The user can configure the server address and port information through the Web interface, which requires VDB2613 to be accessible.In addition, the default Internet access mode of VDB2613 is UDP protocol. In the Web interface, you can customize the communication protocol, and the optional protocol is TCP/UDP/MQTT.The configuration method is as follows:

6.1 配置为 TCP 协议通信/Configure for TCP protocol communication

配置为 TCP 协议通信方式，配置截图如下：

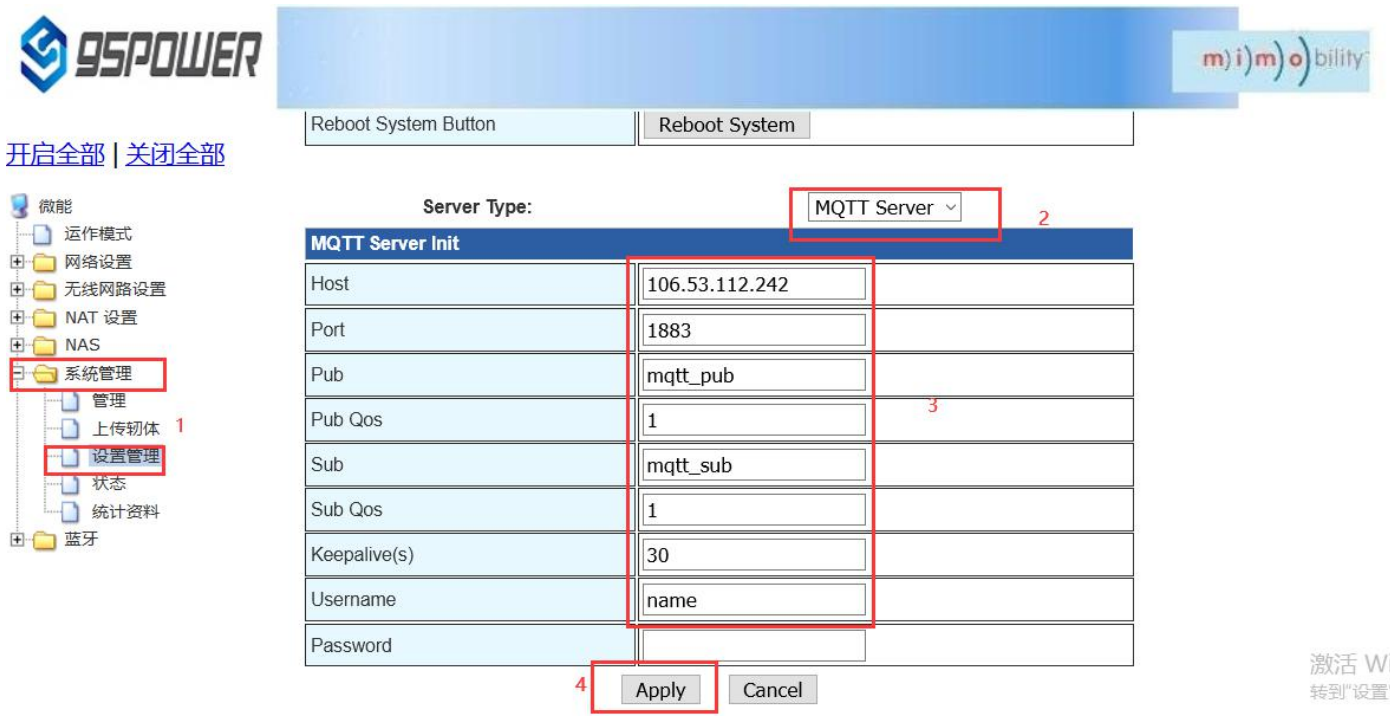
The configuration is the communication mode of TCP protocol. The configuration screenshot is as follows

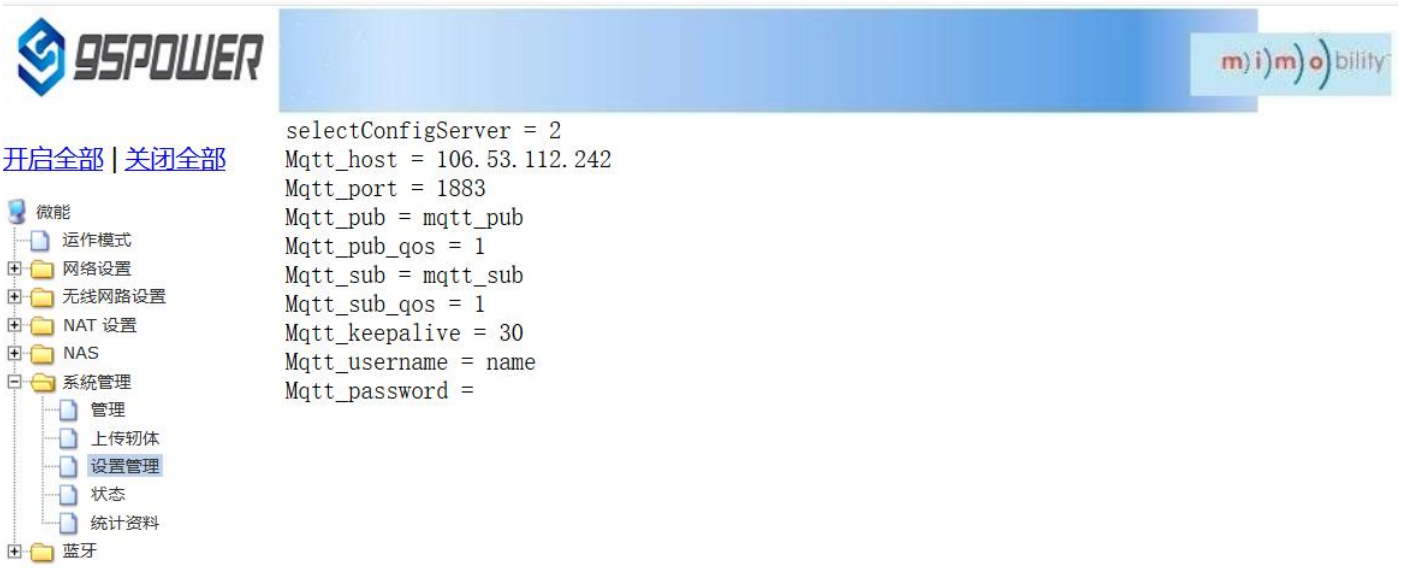
6.2 配置为 UDP 协议通信/It is configured for UDP protocol communication

配置为 UDP 协议方式通信，配置截图如下所示：

The configuration is UDP protocol communication. The configuration screenshot is as follows:

6.3 配置为 MQTT 协议通信/Configure for MQTT protocol communication





7、 设置蓝牙信息/Set bluetooth information

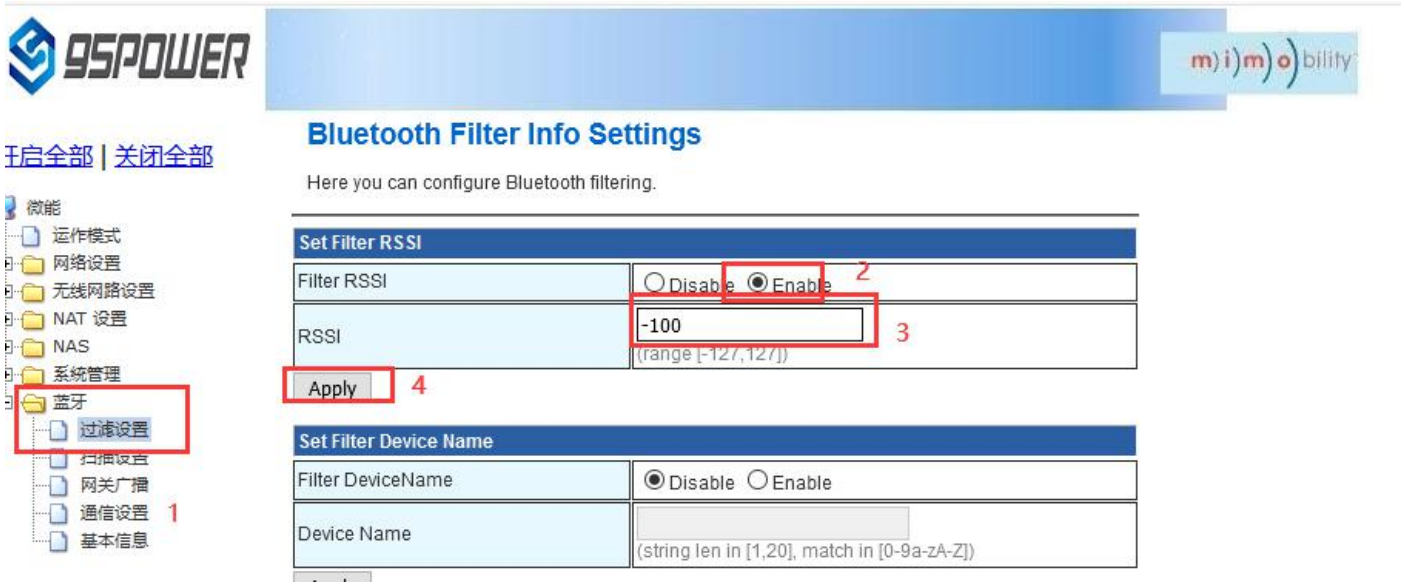
用户可以通过 web 界面配置蓝牙的各种参数，主要包括扫描过滤参数，扫描数据参数、网关蓝牙广播参数、网关蓝牙与 APP 和设备通信的各个 UUID。

Users can configure various parameters of Bluetooth through the Web interface, including scanning and filtering parameters, scanning data parameters, gateway Bluetooth broadcasting parameters, and uUids that gateway Bluetooth communicates with APP and device.

7.1 配置蓝牙的过滤信息/Configure Bluetooth filtering information

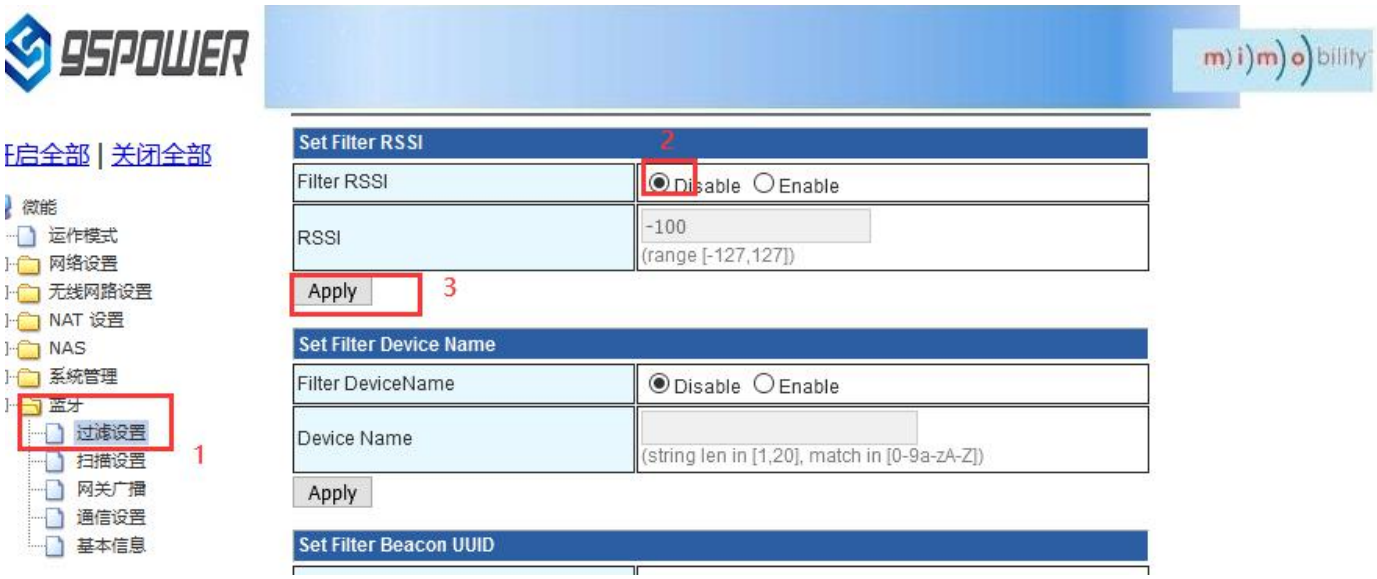
6.1.1、设置/取消扫描过滤的信号强度 RSSI 值/Set/unfilter signal strength RSSI value

设置过滤的信号强度 RSSI 值/Set the filtered signal strength RSSI value



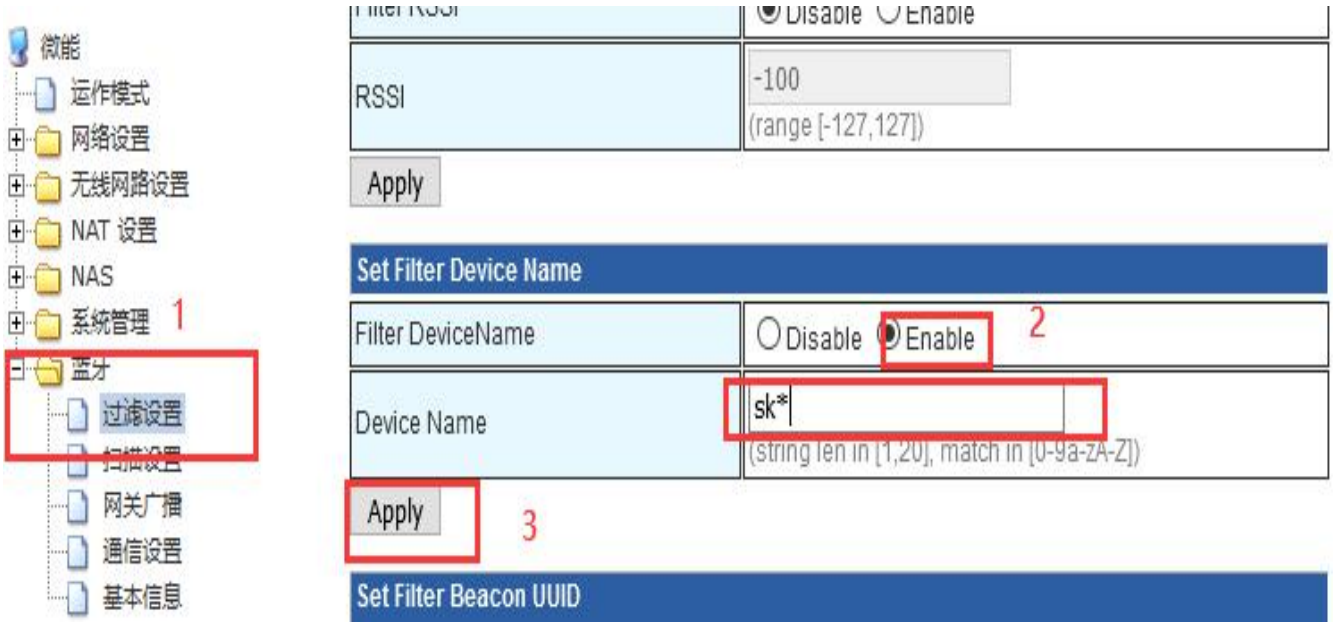
取消扫描过滤的信号强度 RSSI 值设置；/

Cancel the RSSI value setting of scanning filter signal strength;

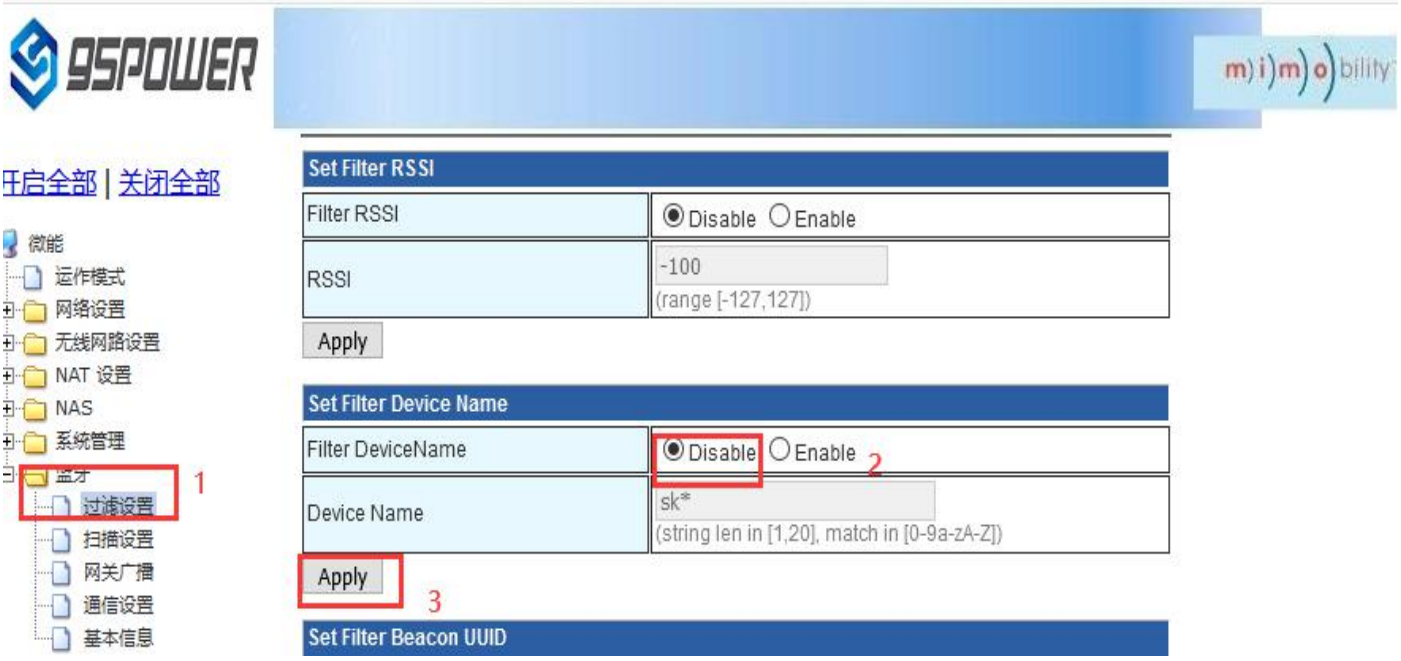


7.1.2、设置/取消扫描过滤的设备名称/Set/unscan filter device name

设置扫描的设置名称/Set the Settings name for the scan

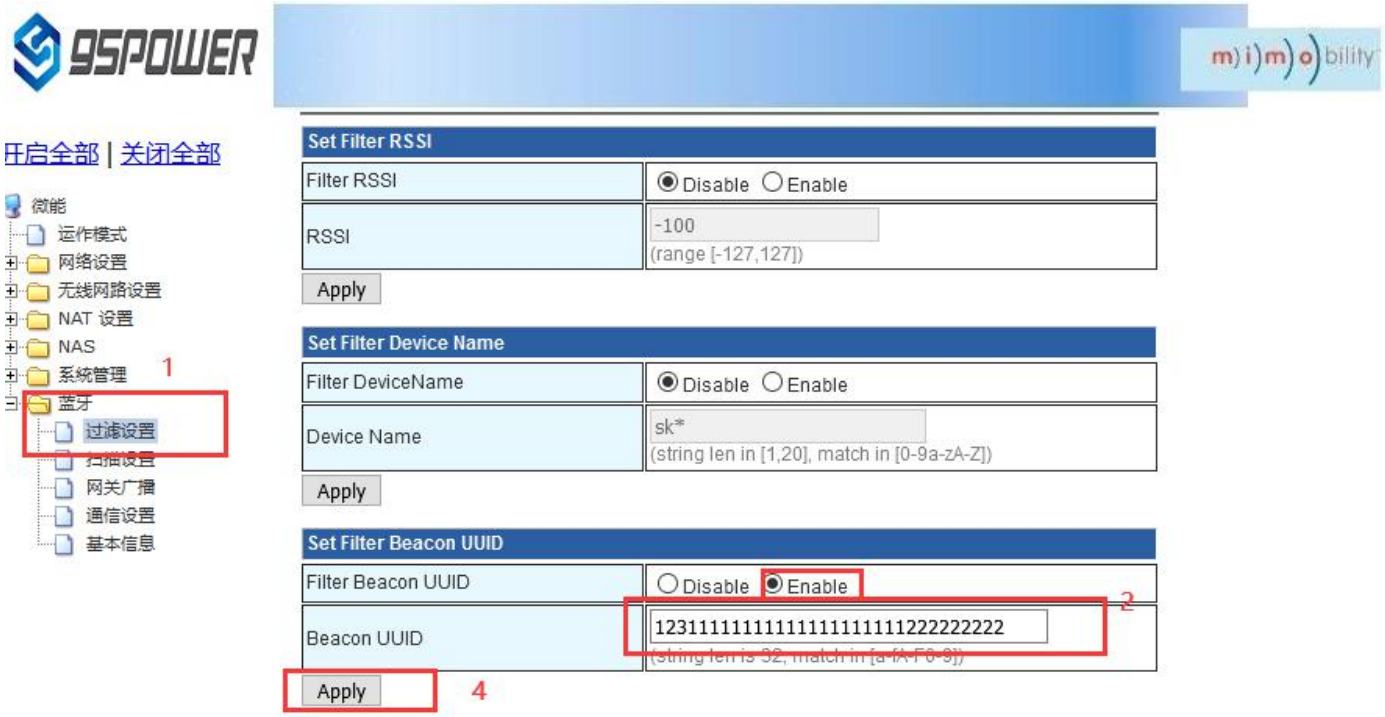


取消过滤设备名称的设置/Unset the filter device name

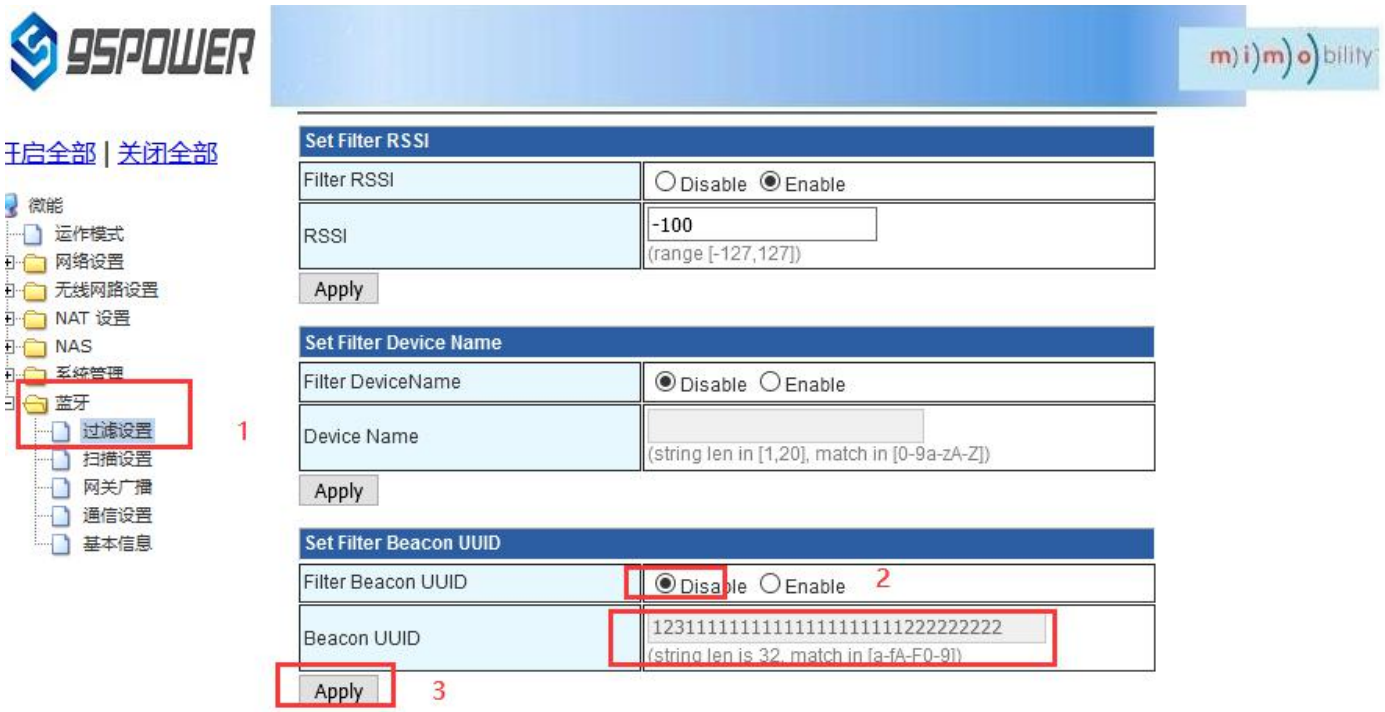


7.1.3、设置/取消扫描过滤的 Beacon UUID/Set/Unscan the filtered Beacon UUID

设置扫描过滤 Beacon UUID/Set the scan filter Beacon UUID

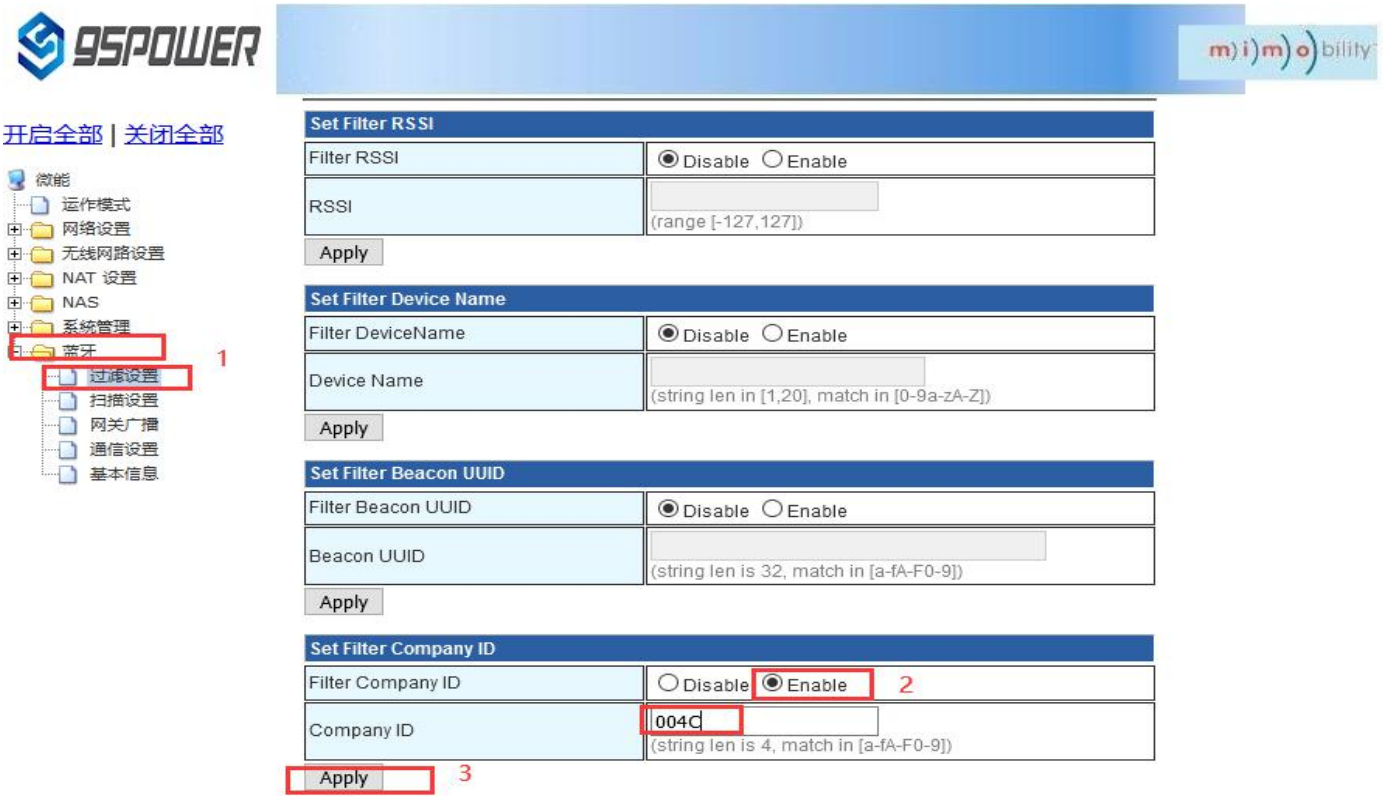


取消扫描过滤 Beacon UUID 的设置/Unset the scan filter Beacon UUID

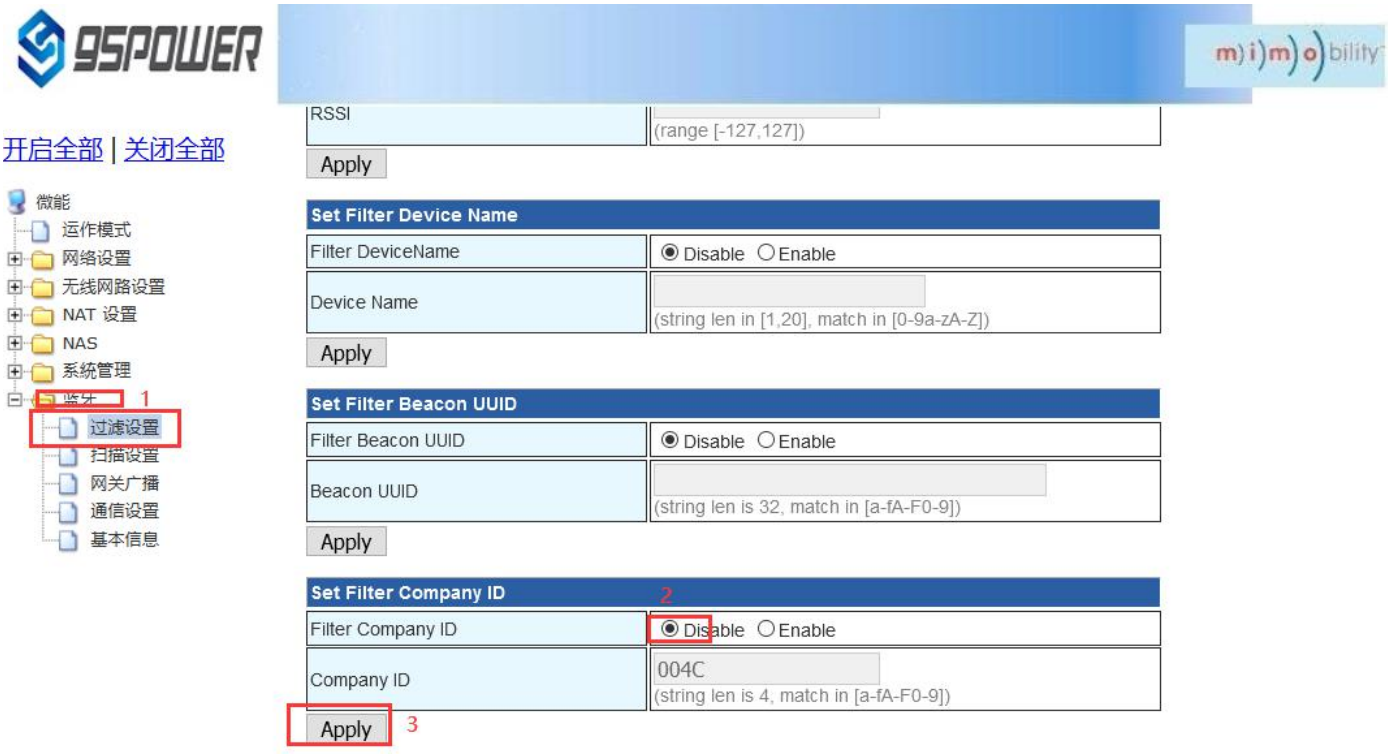


7.1.4、设置/取消扫描过滤的 CompanyId / Set/unscan filtered CompanyId

设置扫描过滤的 CompanyId / Set the CompanyId for scanning and filtering



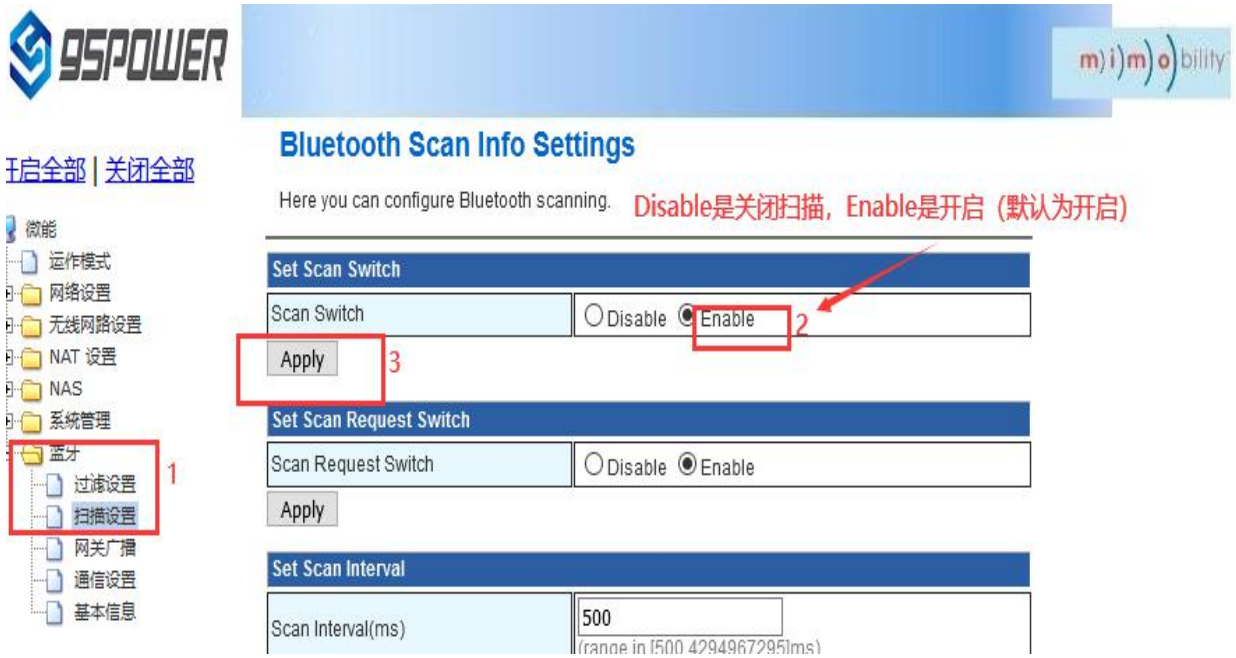
取消扫描过滤 CompanyId 的设置 / Unset the scan filter CompanyId



7.2 配置蓝牙扫描参数 / Configure the Bluetooth scan parameters

7.2.1、设置扫描输出开关 / Set the scan output switch

设置蓝牙扫描输出开关的步骤如下图：/ The steps to set the Bluetooth scan output switch are as follows:



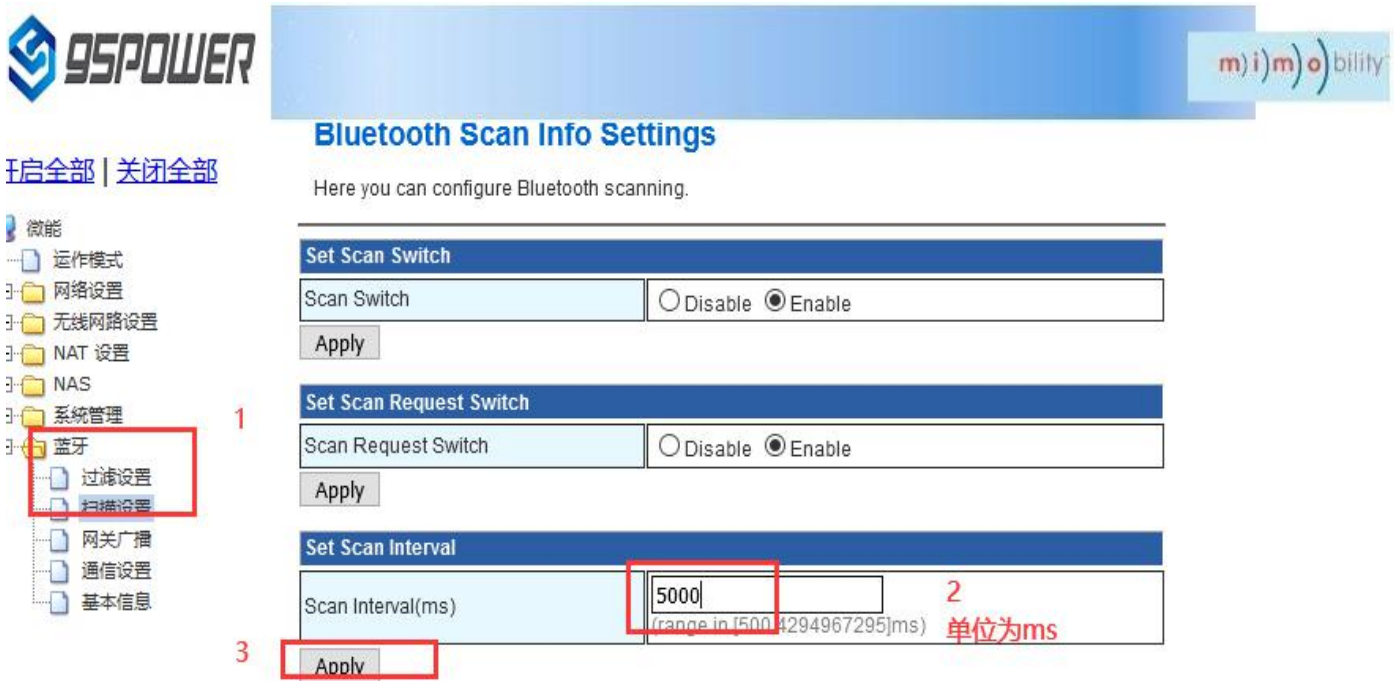
7.2.2、设置是否启动扫描请求 / Sets whether to start a scan request

当启动扫描请求时，扫描输出的数据量为 62 字节，默认是启动的。当不启动扫描请求时，扫描输出的数据量为 31 字节。

When the scan request is started, the scan output is 62 bytes, which is started by default.When the scan request is not started, the amount of data output from the scan is 31 bytes.

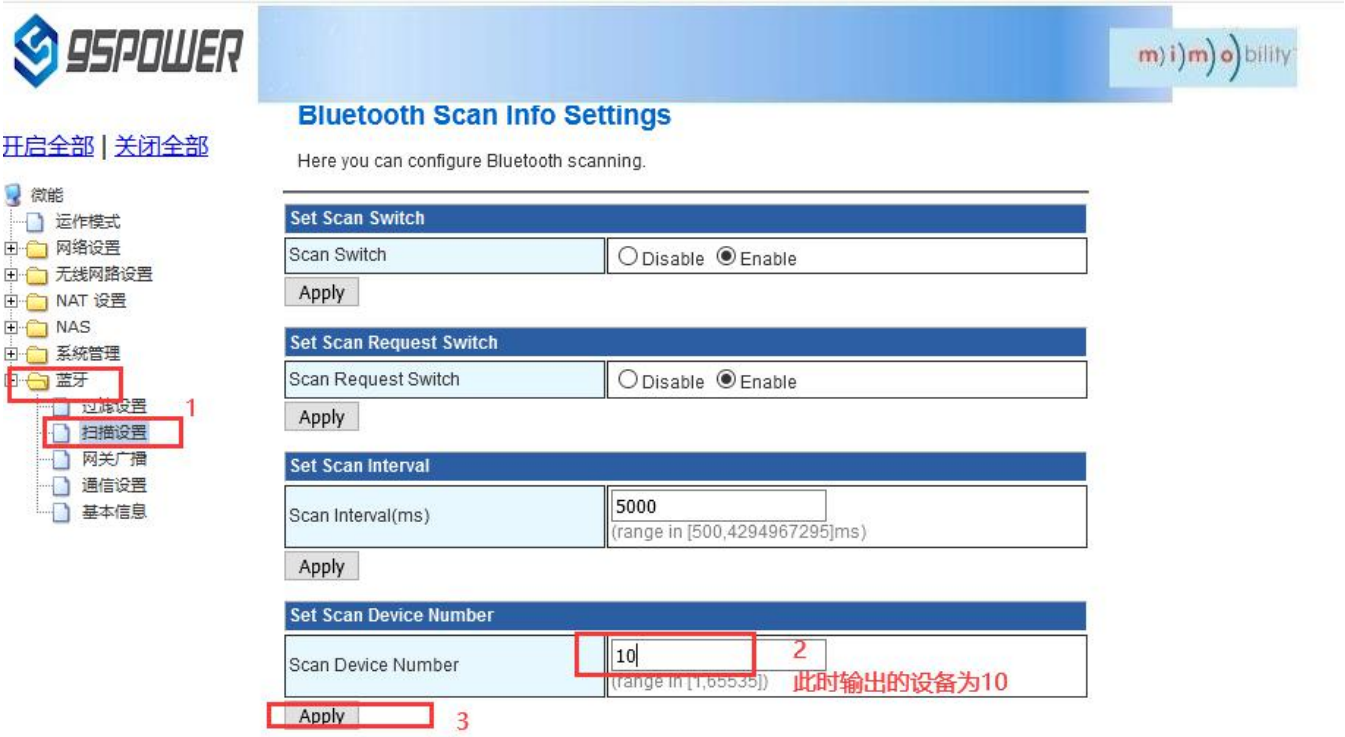
7.2.3、设置扫描输出的时间间隔 / Set the time interval for the scan output

设置扫描输出的时间间隔，最小值为 500ms。/ Set the time interval of scan output to a minimum of 500ms.



7.2.4、设置单次输出设备信息数量 / Sets the number of output device information at a time

设置单次输出的设备信息的数量，最小为 1./ Set the amount of device information output at a time to a minimum of 1.

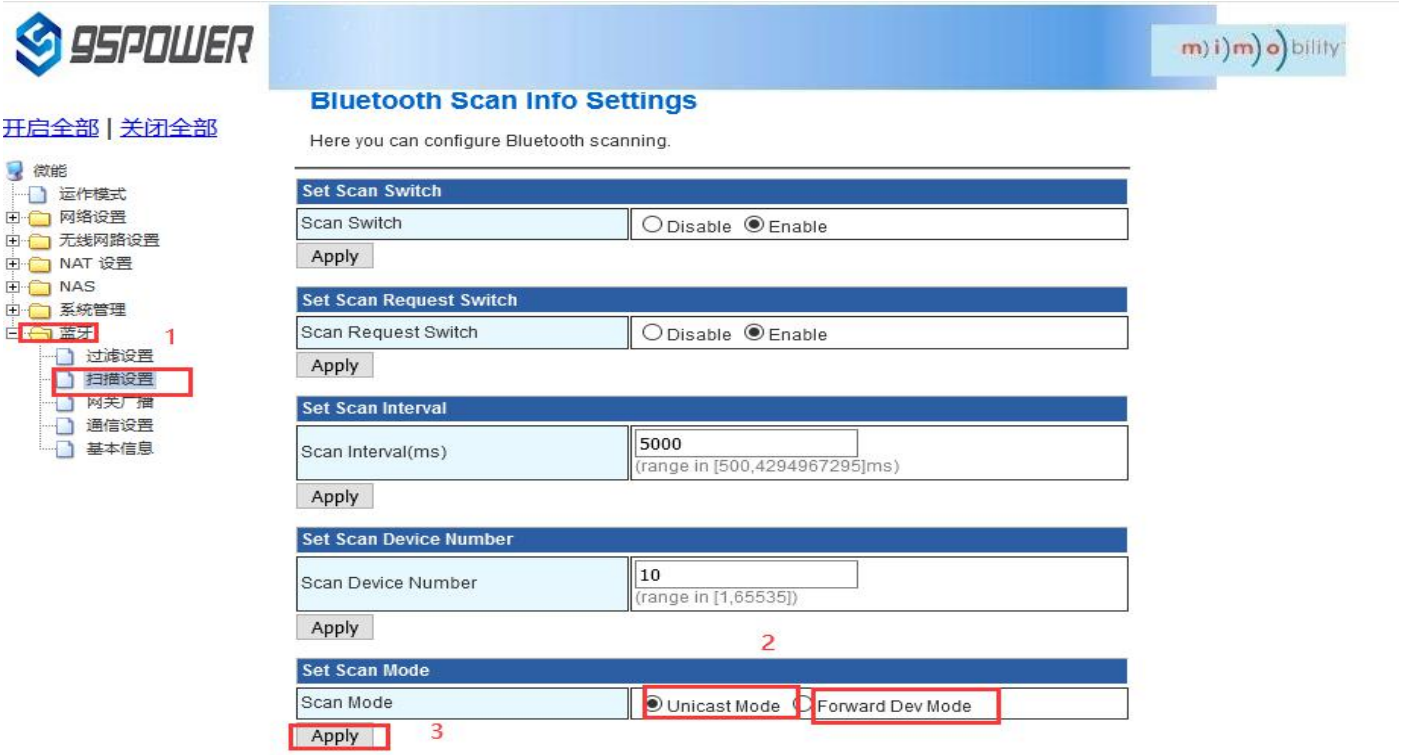


7.2.5、设置扫描单广播通用设备模式还是转发工卡模式 /

Sets the scan single broadcast universal device mode or the forward work card mode

默认为单广播通用设备模式，根据应用需要可设置为转工卡模式。

The default is single broadcast universal device mode, which can be set to transfer card mode according to application needs.



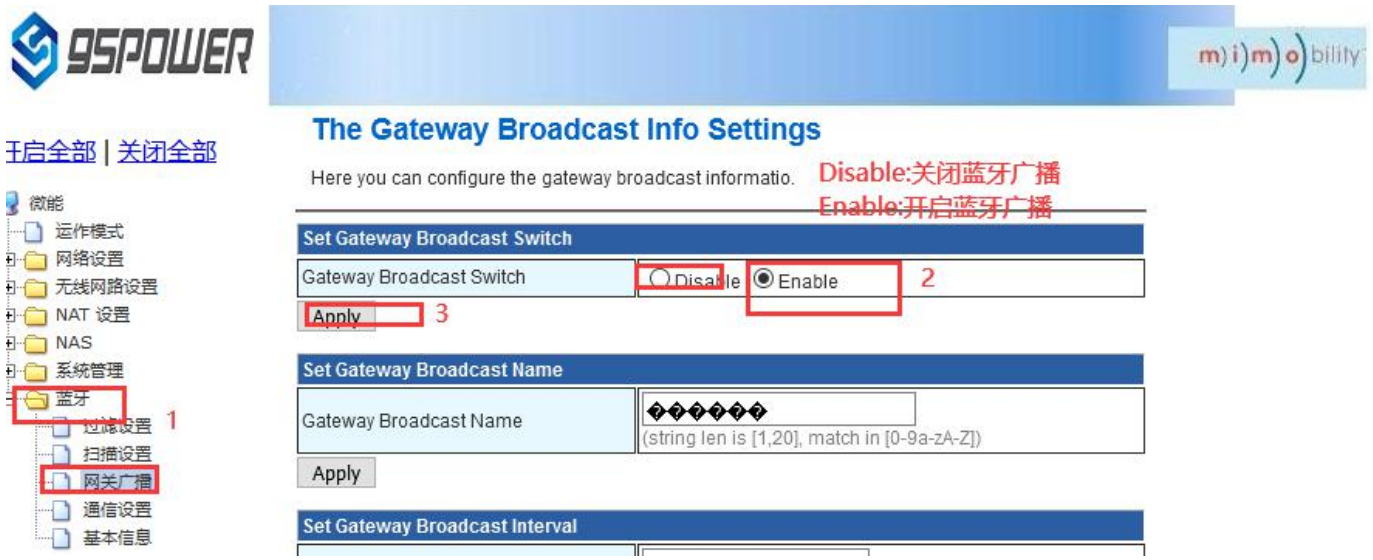
7.3 配置网关广播配置信息 /

Configure the gateway to broadcast configuration information

7.3.1、设置网关广播开关 / Set the gateway broadcast switch

默认网关开启蓝牙广播，用户可根据需求关闭蓝牙广播。

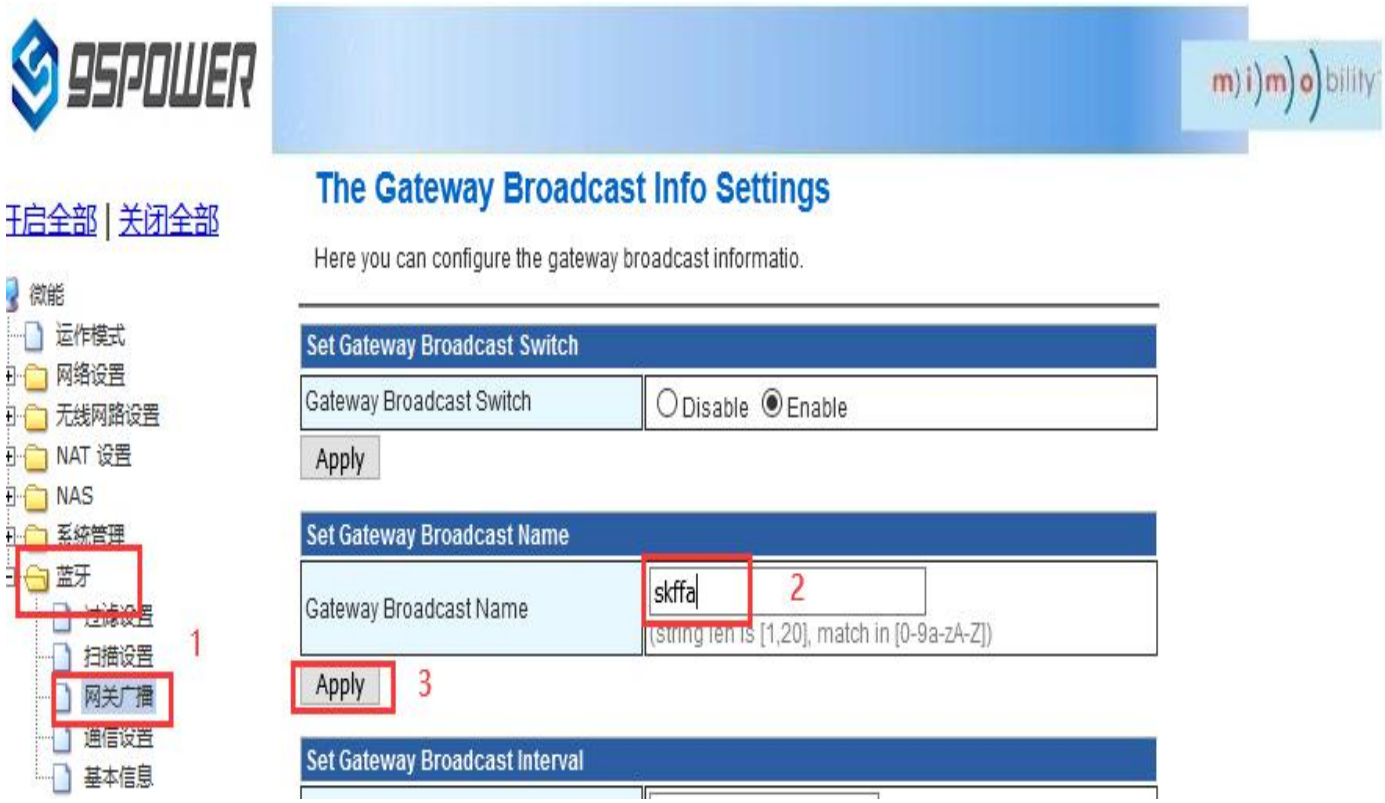
The default gateway turns on Bluetooth broadcasting, and users can turn off Bluetooth broadcasting according to their needs.



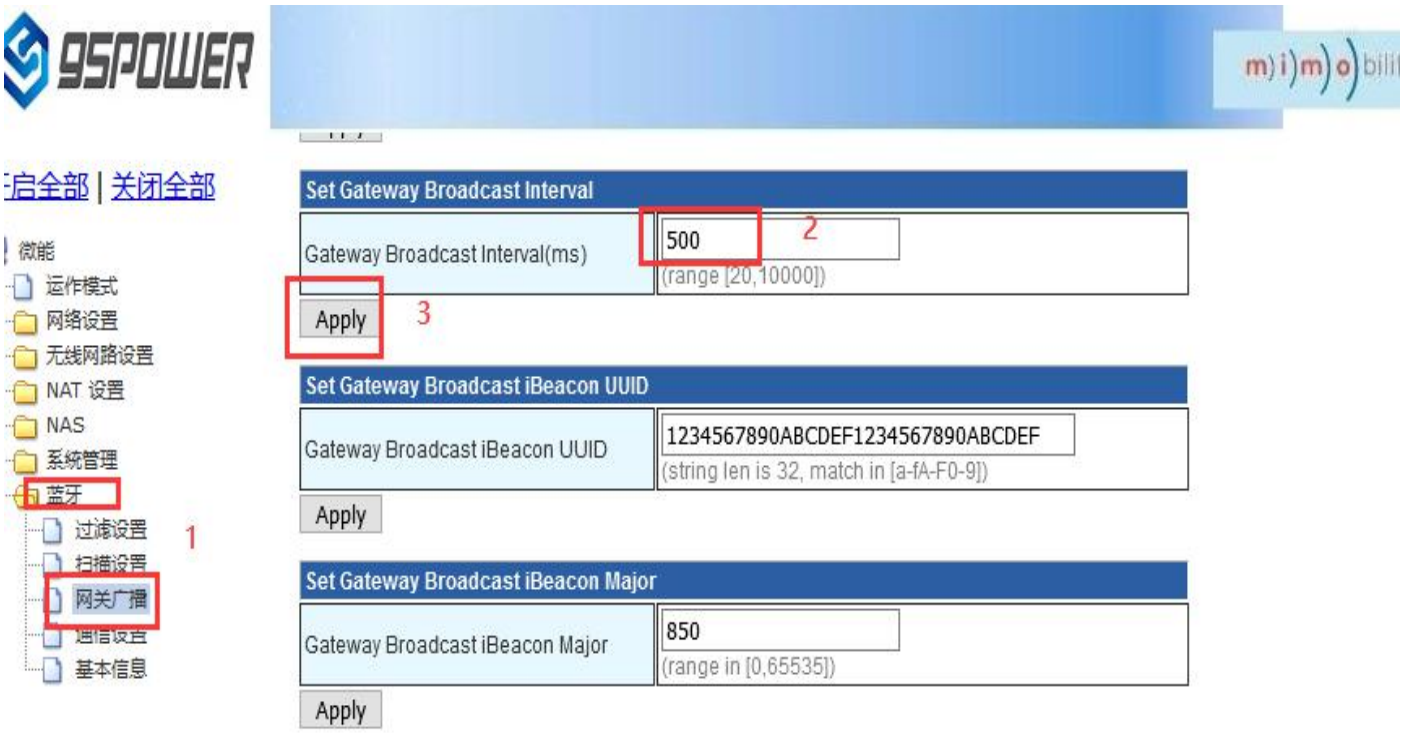
7.3.2、设置网关广播名称 / Set the gateway broadcast name

设置蓝牙广播的名称，长度最大 20 字节。/

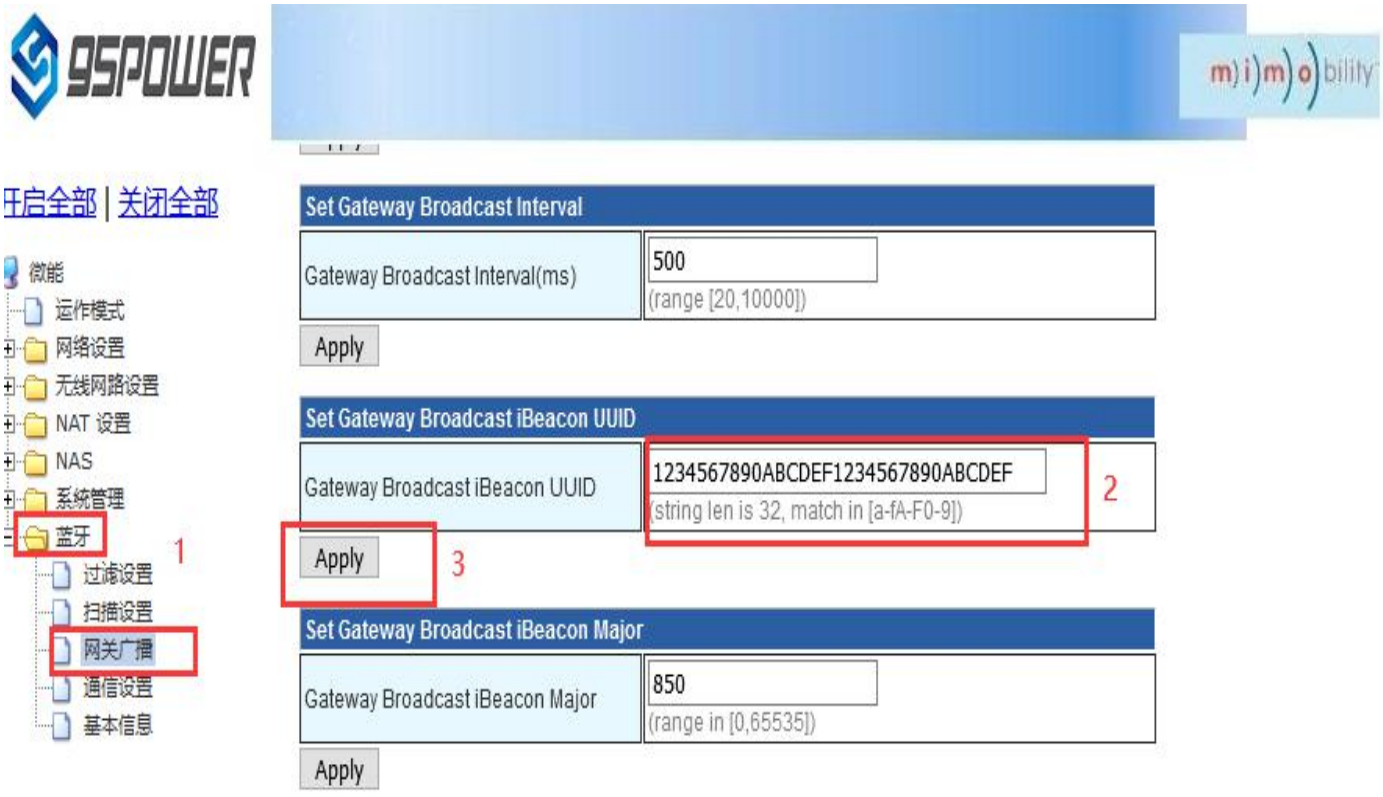
Sets the name of the Bluetooth broadcast to a maximum length of 20 bytes.



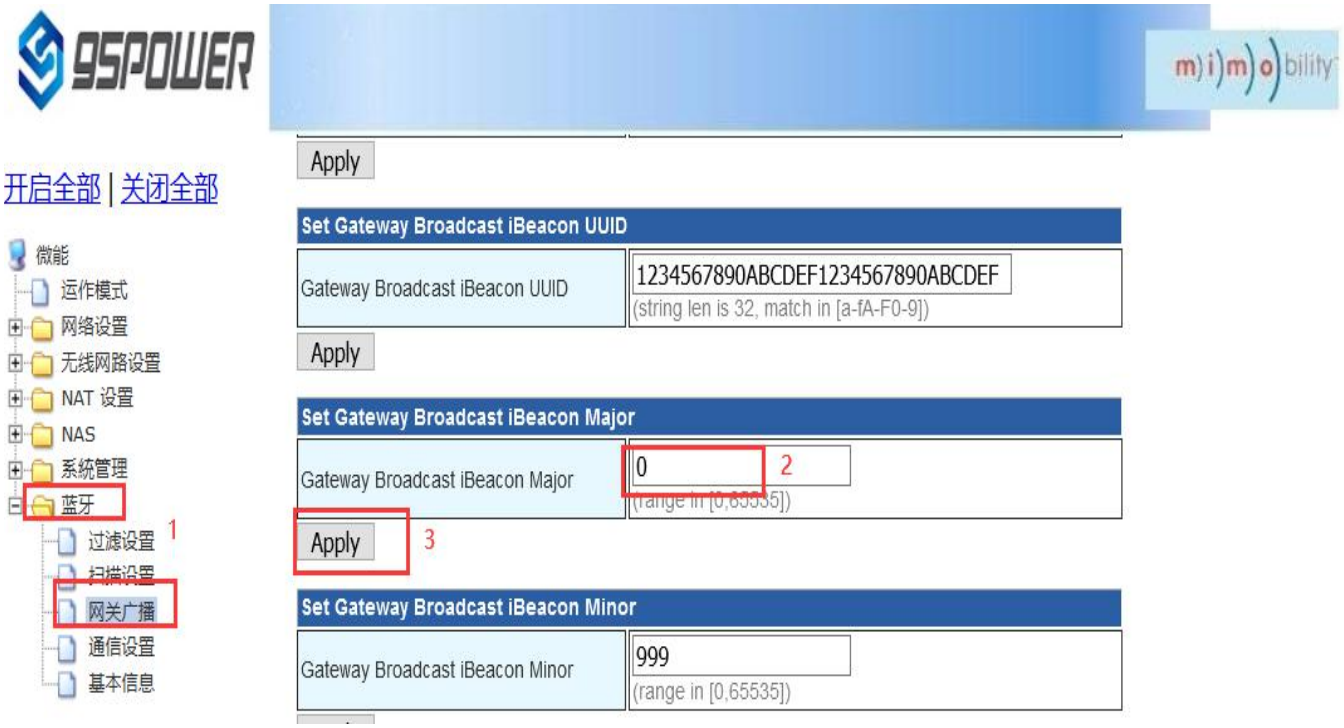
7.3.3、设置网关广播的间隔 / Set the interval between gateway broadcasts



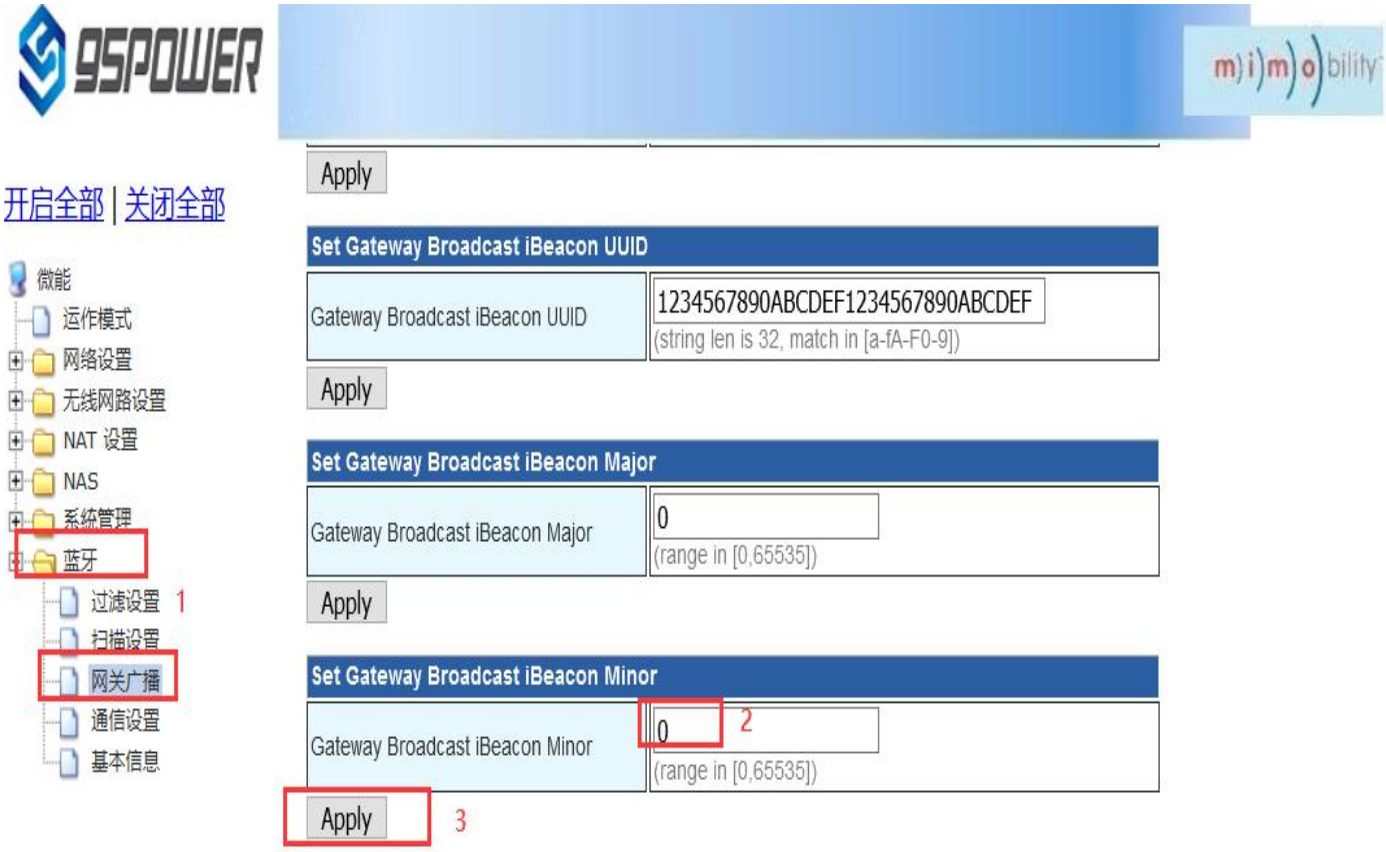
7.3.4、设置网关广播的 iBeacon UUID / Set the iBeacon UUID for the gateway broadcast



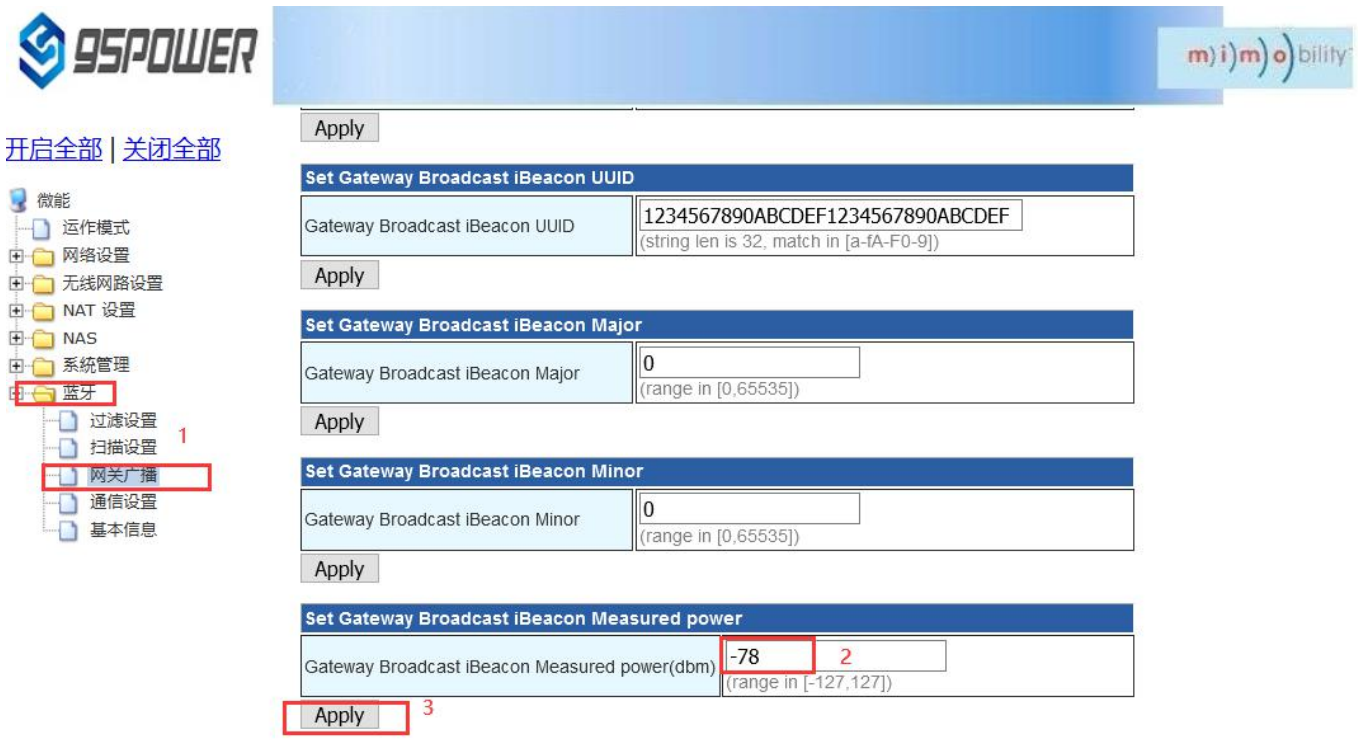
7.3.5、设置网关广播的 iBeacon Major / Set the iBeacon Major for gateway broadcast



7.3.6、设置网关广播的 iBeacon Minor / Set the iBeacon Minor for gateway broadcast



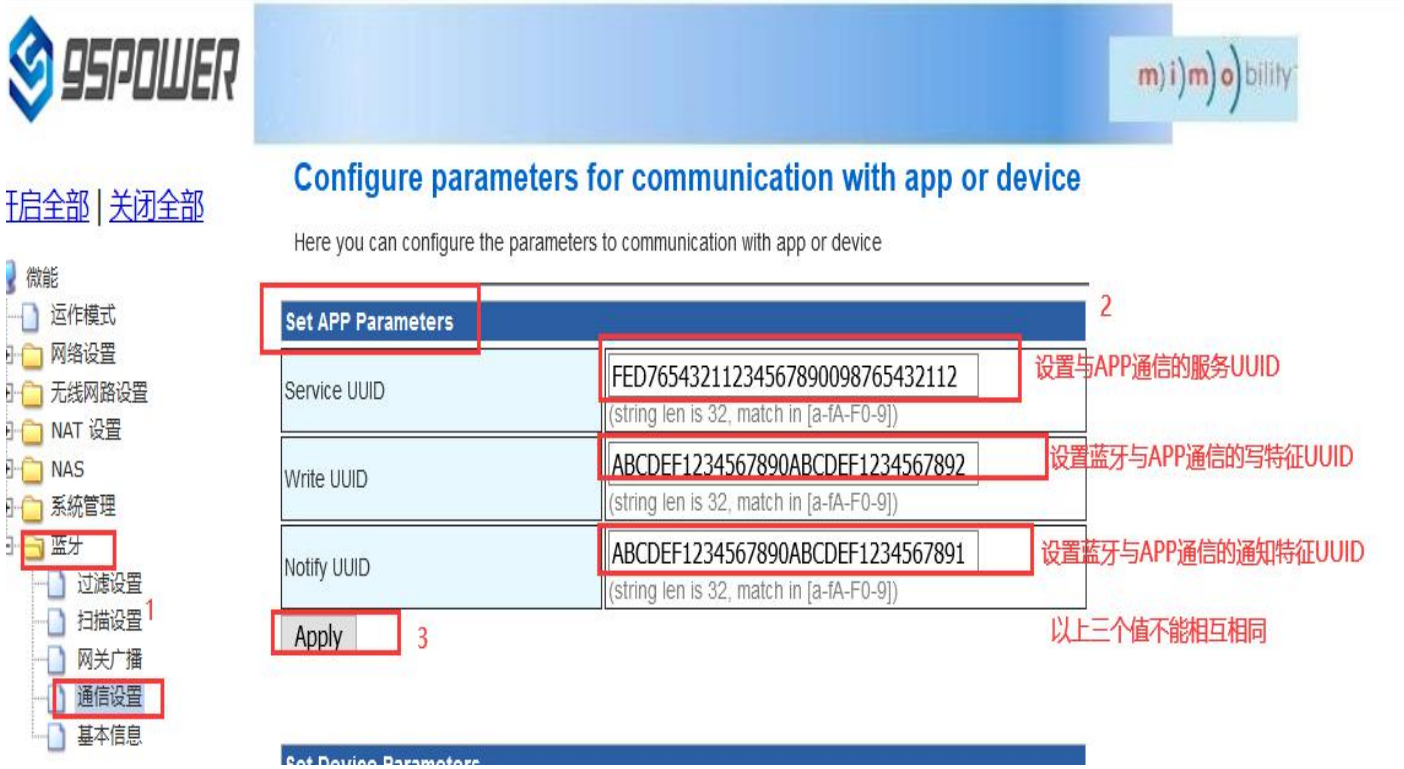
7.3.7、设置网关广播的 iBeacon Measured power / Set iBeacon Measured Power for gateway broadcast

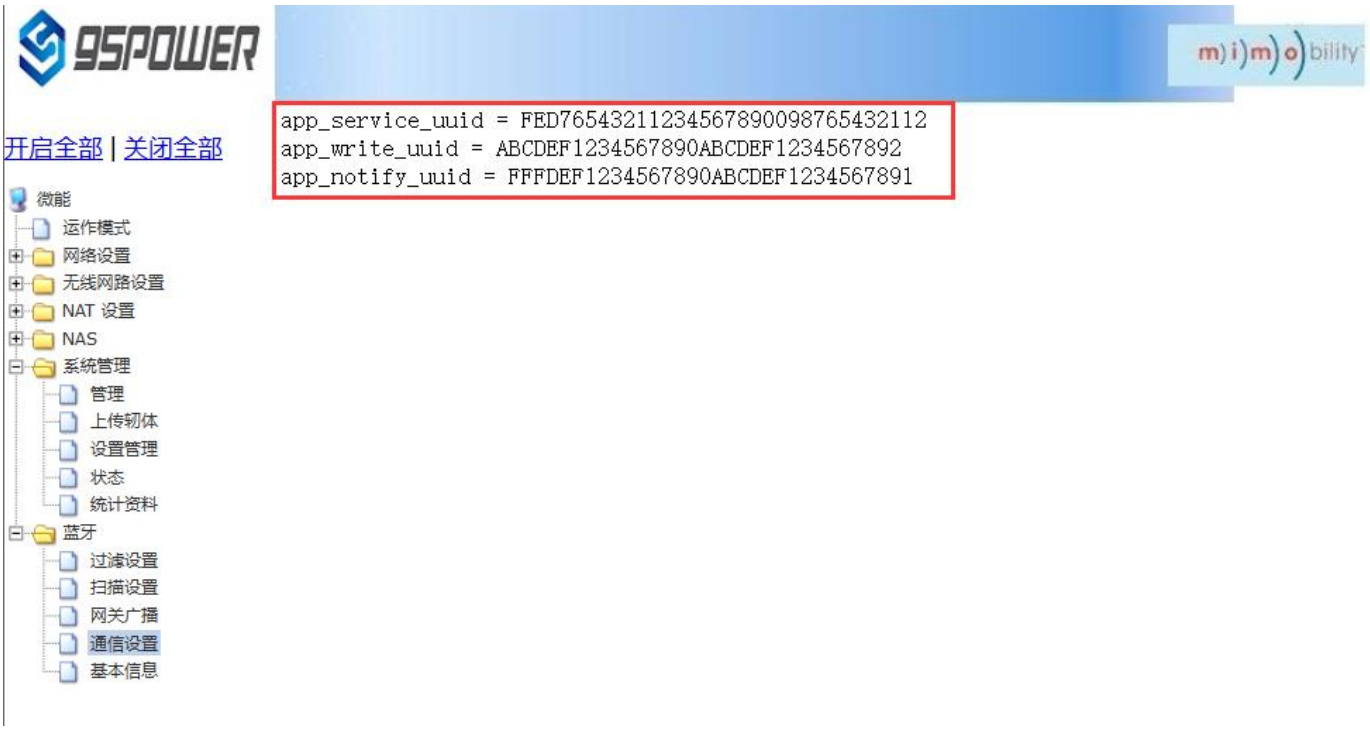


7.4 配置与通信相关参数

Configure the parameters associated with communication

7.4.1 配置与 APP 通信的 UUID / Configure the UUID that communicates with the APP

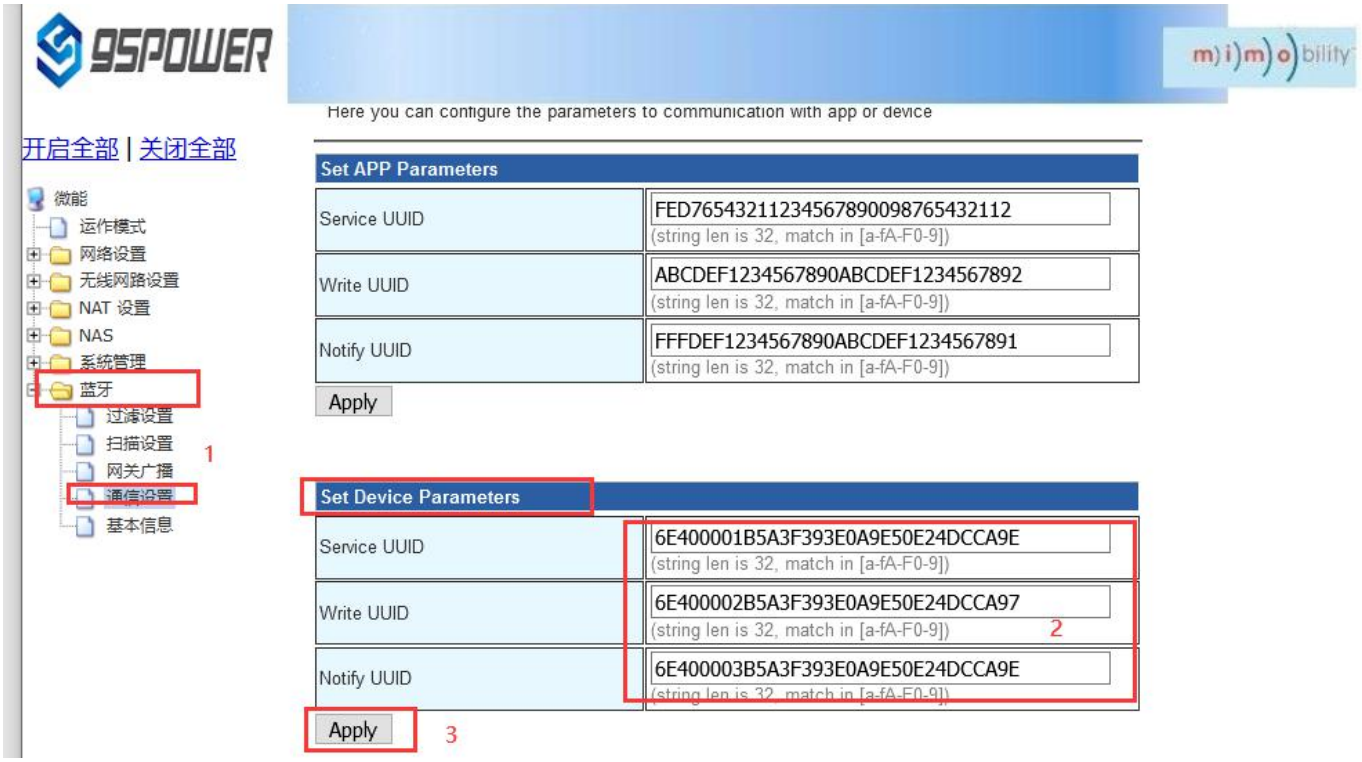




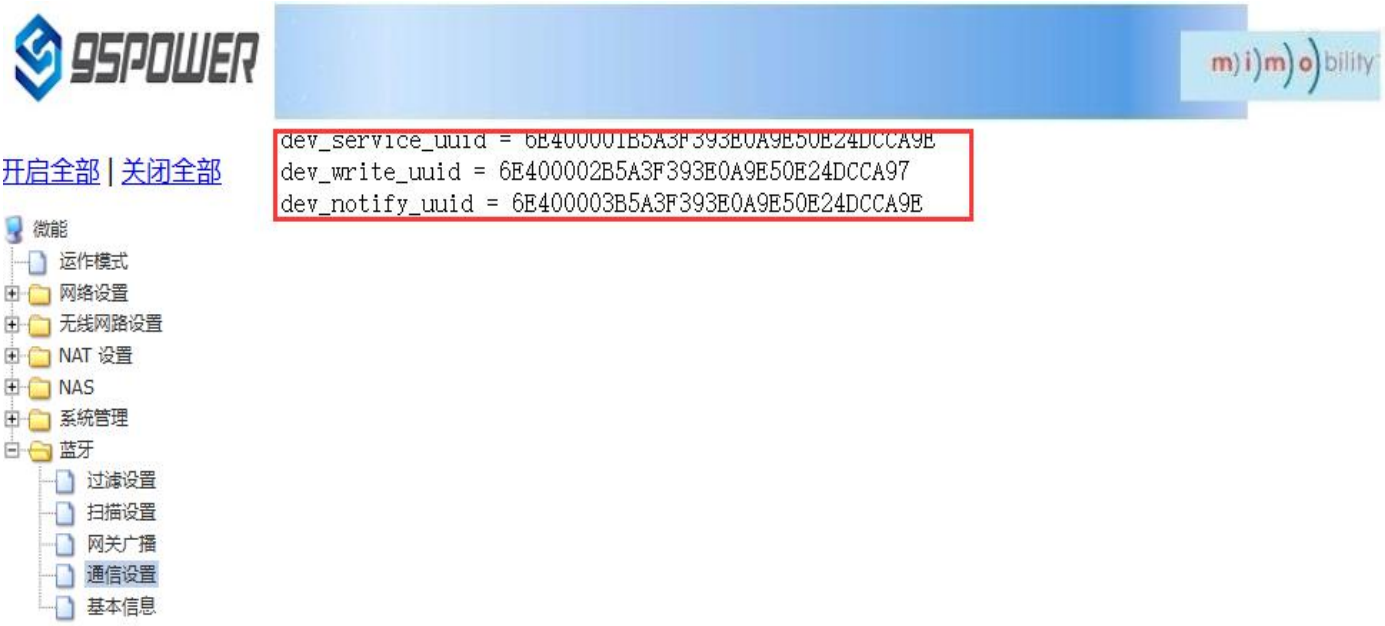
点击“通信设置”，查看设置情况。设置成功后，需要重启网关，使配置生效。下面是重启网关的操作

Click "Communication Settings" to view the Settings.After the setup is successful, you need to restart the gateway for the configuration to take effect.Here is how to restart the gateway

7.4.2 配置与设备通信的 UUID / Configure the UUID that communicates with the device



点击 apply 后，会跳转界面，如下所示：/ After clicking Apply, the interface will jump to, as shown below:



点击“通信设置”返回对应界面，查看设置情况。设置成功后，需要重启网关，使配置生效，操作如下

Click "Communication Settings" to return to the corresponding interface to check the Settings.After the setup is successful, you need to restart the gateway for the configuration to take effect, as follows

8、 系统管理配置 / System management configuration

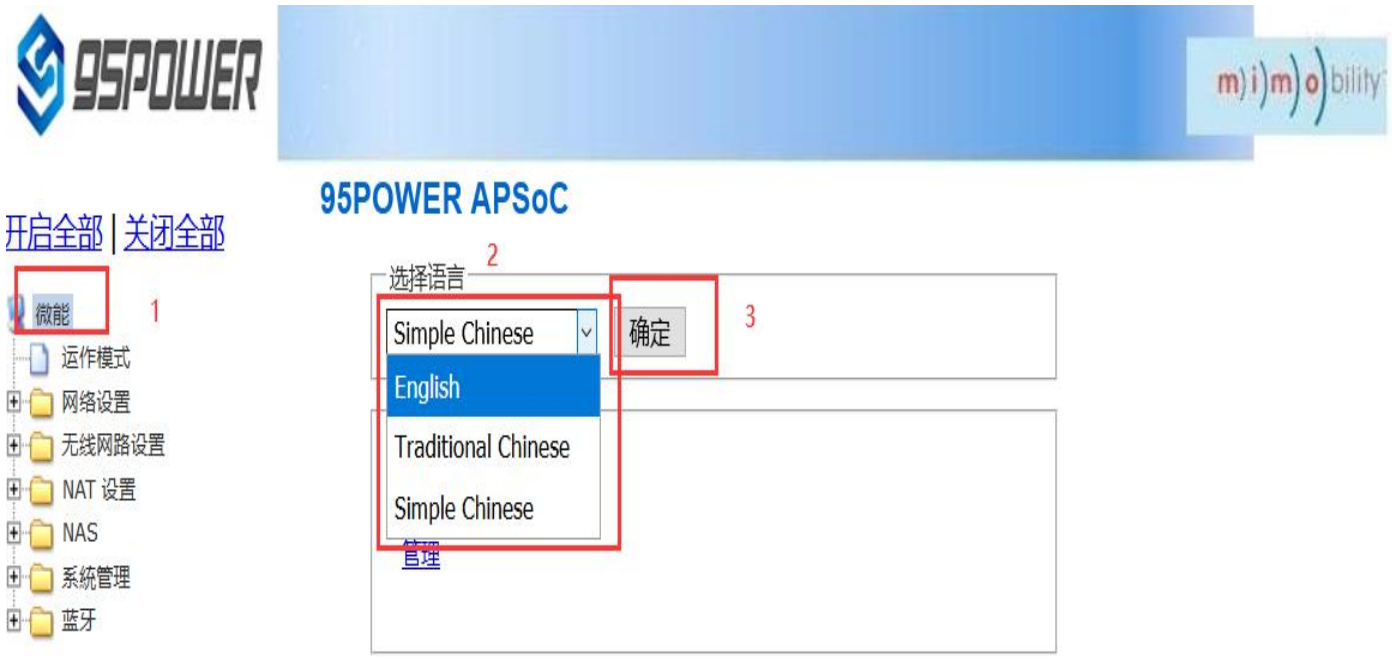
8.1 设置 WEB 界面显示 / Set up the WEB interface display

VDB2613 的网页支持简体中文、繁体中文、英文的显示，默认为简体中文显示。客户根据需要可以切换显示的语言，操作步骤如下：

VDB2613 web pages support simplified Chinese, traditional Chinese, English display, default for simplified Chinese display.Customers can switch the displayed language according to their needs. The operation steps are as follows:

（1）选择需要切换的语言，下面以切换到英文为例，图中 2 时，选择 English。

Select the language to be switched. Take Switching to English as an example. In figure 2, select English.



（2）查看切换效果 / Check the switching effect

8.2 恢复出厂设置 / factory data reset；restore factory setting

网关固件升级后，默认保留原来的设置，如果需要恢复出厂设置，请按下面图示的步骤操作。

If you need to restore factory Settings, please follow the steps shown below.

8.3 重启系统 / Restart the system

下面是重启系统的操作步骤 / Here are the steps to restart the system

8.4 升级系统 / upgrade system

通过 Web 界面可以升级 WIFI 固件，升级步骤如下:

WIFI firmware can be upgraded through the Web interface. The upgrade steps are as follows:

（1）下图中点击 2 后，在本地选择你所需要升级的固件，确定后，出现 3 的提示，点击确定开始升级。

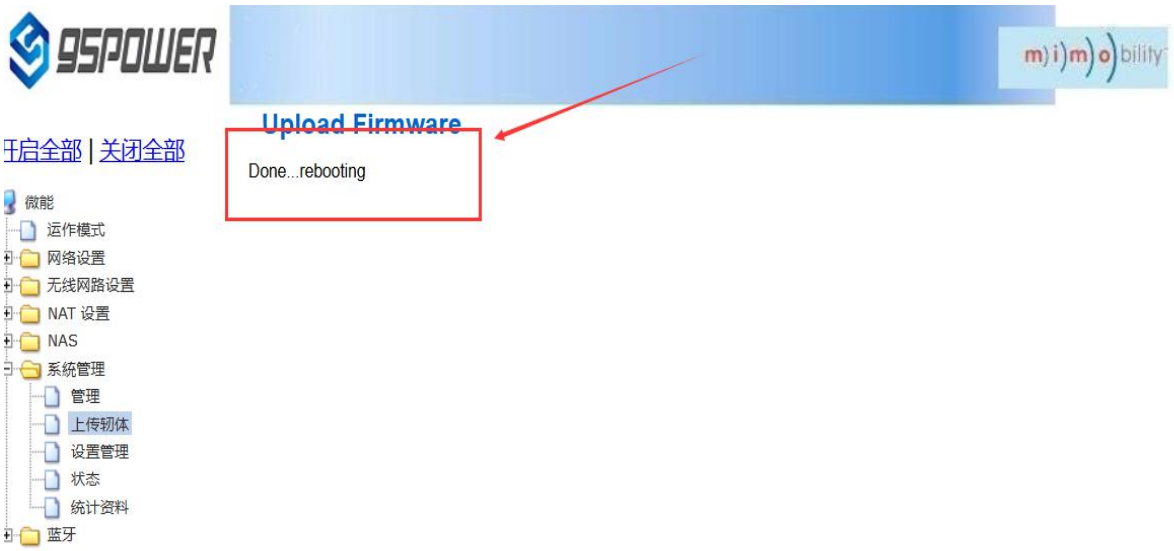
After clicking 2 in the figure below, select the firmware you need to upgrade locally. When you confirm, a prompt of 3 appears and click OK to start the upgrade.

（2）升级过程会出现下图所示提示，提示没有消失前，不要断电，此时断电可能导致模块升级变砖。

During the upgrade process, a prompt as shown in the figure below will appear. Do not power off until the prompt disappears. At this point, power off may cause the module to be upgraded to brick

（3）升级成功后，会有重启系统的提示，如下图所示。

After the successful upgrade, there will be a prompt to restart the system, as shown in the figure below.



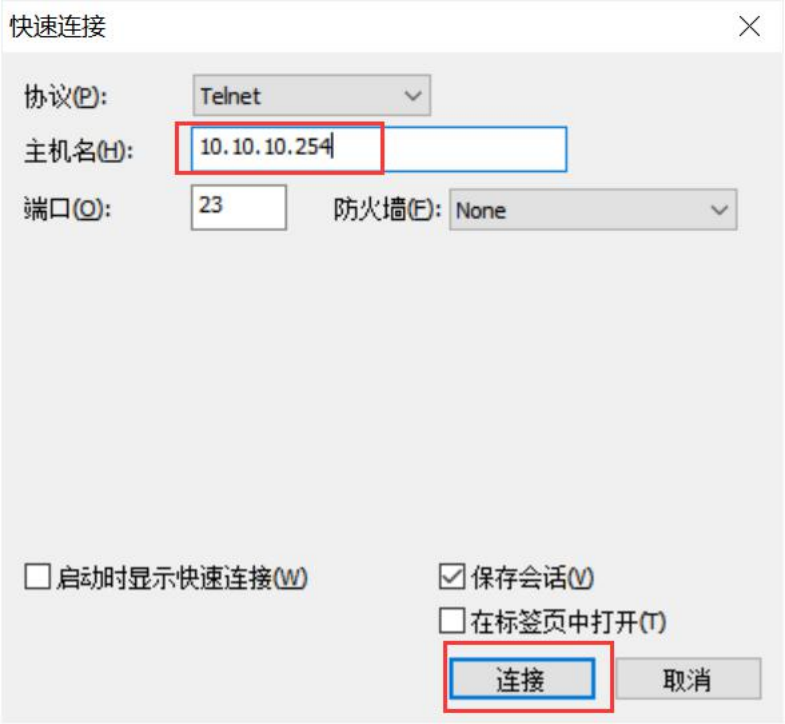
8.5 telnet 测试管理 / Telnet test management

下面介绍使用 SecureCRT 工具配置 Telnet 的过程。

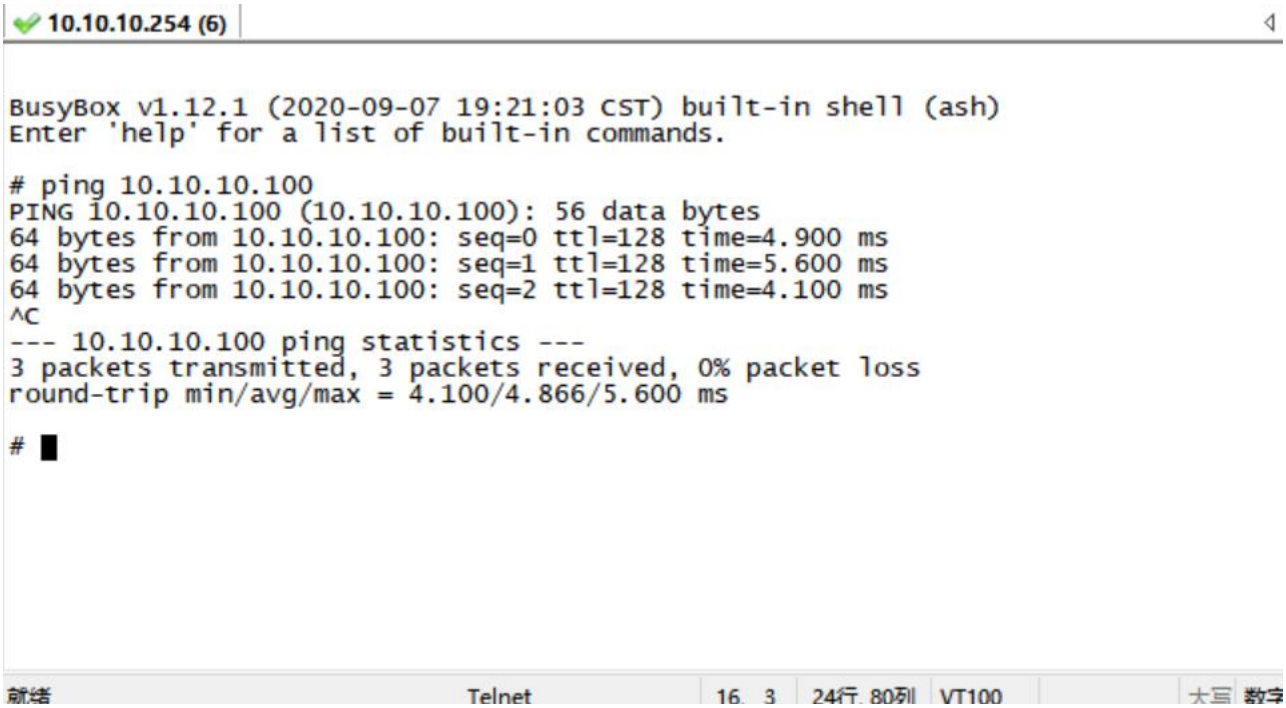
The following describes the process of configuring Telnet using the SecureCRT tool.

（1）选择 telnet 协议，主机名为 10.10.10.254，端口默认 23 即可；

Select Telnet protocol, host name 10.10.10.254, port default 23;



（2）进入到管理终端后，使用命令检测。 / After entering the administrative terminal, use the command detection



9. 联系方式/Contact

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