WOXU WIRELESS UA-220 UWB Gateway User Manual

Contents

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WOXU WIRELESS

WOXU WIRELESS UA-220 UWB Gateway

Preface

Location Anchor is a kind of anchor-based UWB manufactured by Woxu Wireless Co., Ltd., which is for human and goods indoor location with high precision. This document introduces the method to use and configure the anchor.

Contents

Reader, Appointment, Technical support

Reader

This manual is mainly applicable to the following engineers

- Students and teachers and developers
- Engineer

Appointment

The book also uses a variety of eye-catching signs to indicate that in the operation of the process should pay special attention to the place, the significance of these signs are as follows

Attention

Use Only Power Supplies listed in the user instructions, Use only power adaptor model UES12LZ supplied by UE Electronic The improper operation may result in loss of data or damage to equipment, which should be paid attention to in the operation.

Description

Description of the operation of the contents of the necessary complement and description

Technical Support

When you are installing or using this product, please contact me directly in accordance with the contact information provided in this document.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

  This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IMPORTANT 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. Note: The operators should cease operation when the harmful Interference occurs to other users. FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator& your body. This equipment only is operated indoors. Operation outdoors is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties. This device may not be employed for the operation onboard an aircraft, a ship, or a satellite is prohibited.

Configuration

WEB

Web information in default is as below

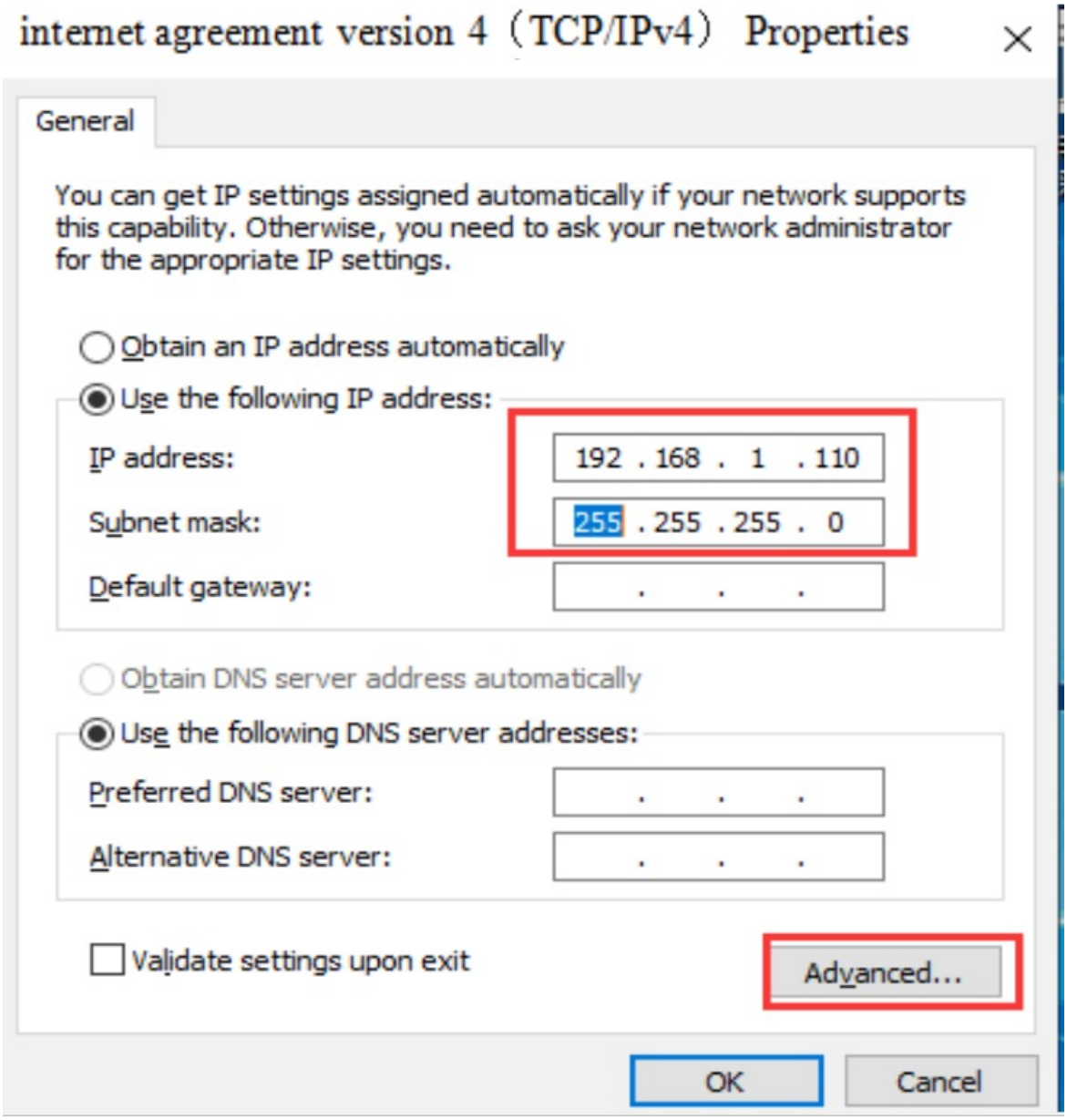
	Device information	**note**
IP address	192.168.1.9	Changeable
User name	box wireless	NOT Changeable
Key	box wireless	Changeable

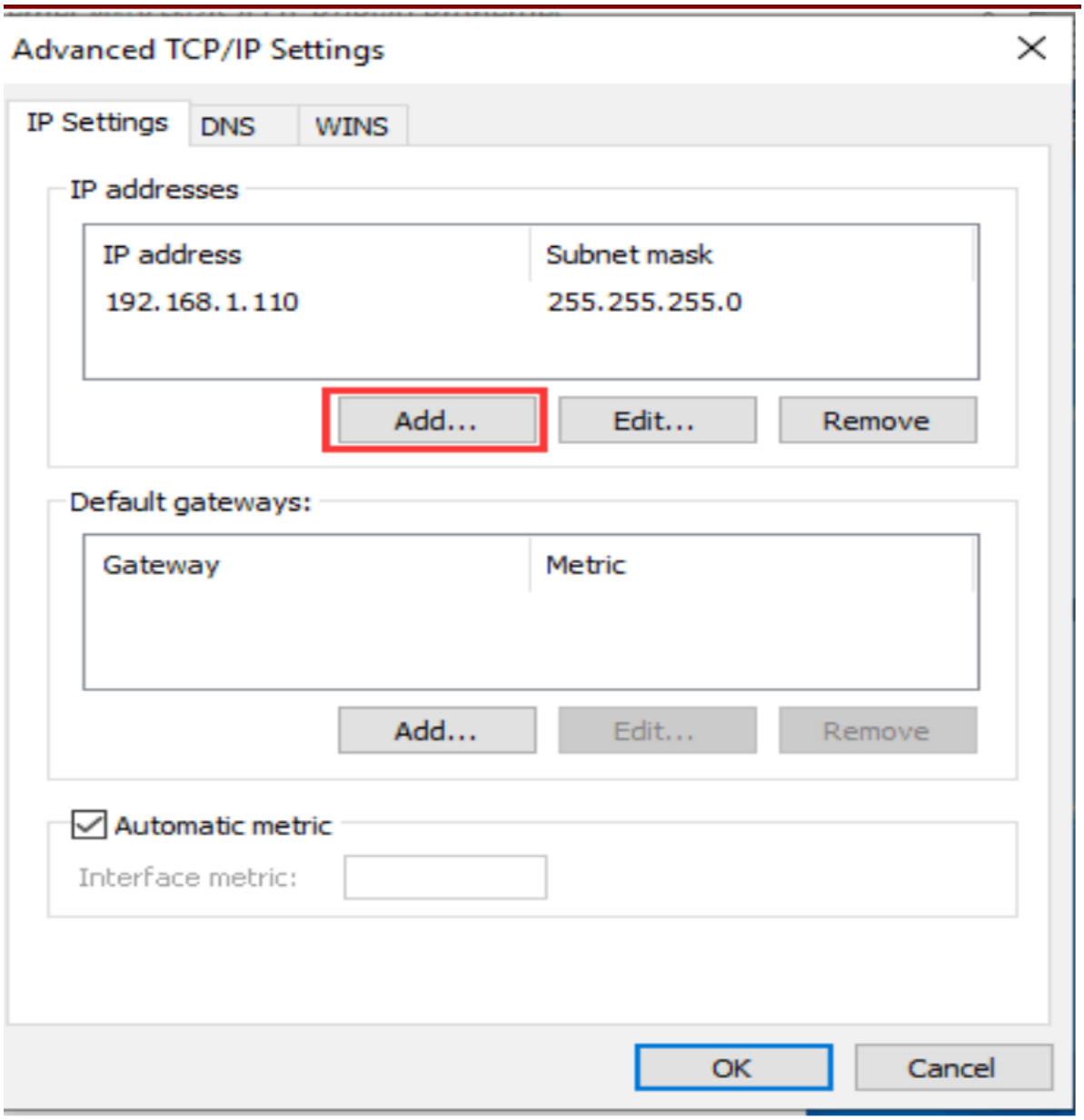
Attention

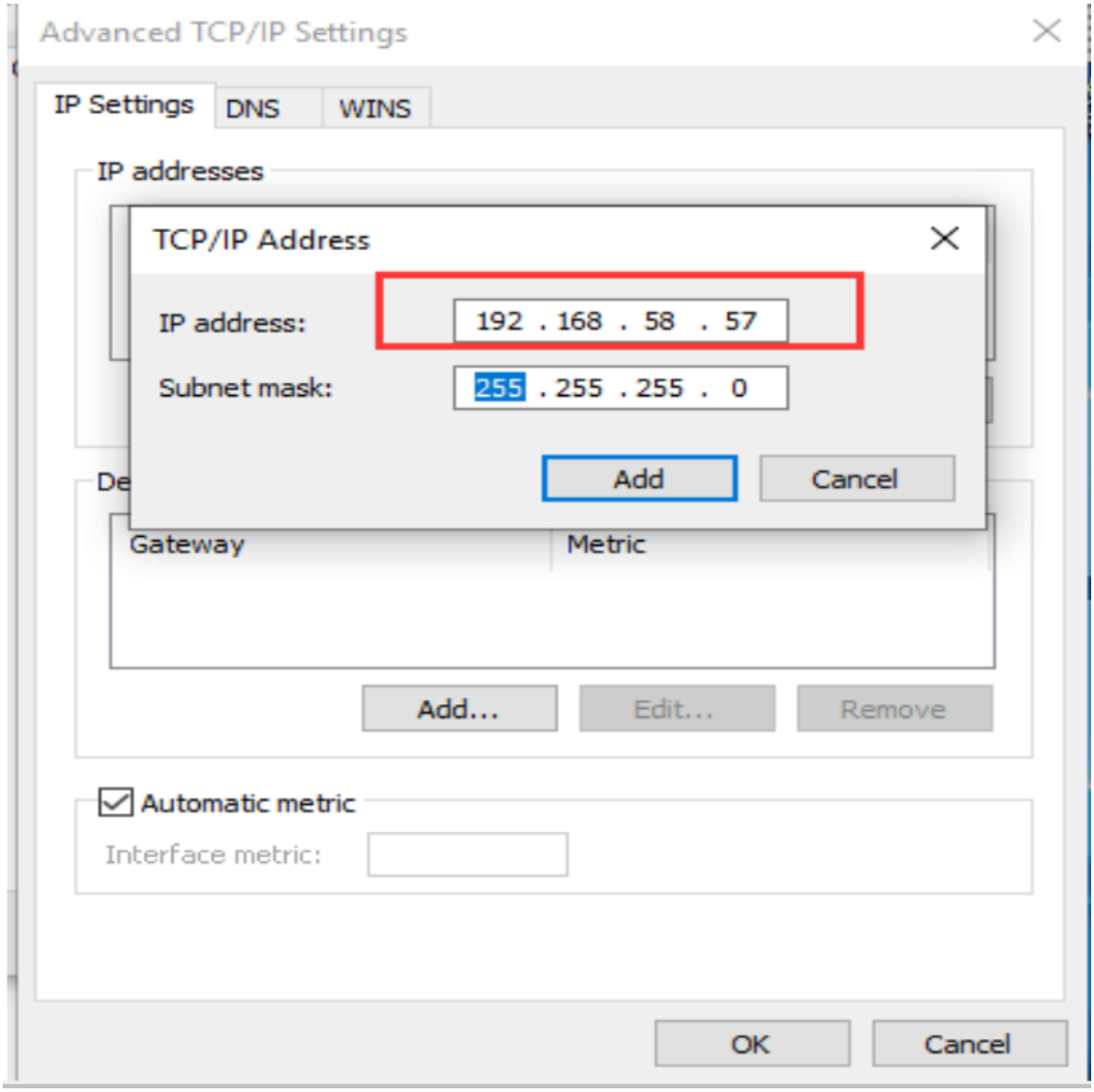
If you change the key, please save the key, if you really forgot it, please contact us or your seller.

Log in Web as below step

- Connect device and PC
- Connect the PC to the device's network over cable.
- Configure PC's IP address to make sure the device can communicate with each other.
- Please change your local network IP as 192.168.1.110, see the below picture



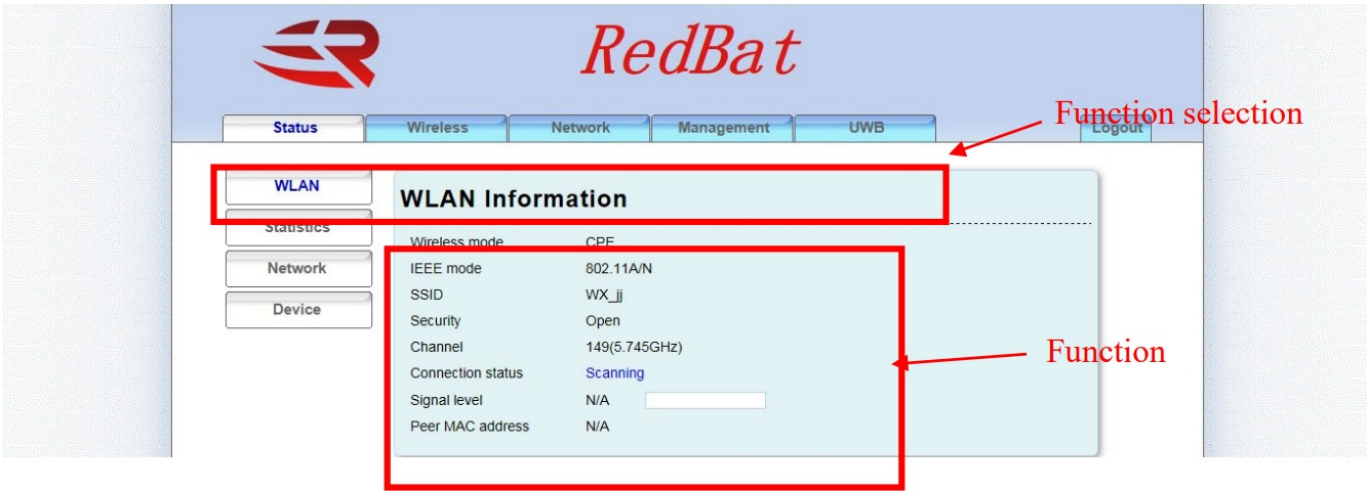

Advanced TCP/IP Settings
IP Settings
DNS
WINS
IP addresses
IP address
Subnet mask
192.168.1.110
255.255.255.0
Add...
Edit...
Remove
Default gateways:
Gateway
Metric
Add...
Edit...
Remove
Automatic metric
Interface metric:
OK
Cancel



- Startup the browser and input log-in information,
- Startup the browser on the PC, input the device's IP address in the address bar, (the default IP is 192.168.1.9), you can log in to the Web pages,
- Input user name "box wireless",Key"box wireless", click <login>

Login display page

About page



About the web page, there are three regions

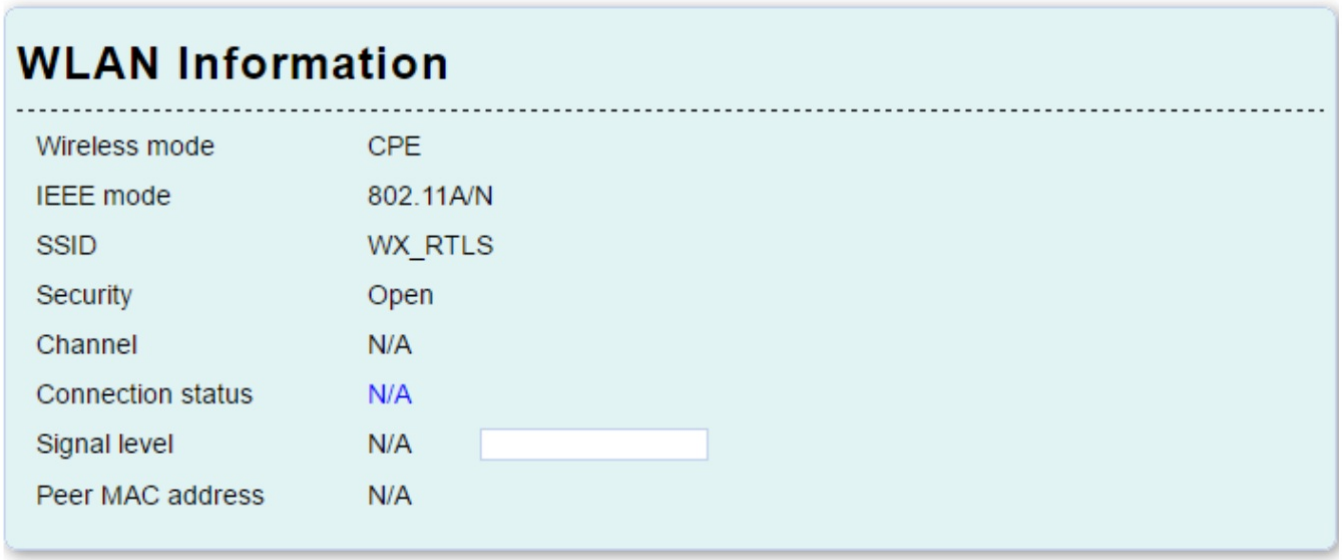
1. Function selection, select the different function items, in the main function region, which will display the corresponding item.
2. Function, Web pages are mainly presented and operated, such as status display, network configuration, etc. Status and configuration

Status

In this item, includes”WLAN”,”Statistics””Network”,”Device”, display different information.

Wireless

Wireless information is used to display the relevant information.

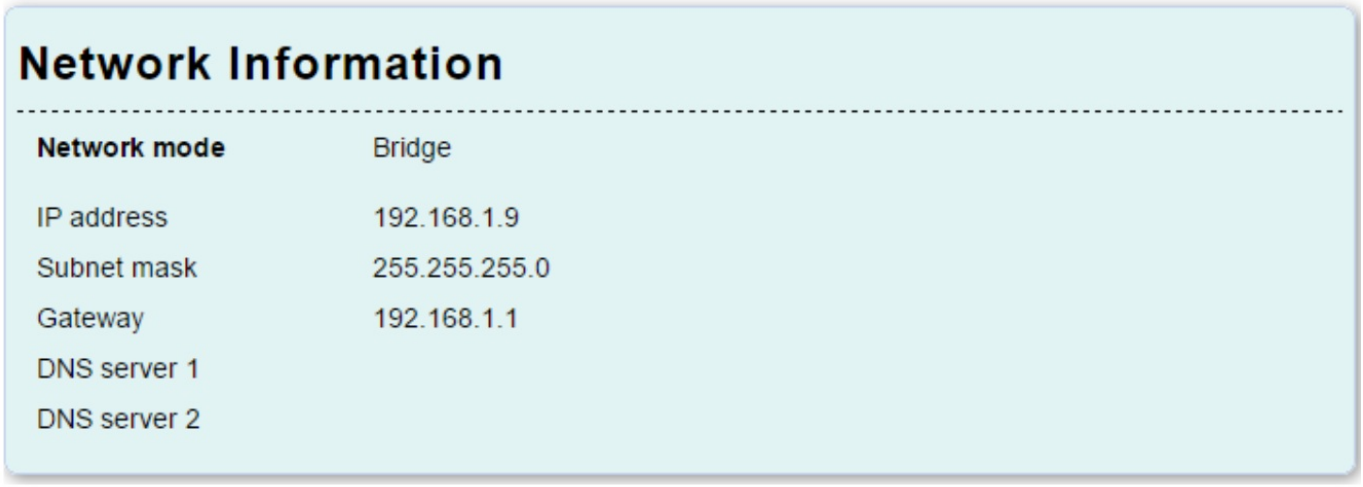


Statistics

The wired part and the wireless part respectively count the number of packets received and sent and the number

of errors.

Network information



Display device network information

Device information

Display hardware and software information.

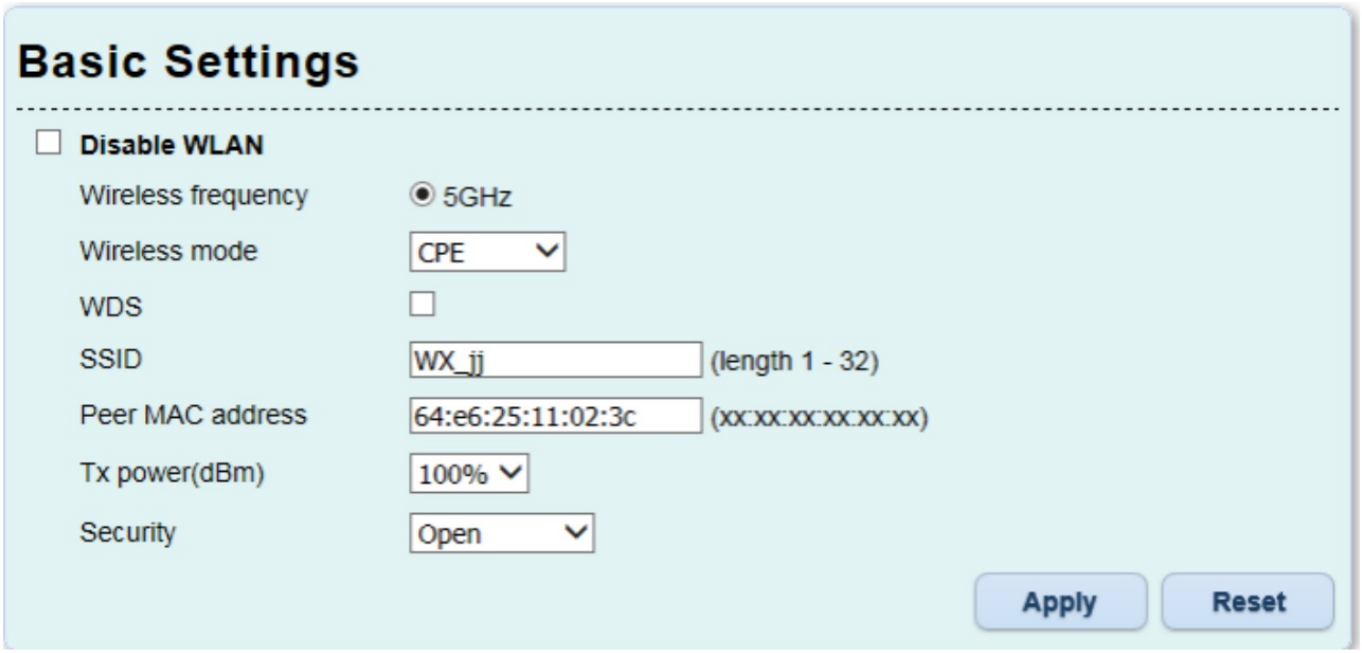
Device display

- Friendly name: the device name you defined, in this device, it is displayed as “UWB Gateway”.
- Hardware version:current hardware version
- Software version: current running version
- Release time: the version released time
- Serial Number: current device serial number

- Wired MAC : current device wired physical address
- Wireless MAC:current device wireless address
- System time:current system time
- Uptime:current system running time
- Set Wi-Fi network
- Basic configuration
- Disable WLAN: If need to make the device connect Wi-Fi, do not select this frame.
- Wi-Fi Only support 5GHz.
- Wireless mode: CPE
- 1.4.1.1 CPE Mode

  Step
- The device only supports CPE mode.SSID default is WX_RTLS AP MAC is 00 00 00 00 00 00 Authentication & encryption mode is Open. If the device has previously been tied to AP or router, the SSID, AP MAC address, authentication / secret mode will retain the last bound status record.
- Select wireless network scan. As below

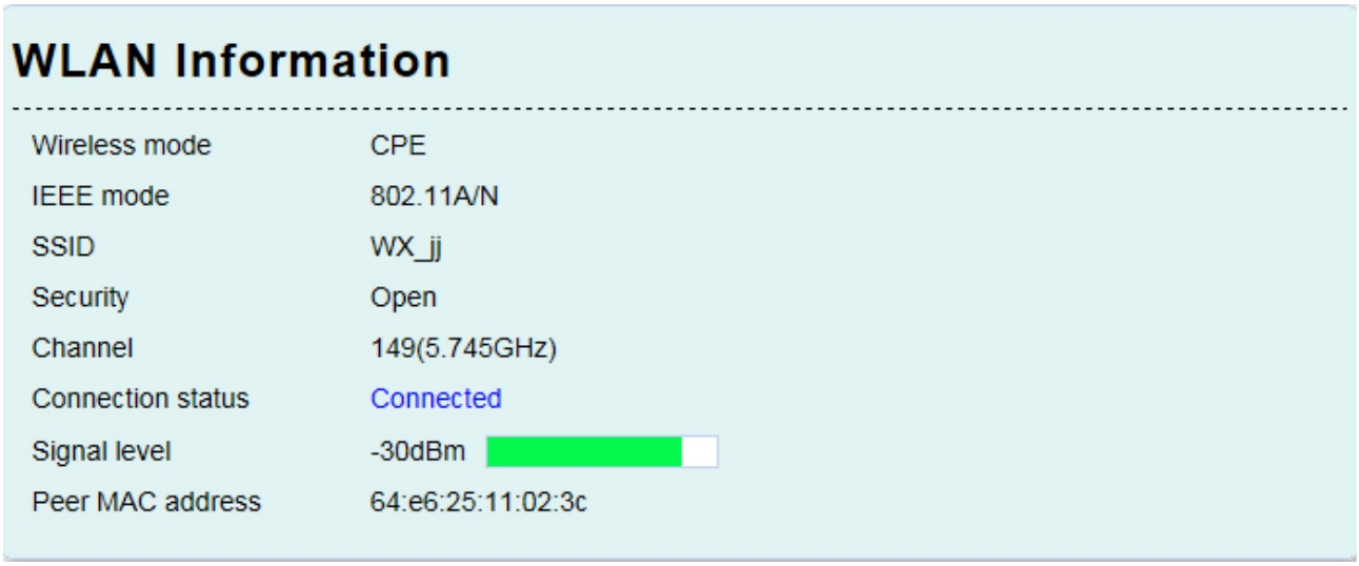
The device will scan the AP or router that can be searched, select the SSID that needs to be connected, and then confirm the selection button and automatically switch to the basic settings interface, just as the below picture



You can see that the Peer MAC address has been entered in the MAC of the destination AP, if the authentication

& encryption mode does not enter the authentication & encryption mode of the destination AP, manually modify, click the application, and the binding can be generated.

Enter the status page about the wireless item to make sure the binding is successful.

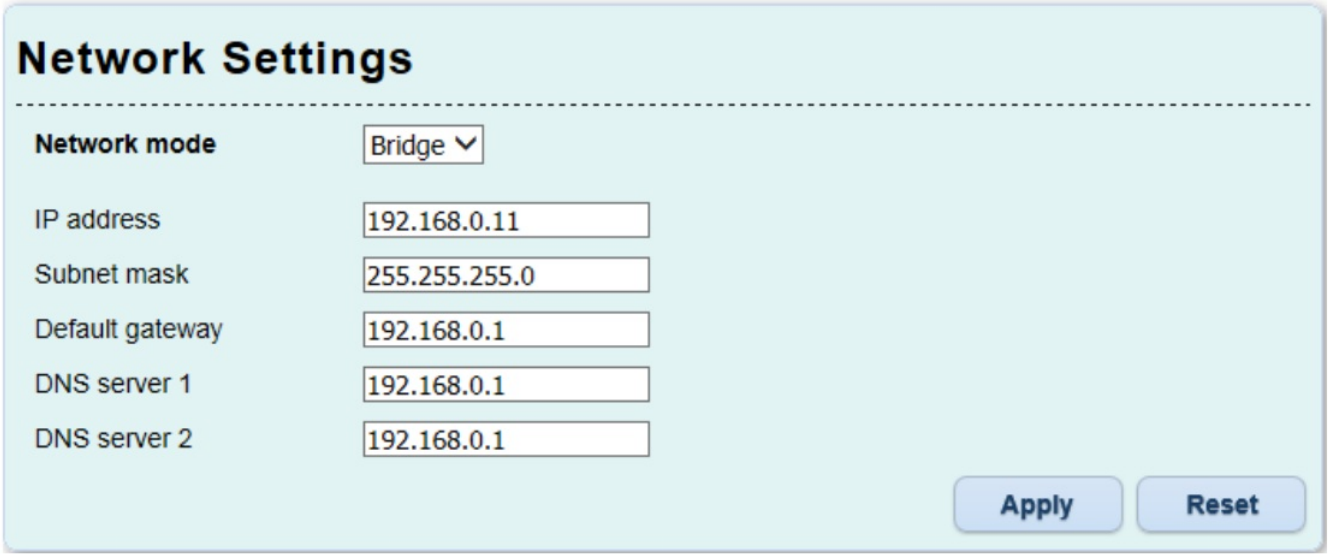


Wi-Fi scan

You can see that the Peer MAC address has been entered in the MAC of the destination AP, if the authentication & encryption mode does not enter the authentication & encryption mode of the destination AP, manually modify, click the application, and the binding can be generated. The device will scan the AP or router that can be searched to display its MAC address, SSID, authentication and encryption mode, signal intensity, working channel, and mode. Select any of them, automatically jump to the wireless settings page, and fill in the relevant information about SSID and identity. When click “refresh”, the device will scan on AP and display the scanning result.

Network set

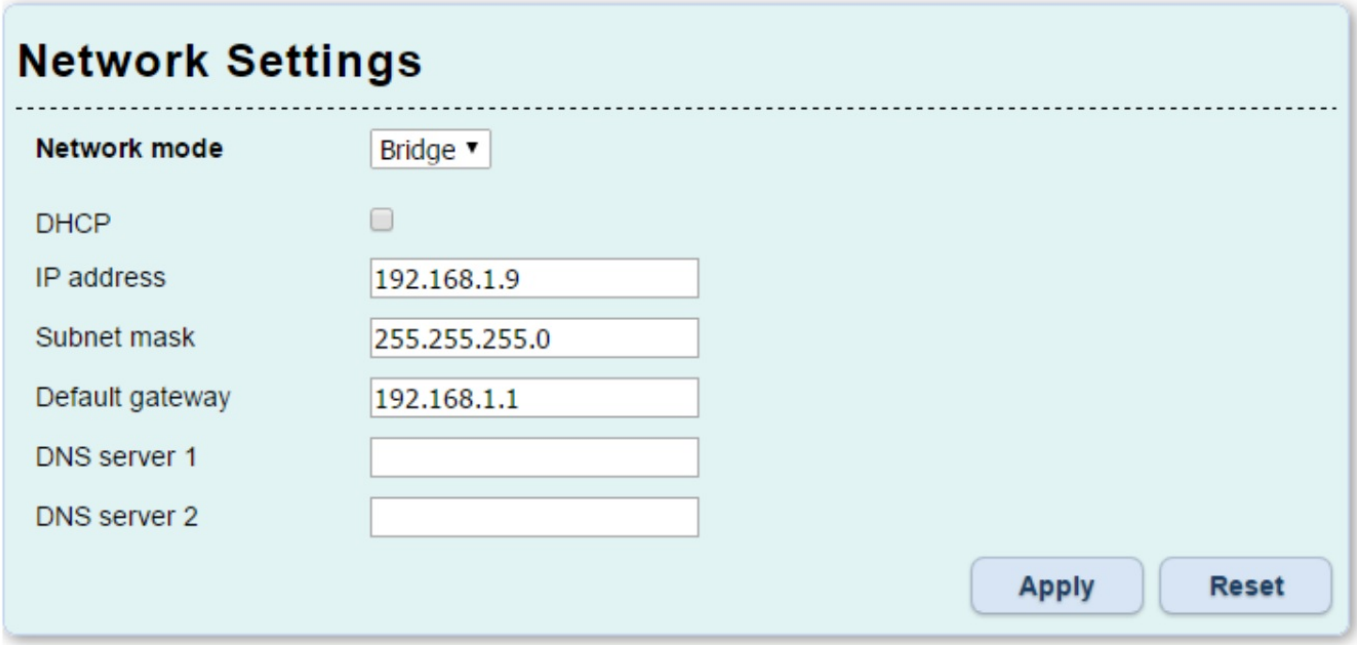
System network mode: IP address, subnet mask, default gateway, DNS server 1, DNS server 2



Network set

When modifying the device IP, note that the IP of the PC is in the same network segment as the device IP, but it cannot be the same. For example, the device IP is 192.168.1.3, and the IP of PC can be set to 192.168.1.1,192.168.1.254,192.168.1.3, Among them, 192.168.1.X represents the network segment, and needs to be consistent.

Modify IP address



- IP address: it's IP address about LAN port, default is 192.168.1.9,
- Subnet mask:it's for LAN,default is 255.255.255.0,
- Default Gateway: It means network gateway configuration, the default is 192.168.1.1,
- DNS server 1: DNS server configuration 1 in LAN port, default is 192.168.1.1
- DNS server 2: DNS server configuration 2, default is 192.168.1.1 After configuration, click<Apply>.

Management

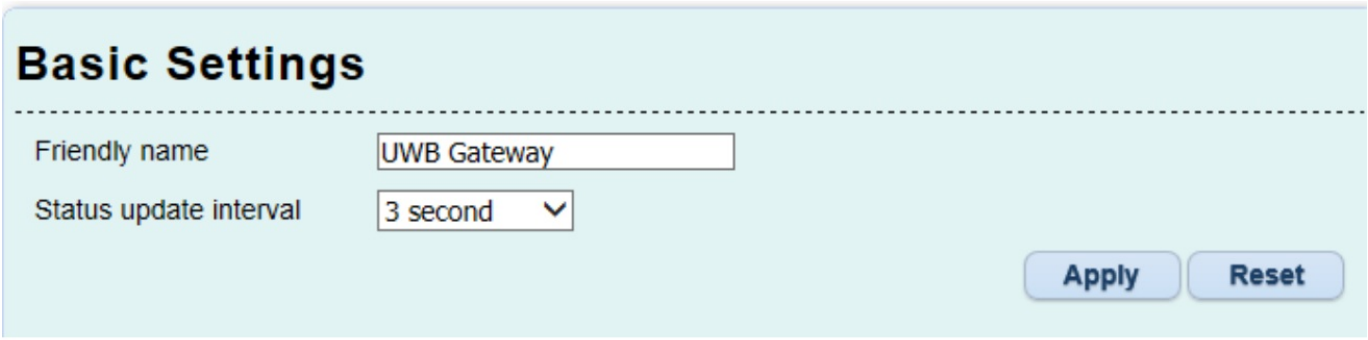
Management includes"Basic settings","FW Upgrade","configuration management","system log","system server"and "Reboot".

Basic setting

The basic setting is composed by three parts: device name, updated time interval, key management, and language setting.

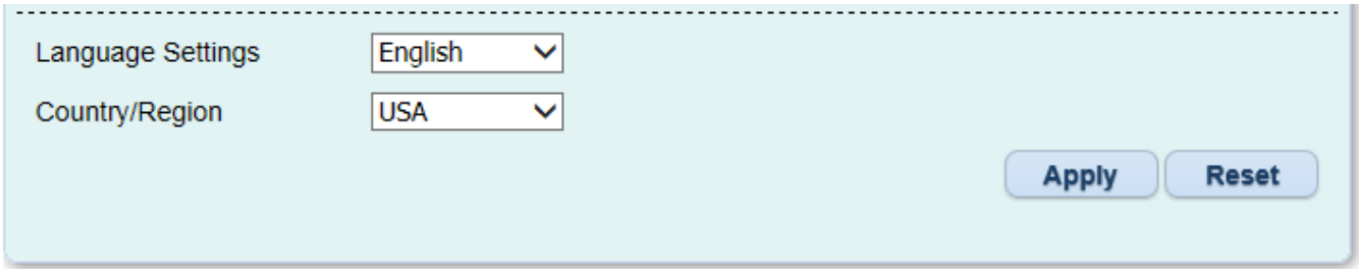
Device name and updated time interval

Modify device name and amend status updated time interval.



- Device name the device name
- Status updated time interval: device status update time interval
- After configuration, click application, and the result can be checked on the status page.
- Key management
- Amend user and password. The default user name is box wireless Key is: box wireless.

- According to this page, you just need to input a new key, and click “application”.
- Language set
- Two choices: Chinese and English

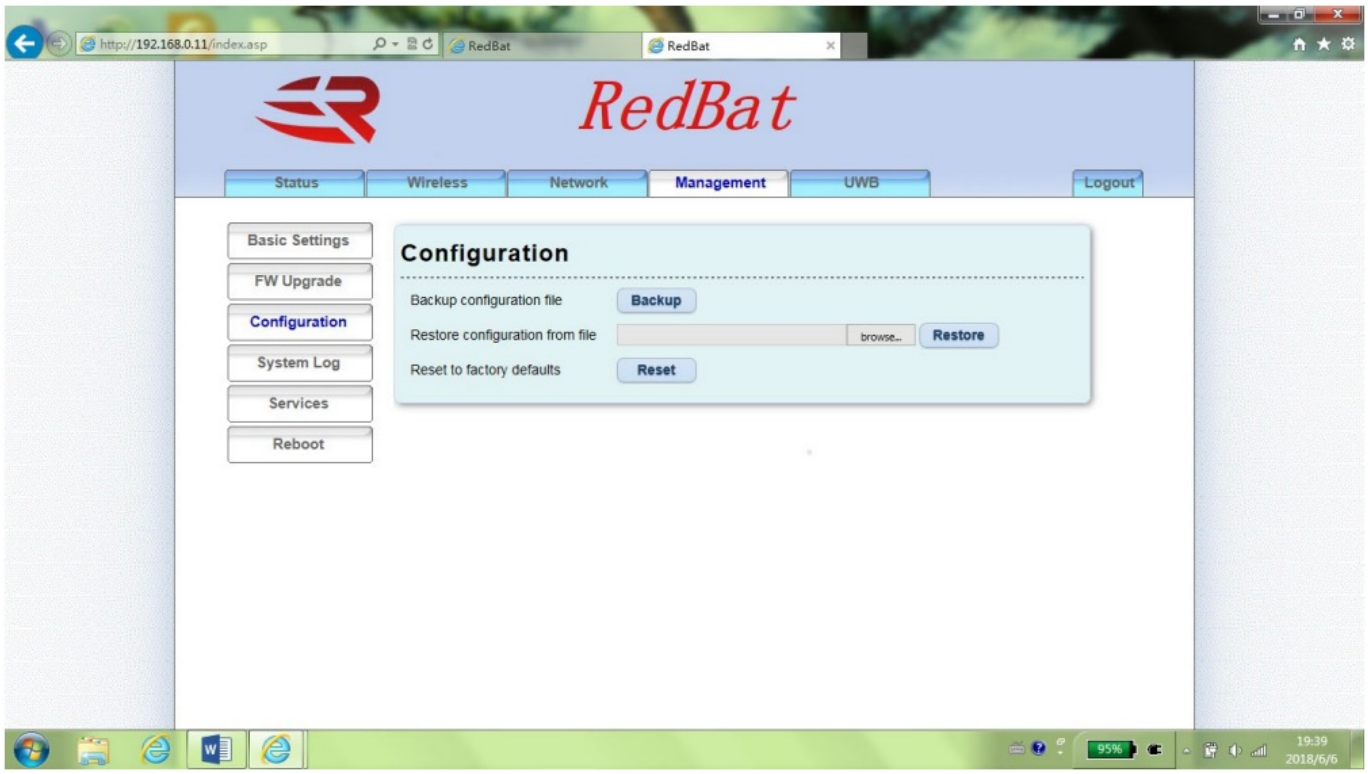


- Select English in language settings, and select the USA in the country.
- Select and click “apply”.
- 1.6.2 FW Upgrade
- Upgrade Wi-Fi

- Click <select file > to select one FW, click “upload firmware”, after successful upgrading, restart and display the version information.
- In the process of upgrading firmware, power failure is not allowed. Power failure will result in unusable equipment.

Configuration management

Three parts: “backup configuration file”, “restore configuration” and “restore factory settings”



- Backup: Backup the configuration file to an external file, and the backup file name is automatically generated into the “config” style.
- Restore configuration Read the contents of the external file configuration and modify the current configuration of the device.
- Restore factory configuration: click<factory configuration>, and the configuration of the device will be restored as default data.

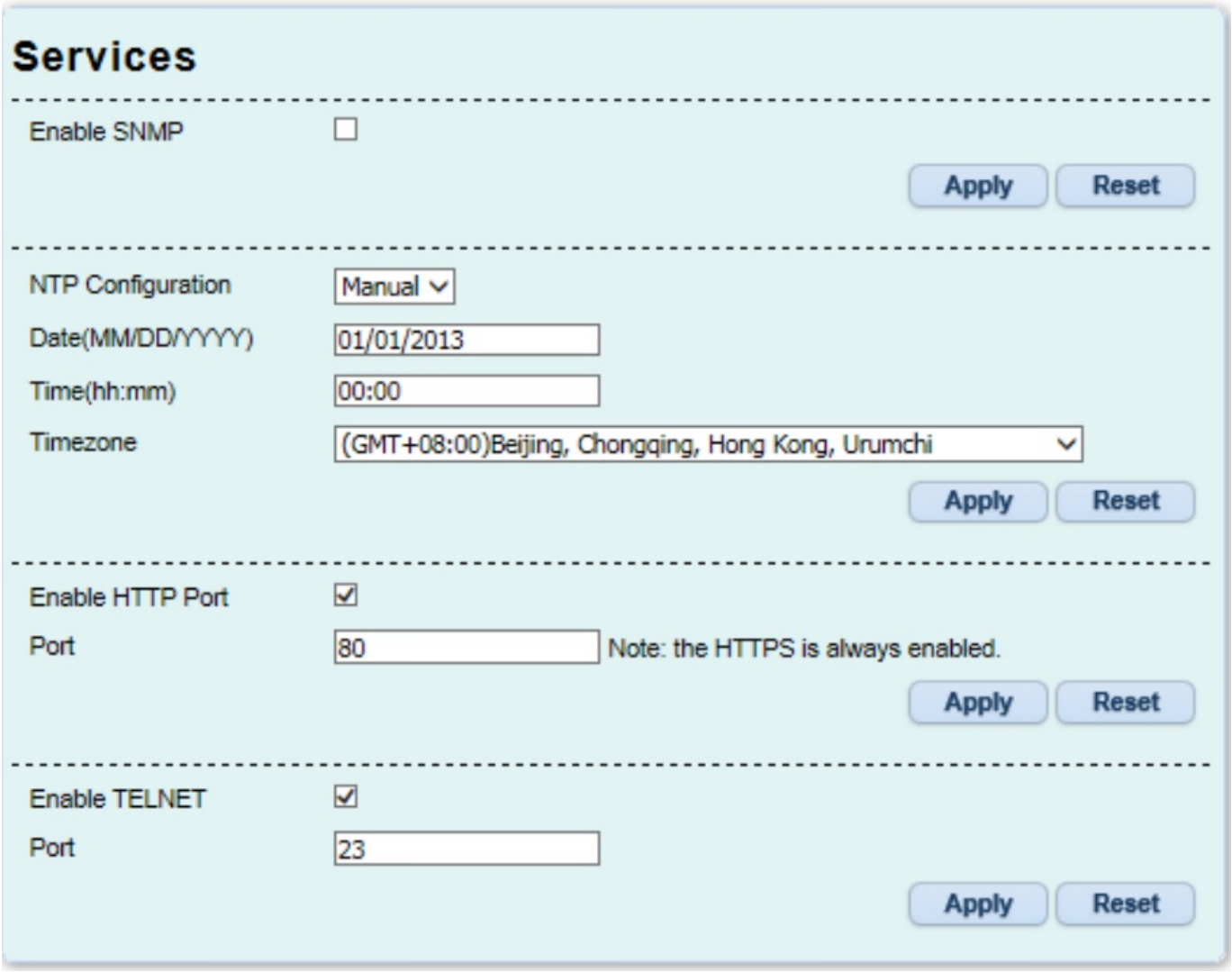
System log

Enable system logs to display important information about the system., select <Clear> to clear the log content.

Enable remote system log, set server IP address and server port, can get the remote system log information.

System service

Four parts SNMP NTP management allow management HTTP port and enable TELNET

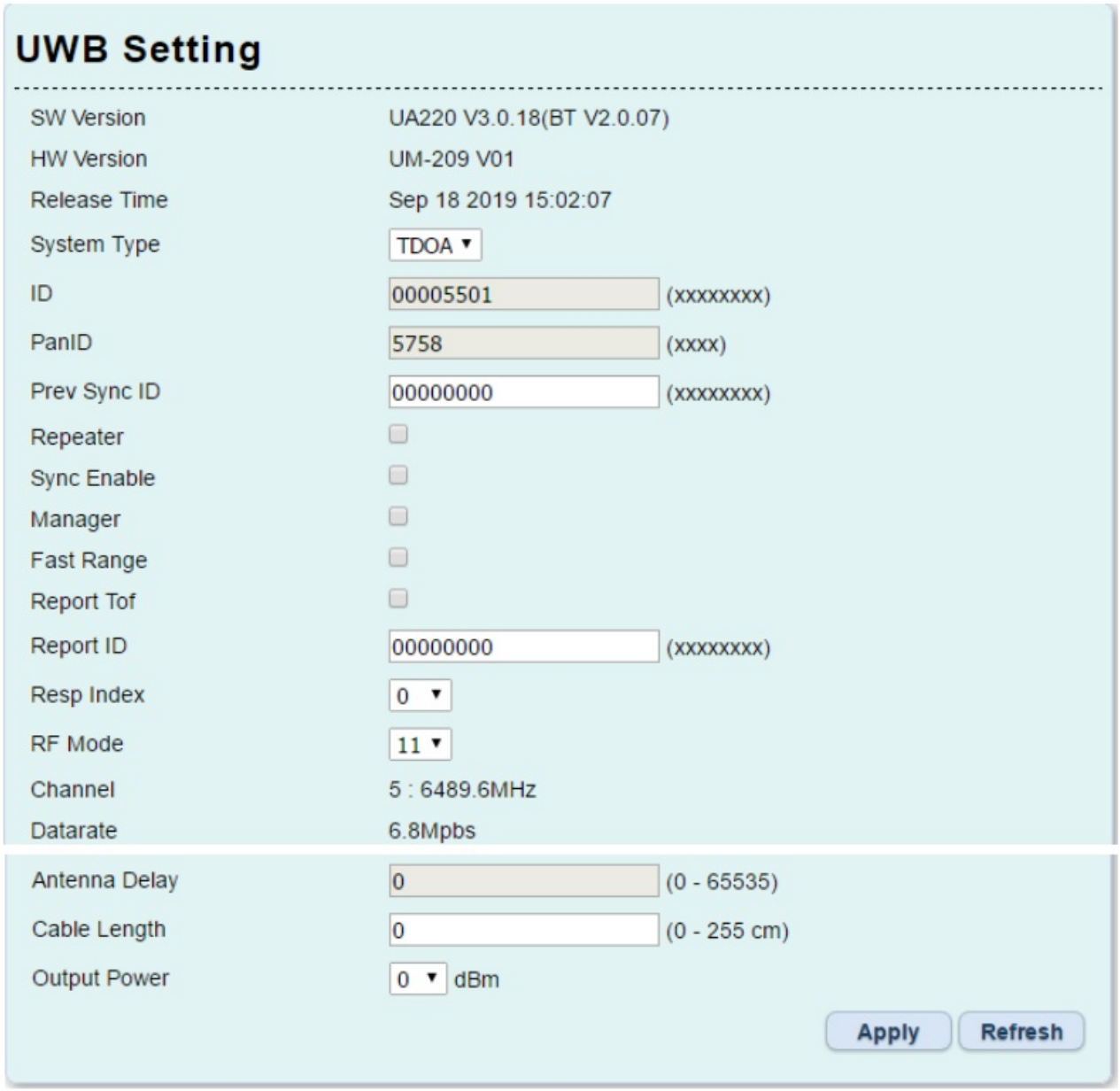


- Enable SNMP is used to set up SNMP(simple network management protocol)
- NTP management: manual and NTP, to set system time;
- Allow management HTTP port default allow, the default port is 80
- Enable TELNET default is enabled, the default port is 23.

Reboot

- Click <reboot>, and the system will reboot.
- 1.7 UWB
- Five parts Basic settings, Advanced, Statistics, UWB Upgrade, RF Gateway

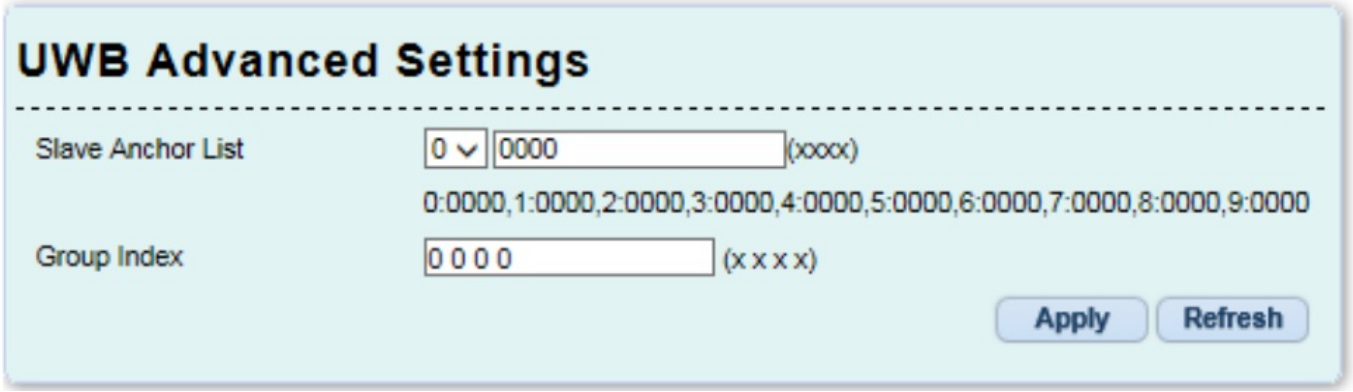
Basic settings



Display the current device's UWB version about H/W and software, set its ID, others are set off from the server. It can be selected from 0 dBm, but it is not for end-users, it is for technical personnel. When it sells to end-users, it has been locked.

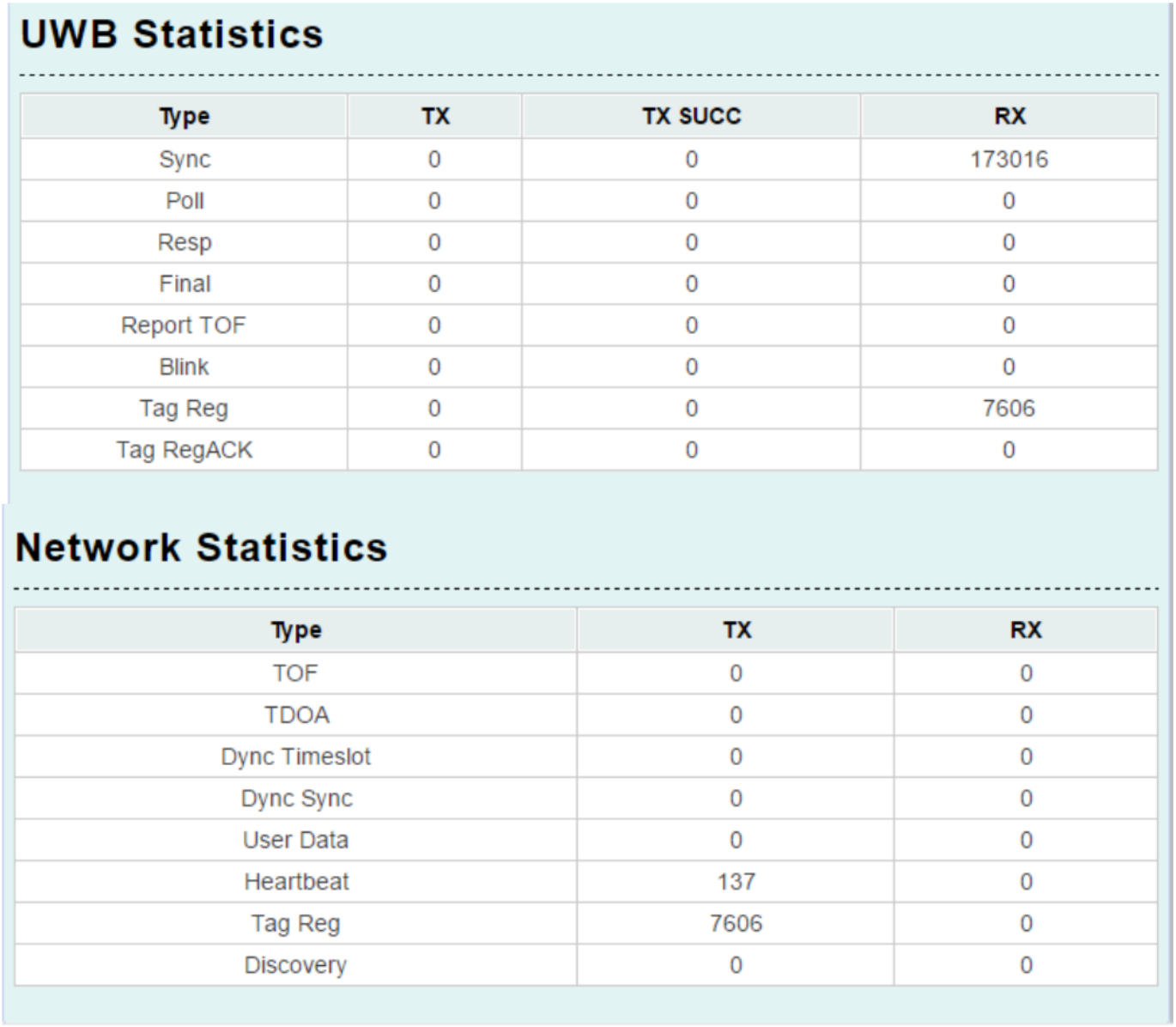
Advanced

Used to set up a sub-anchor list and team number.



Statistics

It is used to count the data of sending packets, sending successful data, and receiving message data.



UWB Statistics

Type	TX	TX SUCC	RX
Sync	0	0	173016
Poll	0	0	0
Resp	0	0	0
Final	0	0	0
Report TOF	0	0	0
Blink	0	0	0
Tag Reg	0	0	7606
Tag RegACK	0	0	0

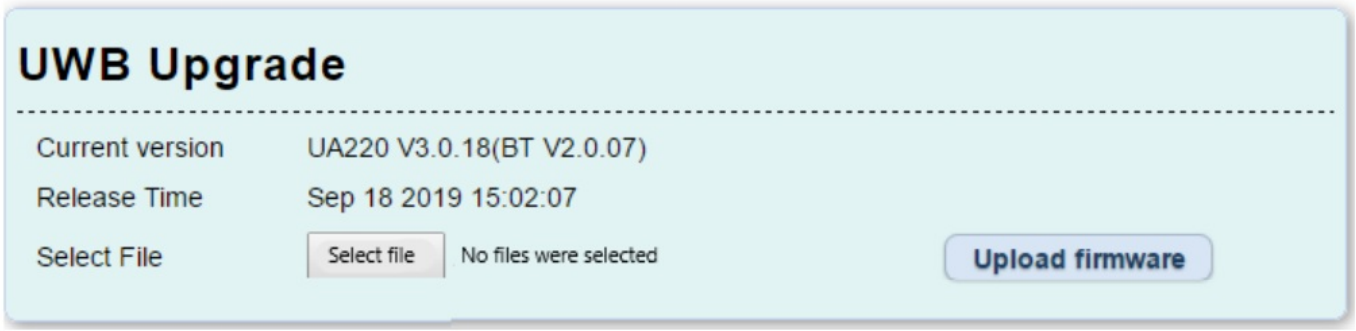
Network Statistics

Type	TX	RX
TOF	0	0
TDOA	0	0
Dync Timeslot	0	0
Dync Sync	0	0
User Data	0	0
Heartbeat	137	0
Tag Reg	7606	0
Discovery	0	0

Upgrade

Upgrade step

- Open the Upgrade page, as below

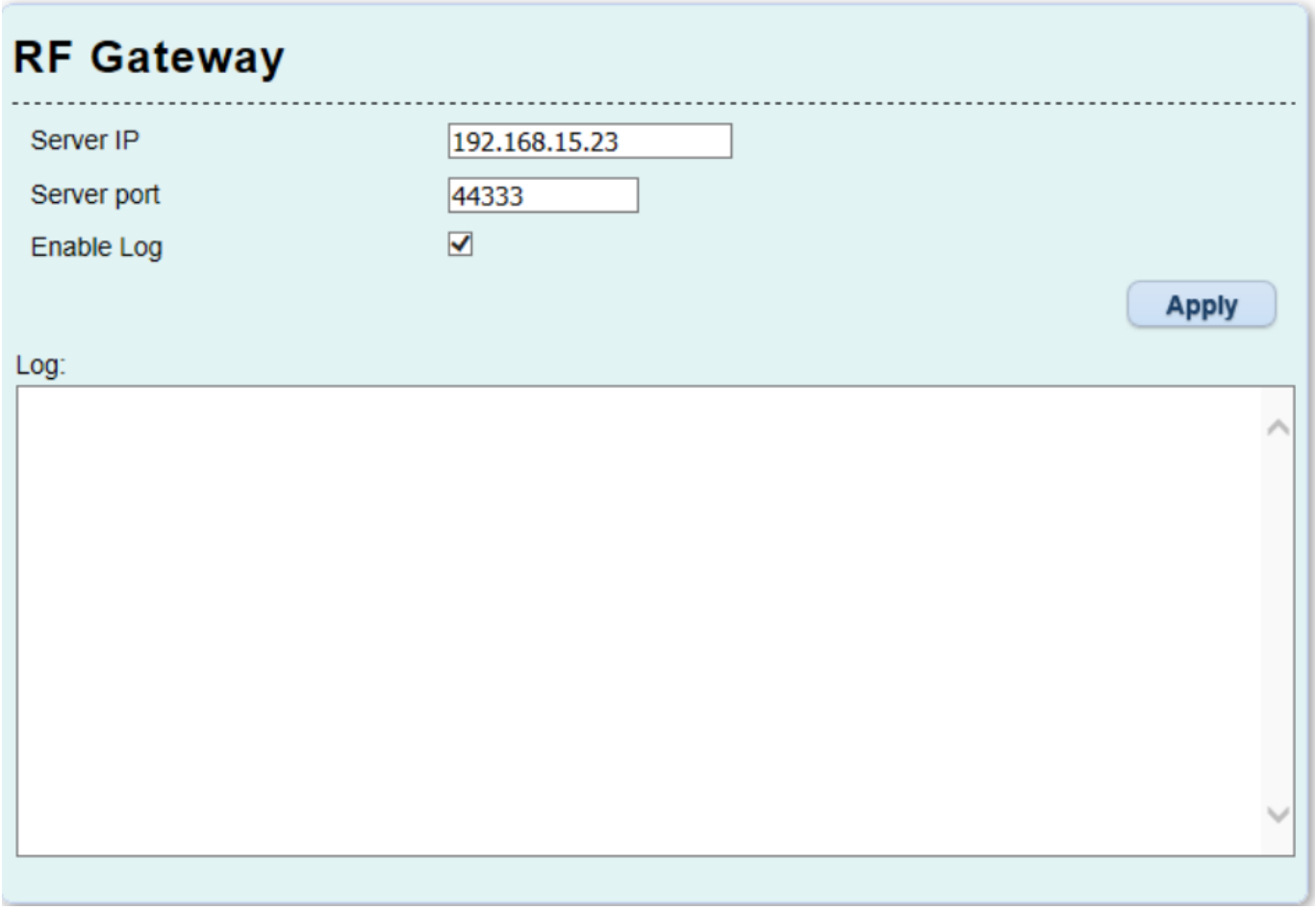


- Click “Select file” and import a bin file, such as UA220 APP V3.0.18.bin
- Open the management page and click restart.
- Open the UWB page, and check whether it is the updated version information.

If it fails, restart the device and check UWB status, if it is not successful, repeat the above steps. If it always fails, please contact us. The whole software bundle is upgraded. Common users cannot modify the software. The software can be obtained by the website www.uwbleader.com or the Woxu support team. The upgrade can be performed only by professional installers who have logged in to the device.

Gateway

As below picture,select the gateway page in the UWB page,the server default IP is 192.168.1.110,server port is 44333. You can change the server IP and server port as you need, please make sure the device IP is in the same network segment, click enable log, make TAG and anchor range, will display the ranging information in log output frame.



Documents / Resources

	WOXU WIRELESS UA-220 UWB Gateway [pdf] User Manual UA220, 2AKVA-UA220, 2AKVAUA220, UA-220 UWB Gateway, UA-220, UWB Gateway