

# **ZigBee Server USER GUIDE**

**Version: 1.0**

**Issued Date:**

**For Models: ZS211H / ZS212H / UBIQ520**

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# Chapter 1 : Introduction

## Welcome

The ZS211H ZigBee Gateway is a stand alone device that allows one to configure and control their ZigBee mesh network using a network-connected computer. The ZS211H can be accessed from anywhere on the IP networks, Ethernet or Internet, allowing one to control their ZigBee devices from home, office or on the road where Internet connectivity is available. This document defines the specifications of this product. It covers setting hardware, software and mechanism, most of all it defines the user interface and configuring of this gateway.

This product provides many extraordinary features:

- Bridging IP network and ZigBee mesh network.
- Web User Interface for managing and configure ZigBee devices from IP networks.
- Create and control scenes (group multiple devices and control by one command).
- Act as the coordinator of ZigBee mesh network.
- Assign or release routers.
- Include and exclude ZigBee devices.
- Configure, group and name ZigBee devices
- Scheduling control of ZigBee devices
- Set wake-up interval on battery-operated devices
- Administrator ID and password for security
- Socket API and “cgi” command interfaces

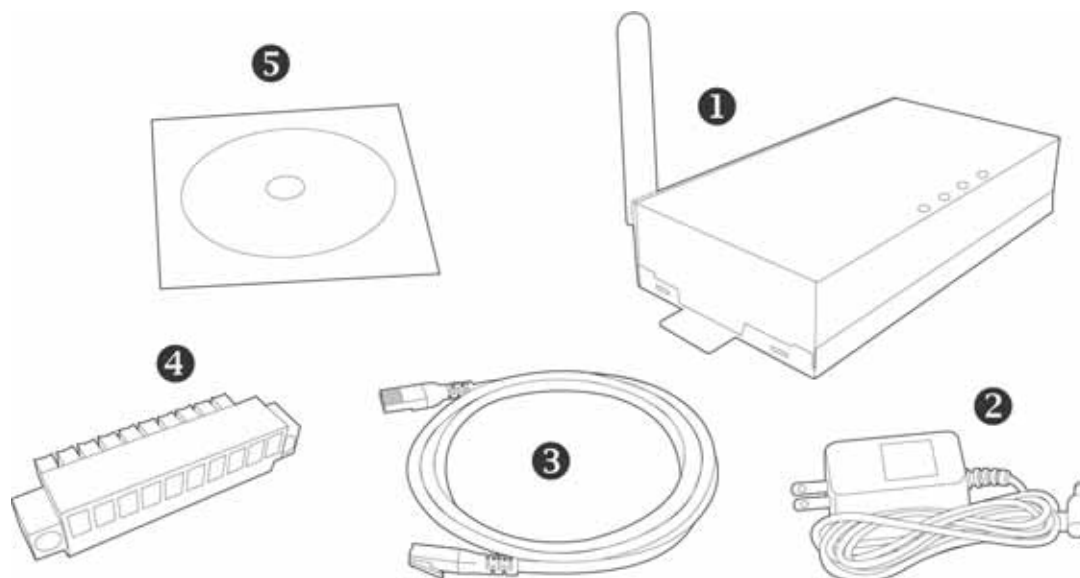
# Chapter 2 : Installing

## Package Contents

The following items are included in your ZigBee Server package. Check this list before installation to ensure that you have received all items.

- ❶ ZigBee Server
- ❷ Power Adapter
- ❸ Ethernet Cable
- ❹ Phenix Connector
- ❺ Installation CD

Please contact your dealer immediately  
in case you are missing items.



# Chapter 3 : Using the ZigBee Server

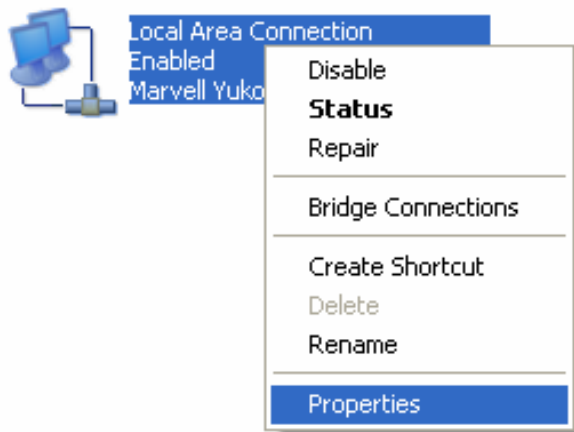
ZS211H default IP is **192.168.0.100:3000** , default data address of return destination is **192.168.0.200:2000**.

## 3.1 Internet Protocol (TCP/IP) setting :

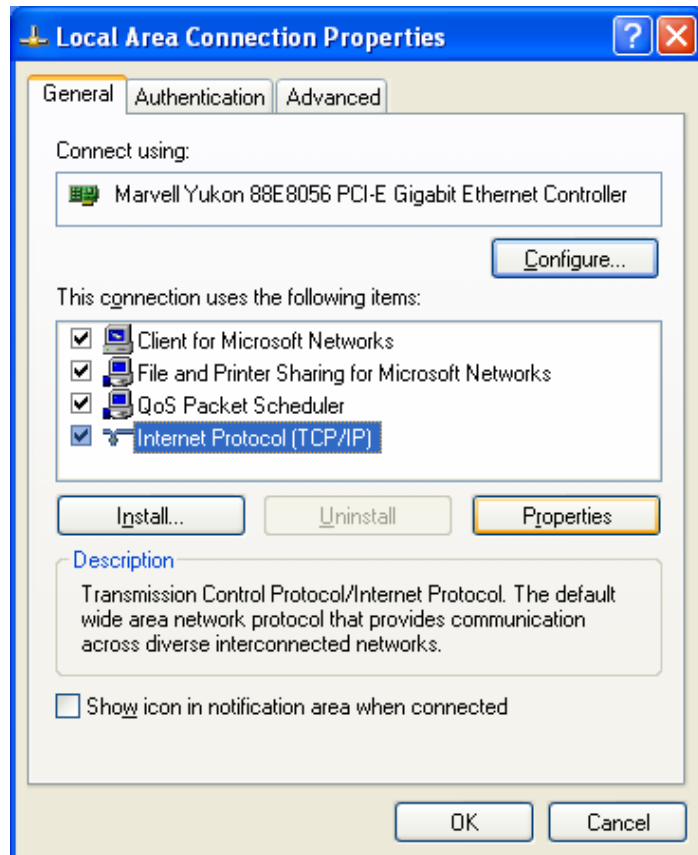
- a. On PC home page of Microsoft Windows. Click “right key” of mouse upon 「My Network Place」 , select 「Properties」 .



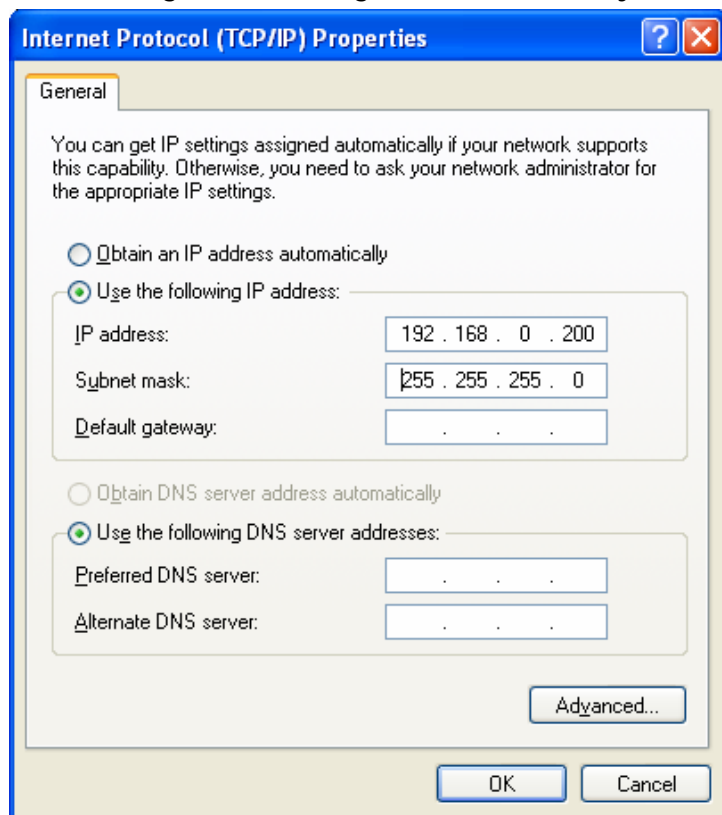
- b. Select 「Local Area Connection」 , click right key at 「Properties」



c. Select 「Internet Protocol(TCP/IP)」, click 「Properties」.



d. in 「using the following IP address」 key in IP address : **192.168.0.200** , subnet mask : 255.255.255.0 , click 「ok」 。

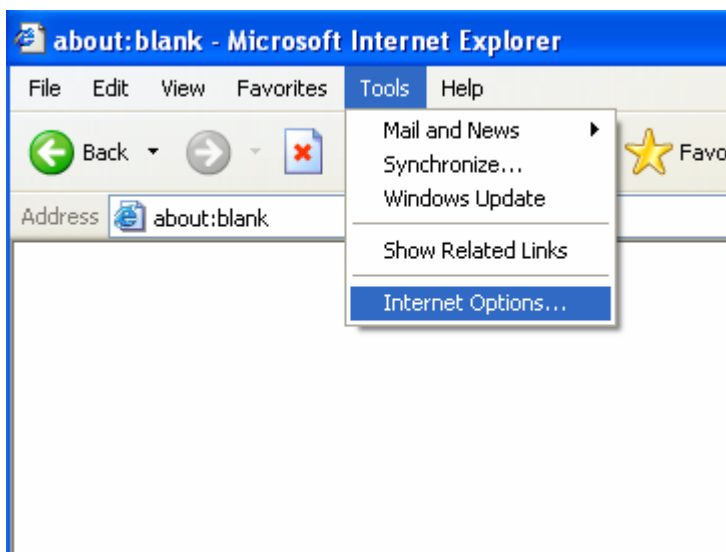


Just remind you to set the IP section to meet your current network section after set this device !

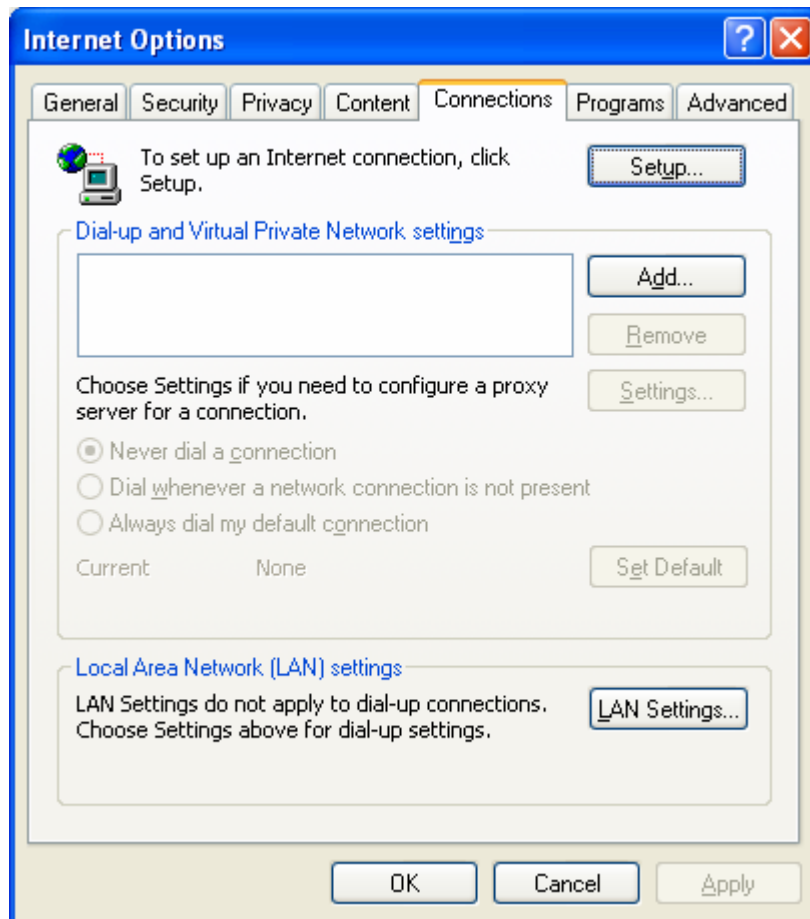


### 3.2 Setting IE :

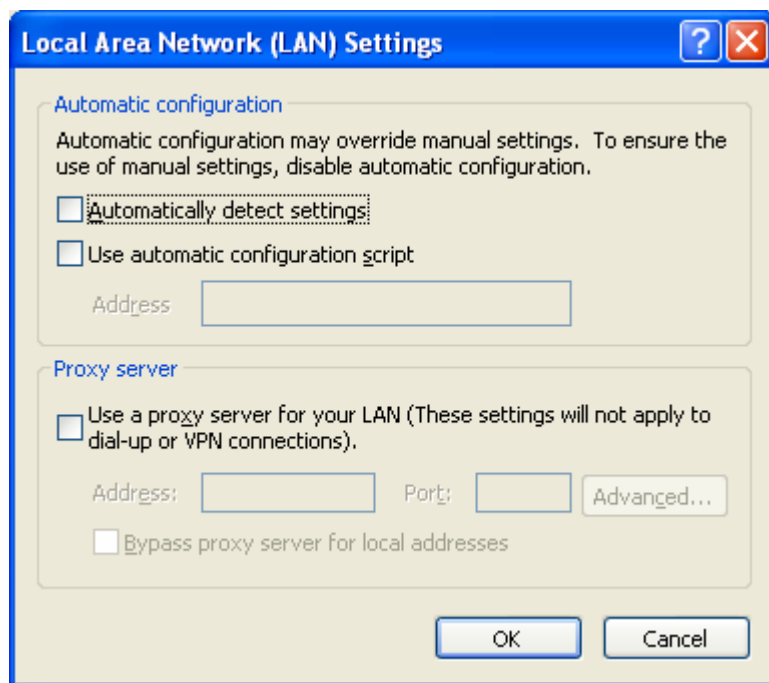
- a. click 「Internet Explorer」 browser.
- b. click 「Tools」 , then 「Internet Options」 。



- c. select 「Connections」 , keep blank at 「Dial-up and Virtual Private network settings」 , then click 「LAN Settings」 .

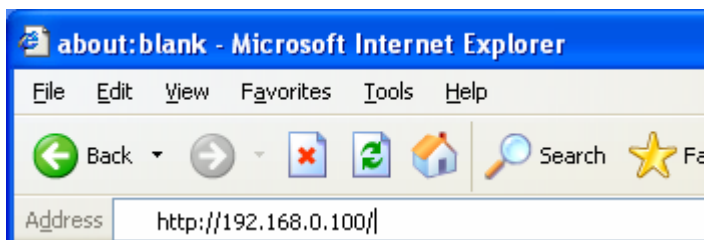


d. Make sure this page is blank and click 'ok'. Once more 'ok' to escape.



### 3.3 Log in ZS211H Web :

- a. Open Internet Explorer , key in address **192.168.0.100** then 「Enter」 .



- b. When you see ZS211H home page , select 「Setup Server」 .  
Login ID : **admin** , Password : **admin** , click 「Login」 , you will enter ZS211H setting page.

o





c. ZS211H setting page.



### 3.4 Web UI :

HOME | OPERATION | LOGOUT 次選單

Settings 主選單

MESH Network

I/O Ports

Alert

Maintenance

System

Device ID : AR000109

Device Name : nOne

Date & Time : 4/15/2008 14:18:6

Set New Date & Time : 2008 / 4 / 15 14 : 18 : 6

Sync with PC Save Date/Time

Date Format : MM/DD/YYYY

Time Zone : GMT+ 8:00

☐ Enable Daylight-Saving

Network Time Protocol : ☐ Enable NTP calibration service

NTP Server Address : 220.130.158.52

Calibration Schedule : Every Day at 8 : 0

- Main mannual : Setting、 MESH Network、 I/O Ports、 Alert、 Maintenance
- Sub mannual : You may key in or select proper features.

## 3.5 Features

### a. Setting



The screenshot displays the ZigBee Server web interface. At the top, there's a header with the title "ZigBee Server" and a small image of a ZigBee device. Below the header is a navigation bar with tabs: HOME, OPERATION, and LOGOUT. Under the OPERATION tab, there are sub-tabs: Settings, System, Network, and Users. The Settings sub-tab is selected, and it contains a sidebar with links: MESH Network, I/O Ports, Alert, and Maintenance. The main content area shows the "System" settings for a device with ID "AR000117". The settings include: Device Name (a text input field), Date & Time (displayed as 4/18/2008 13:46:25), Set New Date & Time (a date and time picker), Date Format (a dropdown menu set to MM/DD/YYYY), Time Zone (a dropdown menu set to GMT+8:00), Network Time Protocol (checkboxes for Enable Daylight-Saving and Enable NTP calibration service), NTP Server Address (a text input field set to 220.19.0.138.52), Calibration Schedule (a dropdown menu set to Every Day, at 8:00), LED Lights (checkbox set to Enable), and Password Protection (checkbox set to Enable). A Save button is at the bottom.

**ZigBee Server**

HOME | OPERATION | LOGOUT

Settings | **System** | Network | Users

MESH Network  
I/O Ports  
Alert  
Maintenance

**Device ID:** AR000117

**Device Name:**

**Date & Time:** 4/18/2008 13:46:25

**Set New Date & Time:**  /  /  :  :  :

**Date Format:**

**Time Zone:**

☐ Enable Daylight-Saving

☐ Enable NTP calibration service

**Network Time Protocol:**

**NTP Server Address:**

**Calibration Schedule:**  at  :

**LED Lights:** ☒ Enable

**Password Protection:** ☒ Enable

System : Setting ZS211H device name , date & time , etc...





The image shows a web-based configuration interface for a ZigBee Server. The title bar at the top reads "ZigBee Server" and includes a small icon of a ZigBee module. Below the title bar are three tabs: "HOME", "OPERATION", and "LOGOUT". The main content area is divided into four sections: "Settings", "System", "Network", and "Users". The "Network" section is currently selected and displays various configuration fields. On the left side of the "Network" section, there is a vertical menu with options: "MESH Network", "I/O Ports", "Alert", and "Maintenance". The "Network" section contains the following fields: "MAC Address" (00-1c-3b-00-01-17), "IP Type" (Fixed IP), "IP Address" (192.168.0.100), "Subnet Mask" (255.255.255.0), "Default Gateway" (192.168.0.254), "Primary DNS" (192.168.0.7), "Secondary DNS" (192.168.0.7), and "HTTP Port" (80). A "Save" button is located at the bottom of the "Network" section.

Section	Field	Value
System	MAC Address:	00-1c-3b-00-01-17
	IP Type:	Fixed IP
Network	IP Address	192.168.0.100
	Subnet Mask	255.255.255.0
	Default Gateway	192.168.0.254
	Primary DNS	192.168.0.7
	Secondary DNS	192.168.0.7
	HTTP Port	80
	Save	Save

Network : Ethernet setting , IP , DNS , HTTP Port etc...



The screenshot shows the 'ZigBee Server' web interface. At the top, there is a navigation bar with 'HOME', 'OPERATION', and 'LOGOUT' links. Below this, a sidebar on the left contains 'Settings', 'MESH Network', 'I/O Ports', 'Alert', and 'Maintenance'. The main content area is titled 'Users' and contains several sections: 'Administrator ID:' with a text input field, 'Password:' with a text input field, 'Verify Password:' with a text input field, and 'Save' and 'Cancel' buttons. Below these is a 'Registered Users List:' which is a scrollable table with multiple rows, each containing the text 'guest'. A 'Delete' button is positioned below the list. At the bottom, there is a 'New User Name:' text input field, 'Password:' and 'Verify Password:' text input fields, and 'Save' and 'Cancel' buttons. A small image of a ZigBee router is visible in the top right corner of the interface.

Users :

Update or modify administrator ID & Password.

Register new User and password to join.

b. MESH Network



The screenshot shows the ZigBee Server web interface. At the top, there's a header with the title "ZigBee Server" and a small image of a ZigBee module. Below the header is a navigation bar with links: HOME, OPERATION, and LOGOUT. On the left side, there's a sidebar menu with options: Settings, MESH Network, I/O Ports, Alert, and Maintenance. The main content area is titled "PAN Settings" and "Node Settings". Under "PAN Settings", there are fields for Name (PAN\_1000\_0x90), PAN ID (0x1000), Channel (11), and AES. There are also checkboxes for "Enable AES", "Coordinator Routing", and "Not Allow New Nodes Join". Below these fields, there are statistics: Total Nodes: 2, Total Services: 5, and Total Groups: 0. A "Save" button is at the bottom right of the settings area.

**ZigBee Server**

HOME | OPERATION | LOGOUT

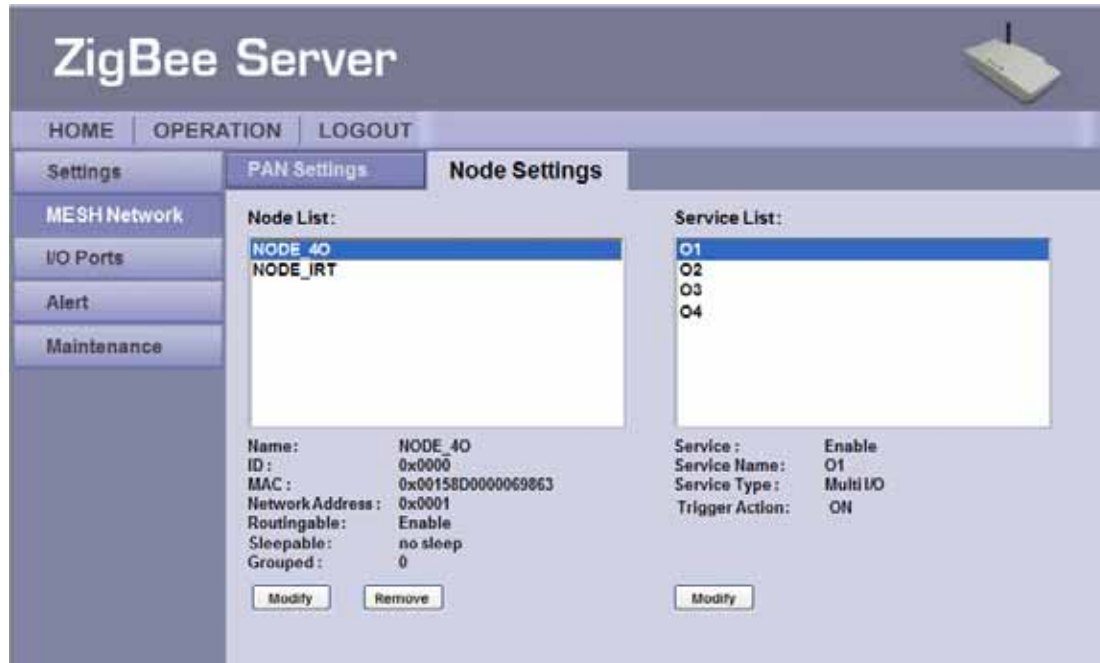
Settings | **PAN Settings** | Node Settings

MESH Network  
I/O Ports  
Alert  
Maintenance

**PAN Settings**

Name : PAN\_1000\_0x90  
PAN ID: 0x1000  
Channel: 11  
AES:  
☐ Enable AES  
Total Nodes: 2  
Total Services: 5  
Total Groups: 0  
☒ Coordinator Routing  
☐ Not Allow New Nodes Join  
Save

PAN Setting : input or modify ZigBee network setting.



Node Setting :

Update or modify ZigBee Node setting.

Update or modify ZigBee Node Service setting.

c. I/O Ports

**ZigBee Server**

HOME | OPERATION | LOGOUT

Settings | **GPIO** | RS485

MESH Network

I/O Ports

Alert

Maintenance

**GPIO**

Output 0: L → H

Period: 0 min

Output 1: L → H

Period: 0 min

Input 0: H

Input 1: H

Save

GPIO :

GPIO :

Input Pin Alert's input level setting.

Output Pin Alert's input level setting.



The image shows the 'ZigBee Server' web interface. At the top, there's a navigation bar with 'HOME', 'OPERATION', and 'LOGOUT'. Below this, a sidebar on the left contains links for 'Settings', 'MESH Network', 'I/O Ports', 'Alert', and 'Maintenance'. The main content area is titled 'RS485' and contains the following configuration options:

Setting	Value
RS485:	<input checked="" type="checkbox"/> Enable
Baud Rate:	9600
Work Mode:	Full Duplex
Data Bit:	8
Stop Bit:	1
Parity Check:	none
Terminator:	<input type="checkbox"/> Enable

A 'Save' button is located at the bottom of the configuration area.

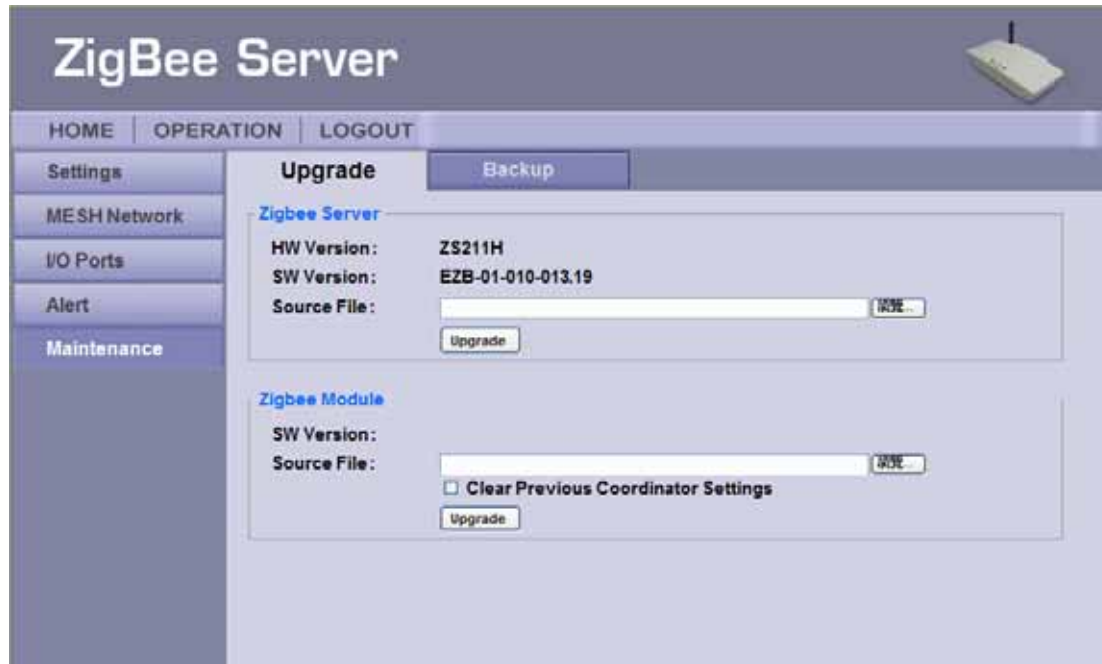
RS485 : RS485 interface setting, and settings of Baud Rate , Work Mode , Data Bit , Stop Bit , Parity Check , Terminator。

d. Alert



Setting triggering devices for Service Alert.

e. Maintenance

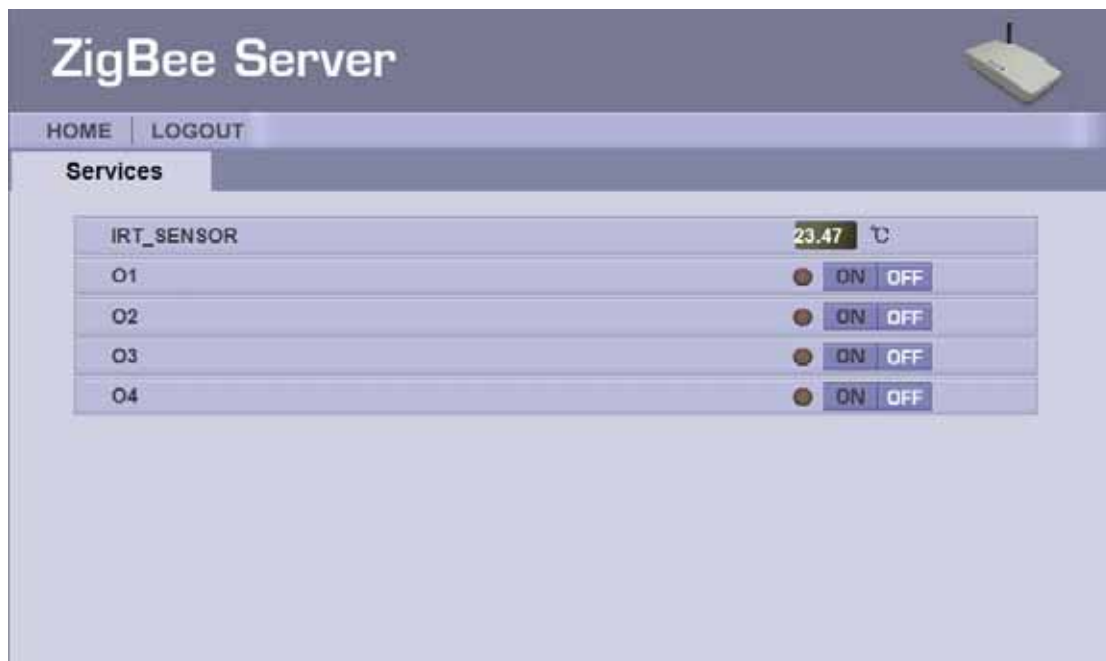


Display hardware version of ZS211H .

Provide update input of system program and coordinator's firmware

Operation Mode





Show all Services which are set Enable. User can operate them from display panel.

### 3.6 Hardware rest

At rear panel of ZH211H, there is a hardware reset key. Short press once will enforce ZH211H back to default IP address, IP (192.168.0.100). Press longer than 3 seconds, ZH211H will retrieve all system default settings and restart automatically.

# Appendix

## **Federal Communications Commission (FCC) Statement**

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

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.

### **Operation is subject to the following two conditions:**

- 1) this device may not cause interference and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.