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***ZigBee™- Integrated Wireless Smart Home Controller***

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# User Manual

**Integrated Wireless Smart Home Controller**

**Model: Z207**

20151124

For firmware V0.0.0.25 and later

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## 1. Introduction

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Netvox Z207 is a Cloud-Based Wireless Smart Home (CWSH) Controller. It is equipped with ZigBee, and Cloud technology. As the main character of Netvox Smart Home Cloud Platform, Z207 provides Cloud services and ZigBee network communication. Users are able to control the ZigBee network devices through Z207 with mobile App. Netvox Smart Home Cloud service allows users to remotely control home devices anytime and anywhere to achieve low power consumption and environmental protection. Widely used for home and commercial purpose.

## 2. Product Appearance

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## 3. Specification

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- Comply with ZigBee Pro™ Agreement; base on ZigBee HA profile
- Support Netvox Cloud system
- Support up to 20 Zigbee devices
- 2.4GHz ISM band transceiver, total 16 channels
- Up to 210 meters wireless distance
- Easy installation and configuration

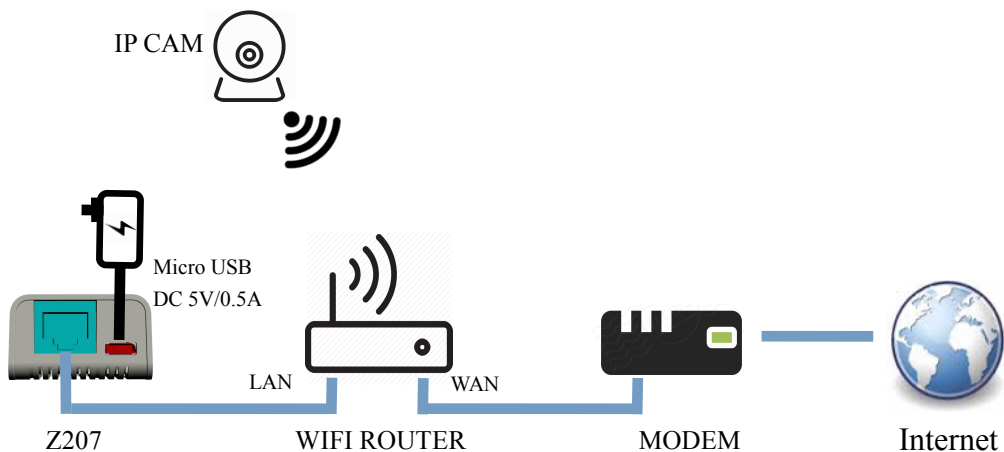
## 4. Installation and Preparation

### 4-1. Port introduction



### 4-2. Power on Z207 and connection diagram

Power on Z207 with DC 5V / 0.5A power adapter (Micro USB Port). The power indicator light stays on.



### 4-3. Reset Z207

To reset Z207, press Reset Button when Z207 is powered on.

### 4-4. Indicators

A. Power Indicator:

Light on: power-on.

Light off :power-off.

B. Cloud Indicator:

Light flash: connection fail

Light on: connection complete

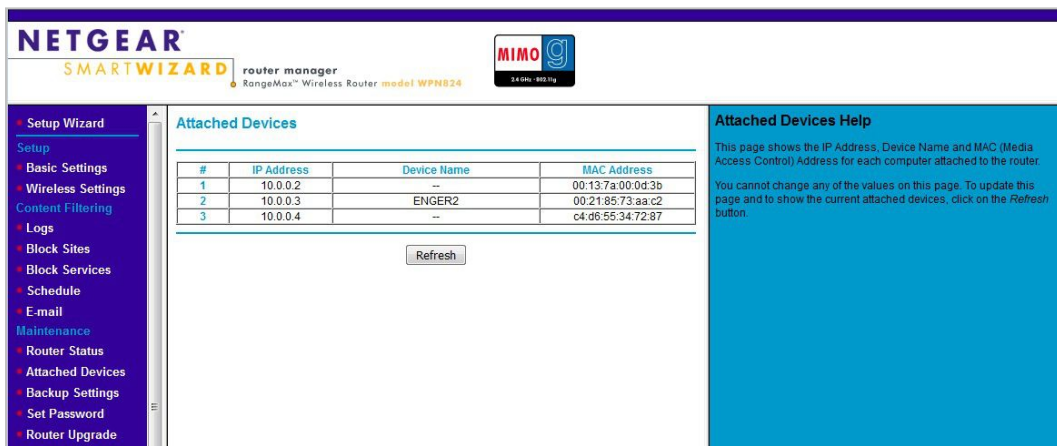
## 5. Set up Z207

### 5-1. Set up

Connect the router to the LAN port of Netvox Z207 with a web line.

### 5-2. Search Z207 IP

Login router settings interface with browser. Connect the computer to router with either cable or WIFI. Login setup interface (login and password method, please refer to manual). Find the corresponding IP for Z207 MAC.



The screenshot shows the Netgear Router Manager interface. The main content area is titled "Attached Devices" and contains a table with the following data:

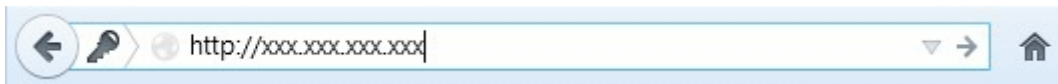
#	IP Address	Device Name	MAC Address
1	10.0.0.2	--	00:13:7a:00:0d:3b
2	10.0.0.3	ENGER2	00:21:85:73:aa:c2
3	10.0.0.4	--	cd:d6:55:34:72:87

Below the table is a "Refresh" button. To the right of the table is an "Attached Devices Help" section with the following text:

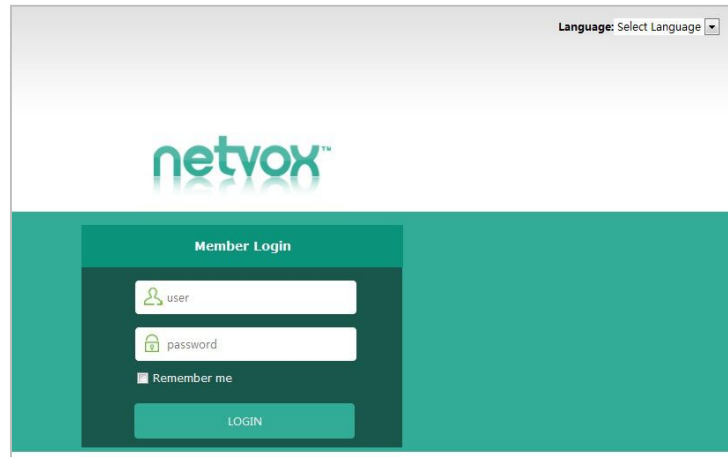
**Attached Devices Help**  
 This page shows the IP Address, Device Name and MAC (Media Access Control) Address for each computer attached to the router.  
 You cannot change any of the values on this page. To update this page and to show the current attached devices, click on the Refresh button.

### 5-3. Log in the management system

Open the web browser and enter Z207 IP address (Step. 5.2) to login page.



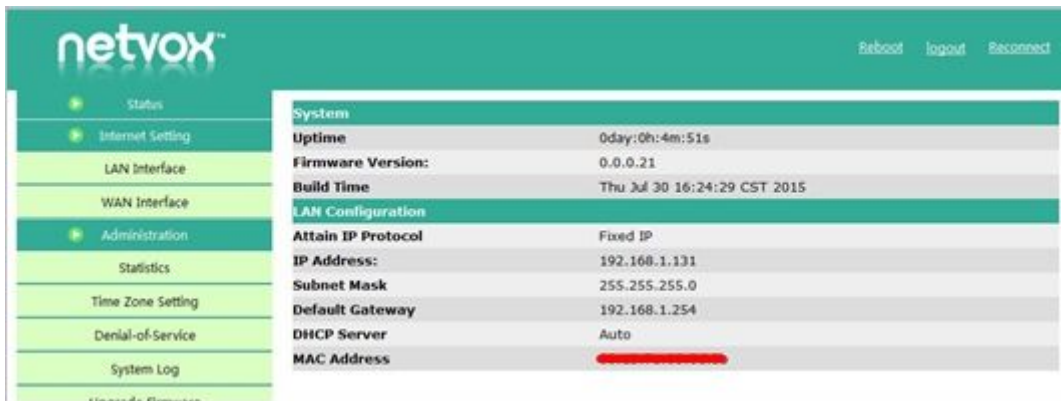
Click enter. The login interface as below:



Key in the Username & Password (default for customer: admin / admin ; for user: operator / operator ) and login the management system including status, internet setting, administration and home automation.

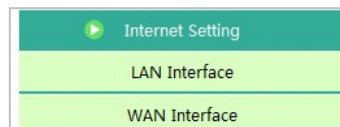
### 5-4. View Z207 Status

Click **Status** to view the system and web data as below page.



### 5-5. Internet setting

Click **Internet Settings** to the page used to configure the parameters for local area network which connects to the LAN / WAN ports of your access point. Here you may change the setting for IP address, subnet mask, DHCP, etc..



**(A) LAN Settings**

This page is used to configure the parameters for local area network which connects to the LAN port of your access point. Here you may change the setting for IP address, subnet mask, DHCP, etc..

**LAN Interface Setup**

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet mask, DHCP, etc..

---

<b>IP Address:</b>	<input type="text" value="192.168.15.1"/>
<b>Subnet Mask:</b>	<input type="text" value="255.255.255.0"/>
<b>Default Gateway:</b>	<input type="text" value="0.0.0.0"/>
<b>DHCP:</b>	<input type="checkbox"/>
<b>DHCP Client Range:</b>	<input type="text" value="192.168.15.10"/> - <input type="text" value="192.168.15.20"/> <input type="button" value="Show Client"/>
<b>DHCP Lease Time:</b>	<input type="text" value="480"/> (1 ~ 10080 minutes)
<b>Static DHCP:</b>	<input type="button" value="Set Static DHCP"/>
<b>Domain Name:</b>	<input type="text" value="netvox"/>
<b>802.1d Spanning Tree:</b>	<input type="checkbox"/> Enabled
<b>Clone MAC Address:</b>	<input type="text" value="000000000000"/>

**(B) WAN Settings**

This page is used to configure the parameters for local area network which connects to the WAN port of your access point. Here you may change the setting for IP address, subnet mask, DHCP, etc..

**WAN Interface Setup**

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to static IP, DHCP, PPPoE, PPTP or L2TP by click the item value of WAN Access type.

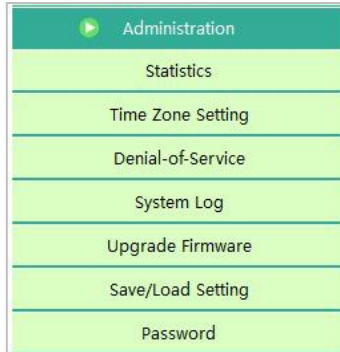
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<b>WAN Access Type:</b>	<input type="checkbox"/> DHCP Client
<b>Host Name:</b>	<input type="text"/>
<b>MTU Size:</b>	<input type="text" value="1492"/> (1400-1500 bytes)
<input checked="" type="radio"/> <b>Attain DNS Automatically</b> <input type="radio"/> <b>Set DNS Manually</b>	
<b>DNS 1:</b>	<input type="text"/>
<b>DNS 2:</b>	<input type="text"/>
<b>DNS 3:</b>	<input type="text"/>
<b>Clone MAC Address:</b>	<input type="text" value="000000000000"/>
<input checked="" type="checkbox"/> <b>Enable uPNP</b> <input checked="" type="checkbox"/> <b>Enable IGMP Proxy</b> <input type="checkbox"/> <b>Enable Ping Access on WAN</b> <input checked="" type="checkbox"/> <b>Enable Web Server Access on WAN</b> <input checked="" type="checkbox"/> <b>Enable IPsec pass through on VPN connection</b> <input checked="" type="checkbox"/> <b>Enable PPTP pass through on VPN connection</b> <input checked="" type="checkbox"/> <b>Enable L2TP pass through on VPN connection</b> <input type="checkbox"/> <b>Enable IPv6 pass through on VPN connection</b>	



## 5-6. Administration

Click administration to advance set up including statistics, time zone setting, denial-of-service, system log, upgrade firmware, save/load setting, password.



### (A) Statistic

This page shows the packet counter for transmission and reception regarding to wireless and Ethernet.

**Statistics**

This page shows the packet counters for transmission and reception regarding to wireless and Ethernet networks.

<b>Ethernet LAN</b>	Sent Packets	0
	Received Packet	0

### (B) Time zone setting

Users can maintain the system by synchronizing with a public time server over the internet.

**Time Zone Setting**

You can maintain the system time by synchronizing with a public time server over the Internet.

**Current Time :** Yr  Mon  Day  Hr  Mn  Sec

**Time Zone Select :**  ▼

**Automatically Adjust Daylight Saving**

**Enable NTP client update**

**NTP server :**   ▼   (Manual IP Setting)

### (C) Denial-of-service

A “denial-of-service” (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using the service.

**Denial-of-Service**

A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

---

**Enable DoS Prevention**

<input type="checkbox"/> Whole System Flood: SYN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Whole System Flood: FIN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Whole System Flood: UDP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Whole System Flood: ICMP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: SYN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: FIN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: UDP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: ICMP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> TCP/UDP PortScan	<input type="text" value="Low"/>	Sensitivity
<input type="checkbox"/> ICMP Smurf		
<input type="checkbox"/> IP Land		
<input type="checkbox"/> IP Spoof		
<input type="checkbox"/> IP TearDrop		
<input type="checkbox"/> PingOfDeath		
<input type="checkbox"/> TCP Scan		
<input type="checkbox"/> TCP SynWithData		
<input type="checkbox"/> UDP Bomb		
<input type="checkbox"/> UDP EchoChargen		

**Enable Source IP Blocking**  **Block time (sec)**

**(D) System Log**

This page can be used to set remote log server and show the system log.

**System Log**

This page can be used to set remote log server and show the system log.

---

**Enable Log**

**system all**
 **wireless**
 **DoS**

**Enable Remote Log**      **Log Server IP Address:**

**(E) Upgrade Firmware**

This page allows you upgrade the access point firmware to new version. Please note, do not power off the device during the upgrade because it may crash the system.

**Upgrade Firmware**

This page allows you upgrade the Access Point firmware to new version. Please note,do not power off the device during the upload because it may crash the system.

---

**Firmware Version:** 0.0.0.21

**Select File:**  未選擇檔案。

**(F) Save/Reload Setting**

This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

**Save/Reload Settings**

This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

---

**Save Settings to File:**

**Load Settings from File:**  未選擇檔案。

**Reset Settings to Default:**

**(G) System Management**

Users can set new username & Password for login page.

**System Management**

▼ **User permission setting**

Account

Password

▼ **Administrator permission setting**

Account

Password

## 6. Set up Zigbee smart home

Open the web browser and enter Z207 IP address (Step. 5.2) to login page. Click Smart Home to the smart home page. Key in the Username & Password (for advanced settings, please use **operator/ operator**) and login the management system.

▶ Smart Home
Device List
Device Management
Initiate Smart Home
User Management
Upgrade ZB Firmware
Data Management
Import Data
Communication Setting

## 6-1. Device List

The device data such as IEEE address, data code, and device details. For the first-time use, please power on / wake up all of the devices, and then refresh the list and check all device names are listed.

**Device List**

▼ Device List

refresh

Num	Device Name	Device IEEE Address	Data Code	Device Details	Delete
1	Z103A	00137A <span style="background-color: red; color: red;">XXXXXXXXXX</span>	20150306	<a href="#" style="border: 1px solid #ccc; padding: 2px 5px;">Detail</a>	<a href="#" style="border: 1px solid #ccc; padding: 2px 5px;">Delete</a>

▼ Device Node List

refresh

Num	Device Name	Device IEEE Address	End Point	Data Code	Device Details	Delete
1	Z207云智能网关1	00137A <span style="background-color: red; color: red;">XXXXXXXXXX</span>	0A	20150306	<a href="#" style="border: 1px solid #ccc; padding: 2px 5px;">Detail</a>	<a href="#" style="border: 1px solid #ccc; padding: 2px 5px;">Delete</a>

**Operation tip:** Power on each device in turn for the first-time of usage

## 6-2. Device Management

To turn on Permit-Join feature, to add devices, and to manage IP camera.

### (A) Permit-Join

To add new devices to the network, we need to turn the Permit-Join feature on. After turning on Permit-Join, power on the devices users would like to add into the network. Operation tip as listed below:

**Device Management**

▼ Permit Join On

Permit-join time:  S (max=255)

**Operation tip:** Reset devices to factory default and power off, then set permit-join duration and click on the "Permit Join ON" button. Power on the devices. When the period is set to 255s, it means the status of permit-join is permanent on. Please click on "Permit Join Off" when the process of adding devices completed.

**(B) Add Devices**

Users could also add the devices manually using device's IEEE number. Operation tip as listed below:

▼ Add Devices

IEEE addr:  (max=60s)

**Operation tip:** Reset device to factory default and power off, then input the device's ieee addr and click on the 'Add Device' button. Power on the device.

**(C) IP Camera List**

To manage the IP camera automatically and manually.

**(I) Select automatic:**

▼ IPCamera list

Find a camera:

Please select the camera model:

The current number of online web camera for1The mapping list as follows:

Name	Room Name	MAC Address	IP Address	WAN Address
ipcam	家全局	C4 [redacted]	10.0.0.4	The current did not connect to the Internet

**(II) Select manual:**

▼ IPCamera list

Find a camera:

IP Address:

port:

user name:

password:

model:

uid:

The current number of online web camera for1The mapping list as follows:

Name	Room Name	MAC Address	IP Address	WAN Address
ipcam	家全局	C [redacted]	10.0.0.4	The current did not connect to the Internet

### 6-3. Initiate Smart Home

Select Zigbee network channel to be used.

Initiate Smart Home

▼ Zigbee Channel

Current Channel:	26
------------------	----

▼ Switch ZigBee network channel

Manual operation

Switch ZigBee network channel:

11
OK

**Notes**

A. To switch the channel before forming a network, click to switch the channel and power on router devices one by one and activate ED devices.

B. To switch the channel when the network is already formed, make sure all router devices are powered on to be able to receive commands. ED devices shall be activated after the operation of switching the channel.

C. If there are any devices with their channel not switched successfully, you need to set them to factory default and join them to the network again.

For the first time, after the network is completed, users need to initialize the smart home system . Select the device to be initialized, click [ Initialize smart home ] button to initialize the smart home system. Users are able to check the completeness of the network. It will list the problem of the network if there is any as shown in below:

▼ Initialize Smart Home

Please select devices to be
Initialize Smart Home

Operation tip: Click to initialize the configuration of the network. Do not use it unless needed.

Group and scene created successfully.

▼ Check the completeness

Check the completeness:
Check the completeness

Time of last checking:2015-07-15 20:46:18

Device not joined to the network

Device Name	IEEE Attr.	End Point
	00137A00	

**Notes:** Reset devices not joined to the network to factory default and then execute the operation of joining the network again

## 6-4. User management

Click **User Management** on the left of the page as below. In this page, users can add and generate new verification code . Click once to generate a verification code, the status updated in the list.

**User Management**

▼ User Management

add

User Name	Status	reset password	Delete
shcadmin	Normal <span style="border: 1px solid #ccc; padding: 2px;">Lock</span>	<span style="border: 1px solid #ccc; padding: 2px;">Reset</span>	<span style="border: 1px solid #ccc; padding: 2px;">Delete</span>

▼ Verification Code

add

Serial Number	Verification Code	Status
1	540615	used
2	585424	unused
3	831172	unused
4	239628	unused
5	865986	unused
6	421699	unused
7	412415	unused
8	567874	unused

**Operation tip:** Click on the button of\*add\*to get one verification code.

Click User Management [Add] button, following page as below, enter a user name, password, password confirmation and verification code and click submit to add new users.

▼ User Management

back

User Name	<input type="text" value="Please input the user name"/>	<small>(Please input 4-16 letters or numbers)</small>
password	<input type="password"/>	<small>(Please input 6-16 letters or numbers)</small>
Confirm Password	<input type="password"/>	<small>(It shall be the same as input password)</small>
Verification Code	<input type="text" value="One verification code can b"/>	<span style="background-color: #2e8b57; color: white; padding: 2px 5px;">Get verification code</span>
<span style="background-color: #2e8b57; color: white; padding: 2px 5px; margin-right: 10px;">Submit</span> <span style="background-color: #2e8b57; color: white; padding: 2px 5px;">Cancel</span>		

The status of corresponding user name can be set (normal / lock ) , a password can be reset (enter new password again to reset password ).

▼ User Management

back

User Name	shcadmin	
New Password	<input type="password"/>	<small>(Please input 6-16 letters or numbers)</small>
Confirm Password	<input type="password"/>	<small>(It shall be the same as input password)</small>
<span style="background-color: #2e8b57; color: white; padding: 2px 5px; margin-right: 10px;">reset password</span> <span style="background-color: #2e8b57; color: white; padding: 2px 5px;">Cancel</span>		

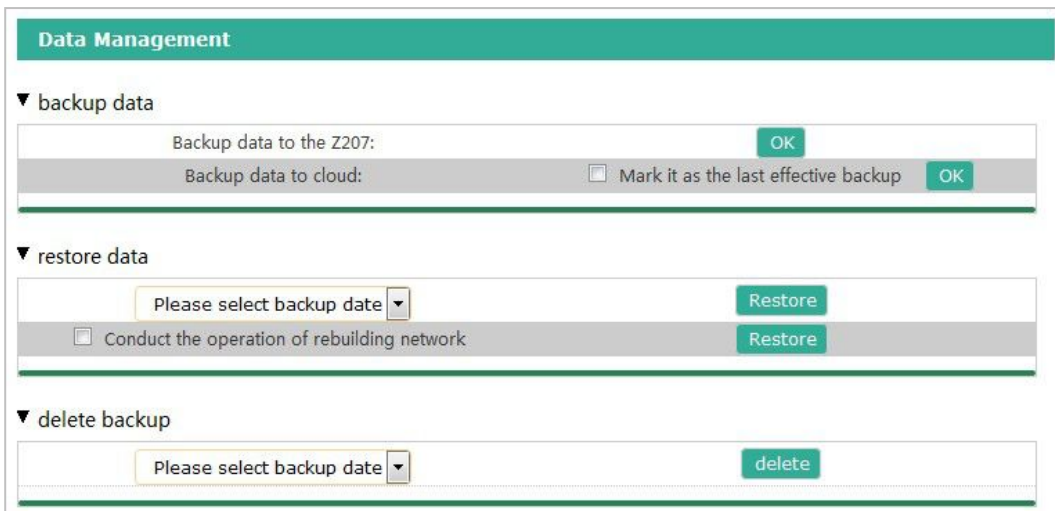
### 6-5. Upgrade Firmware

Click on the left of the page to **Upgrade Firmware**. Click [ Browse ] button , select a upgrade file, then click [ upgrade ] button.



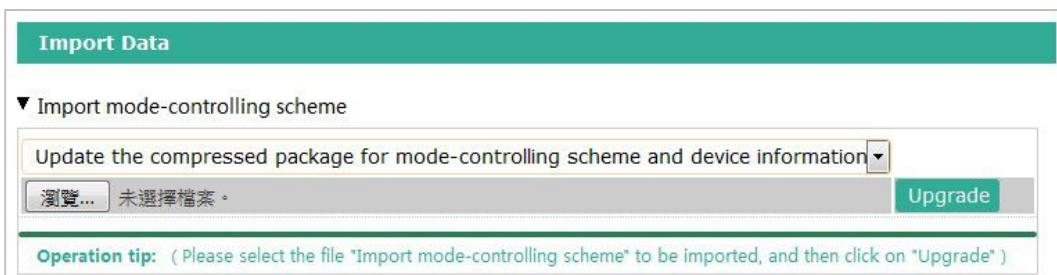
### 6-6. Data Management (backup, restore, or delete setting)

Click on the left side of data management as interface in below. Users can choose to back up, restore, delete data to local or cloud systems, according to the backup date. (NOTE: cloud is suggested because there's limited memory space in the device when saving data to local. Too much data in local might cause factional fail for device.)



### 6-7. Import Data

Click on data import. Click [ Browse ] button, select to import " intelligent mode-controlling scheme " file, press [ Update ] button to update the smart scene control program





## 6-8. Communication Setting

To manage security key or Cloud link.

**Communication Setting**

▼ amend secret key

Secure Communication OK

▼ Cloud Link

cloud state span connected

IP address and port of the cloud proxy server:

OK cancel

## 7. Switch Z207 to Z202 Gateway mode

1. Login to Z207 web page, select communication setting → amend secret key → un-tick secure communication → Click “OK” :

The screenshot shows the 'Communication Setting' interface. Under the 'amend secret key' section, there is a checkbox for 'Secure Communication' which is currently unchecked, and an 'OK' button to its right. Below this is the 'Cloud Link' section, which displays 'cloud state span' as 'connected' and 'IP address and port of the cloud proxy server' as 'netvoxcwsh.com:8081'. At the bottom of this section are 'OK' and 'cande' buttons.

2. Open a new Web page, enter below cgi configuration to switch Z207 into Z202 mode.

(Note: IP address is your real Z207 IP)

<http://192.168.11.103/cgi-bin/rest/network/SystemConfigure.cgi?opt=101&value=1&callback=1234&encodemethod=NONE&sign=AAA>

Reboot Web page and restart Z207 to switch into Z202 Gateway mode.



3. Users can switch Z202 Gateway mode back to Z207 mode through below cgi configuration.

(Note: IP address is your real Z207 IP)

<http://192.168.11.103/cgi-bin/rest/network/SystemConfigure.cgi?opt=101&value=0&callback=1234&encodemethod=NONE&sign=AAA>

Reboot Web page and restart Z207 to switch back to Z207 mode.

## 8. Important Maintenance Instructions

- This device is NOT truly waterproof/ resistant and is for indoor use.
- Please keep the device in a dry place. Precipitation, humidity, and all types of liquids or moisture can contain minerals that corrode electronic circuits. In cases of accidental liquid spills to a device, please leave the device dry properly before storing or using.
- Do not use or store the device in dusty or dirty areas.
- Do not use or store the device in extremely hot temperatures. High temperatures may damage the device or battery.
- Do not use or store the device in extremely cold temperatures. When the device warms to its normal temperature, moisture can form inside the device and damage the device or battery.
- Do not drop, knock, or shake the device. Rough handling would break it.
- Do not use strong chemicals or washing to clean the device.
- Do not paint the device. Paint would cause improper operation.

Handle your device, battery, and accessories with care. The suggestions above help you keep your device operational. For damaged device, please contact the authorized service center in your area.