

VM300-L/VM300-H WiFi Module

Quick Setting Guide

Declaration

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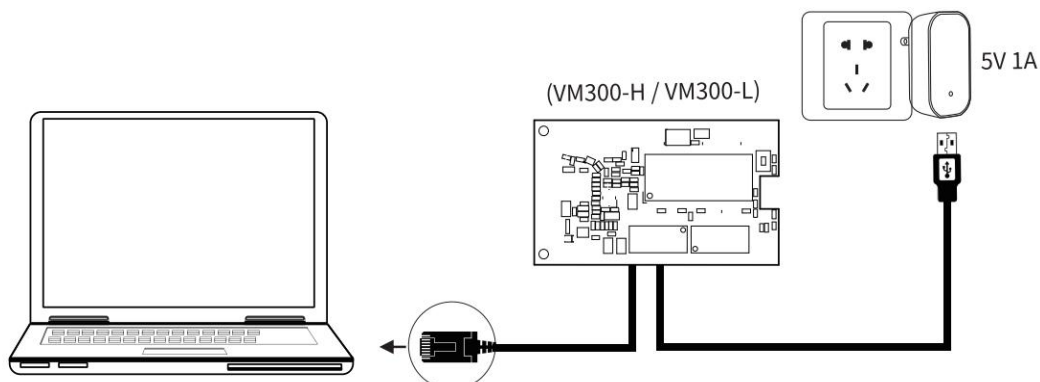
Chapter 1 Bridge+Repeater Mode Configuration

Instruction

1.1 Device Connection

Power on VM300-L/VM300-H by 5V/1A power supply, then connect to PC, there are two connection ways as below:

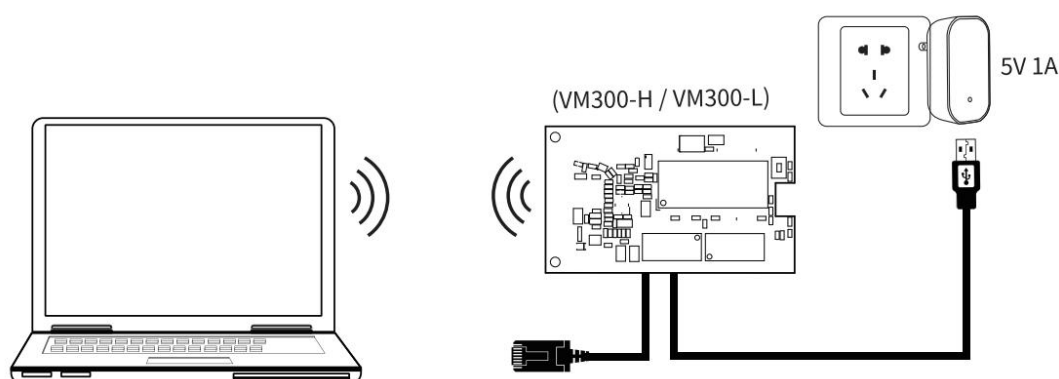
- A. Computer is wired connected to LAN port of VM300-L/VM300-H;



(Recommend Method)

- B. The computer wirelessly connects to the WiFi signal of VM300-L/VM300-H, its default hotspot parameters are as follows:

WiFi SSID	WiFi Password
VONETS_2.4G_****	12345678



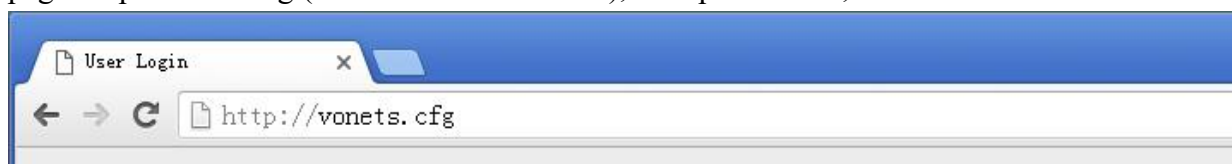
(After the WiFi parameters are configured, the WiFi will be disconnected, that is normal.)

1.2 Bridge+Repeater Application Configuration

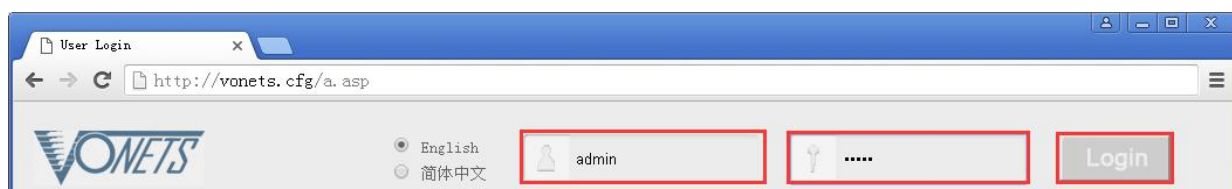
The configuration steps of VM300-L/VM300-H for WiFi repeater and WiFi bridge are basically the same, so this manual combines the configuration instructions of the two application modes.

1. After computer is connected to VM300-L/VM300-H, open browser, input configured

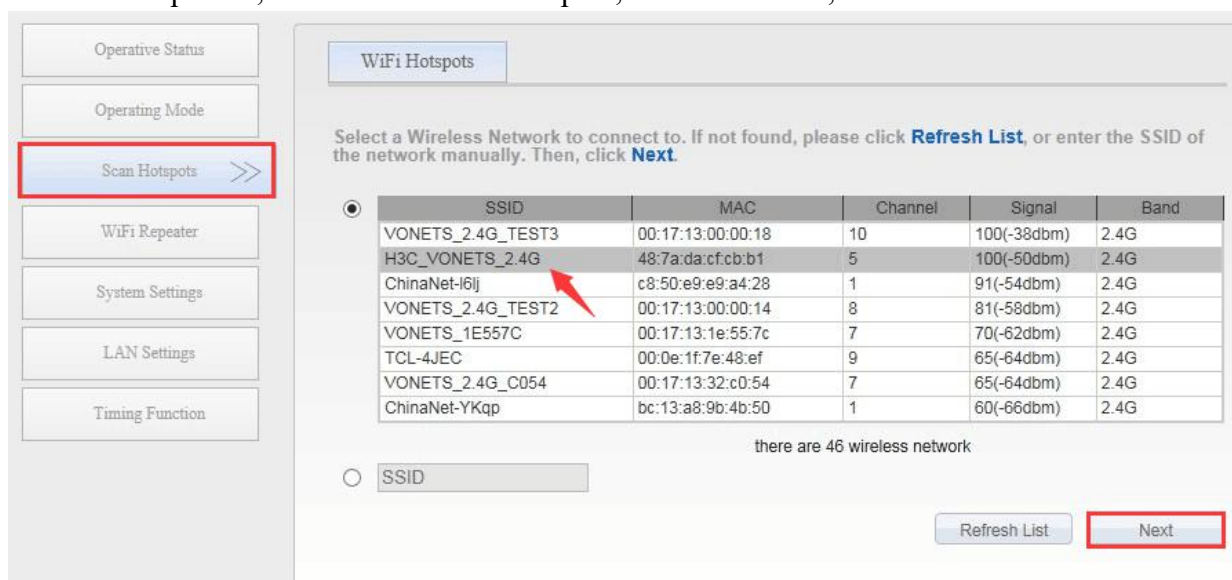
page: <http://vonets.cfg> (or IP: 192.168.254.254), then press Enter;



- Input User name and Password in login page (both are “admin”), click “Login” button to enter configured page;



- “Scan Hotspots” , choose the source hotspots, click “Next” ;



- Input “Source WiFi hotspot password” , click “Apply” ;
 - IP layer transparent transmission** (factory default), transparent transmission of IP layer data, can meet most of WiFi bridge applications;
 - MAC layer transparent transmission**, transparent transmission of all data above the MAC layer (link layer) and MAC layer, including IP layer data. MAC transparent transmission can solve some special applications for MAC layer encryption, such as GoPro camera, Cisco AP, Hikvision monitoring system, etc;
 - The option “**The configuration parameters of WiFi repeater security is synchronized with source hotspot**” is default ticked, it means the SSID of VONETS repeater is associated with the SSID of the source hotspot, and the WiFi password is the same as the password of the source hotspot;
 - Disable hotspot**, if you select “Disable hotspot” on the right side of the SSID, the device will not transmit the corresponding hotspot and can only be used as a bridge application;
 - Advanced Setting**, include Hot spot authentication match mode, WiFi Signal Motion

Detection and SSA Signal strength alarm threshold,these options here can be kept unchanged, for instructions on this option, go to www.vonets.com and download the “V Series WiFi Bridge Advanced Features Instruction” ;

The screenshot shows the 'WiFi Hotspots' configuration page. On the left is a sidebar with buttons: Operative Status, Operating Mode, Scan Hotspots (highlighted with a blue bar and double arrows), WiFi Repeater, System Settings, LAN Settings, and Timing Function. The main area is titled 'WiFi Hotspots' and contains several sections: 'Security Settings' with fields for SSID (H3C_VONETS_2.4G) and Source WiFi hotspot password (highlighted with a red box), 'Transmission mode' (IP layer transparent selected), a checkbox for synchronization, '2.4G WiFi Repeater SSID' (H3C_VONETS_2.4G_2.4G_II), and 'Disable Hotspot'. Below is 'DHCP Server Settings' with 'DHCP Server' set to 'Disable(Recommended configuration)'. At the bottom, there's an 'Advanced Setting' section with a warning message and two buttons: 'Apply' (highlighted with a red box) and 'Back'.

- Click “Reboot” , VM300-L/VM300-H will connect to the configured WiFi hotspot automatically, if connection is successful, the WiFi LED light will flash quickly;

This screenshot shows the same 'WiFi Hotspots' configuration page, but with the 'Source WiFi hotspot password' field now filled with 'Vonets.26642519'. The 'Apply' button is no longer visible. Instead, there are three buttons at the bottom right: 'Continue Add', 'To Connect', and 'Reboot' (highlighted with a red box). The warning message at the bottom states: 'To make the new parameters effective, after parameters are configured, please click "Reboot" button.'

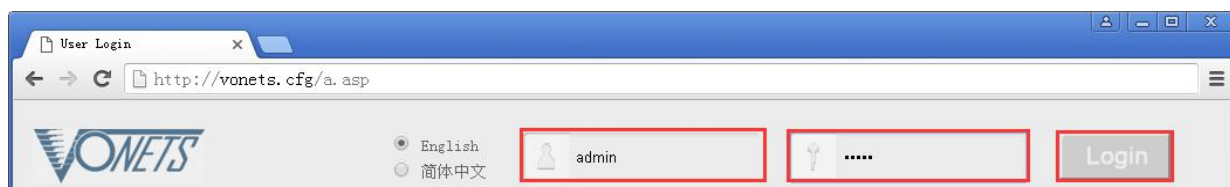
Remark 1:

LED Light Form		
Model	Blue Light	Green Light
VM300-L/VM300-H	2.4G WiFi Connection Status Light	Ethernet Cable Connection Status Light
<p>① VM300-L/VM300-H is not connected to any hotspot, WiFi connection status light will flash quickly;</p> <p>② VM300-L/VM300-H is connected to hotspot successfully, WiFi connection status light will quick flash;</p> <p>③ VM300-L/VM300-H is connected to hotspot successfully, but hotspot signal strength is less than 50% greater than 10%, WiFi status light will pause flash and flash;</p> <p>④ VM300-L/VM300-H is connected to hotspot failed, WiFi connection status light will flash slowly.</p>		

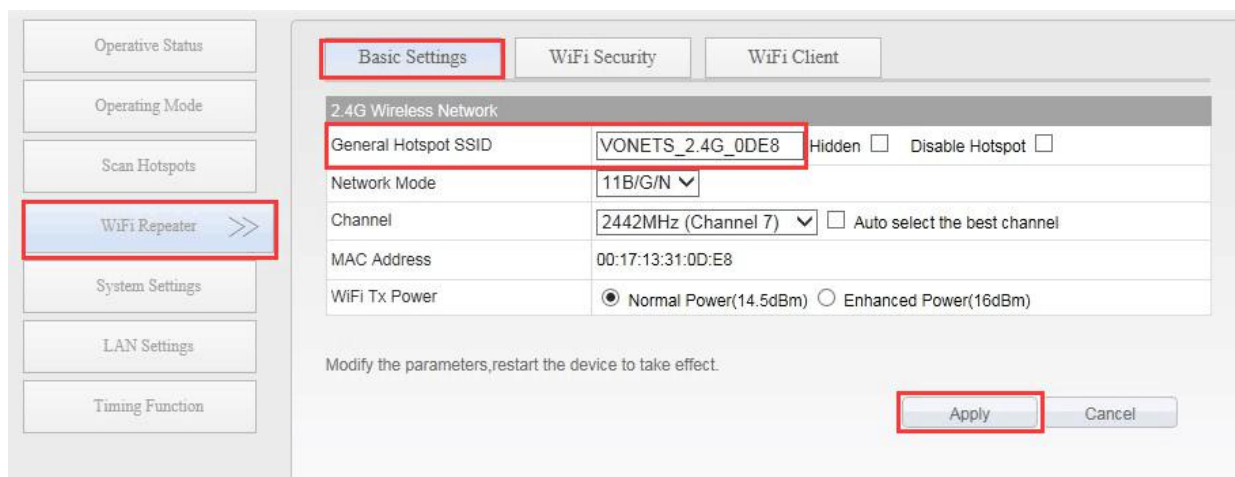
1.3 AP Application Configuration

VM300-L/VM300-H can be configured as an AP application. The wireless terminal device can connect to VM300-L/VM300-H hotspot to connect to the network; however, it is best to change its WiFi name and password for network security.

1. Log in to the configuration page <http://vonets.cfg> (or IP: 192.168.254.254) in your computer browser, both user name and password are “admin”



2. Revise WiFi name: Jump to “WiFi Repeater” ---- “Basic Settings”, enter new WiFi name in “General Hotspot SSID”, click “Apply”;



3. Revise WiFi password, in “WiFi Repeater” ---- “WiFi Security” , enter new WiFi password in “Pass Phrase” , click “Apply” ;

Operative Status

Operating Mode

Scan Hotspots

WiFi Repeater >>

System Settings

LAN Settings

Timing Function

Basic Settings WiFi Security WiFi Client

WiFi Security

Repeater SSID VONETS_2.4G_0DE8

Security Mode WPA2-PSK

WPA Algorithms ☐ TKIP ☒ AES ☐ TKIP-AES

Pass Phrase 12345678 (8-63 characters or 64 hex numbers)

Modify the parameters, restart the device to take effect.

Apply Cancel

4. “WiFi Tx Power” of VM300-L/VM300-H can be changed, jump to “WiFi Repeater” ---- “Basic Settings” , choose suitable transmit power, then click “Apply” ;

Operative Status

Operating Mode

Scan Hotspots

WiFi Repeater >>

System Settings

LAN Settings

Timing Function

Basic Settings WiFi Security WiFi Client

2.4G Wireless Network

General Hotspot SSID VONETS_2.4G_0DE8 Hidden ☐ Disable Hotspot ☐

Network Mode 11B/G/N

Channel 2442MHz (Channel 7) ☐ Auto select the best channel

MAC Address 00:17:13:31:0D:E8

WiFi Tx Power ☐ Normal Power(14.5dBm) ☒ Enhanced Power(16dBm)

Modify the parameters, restart the device to take effect.

Apply Cancel

5. Reboot device, jump to “System Settings” ---- “Reboot Device” , click “Reboot” , when it is finished, all revised options will take effort.

Operative Status

Operating Mode

Scan Hotspots

WiFi Repeater

System Settings >>

LAN Settings

Reboot Device Advanced Setting Login Settings Firmware Upgrade

Reboot Device

Reboot Device Reboot

Remark 2: When VM300-L/VM300-H connect to external network, its IP address will be changed. At this time, when log in configured page, we suggest you enter configured domain

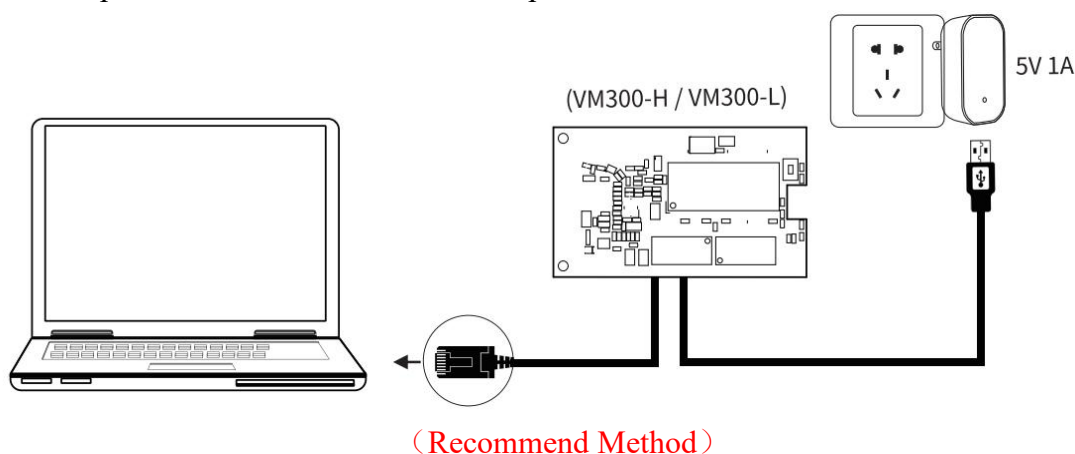
name: <http://vonets.cfg>. Or in Windows command window, enter the command: ping vonets.cfg, to get the IP address of the device, then log in configuration page by this IP address.

Chapter 2 Router Mode Configuration Instruction

2.1 Change device mode

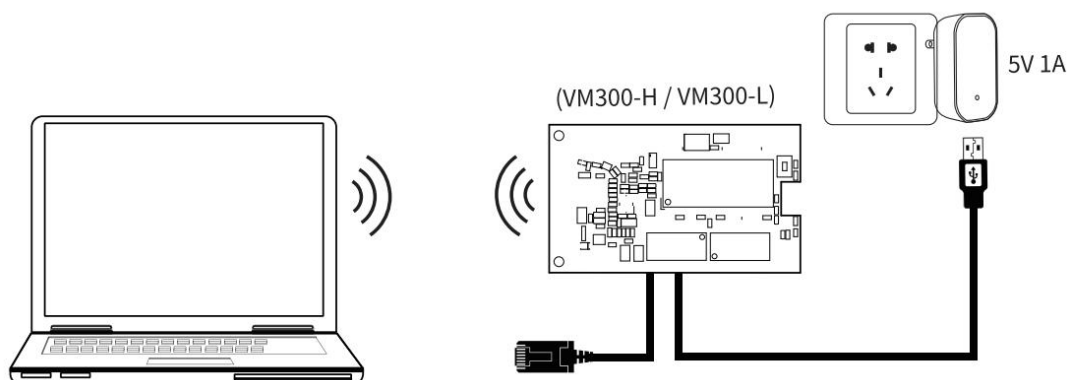
1. Power on VM300-L/VM300-H by 5V/1A power supply, then connect to PC, there are two connection ways as below:

A. Computer is wired connected to LAN port of VM300-L/VM300-H;



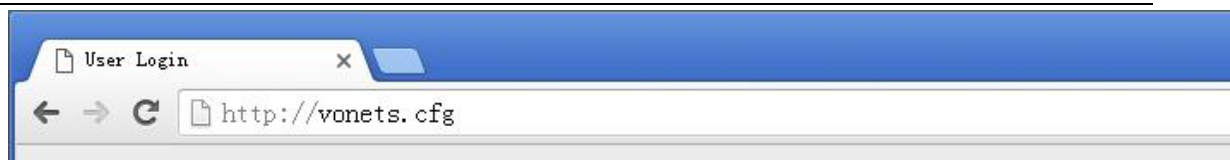
B. Computer wirelessly connects to the WiFi signal of VM300-L/VM300-H, its default hotspot parameters are as follows:

WiFi SSID	WiFi Password
VONETS_2.4G_****	12345678

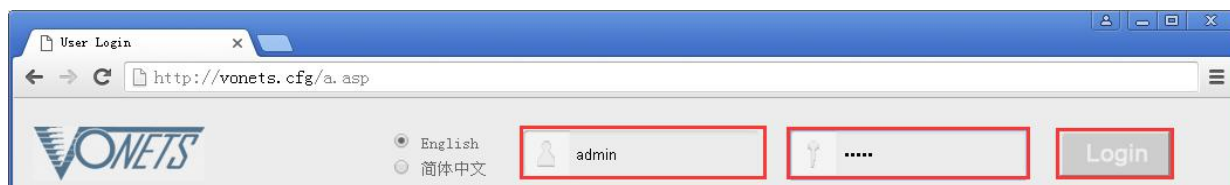


(After the WiFi parameters are configured, the WiFi will be disconnected, that is normal.)

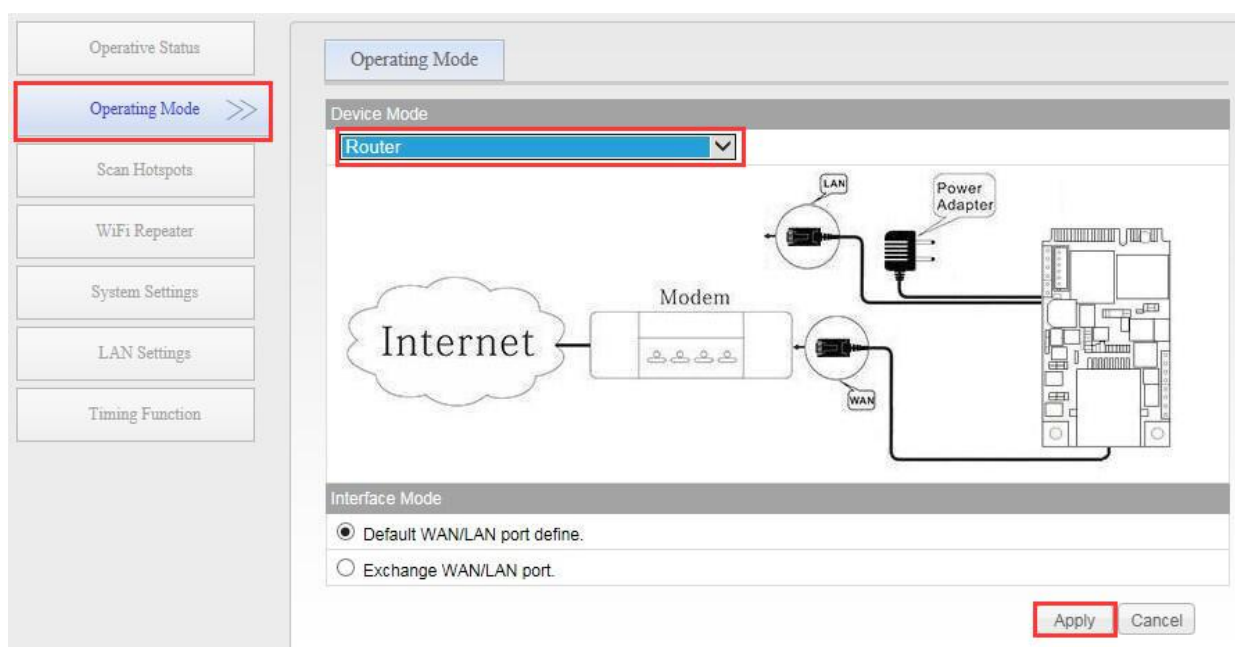
2. After computer is connected to VM300-L/VM300-H, open browser, input configured page domain name: <http://vonets.cfg> (or IP: 192.168.254.254), then press Enter;



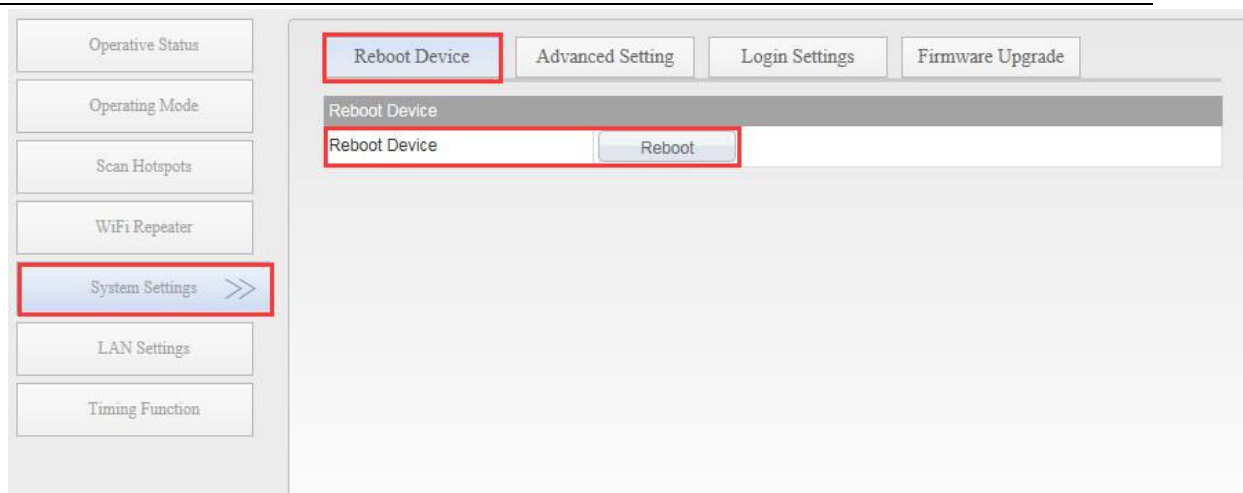
3. Enter User name and Password in login page (both are “admin”), click “Login” button to enter configured page;



4. In “Operating Mode” , change Device mode to “Router” mode, click “Apply” button;



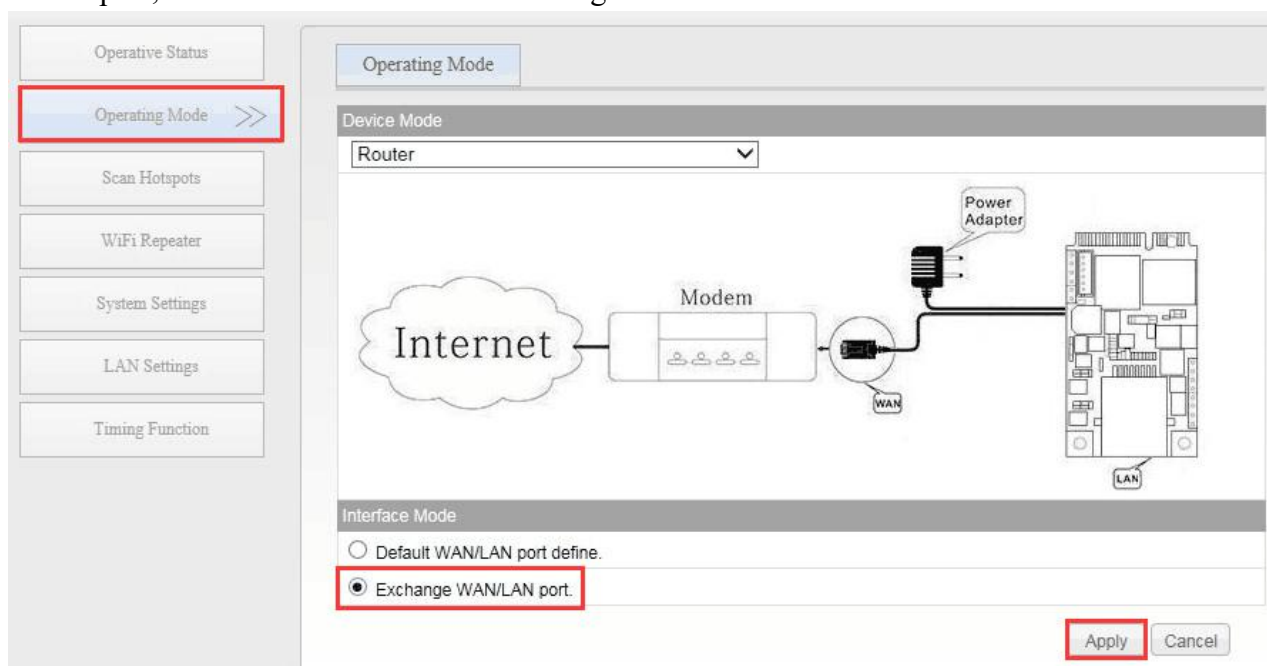
5. Reboot device: go to “System Settings” -- “Reboot Device” , click “Reboot” button, VM300-L/VM300-H will automatically switch to router mode.



2.2 WAN port setting

2.2.1 WAN/LAN exchange

In routing mode, the Ethernet port of VM300-L/VM300-H is divided into a WAN port and a LAN port, and WAN/LAN can be interchanged.



2.2.2 WAN Port connection method

By setting the WAN port of the router, you can change the network connection type according to the actual needs of the individual, there are three types of WAN port connections commonly used in the routing mode of the VM300-L/VM300-H: DHCP(Auto Config), PPPoE(ADSL) and WiFi. DHCP and PPPoE are wired connections, and the WAN port needs to be connected to the source network through a wired connection:

- DHCP(Auto Config): WAN port connection type is selected as **“DHCP(Auto Config)”**, VM300-L/VM300-H will automatically obtain IP address from source

network;

- PPPoE(ADSL): WAN port connection type is selected as **“PPPoE”**, that is, ADSL virtual dialing mode requires ISP (Internet Service Provider) to provide Internet account and password.
- WiFi: WAN port connection type is selected as **“WiFi”**, VM300-L/VM300-H uses a built-in WiFi network card (used to connect to the source hotspot) as a WAN port, and all Ethernet ports as LAN ports, while providing WiFi hotspot functions.

2.2.3 WAN port wired connect network——DHCP

The default WAN port connection mode of VONETS is DHCP. The WAN port can automatically obtain an IP address after connecting with the source network.

The screenshot displays the VONETS web management interface. On the left sidebar, the 'WAN Settings' option is highlighted with a red box and a double arrow. The main content area shows the 'Basic Settings' tab for WAN configuration. Under 'WAN Connection Type', the 'Connection Type' is set to 'DHCP (Auto config)'. Below this, 'Remote Management' is set to 'Disable'. The 'DHCP Mode' section shows the 'Hostname' as 'VONETS.COM'. The 'MAC Clone' section includes a 'MAC Address' input field and a 'Get PC MAC' button. A note at the bottom of the settings area reads: 'Modify the parameters, restart the device to take effect.' At the bottom right, there are 'Apply' and 'Cancel' buttons.

2.2.4 WAN port wired connect network——PPPoE

In “WAN settings”, select “Basic settings”, change the connection type to “PPPoE (ADSL)”, then enter the Internet account and password provided by the ISP (Internet Service Provider), click the “Apply” button, and then reboot VM300-L/VM300-H, then can access to network.

Operative Status

Operating Mode

WAN Settings >>

LAN Settings

WiFi Settings

Firewall

Forwarding Rule

System Settings

Basic Settings DDNS

WAN Connection Type

Connection Type PPPoE (ADSL)

Remote Management ☒ Disable ☐ Enable

PPPoE Mode

User Name 15278511540@163.sz.com

Password

Always on

Operation Mode

Always on mode: Redial Period 60 seconds

Dial on Demand mode: Idle Time 5 minutes

MAC Clone

MAC Address Get PC MAC

Modify the parameters, restart the device to take effect.

Apply Cancel

2.2.5 WAN port wireless connect network---- WiFi

1. In “WAN Settings” , select “Basic Settings” , change Connection type to “WiFi” , then click “Scan Hotspots” to enter the scanning hotspot list.

Operative Status

Operating Mode

WAN Settings >>

LAN Settings

WiFi Settings

Firewall

Forwarding Rule

System Settings

Timing Function

Wizard

Basic Settings DDNS

WAN Connection Type

Connection Type WiFi

Remote Management ☐ Disable ☒ Enable

WiFi Mode

SSID

MAC Address

Connection Status Disconnected

Scan Hotspots Scan Hotspots

IP settings STATIC (fixed IP)

Static Mode

IP Address

Subnet Mask

Default Gateway

Primary DNS Server

Secondary DNS Server

2. Choose the source hotspots, click “Next” ;

Select a Wireless Network to connect to. If not found, please click [Refresh List](#), or enter the SSID of the network manually. Then, click [Next](#).

SSID	MAC	Channel	Signal	Band
VONETS_2.4G_TEST3	00:17:13:00:00:18	10	100(-34dbm)	2.4G
H3C_VONETS_2.4G	48:7a:da:cf:cb:b1	5	96(-52dbm)	2.4G
ChinaNet-l6lj	c8:50:e9:e9:a4:28	1	86(-56dbm)	2.4G
VONETS_2.4G_TEST2	00:17:13:00:00:14	8	76(-60dbm)	2.4G
VONETS_2.4G_C054	00:17:13:32:c0:54	7	76(-60dbm)	2.4G
ChinaNet-YKqp	bc:13:a8:9b:4b:50	1	65(-64dbm)	2.4G
QF_2.4G_3F92	00:17:13:10:3f:94	3	60(-66dbm)	2.4G
TCL-4JEC	00:0e:1f:7e:48:ef	9	50(-70dbm)	2.4G

there are 42 wireless network

☐ SSID

[Refresh List](#) [Next](#)

3. Input “Source wireless hotspot password” , click “Apply”

- The option “**The configuration parameters of WiFi repeater security is synchronized with source hotspot**” is default ticked, it means the SSID of VONETS repeater is associated with the SSID of the source hotspot, and the WiFi password is the same as the password of the source hotspot;
- **Disable hotspot**, if you select “Disable hotspot” on the right side of the SSID, the device will not transmit the corresponding hotspot and can only be used as a bridge application;
- **Advanced Setting**, include Hot spot authentication match mode, WiFi Signal Motion Detection and SSA Signal strength alarm threshold, these options here can be kept unchanged, for instructions on this option, go to www.vonets.com and download the “V Series WiFi Bridge Advanced Features Instruction” ;

Basic Settings WiFi Security WiFi Client WiFi Hotspots

Security Settings

SSID H3C_VONETS_2.4G

Source WiFi hotspot password

☒ The configuration parameters of WiFi repeater security is synchronized with source hotspot

2.4G WiFi Repeater SSID H3C_VONETS_2.4G_2.4G_I ☐ Disable Hotspot

Advanced Setting (For specific applications only) >>

[Apply](#) [Back](#)

- Click "Next" again, and then on the "Operative Status" page, click "Start Connect";

The screenshot shows the 'Operative Status' page of the VM300-L/VM300-H Mini WiFi Module web interface. The left sidebar contains a list of navigation options: Operative Status, Operating Mode, WAN Settings, LAN Settings, WiFi Settings, Firewall, Forwarding Rule, System Settings, Timing Function, and Wizard. The 'Operative Status' option is highlighted with a red box. The main content area is divided into two tabs: 'Operative Status' and 'Copyright Declaration'. The 'Operative Status' tab is active, displaying the following information:

System Info			
Device Name	VM300		
Hardware Version	VER4.0		
Software Version	3.2.21.1.14 (Jan 14 2021 16:42:07)		
Operation Mode	Router		
System Uptime	14 mins, 37 secs		

Current Hotspots Info			
SSID	H3C_VONETS_2.4G		
MAC Address			
Security Mode			
Encryption Type			
Channel			
Signal			
Connection Status	Disconnected	Start Connect	

Hotspots Memory List			
SSID	Hotspot MAC	Band	Uplink NIC MAC
H3C_VONETS_2.4G	48:7a:da:cf:cb:b1	2.4G	

Clear

WAN	
MAC Address	00:17:13:31:0D:EB

- Then click the "Restart" button in "System Settings", VM300-L/VM300-H will automatically connect to the configured WiFi hotspot, if the connection is successful, its WiFi status light will flash quickly;(Please refer to Remark 1 for the description of the LED light.)

The screenshot shows the 'System Settings' page of the VM300-L/VM300-H Mini WiFi Module web interface. The left sidebar contains a list of navigation options: Operative Status, Operating Mode, WAN Settings, LAN Settings, WiFi Settings, Firewall, Forwarding Rule, System Settings, Timing Function, and Wizard. The 'System Settings' option is highlighted with a red box. The main content area is divided into four tabs: 'Reboot Device', 'Advanced Setting', 'Login Settings', and 'Firmware Upgrade'. The 'Reboot Device' tab is active and highlighted with a red box. It contains a 'Reboot Device' section with a 'Reboot' button, which is also highlighted with a red box.

Remark 3: After VM300-L/VM300-H sets the WAN port to access the WiFi hotspot in the routing mode, its LAN port IP is still 192.168.254.254, and the terminal device also obtains the IP address of the same network segment, can login configuration page by 192.168.254.254 or <http://vonets.cfg>.

2.3 Set WiFi hotspot parameters

1. Revise WiFi name: Jump to “WiFi Settings”---- “Basic Settings”, enter new WiFi name in “General Hotspot SSID”, click “Apply”;

Operative Status

Operating Mode

WAN Settings

LAN Settings

WiFi Settings >>

Firewall

Forwarding Rule

System Settings

Timing Function

Wizard

Basic Settings | WiFi Security | WiFi Client

2.4G Wireless Network

WiFi Hardware Module ☒ Enable ☐ Disable

General Hotspot SSID **H3C_VONETS_2.4G_2.4** Hidden ☐ Disable Hotspot ☐

Network Mode 11B/G/N

Channel 2442MHz (Channel 7) ☐ Auto select the best channel

MAC Address 00:17:13:31:0D:E8

WiFi Tx Power ☒ Normal Power(14.5dBm) ☐ Enhanced Power(16dBm)

Modify the parameters, restart the device to take effect.

Apply Cancel

2. Revise WiFi password, in “WiFi Settings” ---- “WiFi Security”, enter new WiFi password in “Pass Phrase”, click “Apply”;

Operative Status

Operating Mode

WAN Settings

LAN Settings

WiFi Settings >>

Firewall

Forwarding Rule

System Settings

Timing Function

Wizard

Basic Settings | **WiFi Security** | WiFi Client

WiFi Security

Repeater SSID H3C_VONETS_2.4G_2.4G_E8

Security Mode WPA2-PSK

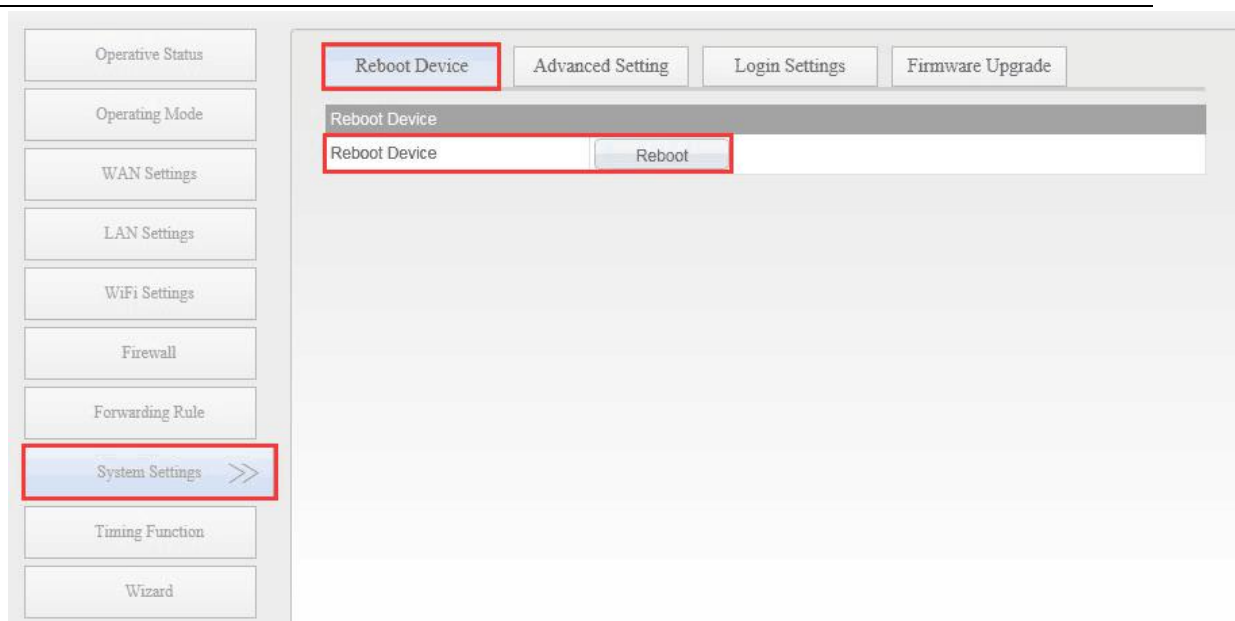
WPA Algorithms ☐ TKIP ☐ AES ☒ TKIP-AES

Pass Phrase **Vonets.266425** (8-63 characters or 64 hex numbers)

Modify the parameters, restart the device to take effect.

Apply Cancel

3. Reboot device, jump to “System Settings” ---- “Reboot Device”, click “Reboot”, when it is finished, all revised options will take effect.



Appendix Frequently Asked Questions

1. How to restore the factory default parameters of the VM300-L/VM300-H?
VM300-L/VM300-H restore to the factory method: press and hold the Reset button for 5 seconds and then release it, the blue indicator light will flash a few times, and then the device will automatically restore the factory default parameters (the restoration process takes about 80 seconds),During operation, the product cannot be powered down, otherwise it may cause damage to the product.
2. Does VM300-L/VM300-H support firmware upgrade, how to upgrade?
VM300-L/VM300-H supports firmware upgrade, and support online upgrade, please visit website: www.vonets.com to refer to the related documents.
3. The device WiFi hot spot can be found, but the smart phone or PC can't connect to this device hotspot?
 - Reason 1. Due to some unexpected operation or power down, caused the destroy of device parameters. At this time, just need to reset the device to factory default parameters;
 - Reason 2. The device WiFi doesn't work at the best channel, make the performance worse. At this time, you can try to change the source WiFi hot spot and this device WiFi channel to make the performance better;
 - Reason 3. The smart phone or PC haven't been configured the correct WiFi password.
4. The device has been configured the source WiFi hot spot parameters, the smart phone or PC has connected to the device WiFi hot spot, but still doesn't get internet?
 - First, check the status light to know the current state of the device, then according to the state of the device to analyze the fault reasons;
 - Reason 1. The distance between the device and source WiFi hot spot is too long, cause the communication performance degradation, finally effect the user's access to the Internet. At this time, just need shorten the distance between the device and source WiFi hot spot to solve this problem;
 - Reason 2. Due to some unexpected operation or power down, caused the destroy of device parameters. At this time, just need to reset the device to factory default parameters;
 - Reason 3. The device WiFi doesn't work at the best channel, make the performance worse. At this time, you can try to change the source WiFi hot spot WiFi channel to make it the same as the default channel of the device, the reboot the device, the device will automatically exchange to the same channel as the source WiFi hotspot, to make the performance better;
 - Reason 4. There are several WiFi hot spot around the device, WiFi channel mutual interference, make the performance worse. At this time, you can try to change the source WiFi hot spot and this device WiFi channel to make the performance better;

- Reason 5. The configured source WiFi hot spot parameters are not correct. At this time, just need to configure the correct parameters then reboot the device;
5. The smart phone or PC has been connected the device by WiFi or Ethernet cable, but user can't log in the device WEB page, or after log in the WEB it shows error?
- Reason 1. The users don't use the browser recommended by VONETS(IE,Google Chrome, Safari, the mobile phone browser);
 - Reason 2. The smart phone or PC installed the firewall, the security level is set too high, caused the above problem. At this time, only need to close the firewall;
 - Reason 3. The security level of browser is too high, it will also cause the above problem. At this time, just need to reduce the browser's security level, then log in again;
 - Reason 4. The IP address of the device input error. For the new device from the factory, user only need input the correct IP address according to the instruction guide; for the device that has connected the source hot spot, user only operate according to <Remark 2>.