

V Series WiFi Bridge Project Application Advanced Features Instruction

I. Summary

The functions mentioned in this manual are some of the advanced management functions developed by the Houtian network specifically for the needs of the bridge for project applications, the normal user can also configure the normal use of the bridge with reference to the Quick Configuration Guide.

Application of wireless communication in the project is the general trend of the development of the industry, for example Intelligent robots, mobile electronic scales and gas stations wireless communications, but how to do fast switching and connecting hot spot in the connection environment is a major challenge for traditional wireless bridges. VONETS series of products in the original functions of memorizing a number of hot spots, automatically switch channel and encryption mode following the source hot spot, in 3.0.17.X.X software version, new add two functions “Hot spot authentication match mode” and “WiFi Signal Motion Detection”, can batch add hot spots information and detect hot spot signal strength, so as to fast switch and connect the hotspot in the environment, effectively solve the new application problems that traditional WiFi bridge is facing.

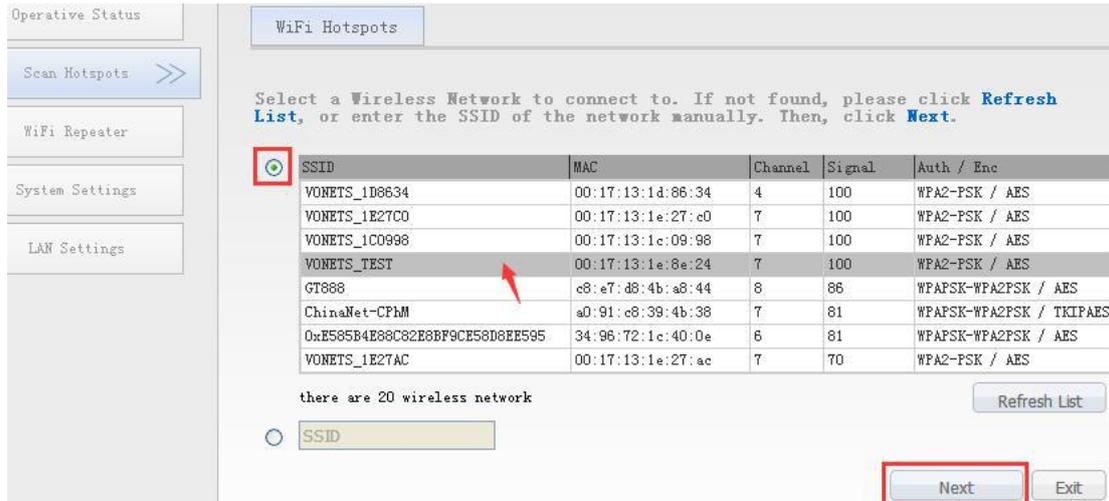
II The bridge application of advanced features

1. Connection Method (Bridge can memorize several hot spots information, but at the same time can only connect a hot spot)

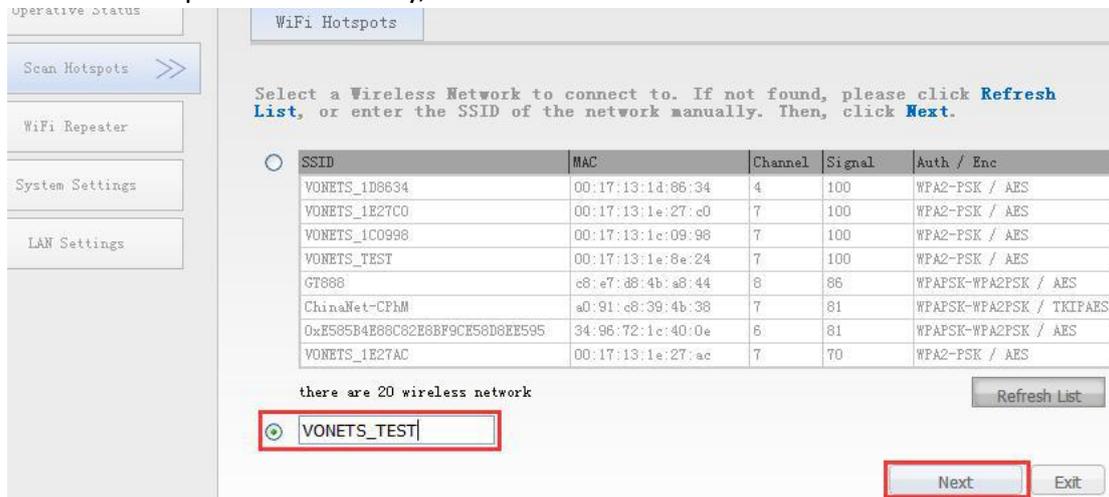


2. Set up the Network

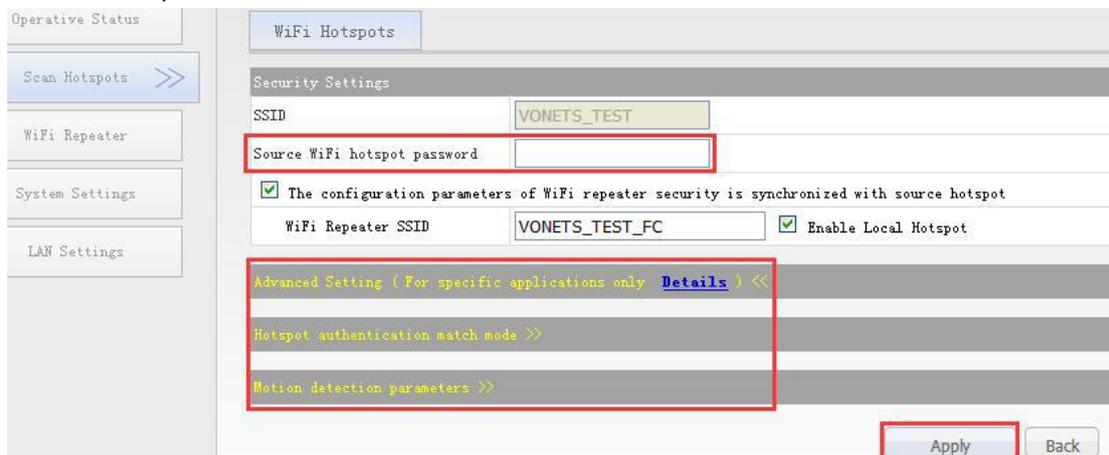
- 1) After PC is connected to VONETS device, enter configured domain name in browser address: <http://vonets.cfg>;
- 2) Both user name and password are admin, click login button to enter configured page;
- 3) WiFi Scan, select hot spot:



or enter hot spot SSID manually, click “Next”:



4) Enter Source WiFi hot spot password, and change the parameters of “Hot spot authentication match mode” and “WiFi signal Motion detection” (please refer to the specific setting method in following guide), click “Apply” to save hot spot information;



5) Reboot device, configuration is finished.

III Hot spot authentication match mode

Hot spot authentication match mode refer to bridge obtains authentication based on the difference in memory hot spot information, then connect the hot spot with matching the information; it includes two modes "Fully matched authentication mode" and "SSID and password authentication mode", for these two modes, it must memorize hot spot SSID and password, the only difference is that the "Fully matched authentication mode" is adding a match of hot spot MAC address. With this setting, the bridge can fast memorize multiple hot spots parameters of the same SSID to achieve the basic conditions for switching and connecting hot spots in the connected environment.

1. Fully matched authentication mode:

1.1 Memorize Hot spot SSID, password and MAC address, the bridge can connect hot spot with these three parameters simultaneously matched the memory information ;

1.2 This mode allows you to add multiple sets of SSIDs and passwords to the memory list (fractional operations), as shown in the following pics:

Operative Status

WiFi Hotspots

Security Settings

SSID: VONETS_TEST

Source WiFi hotspot password: 12345678

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

WiFi Repeater SSID: VONETS_TEST_FC Enable Local Hotspot

Advanced Setting (For specific applications only [Details](#)) <<

Hotspot authentication match mode >>

Motion detection parameters >>

Apply Back

Operative Status

WiFi Hotspots

Security Settings

SSID: VONETS_TEST

Source WiFi hotspot password: 12345678

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Advanced Setting (For specific applications only [Details](#)) <<

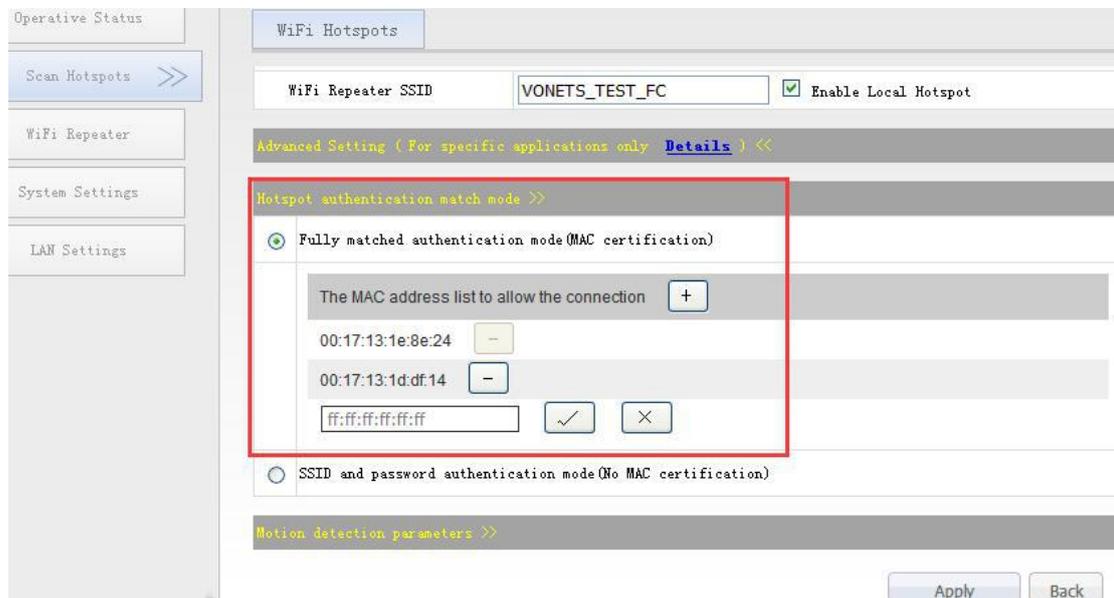
Hotspot authentication match mode >>

Motion detection parameters >>

The configured parameters have been saved successfully, reboot your device to take effect or continue to increase hot configuration.

Continue Add Reboot

1.3 For the hot spots with same SSID, but different MAC, the following interface greatly facilitates the configuration, you can add batch of multiple hot spots at one time, as shown below:



1.4 Whether it is added in batches or single batch added memory hot spots, The maximum number of hot spots are 10;

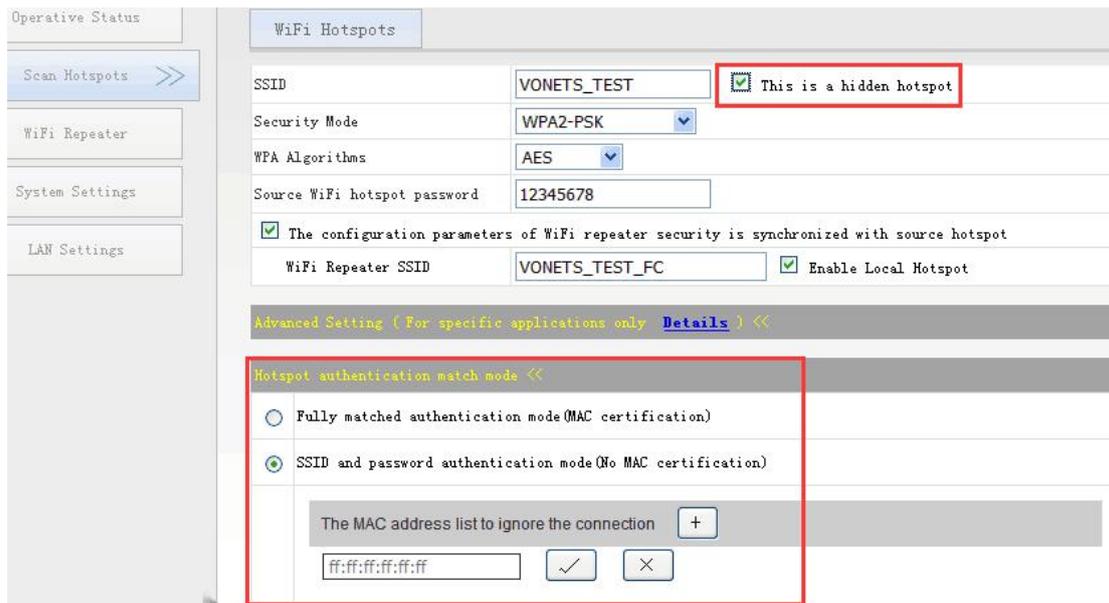
1.5 If the last step is to automatically search the wireless network, and the selected is hidden hot spots, then here can only select the "Fully match authentication mode".

2. SSID and password authentication mode:

2.1 Memorize hot spot SSID and password, the bridge can connect hot spots with these two parameters simultaneously matched the memory information, but if MAC address is added, the bridge will not connect to the MAC matching device;

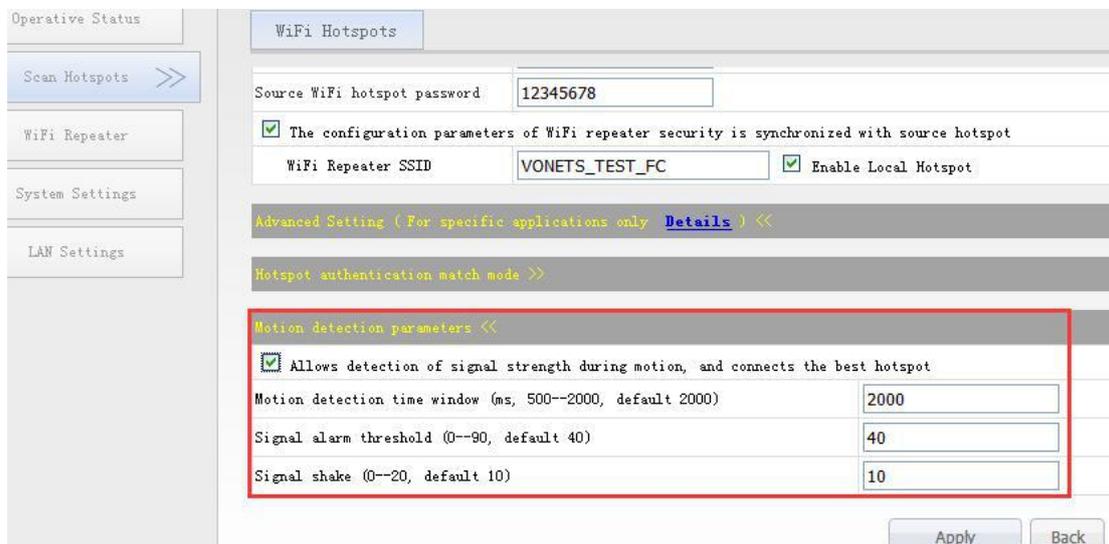
2.2 This mode allows you to add SSIDs and passwords to the memory list multiple times, and each time you can add a different MAC address to the blacklist. The maximum number of hot spots in the blacklist is 20;

2.3 If the last step is to manually enter the SSID, and the SSID hot spots is hidden, here also selected the "SSID and password authentication mode", we must tick to confirm that "This is a hidden hot spot";



IV WiFi Signal Motion Detection

WiFi Signal Motion Detection function allows dynamic detection of hot spot signal strength, if parameters setting is reasonable, when the location of the bridge is moved, it can quick search and connect the strongest new hot spots (excluding the original hot spots) in the memory list, the fastest switching connection time is only 6 seconds, to achieve the requirements that fast switch and connect the hot spot in the environment.



- **Motion detection time window**

This parameters means the minimum time interval for two motion detection alarm responses, if the current signal strength meets the warning threshold conditions, the system sends early warning. But the early warning is not necessarily the implementation of scanning and connecting the new hot spots action after early

warning, only when this time interval from this warning to the last warning is greater than this parameter, the system will perform the relevant actions after the warning.

When the bridge moves fast, the early warning response speed may not keep up with the change in the intensity of the hot spot signal, then you can adjust this value to meet the demand, move faster, then this parameter need to set smaller. (The general situation is not recommended to change, because the small adjusting the value) will increase the computing load of equipment, thus affecting the communication speed).

- **Signal alarm threshold**

Signal alarm threshold means, when the connected hot spot signal strength is below this threshold, the bridge begins to alert and search for the best hot spot trying to connect. This value should be set to match the actual environment settings.

- **Signal Shake**

Signal Shake means, if the signal strength of the hot spot changes within this range, the connection of the bridge to the hotspot is not cut off.