



LEGUANG A320 Wireless Bridge Configuration Guide

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February 2014

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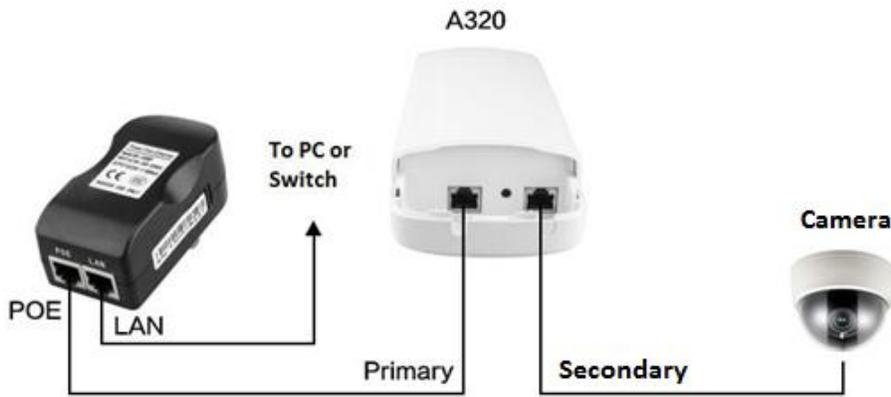
1. What is included



2. Installation Guide

2.1 How to connect

The black adapter is PoE power supply. It comes with 2 ports. One is used to connect the switch or PC and the other is used to connect the Primary port of the wireless bridge. The secondary port of the bridge can be used to connect network camera. Please note that PoE port has to plug into the Primary port of the bridge, not the secondary port.



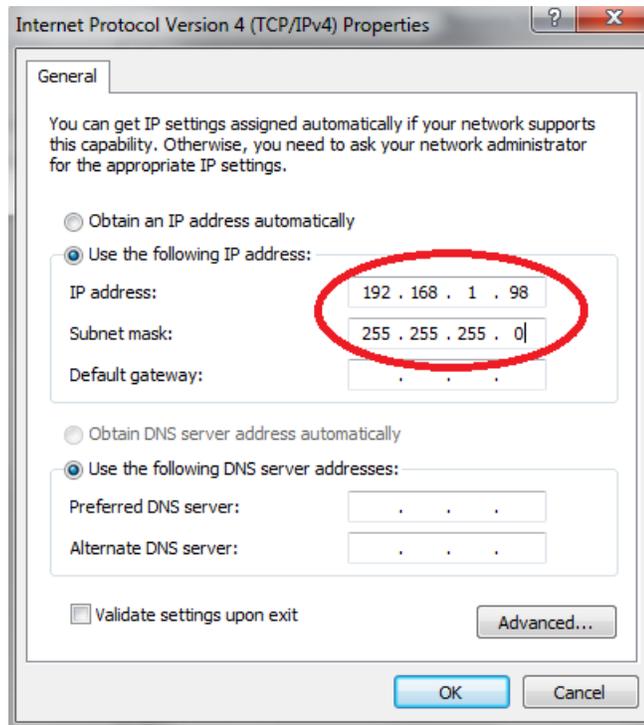
How A320 is connected

2.2 How to reset

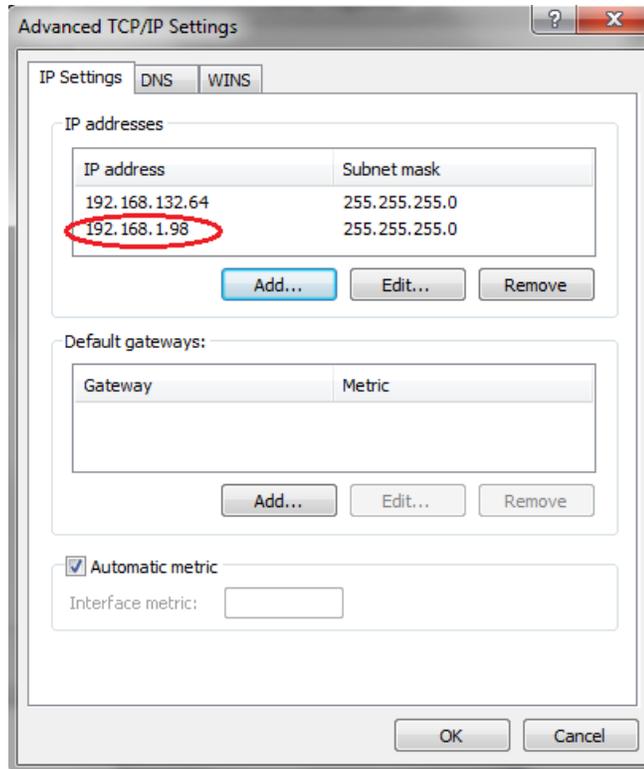
In some cases, you may need to reset the system. After the system has boot up which takes about 1 minute, press the RESET button which is located between the primary and secondary port for around 15 seconds before release it, the system will be reset after reboot.

2.3 How to configure your PC to set up the bridge

The default IP address of the wireless bridge is 192.168.1.1. You have to configure the IP address of your PC to be on the same subnet in order to access it for initial setup.



If you want to keep your original IP address, you can add an IP address to your NIC(network Interface Card) using Advanced options as following:



2.4 Login to the wireless bridge

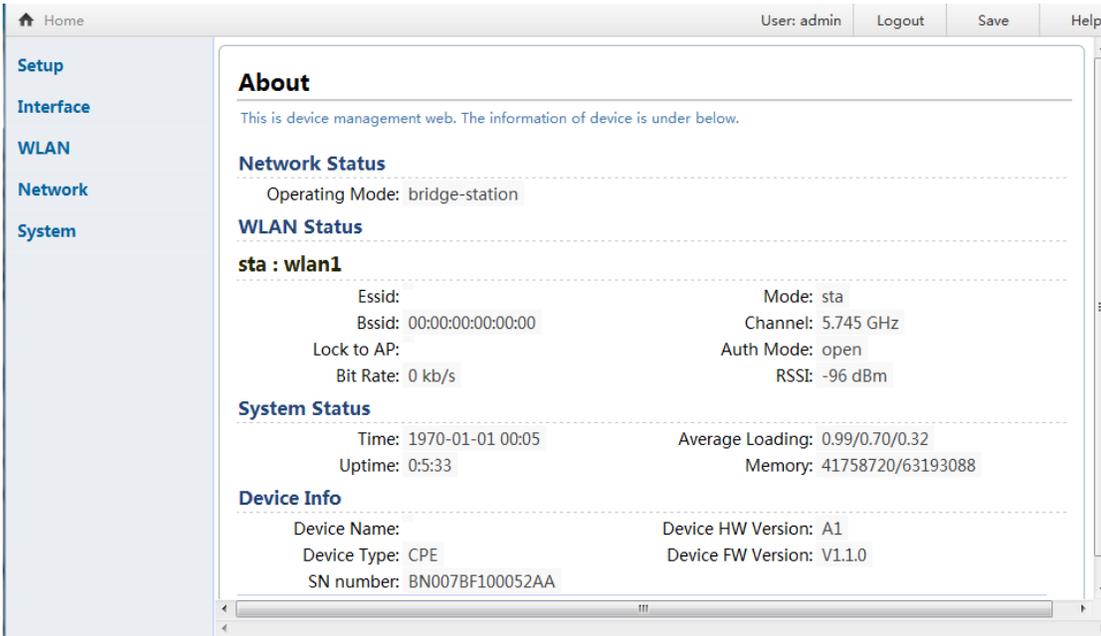
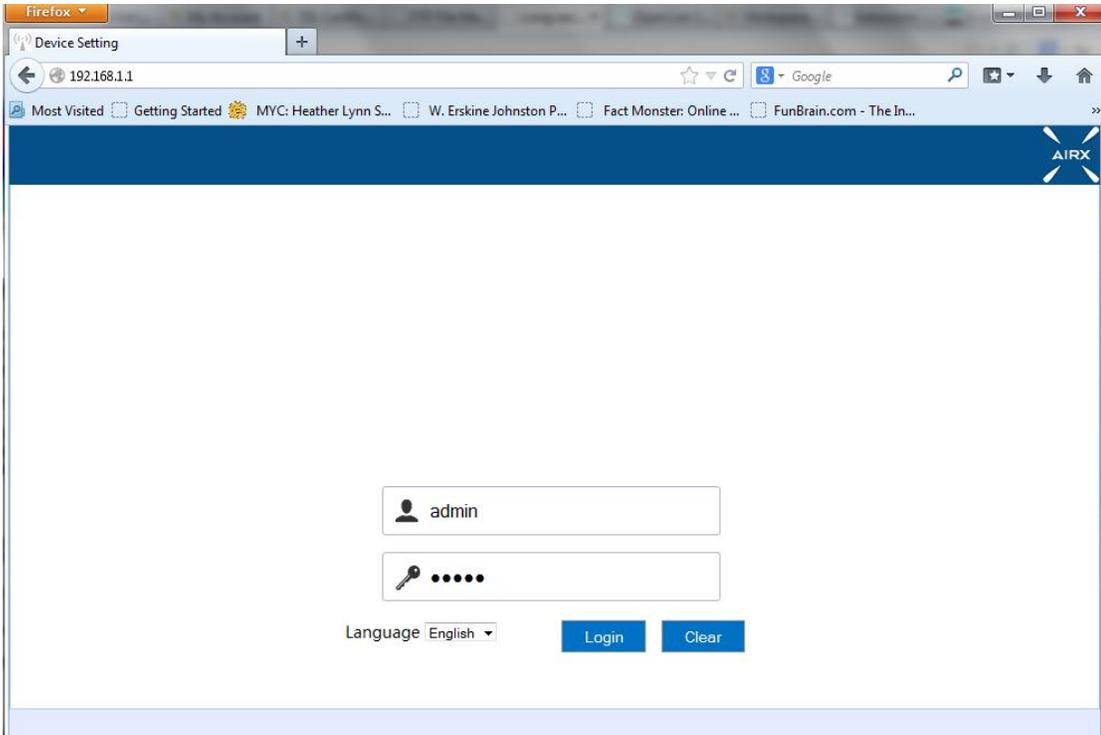
The factory default IP address: 192.168.1.1

Default username: admin

Default password: admin

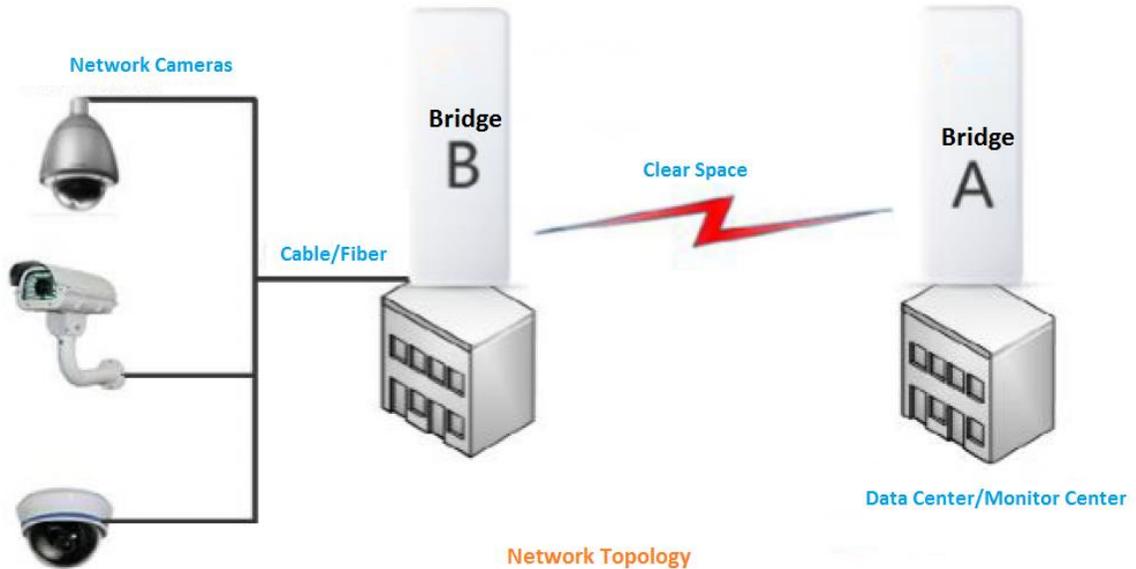
Open your browser and type the default IP into the address field, and enter the default user credential as prompted, you should be able access the admin GUI of the wireless bridge.

LEGUANG A320 Configuration Guide



3. Wireless Bridge Configuration

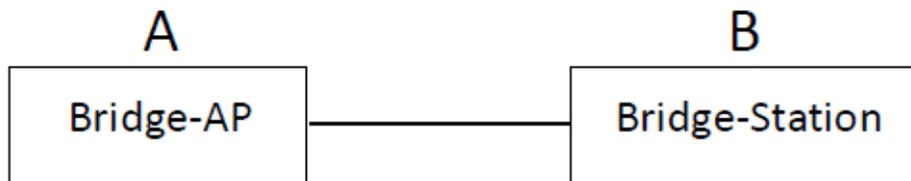
3.1 Network topology



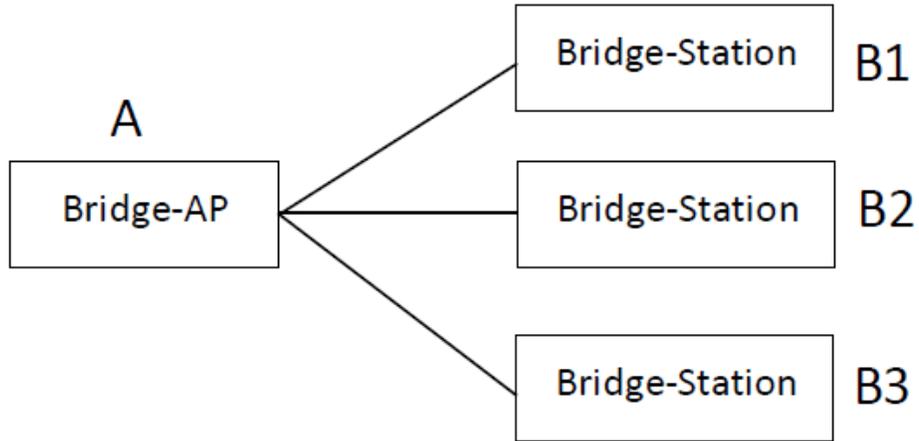
Assuming a customer has two separate buildings that are 1KM away and they need to connect a number of network cameras in the remote building to the monitor center in local building. Currently there is no network connectivity between the two buildings. It would be very expensive to connect the two building with optical fiber. That's where A320 wireless bridge can excel. We put a A320 wireless bridge on the top of each building, let's say A and B. All the network cameras on remote building are connected to a switch, then the wireless bridge B. The wireless bridge on local building (A) is connected to the monitor center. The two wireless bridges are connected together through WiFi, so are the remote network and the local monitor center.

3.2 Wireless Bridge Operating Modes

The modes of wireless bridge A and bridge B are configured in the following modes:



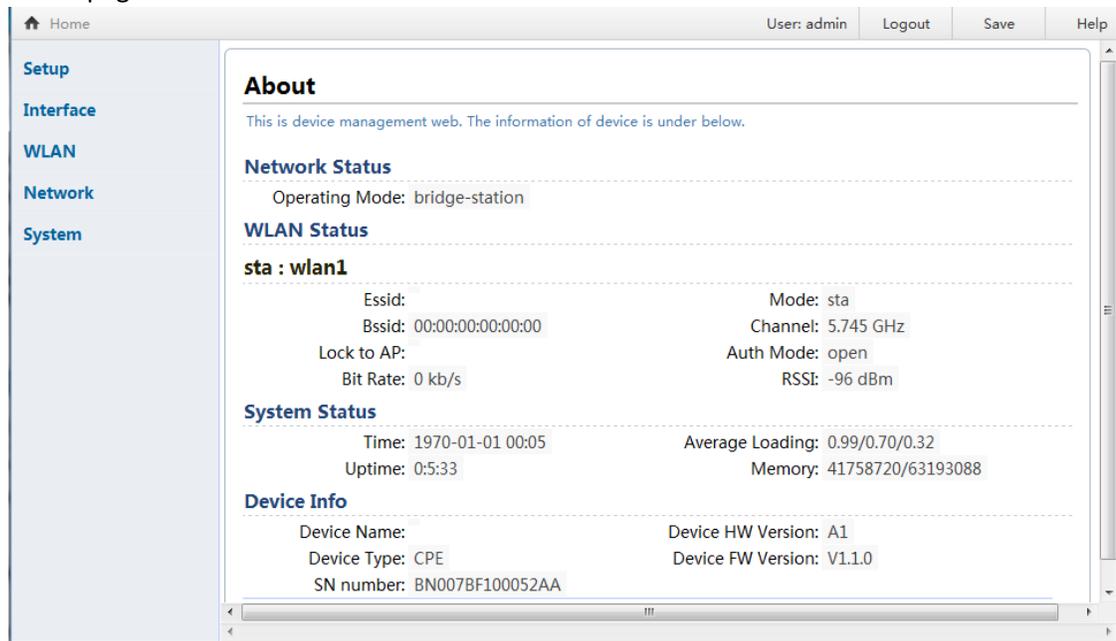
If we have three or more wireless bridges, the modes should be configure as following:



Usually Bridge-AP is connected to datacenter, monitor center or the Internet and Bridge-Station is located on the remote site.

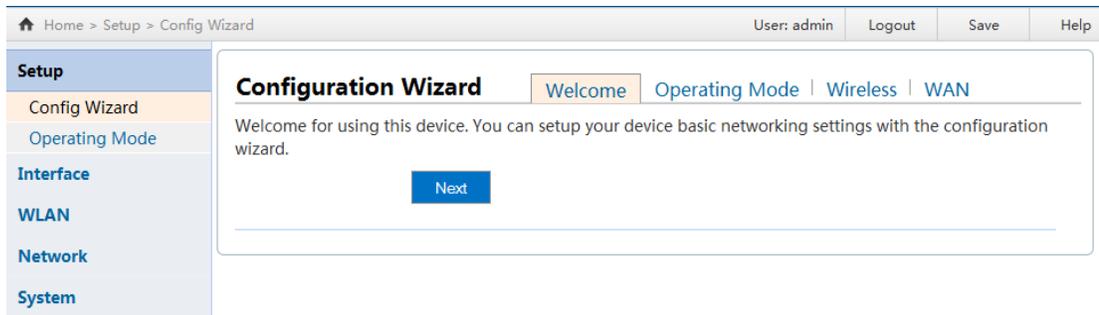
3.3 Local bridge configuration

1. After you login to the web admin GUI of the wireless bridge, you will see the following status page:

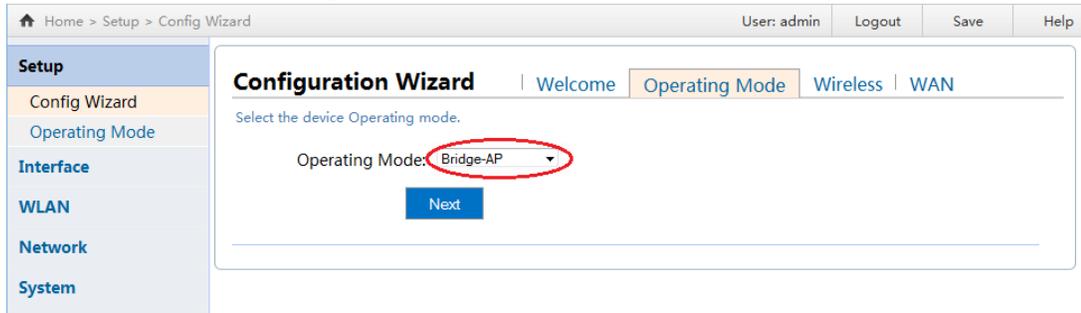


2. Click Setup->Config Wizard

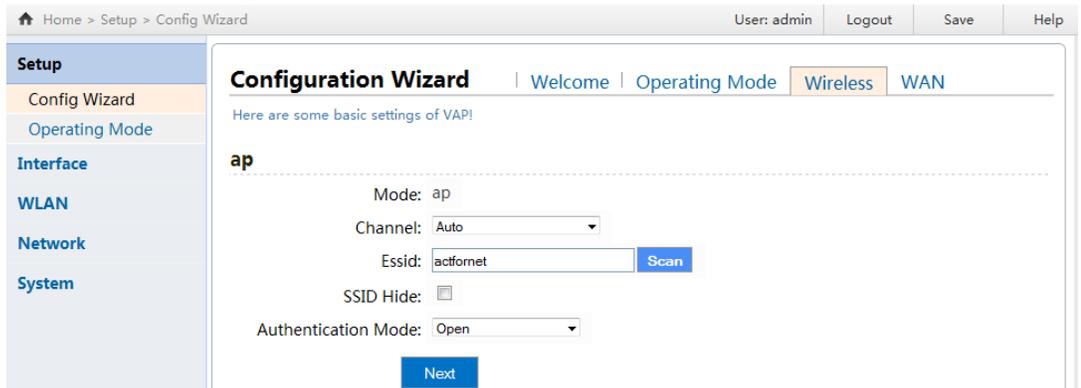
LEGUANG A320 Configuration Guide



3. Click Next, and select "Bridge-AP" for the mode:

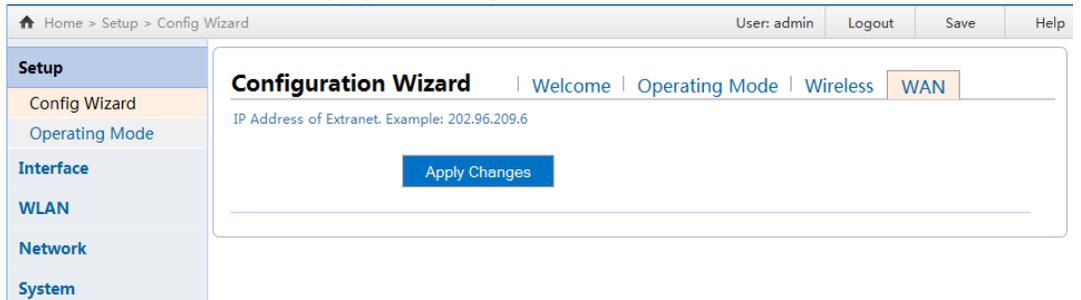


4. Click Next and configure the channel, ESSID and authentication:



It is recommended to use "open" for authentication mode during the setup phase for simplicity. After setup is complete, user can set up the desired authentication as needed.

5. Click Next and confirm to apply the change:



After applying the change, the bridge status will be displayed as following:

LEGUANG A320 Configuration Guide

Home User: admin Logout Save

Setup
Interface
WLAN
Network
System

About

This is device management web. The information of device is under below.

Network Status

Operating Mode: bridge-ap

WLAN Status

ap : wlan0

Essid: actfornet	Mode: ap
Bssid: 84:82:f4:03:f6:e2	Channel: 5.785 GHz
Stations: 0	Auth Mode: open
Bit Rate: 144.4 Mb/s	

System Status

Time: 1970-01-01 01:35	Average Loading: 1.24/1.09/1.02
Uptime: 1:35:20	Memory: 41508864/63193088

Device Info

Device Name:	Device HW Version: A1
Device Type: CPE	Device FW Version: V1.1.0
SN number: BN007BF100052AA	

6. Click “Save” to save the change:

Home User: admin Logout **Save**

Setup
Interface
WLAN
Network
System

About

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Network Status

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WLAN Status

ap : wlan0

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Device Info

Device Name:	Device HW Version: A1
Device Type: CPE	Device FW Version: V1.1.0
SN number: BN007BF100052AA	

7. Under WLAN->VAP, Check the checkbox beside WDS to allow the wireless bridges to access each other.

LEGUANG A320 Configuration Guide

Home > WLAN > VAP User: admin Logout Save

Setup

Interface

WLAN

RF

VAP

Advanced

Access

Status

Traffic Control

Network

System

WLAN VAP Settings

Here are some basic settings of VAP! When you changed the options with *, you need to restart interface.

Select VAP: wlan0

RF: wifi0

MAC: 84:82:f4:03:f6:e2

Mode: ap

Enable: Enable Enable or Disable VAP

Essid: actfomet

SSID Hide: Don't broadcast ssid

Isolation: Don't allowed communication between stations

WDS: Allow devices linked to the station to pass through the ap

KeepAP*: Only used in bridge. Keep AP up before station is linked. Need restart port!

Authentication Mode: Open

Now the basic configuration of the local wireless bridge is complete. You can proceed to next step to configure the remote wireless bridge.

3.4 Remote bridge configuration

1. Change IP address

Every bridge comes with default IP address 192.168.1.1. If we leave the local bridge with default IP address, we need to change the remote bridge IP address so that there won't be IP address conflict in the same subnet.

Home > Interface > LAN User: admin

Setup

Interface

LAN

VLAN

WLAN

Network

System

LAN Settings

LAN settings, example, IP address: 192.168.1.1 etc...

IPv4 Settings

IP Address: 192.168.1.10

Netmask: 255.255.255.0

DHCP Server: Enable

IP Address Standby: 0.0.0.0

Netmask Standby: 0.0.0.0

IPv6 Settings

IPv6 DHCP Client:

IPv6 Address:

IPv6 Prefix Length:

Bridge Setting

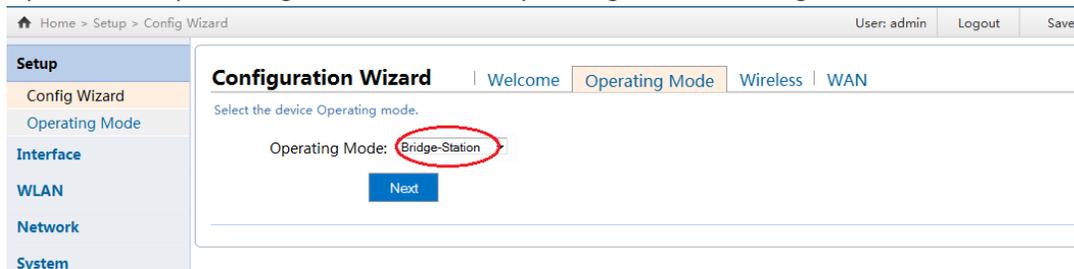
STP: Enable

After you click "Apply Changes", the new IP address will be effective immediately. Please use the new IP to login to the GUI. Remember to click "Save" to make the change persistent after reboots.

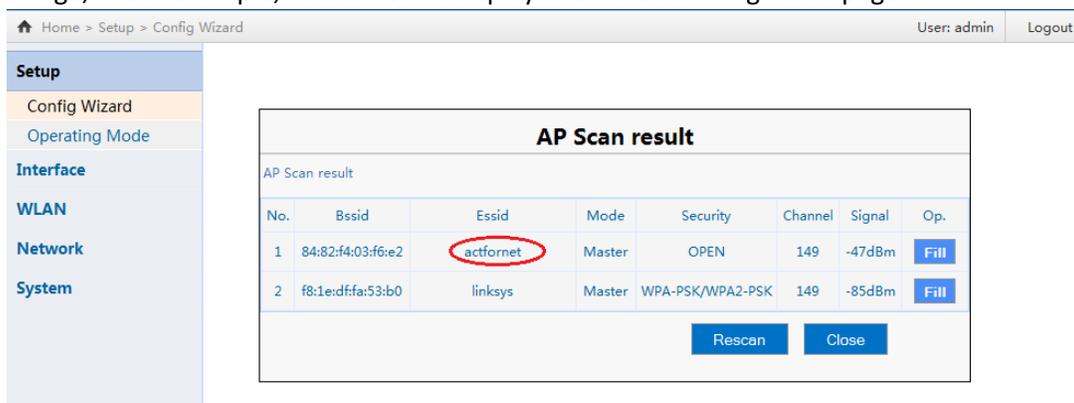
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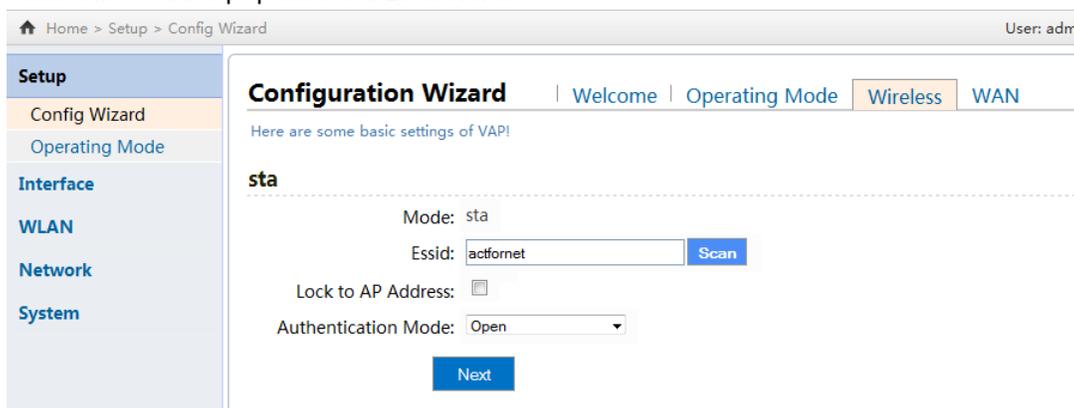
2. Open the setup-> config wizard to set the operating mode as “Bridge-Station”:



3. Click Next, and click “Scan” beside the ESSID box. The bridge can detect the signal of the local bridge, in our example, “actfornet” is displayed on the scanning result page:

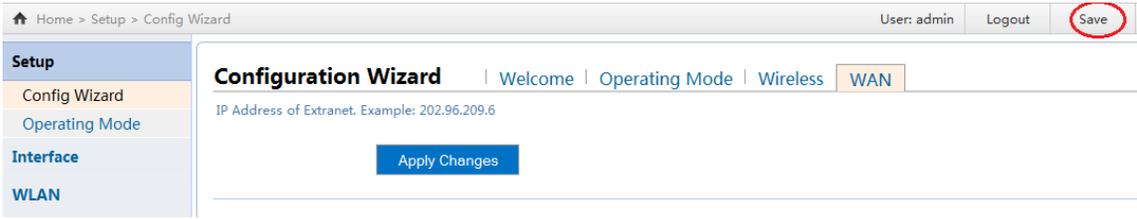


Click “Fill” to auto populate the Essid field.

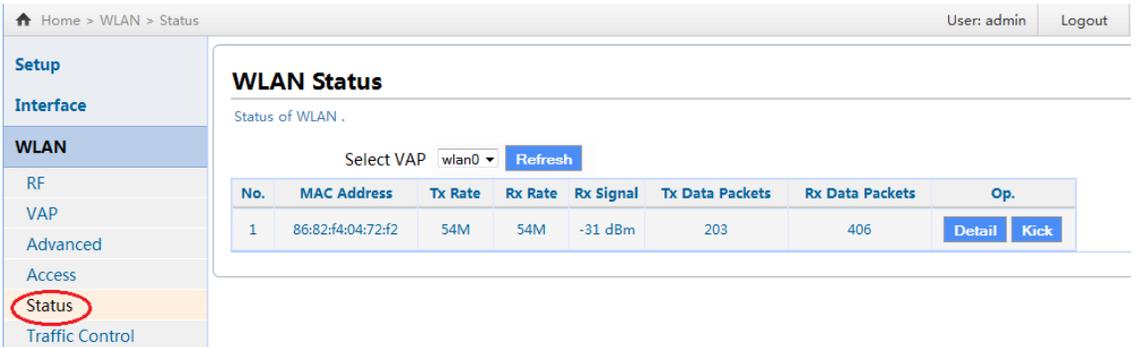


The authentication/encryption setting should matches whatever is configured on the local bridge.

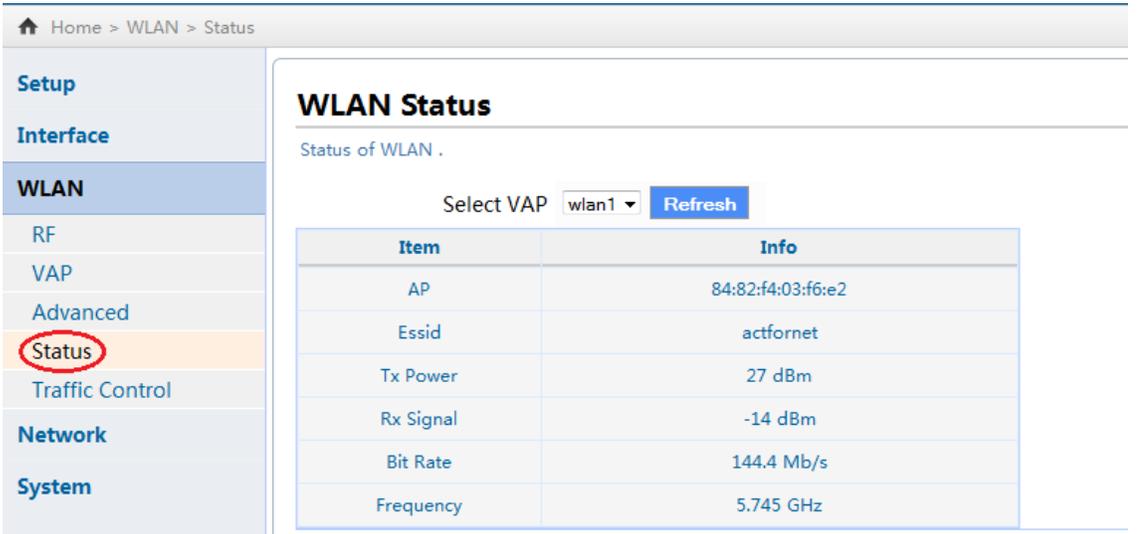
4. Click “Apply the change” to make the change take effect. Then click “Save” to save the changes.



5. Verify the WAN connection is working.
On bridge A(local), check the WLAN status as following:



On bridge B(remote), check the WLAN status as following:



Now we have connected the remote network to the local with two wireless bridge. You can ping the IP addresses on remote network from local to verify the network connectivity. If you have issue with WiFi, please change the direction/angle of the bridge as the antenna of wireless bridge is directional. A small angle change may make a big difference in signal strength.

3.5 Other Settings

1. RF settings
Click WLAN->RF, and then “Change” to modify the wireless Radio Frequency related settings:

LEGUANG A320 Configuration Guide

Home > WLAN > RF User: admin

Setup

Interface

WLAN

RF

VAP

Advanced

Status

Traffic Control

Network

WLAN RF Settings

A wireless local area network (WLAN) links two or more devices using wireless distribution method. RF include the spectrum WLAN is based on IEEE 802.11 standards. When you changed the options with *, you need to reboot device.

wifi0

Frequency 5GHz

Country Code* CN(China)

Mode 11an

Channel Auto

Tx Power 27dBm

Channel bandwidth 20MHz

Change

On this page, you can change the country code, channel bandwidth according to the regulation in your country. Please note that the RF settings you configured on both ends (remote and local site) should match each other. If you do not know what a specific setting is about, please leave them as default to avoid potential issues.

Home > WLAN > RF User: admin Logout

Setup

Interface

WLAN

RF

VAP

Advanced

Status

Traffic Control

Network

System

Change WLAN RF Settings

RF name: wifi0

Country Code*: **US(United States)** Go into effect after reboot device.

Mode(5G): a n Go into effect after reboot device.

Channel bandwidth: 20MHz Go into effect after reboot device.

Channel: Auto Effected only AP mode.

Tx Power: 27dBm

Tx Chain*: Chain0 Chain1 Effective for new create vap(or reboot device).

Rx Chain*: Chain0 Chain1 Effective for new create vap(or reboot device).

Beacon Interval: 100 Set beacon sendinterval (50-1000)ms

Ack timeout: 64 Effect coverage area and throughput.

A-MPDU: Enable Enable or Disable A-MPDU

A-MPDU Frames: 32 The number of frames in an A-MPDU packet

A-MPDU Limit: 65535 The max length of an A-MPDU packet

A-MSDU: Enable Enable or Disable A-MSDU

Short GI: Enable Enable or Disable Short GI

Short Preamble: Enable

Max Stations: 512

Apply Changes **Cancel**

2. Backup and restore

After you finished the setup and verify it is in work order, please back up the configuration files in case there is any problem you can restore the device to a known good state to reduce the service interruption time.

Home > System > Config

Setup
Interface
WLAN
Network
System
Config
Device

Configuration Management

Manage configuration of device.

Save Current Settings:

Restore Factory Defaults:

Export Config File:

Load Config File: No file selected.