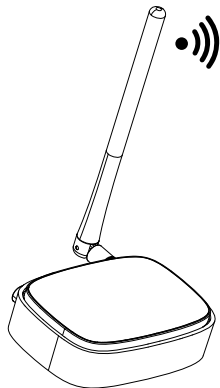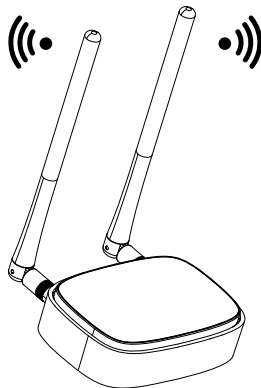# WiFi Halow Network Bridge

The lord of Wall-penetration, the best of your WiFi signal booster!

User Manual V2.0

Master Machine

Slave Machine

1   Product Introduction

This product is dedicated to provide solutions for extending wireless network coverage. Using the most advanced wireless technology for long transmission distance and strong penetraton ability. One-key configuration can meet a variety of applications such as extending the coverage of WIFI wireless network or extending the wireless transmission distance of security monitoring.
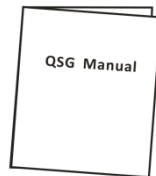
2   Packing List

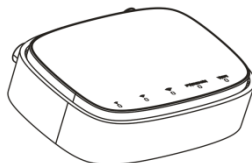Power adapter (2 pcs)   Network cable (2 pcs)   Instruction manual

2.4G antenna   TX/RX antenna(2 pcs)   Host wireless bridge   Sub wireless bridge

Note: The host wireless bridge is generally connected to a video recorder or router, and the Sub is generally connected to a camera, mobile phone, or computer.

3   Product Features

※ Using advanced wireless technology with super penetration ability, long distance transmission.
※ Effectively expand the coverage of home wireless network or extend the transmission distance of security monitoring;
※ The host wireless bridge and the sub wireless bridge point-to-point transmission, plug and play, easy settings;
※ Compatible different brands of network cameras;
※ The high-gain antenna does not need to be aligned;
※ LED indication;
※ UDP maximum transmission rate: 20Mbps
※ TCP maximum transmission rate: 18Mbps

※ Maximum penetration capacity: 4 walls of 24cm non-load-bearing or 2 walls of 24cm load-bearing [1]

※ Maximum transmission distance: 1000 meters[1]

Note [1] According to laboratory test data, the actual transmission rate decreases with the increase of distance and obstacles.

4 Technical Parameter

| Hardware parameters	
Processor	White head brother Xuan Tie 803
Installation method	Desktop or wall-mounted
Master Machine	Connect to the router: 802.11ah
Slave Machine	Connect to mobile phone: 802.11ah, 802.11b/g/n

2.4GHz wireless	2400~2483.5MHz, omnidireconal antenna, gain 5dbi
TX/RX antenna	32.5Mbps
Maximum transmission distance	1000 meters [1]
Maximum penetration capacity	4 24cm non-load-bearing walls or 2 24cm load-bearing walls [1]
Communication Interface	Host (connected to video recorder/router): one RJ45 network port Sub wireless bridge (connected to camera/mobile phone): one RJ45 network port, one 2.4G wireless wifi port
Indicator light	3 signal strength lights, one power supply/connection status light, and one WIFI working indicator light (TX/RX (802.11AH) indicator light on the router side, 2.4G WIFI indicator light on the mobile phone side)
Product size (L×W×H)	107.5×76×29 (unit: mm)
Antenna coverage angle	Full range

Operating temperature	-14 $℉$ - 140 $℉$ (-10 $℃$ - 60 $℃$).
Software Parameters	
Software working mode	Host (connect with video recorder/router): TX/RX works in AP mode Sub wireless bridge (connected with camera/mobile phone): TX/RX works in client mode; 2.4Gwifi works in AP mode
Network settings	LAN connection: static IP, dynamic IP
wireless setting	802.11 b/g/n/ah mode Automatic channel selection Transmission power adjustment Wireless security: WPA-PSK SSID: hidden/broadcast
Management and maintenance	HTTP Web Management Login password modification

Note [1] According to laboratory test data, the actual transmission rate decreases with the increase of distance and obstacles.

5 Indicator Light, Interface and Button Description
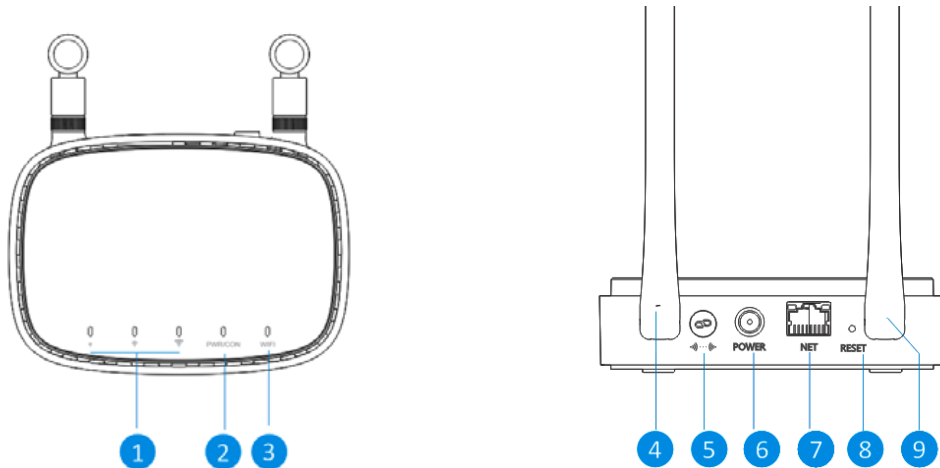
	Name	Function Description
1	Signal strength indicator	Indicates the strength of the wireless signal transmitted to, the more lights on, the stronger the signal
2	Power/connection	The red light is on when the power is on, and the blue light indicates

	status indicator	that the connection between the host and the slave is normal.
3	WIFI work indicator	The host is the TX/RX (802.11AH) indicator, and the secondary is the 2.4G WIFI indicator.
4	Antenna (TX/RX)	It is used for wireless signal transmission between host and slave.
5	Code key	Press this button at both ends of the host computer and the auxiliary computer at the same time until the CON indicator lights blue and release it. At this time, the connection between the host computer and the auxiliary computer is normal.
6	Power input	The power input interface of the main machine and the auxiliary machine are both 12V/1A
7	Network Interface	Host: Connect to router or video recorder equipment; Sub: Connect to cameras or computers and other equipment
8	Reset button	Long press this key for 5 seconds, the device will restore the factory default value.
9	Antenna(WIFI 2.4G)	It is used for wireless signal transmission between mobile phone and auxiliary machine. Generally used to extend the transmission range of wireless router signals. (The host does not have this antenna)

6 Installation

(1) Antenna, the host has a wireless antenna (TX/RX), and the auxiliary machine has a wireless antenna (TX/RX) and a 2.4G WIFI antenna (note: there is a 2.4G logo, do not install it wrong).
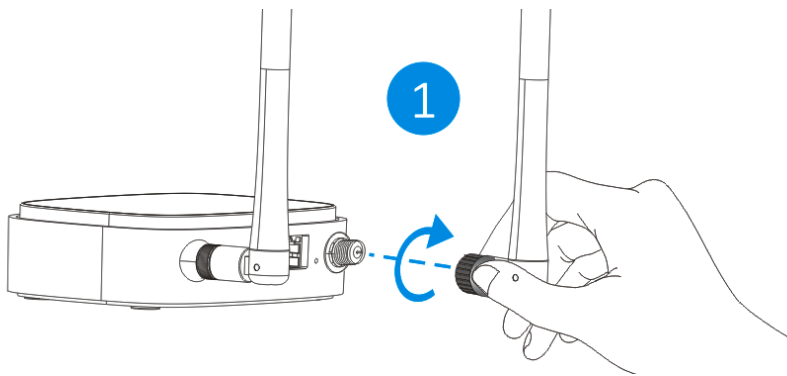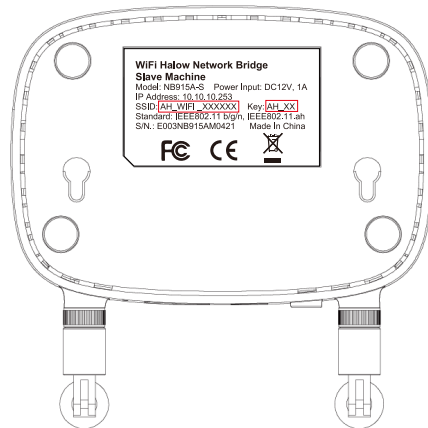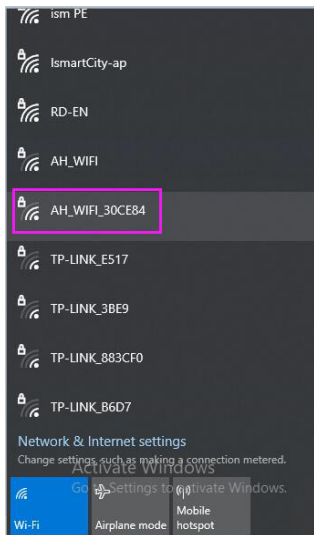

(2) Power On: The main machine and the auxiliary machine use 12V/1A power supply respectively.
(3) According to actual application requirements, refer to Chapter 8 for device connection.

7 Software configuration

The current product (the connection between the host and the sub) has been paired by default at the factory, and no setting is required. Note: The 2.4G WIFI network of the auxiliary machine The default SSID is: AH_WIFI_XXXXXX, the default password is: AH_XX When you need to modify the 2.4G WIFI SSID or password, you can proceed as follows.

WiFi Halow Network Bridge
Slave Machine
Model: NB915A-S   Power Input: DC12V, 1A
IP Address: 10.10.10.253
SSID: AH_WIFI_XXXXXX   Key: AH_XX
Standard: IEEE802.11 b/g/n, IEEE802.11.ah
S/N.: E003NB915AM0421   Made In China
FC CE

(1) In the search in the bottom left of windows10, search for wlan settings > open wlan settings > Change adapter options
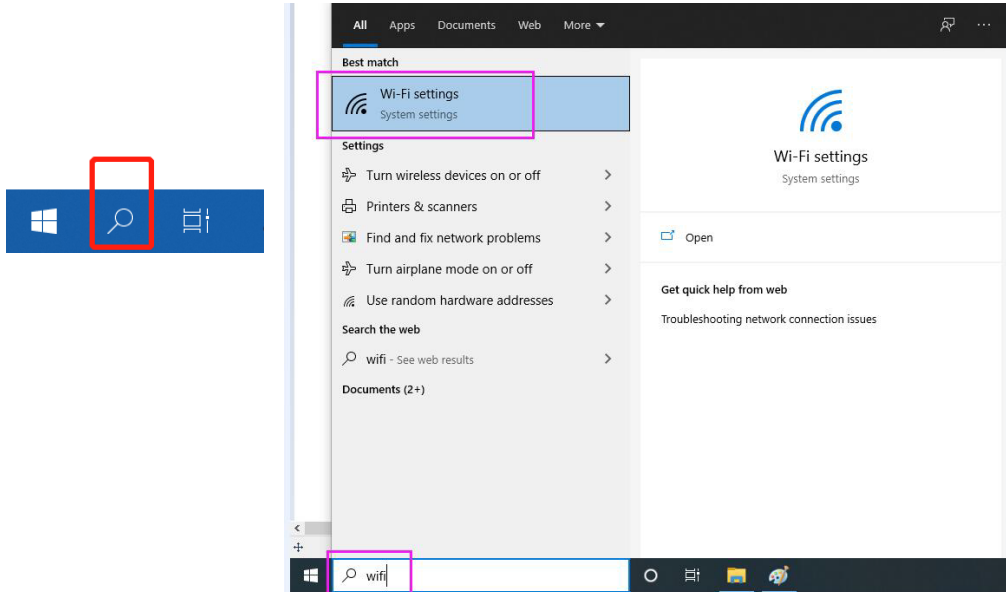
Settings

⌂ Home

Find a setting 🔎

Network & Internet

⊕ Status

⎙ Wi-Fi

🖵 Ethernet

☎ Dial-up

∞ VPN

✈ Airplane mode

(ι) Mobile hotspot

⊕ Proxy

Wi-Fi

Wi-Fi

⬤ On

🔒⎙ IsmartRD
Connected, secured

Show available networks

Hardware properties

Manage known networks

Hotspot 2.0 networks

Hotspot 2.0 networks make it more secure to connect to public Wi-Fi hotspots. They might be available in public places like airports, hotels, and cafes.

Let me use Online Sign-Up to get connected

⬤ On

When you turn this on and choose a Hotspot 2.0 network, we'll show a list of providers to choose from so you can get online.

Related settings

Change adapter options

Change advanced sharing options

Network and Sharing Center

Windows Firewall

🛈 Get help

💬 Give feedback

Right-click and select Properties from the context menu

Wi-Fi Properties ✕

Sharing

Connect using:

🖧 54Mbps Wireless USB Adapter

Configure...

This connection uses the following items:

- ☑ 🖳 Client for Microsoft Networks
- ☑ 🖳 File and Printer Sharing for Microsoft Networks
- ☑ 🖳 QoS Packet Scheduler
- ☑ ⬛ Internet Protocol Version 4 (TCP/IPv4)
- ☐ ⬛ Microsoft Network Adapter Multiplexor Protocol
- ☑ ⬛ Microsoft LLDP Protocol Driver
- ☑ ⬛ Internet Protocol Version 6 (TCP/IPv6)

Install...   Uninstall   Properties

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

OK   Cancel

Internet Protocol Version 4 (TCP/IPv4) Properties ✕

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically   10.10.10.X

◉ Use the following IP address: Except for 10.10.10.253

IP address: 10 . 10 . 10 . 45

Subnet mask: 255 . 0 . 0 . 0

Default gateway: 10 . 10 . 10 . 1

○ Obtain DNS server address automatically

◉ Use the following DNS server addresses:

Preferred DNS server: .   .   .

Alternate DNS server: .   .   .

☐ Validate settings upon exit   Advanced...

OK   Cancel

(2) Enter the default address of the bridge in the browser 10.10.10.253, the user name and
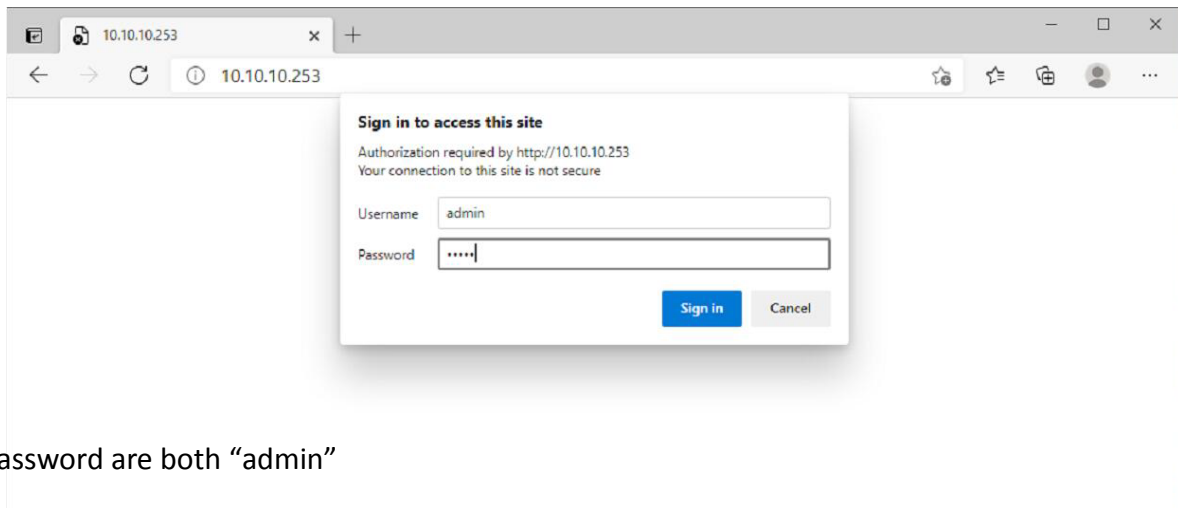
password are both "admin"

(3) Enter 2.4G seting->basic on the left, you can modify the SSID name and password.

open | close

Simple Wireless Settings

Ralink
⊞ Internet Settings
⊟ 2.4G Settings
　　Basic
　　Station List
⊞ Administration

You could configure the minimum number of Wireless settings for communication, such as Network Name (SSID) and Channel. The Access Point can be set simply with only the minimum setting items.

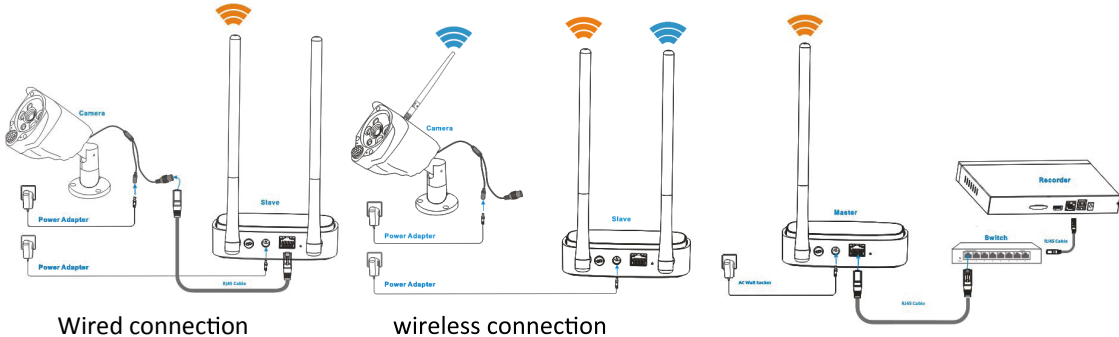| Wireless Network	
Network Name(SSID)	AH_WIFI_ E84
Broadcast Network Name (SSID)	◉ Enable ○ Disable
AP Isolation	○ Enable ◉ Disable
Wireless Security	WPA2-PSK ▼
Pass Phrase	AH5930
Country Code	EU (1~13) ▼
Frequency (Channel)	AutoSelect ▼
Channel BandWidth	○ 20 ◉ 20/40
TX Power	100　(range 1 - 100, default 100)

Apply　Cancel

8 Application

(1) Extend the transmission range between the camera and the recorder (wired connection is converted to wireless connection)

Note: a. The IP addresses of network cameras and video recorders need to be in the same network segment, please set them in advance. b. If the network camera supports WIFI wireless network, you can connect to the 2.4G WIFI network of the Sub machine, search for the AH_WIFI _XXXXXX name, and the password defaults to AH_XX, just connect, so you can save the network cable.

Diagram Of Camera Connection

Wired connection   wireless connection

(2) Extend the WIFI transmission range of the home router In order to extend the transmission range of the original wireless router, connect the devices as shown in the figure below, log in to the 2.4G WIFI network of the secondary machine with a mobile phone or computer, search for the AH_WIFI_XXXXXX name, and the password defaults to AH_XX, just connect. If you need to change the WIFI name and password, refer to Chapter 7 for instructions.
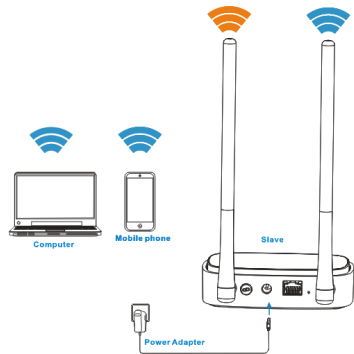
Diagram of Video Recorder Connection

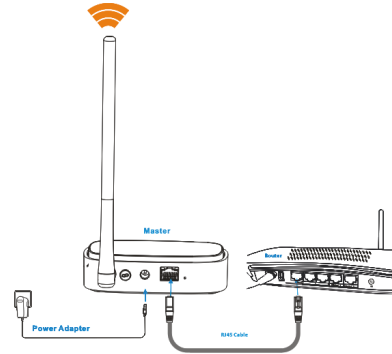Diagram of Mobile Phone Connection   Diagram Of Router Connection

9 Installation Height Guide

Based on the "Fresnel zone" principle of radio waves, in order to obtain a satisfactory transmission effect, the equipment (main and auxiliary) should be elevated as much as possible to avoid obstacles. According to the extension distance requirements, refer to the corresponding recommended installation height:

Distance (m)	10	30	50	100	200	300	500	700	800	1000
Height (m)	0.73	1.26	1.62	2.29	3.24	3.97	5.12	6.06	6.48	7.24

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