

Installation Guide

QBox610



Quick start

How to Set up

1. Set the 3-way switch on the back of each QBox610 device to Auto mode
2. Connect the Ethernet port from the router or gateway to the Ethernet port on one QBox610 device using the Ethernet cable
3. Connect the Ethernet port from the STB or media player to the Ethernet port on the other QBox610 device using the other Ethernet cable

4. Power on both QBox610 devices, wait for WLAN LED to blink and then turn solid blue when the boxes are associated together

Mode Selection

The Mode switch at the back panel of QBox610 device can be set to one of the following three modes:

Auto Mode: If 3-way switch is set to Auto, the QBox610 will set its mode automatically. If the device is connected to a router or gateway it will run in AP Mode otherwise it will run in STA Mode. (QBox610 is set to Auto Mode from the factory).

AP Mode: If the 3-way switch is set to AP, the device acts as an access point. The device in AP Mode should be connected to a router or gateway.

STA Mode: If the 3-way switch is set to STA Mode, the device acts as a client and it can be connected to other wired devices such as STB and media player. The QBox610 in STA Mode connects wirelessly to the QBox610 which is set to AP Mode.

Configure the QBox610 via Web GUI

By default, DHCP client is enabled in QBox610 and it will continue to request the DHCP server to get the IP address.

To configure the QBox610 via Web GUI:

1. Connect the QBox610 to a PC via Ethernet port on the back of the device
2. Open any web browser and type the IP addresses according below:
<http://192.168.1.100> for the box in AP mode if router or gateway is not connected
<http://192.168.1.200> for the box in STA mode if router or gateway is not connected
3. If router or gateway is connected to QBOX610, please find out the IP addresses of the QBOX610 devices from the attached tables of the router or gateway. Please look for the device name: Quantenna
4. You can start configuring the devices via Web GUI. Default user name is user and password is user.

Troubleshooting

On AP device:

Once the QBox610 is connected to Gateway, it fetches the IP address from the Gateway and the Mode LED should be ON if the device is set to AP or Auto. If the Mode LED is OFF, check the three-way switch to make sure that it is on AP or Auto.

If the three-switch is on AP or Auto but the Mode LED is OFF, please check if gateway DHCP server is enabled.

On STA device:

To check the connection between Gateway and STA device, connect a PC to the STA device through Ethernet connection and check the LAN LED and WLAN LED

LAN LED

LAN LED is on when the Ethernet cable is connected and blinking during the traffic. If the LAN LED is OFF, make sure the Ethernet cable is connected to the device.

WLAN LED

Wireless LAN (WLAN) LED is ON when wireless connection is set up. During the association the WLAN LED is blinking.

IF WLAN LED is OFF make sure the modes are sets correctly on the AP and STA device, wait for 5 minutes and the devices should connect. If the devices are still not connected, make sure they are apart at least 3m or move the devices closer if they are very far apart.

WPS button

The security mode is enabled on every QBOX610 device before shipment. If user wants to reset the security key, push the WPS button on both QBOX610 devices within 2 minutes to activate the WPS feature. The WPS LED will start blinking and then turn solid once the new security key is assigned.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device is going to be operated in 5.15~5.25GHz frequency range, it is restricted in indoor environment only.

Generic QHS610 Product specification rev 1.2

Revision history

1.1 – Update the AGPIO_B_25 for mode LED, update the 3 way switch and DHCP mode definition.

1.2 – DHCP mode and static IP mode

LED section

LED definition	GPIO assignments	Color	Behavioral model
POWER	N/A	GREEN	When +3.3V power is up, POWER LED turns on
LAN	N/A	GREEN	When Ethernet Link (1000/100/10Mbps) is up, the LAN LED turns solid.
WPS	AGPIO_B_3	GREEN	When the WPS is triggered by push button or WebUI, the WPS will blink every 3 second and turns on solid after the WPS process is completed.
Wifi Link	AGPIO_B_2	BLUE	When the association is done, Wifi Link LED turns on. During association process, wifi Link LED blinks in every 3 second.
Wifi Quality	AGPIO_B_30	BLUE	When the throughput rate is higher than 30Mbps, Wifi Quality LED turns on
Mode	AGPIO_B_25	GREEN	When AP mode is set, turns on mode LED, When STA mode is set, turns off mode LED. Before either mode is set, blink the LED every 3 second

3 Way switch

Function	DGPIO_B_8	DGPIO_B_0	Definition
STA	1	1	Software will configure it to STA mode only
AP	0	1	Software will configure it to AP mode only
Auto	1	0	Software will configure it based on the DHCP mode or static IP mode

Push button

Function	GPIO	Definition
WPS push button	GPIO_B_4	To trigger WPS feature
RTD push button	GPIO_B_27	To restore the factory default settings

User guides on 3-way switch and IP address assignment

QBOX610 has added a 3 way switch feature and DHCP client feature. This document describes how the 3 way switch works and how the IP address being assigned to the Video bridge. In order to support both old mode (no 3 way switch) and new mode (3 way switch), a new parameter is introduced in wireless_conf.txt file stored in /mnt/jffs2/ folder.

Parameter

“use3way=0” disable the 3 way switch feature

“use3way=1” enable the 3 way switch feature

Mode Configuration

Old mode – “use3way=0”

In old mode, user configures the mode of the device via the mode parameter in the wireless_conf.txt file or via the WebGUI.

“mode=ap” is AP mode and “mode=sta” is STA mode

New mode – “use3way=1”

In new mode, user uses the 3 way switch button at the back panel of the QBOX to configure the mode.

TOP position – STA

MIDDLE position – AP

BOTTOM position - AUTO

When the 3 way switch is in STA position, it is configured to STA mode only. When it is in AP position, it is configured to AP mode only. When it is in AUTO position, then it depends if the DHCP mode or static IP mode is enabled.

If DHCP mode is enabled via api command or WebGUI, the AUTO mode will set the QBOX to AP when the device is directly connected to the Gateway router. Otherwise AUTO mode will set the QBOX to STA.

If static IP is enabled, the AUTO mode will set the QBOX to STA mode only.

IP address configuration

Old mode – “use3way=0”

In old mode, IP address is configured by user via the ipaddr file in /mnt/jffs2/. No DHCP mode is allowed.

New mode – “use3way=1”

In new mode, IP address is configured based on the DHCP mode or Static IP mode.

If DHCP mode is enabled, then the IP address is assigned by DHCP server.

If static IP mode is enabled, then user specify IP address via WebGUI.

DHCP mode or static IP mode

A new parameter is introduced in wireless_conf.txt file stored in /mnt/jffs2/ folder to select between DHCP or static IP

staticip=0 means DHCP mode

staticip=1 means Static IP mode and the IP address is specified in ipaddr

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