Actiontec®

Wireless Network Extender

Model # WxB6x00Q

User Guide v1

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Introduction

Congratulations for purchasing the Actiontec WxB6x00Q Wireless Network Extender. The Extender is a wireless network extender with dual concurrent radios supporting both 2.4GHz and 5GHz operation in 802.11 a/b/g/n, and also 5GHz in 802.11ac. This allows the Extender to connect to everything from legacy wireless laptops, computers, and gaming platforms, up to the most current (and future) Apple and Android tablets, laptops, media platforms, and smartphones.

The Extender works by being placed in a central location of the home, or in a location where the existing wireless signal is weak, and then being physically connected directly to your gateway/modem. This physical connection not only extends the signal, but allows the Extender to import and automatically configure itself with the same network ID/SSID and password that is currently in use and configured on the existing gateway/modem. This means that wherever you are in your house, your WiFi tablet, laptop, phone, or wireless device will automatically connect to Internet without you having to find a new network name or enter security keys.

For users with newer mobile devices, tablets, and laptops, connections through the 5GHz radio can markedly increase the performance and speed of your WiFi connection, while freeing up the 2.4GHz band for legacy or older devices.

Features

- 2.4 and 5 gigahertz dual concurrent 802.11 b/g/n WiFi radios
- 5GHz 802.11ac WiFi radio
- Two Gigabit Ethernet ports
- Integrated wireless networking with 2x2 and 4x4 802.11n access point
- Multiple security offerings, including, MAC address filtering, WEP, and WPA
- Other options, including, WMM, IP address management, and firmware upgrade and restore
- MoCA 2.0 (WCB6000Q)
- Bonded MoCA (WCB62000Q)

Getting to Know the Extender

This chapter describes the location and uses of the Extender's LEDs, ports, and buttons.

Front Panel

The front panel features LEDs that illuminate in green when the operation of power, available ports and wireless bands are functioning and in use.

Back Panel

- **Power port**: used to connect the power adapter (external, 5V DC, 2A, made by APD, model #WA-24Q12FU) to the WxB6x00Q.
- **Reset button**: restores the Extender back to the original factory default settings when held down for at least 10 seconds.
- **Coax port**: used to connect the Extender to your coaxial network
- **Dual-port Gigabit Ethernet switch**: used for the Ethernet installation(s).
- **Labels:** indicate the factory default GUI access username, password, Network SSID names, and security keys.

Accessing the Extender's GUI

The Extender features an onboard graphical user interface (GUI) that includes user-configurable settings. Some of these settings should be accessed by experienced network technicians only.

To configure the network settings of the Extender:

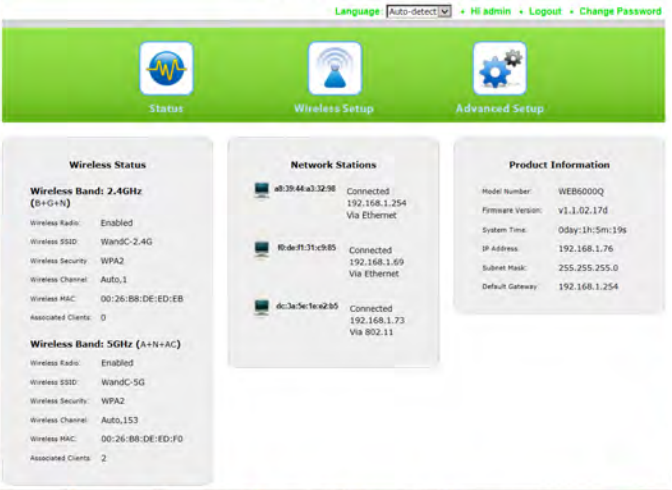
1. Ensure that the Extender is connected to an Actiontec gateway/modem, and that both devices are powered on.
2. On a computer connected to the network, log in to the gateway/modem by entering **192.168.1.254** into the address bar of a web browser.
3. The gateway/modem's GUI appears. The IP address of the Extender should be displayed on the *Main* or *Home* screen of an Actiontec gateway/modem, as indicated below.

4. Write down the IP address of the Extender.
5. Enter the IP address written down in step 4 in the address box of the web browser.
6. The Extender's *Reset Password* screen appears. Enter the Extender's *Username* and *Password* (found on the label located on the back panel of the Extender; see second figure, below).

The Extender's GUI's *Status* screen appears, as shown below.

Status

The first GUI screen that appears is the *Status* screen, which can also be generated by clicking the *Status* icon in the menu bar. This screen contains basic information about the Extender's wireless status, network stations, and product information about the Extender. There are no configurable settings available in this screen.



Wireless Setup

Clicking the *Wireless Setup* icon from the menu bar of any of the Extender's GUI screens generates the *Wireless Network List* screen. Additional wireless settings can be accessed from the menu on the left side. These settings configure various aspects of the Extender's wireless network, and the majority of them should be adjusted by an experienced network technician only. The exceptions are the settings contained in the *Basic Setup* screen.

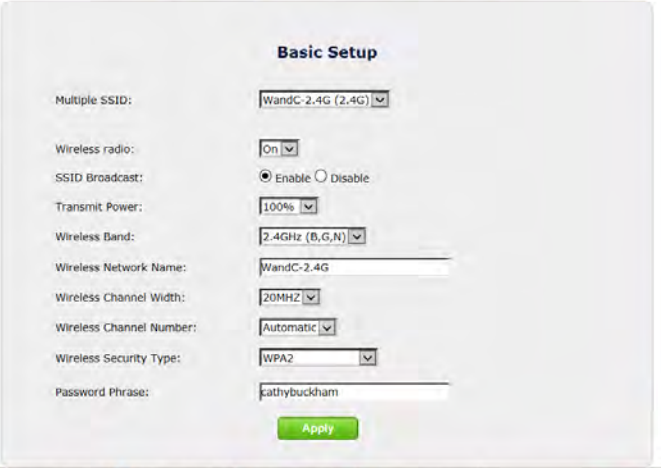
Wireless Network List

Selecting **Wireless Network List** generates the *Wireless Network List* screen (above). This screen displays various characteristics of the Extender's wireless networks.

Basic Setup

The *Basic Setup* wireless network screen contains various settings regarding the Extender's wireless network security.

> **Note**: The Extender is automatically configured with they gateway/router's wireless settings (including security settings) after being connected to the gateway/router network. We recommend that all wireless security changes be performed on the gateway/router. After this is done, reboot the Extender; its wireless security settings will update automatically.



When finished adjusting the settings in this screen, click **Apply**.

Multiple SSID

This option allows the user to setup different SSIDs (wireless networks) with different parameters. Select the option desired from the *Multiple SSID* drop-down menu.

Wireless Radio

This option turns the Extender's wireless radio on and off.

SSID Broadcast

This option controls whether or not the name of the network is broadcast to other wireless devices (usually, in the device's available wireless network list). Select *Enable* or *Disable* by clicking in the appropriate radio button.

Transmit Power

This option controls the power of the Extender's wireless radio. We recommend leaving this setting at 100%.

Wireless Band

This option allows the user to select the bandwidth at which the Extender's wireless radio will operate.

Wireless Network Name

Enter the name of the wireless network in this text box.

Wireless Channel Width

This option allows the user to select the channel width at which the Extender's wireless radio will operate.

Wireless Channel Number

This option allows the user to select the channel number at which the Extender's wireless radio will operate.

Wireless Security Type

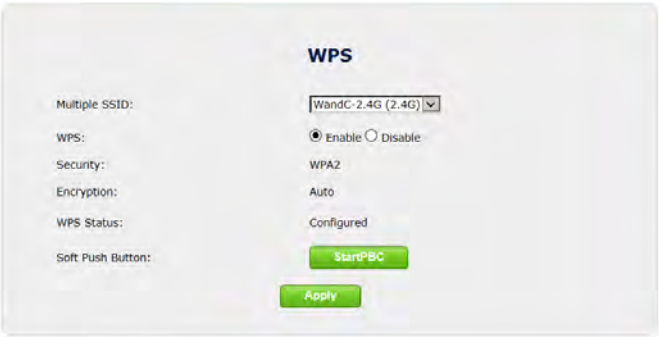
This option allows the user to select the type of security applied to the Extender's wireless network.

Password Phrase

This option allows the user to enter a password phrase, which will ——-.

WPS

The *WPS* screen allows the Extender to accept wireless clients via Wi-Fi Protected Setup (WPS), an automatic wireless network connection protocol. Only experienced network technicians should configure the settings in this screen.



Wireless Access Control

The *Wireless Access Control* screen contains a number of advanced settings regarding the Extender's wireless network. Only experienced network technicians should configure these settings.

Advanced Setup

Clicking the *Advanced Setup* icon from any of the Extender's GUI screens generates the *Management* screen, along with other advanced settings accessed through the menu on the left side. These settings configure various administrative aspects of the Extender and its GUI. They should be adjusted by an experienced network technicians only.

Management

The *Management* screen (above) allows the Extender's IP address settings to be modified. Only experienced network technicians should change these settings.

Change Password

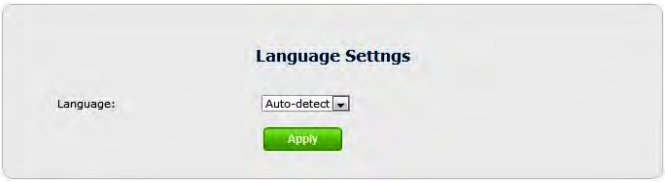
The *Change Password* screen allows the user to change the password that allows access to the GUI. To change, enter the current password, enter and re-enter the new password, then click **Apply**. Be sure to write the password down and keep it somewhere safe, as it will be needed to access the Extender's GUI in the future.

Factory Default

The *Factory Default* advanced setup screen allows the Extender's factory default settings to be reapplied, erasing all current settings. Click **Restore Default Settings** to restore the Extender to its factory default state.

Language Settings

The *Language Settings* screen allows the Extender's GUI language to be changed. Options include Auto-detect, English, and French. Selecting **Auto-detect** causes the Extender to automatically select the language (English or French) based on the language being used on the connected computer. To save changes, click **Apply**.



Specifications

Model Number

WxB6x00Q

Certifications

Wi-Fi

WPS

IP

Wi-Fi 802.11 b/g/n IEEE standard 5GHz/2.4GHz

LAN MoCA (for WCB6000Q, WCB6200Q)

LAN Ethernet Ports 10/100/1000 (2)

LAN Connections (for WCB6000Q, WCB6200Q)

LAN MoCA frequency: 1125 MHz - 1425 MHz (6 channel)

Gain

2.4GHz, 5GHz radios: 5 dBi per chain

LED Indicators

Power, MoCA, WiFi 2.4 GHz, WiFi 5 GHz, LAN Ethernet 1, LAN Ethernet 2

Power

External, 5V DC, 2A, made by APD, model #WA-24Q12FU

Regulatory

FCC part 15, UL-60959-1

Environmental

Operating temperature - 0º to 45º C (32º to 113º F)

Storage temperature - 0º to 70º C (32º to 158º F)

Operating humidity - 10% to 85% non-condensing

Storage humidity - 5% to 95% non-condensing

Altitude: -197 ft. to 7000 ft.

Note: Specifications are subject to change without notice.

Notices

Warranty

This product has a one-year Limited Hardware Warranty and 90-day free software updates from date of purchase.

Local Law

This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States.

To the extent that this Limited Warranty Statement is inconsistent with local law, this Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer.

Go to http://www.actiontec.com/products/warranty.php for more information.

Important Safety Instructions

Basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and personal injury, including the following:

- Do not use this product near water – for example, near a bathtub, kitchen sink, laundry tub, or swimming pool, or in a wet basement; only clean with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus including amplifiers that produce heat.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord indicated in this manual if applicable.

Coaxial Cable

If applicable, the coaxial cable screen shield needs to be connected to the Earth at the building entrance per ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, “Grounding of Outer Conductive Shield of a Coaxial Cable,” or in accordance with local regulation.

FCC Class B Equipment

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 and correct the interference by implementing one or more of the following measures:

- Reorient or relocate the device;
- Increase the separation between the equipment and receiver;
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected (applicable only to powerline products);
- Consult the dealer or an experience radio or television technician for help.

Declaration of Conformity

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;
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Actiontec Electronics, Inc., may void the user's authority to operate the equipment.

Important Note on WiFi

If applicable, this equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The radio has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091, 15.247 (b) (4),15.407 addressing RF Exposure from radio frequency devices as defined in Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields. The equipment should be installed more than 30 cm (~12 in.) from your body or nearby persons.

Only channel 1~11 can be operated for the 2.4 GHz ISM band and channels 36 to 48 and 149-165 for the UNII and ISM Bands. (Channels 52-64 and 100-144 are available if the device is enabled for DFS Band) Channels 124-128 are currently permanently disabled for weather radar. Selection of other channels is not possible.

Contact Information

For questions regarding your product or the FCC declaration, contact:

Actiontec Electronics, Inc.
760 North Mary Avenue, Sunnyvale, CA, 94085, United States
Tel: (408) 752-7700 Fax: (408) 541-9003

Technical Support

Go to **www.actiontec.com/support** for product support, updates, and more information, including:

- Firmware updates
- Troubleshooting
- Registration
- FAQs

Technical Support Phone Number

United States: (888) 436-0657