



## **APPLICATION NOTE:**

# How to Setup Silex Wireless Bridges

(SX-BR-4600WAN2 / BR-310AC / BR-300AN)

**silex technology america, Inc.**  
[www.silextechnology.com](http://www.silextechnology.com)

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## Introduction

The purpose of this application note is to explain the steps necessary to setup Silex wireless bridges (SX-BR-4600WAN2, BR-310AC and BR-300AN) easily in the quickest amount of time. For additional details on the product functions and how to use them, please refer to the product user manual. This application note will guide you through the steps required to get the wireless bridge working with your device and connected to your network.

This document calls out BR-310AC when setting up the device, but the instructions can also be used for the SX-BR4600WAN2 and BR-300AN.

## Package Contents

- Wireless Bridge body
- Power supply
- Ethernet cable
- Setup Guide
- Warranty booklet
- GPL license notice

## Required Equipment for the Configuration

### Configuration Method 1: Configuration by PC via Ethernet port

- Wireless Bridge
- Power supply
- Ethernet cable
- PC

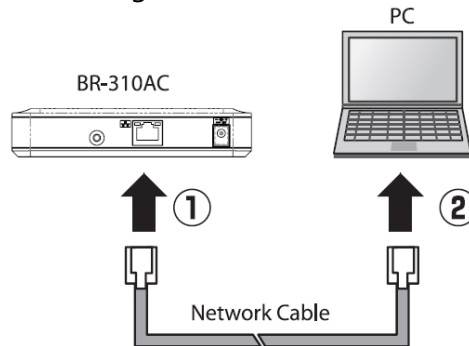
### Configuration Method 2: Smart Wireless Setup

- Wireless Bridge
- Power supply
- WPS capable router / access point with which the wireless bridge will be connected
- Ethernet client device

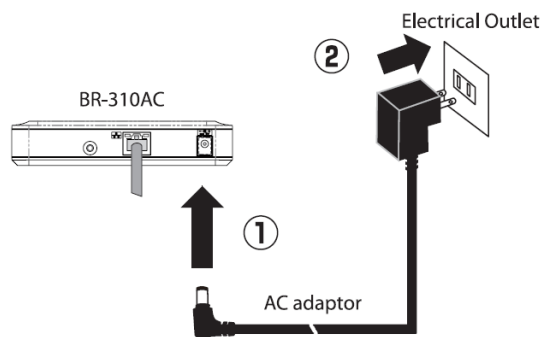
## Setup and Powering up the Device

### Configuration Method 1: Setup using Configuration mode

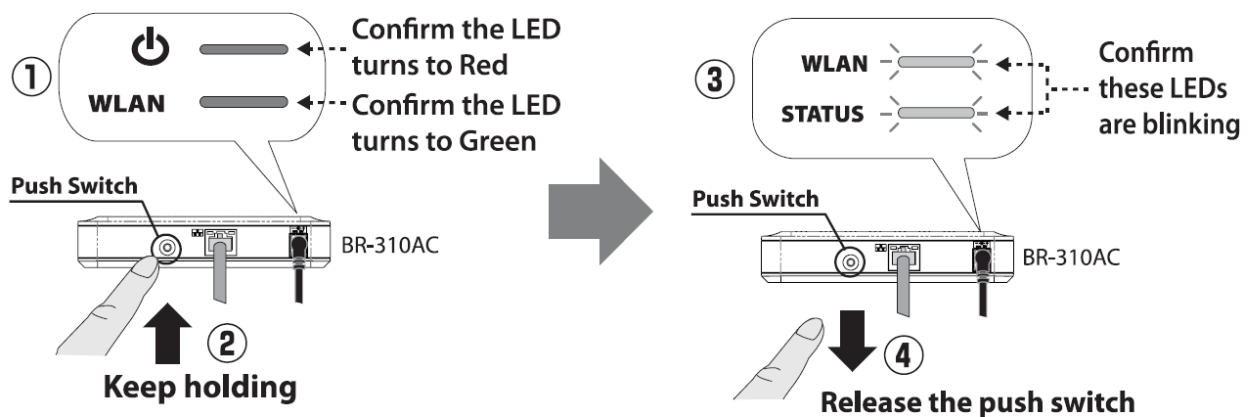
1. Connect BR-310AC to the PC using the network cable that came with BR-310AC.



2. Connect the AC adaptor to BR-310AC and plug the AC adaptor into an electrical outlet.

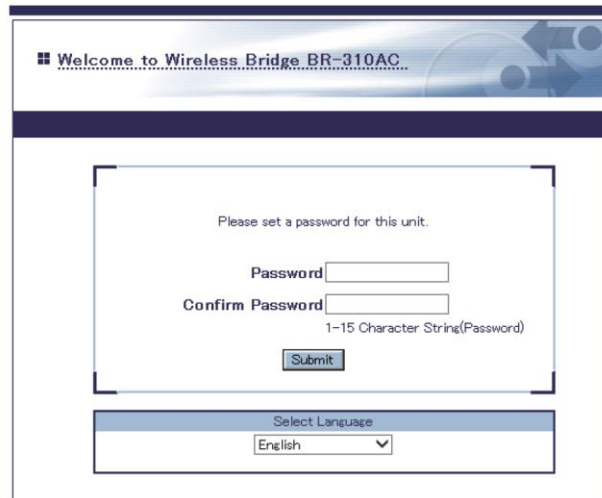


3. When the WLAN LED turns Green after the POWER LED turns Red, press and hold the push switch. Release the push switch when the WLAN LED and the STATUS LED start blinking Green together (it may take 20sec until blinking). BR-310AC will start running in the Configuration Mode and be ready to configure from the PC that has been connected to BR-310AC via a network cable. If wireless LAN is enabled on your PC, please disable it.

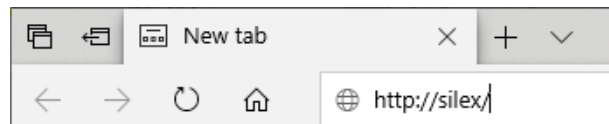


\* If wireless LAN is enabled on your PC, please disable it.

4. Start a Web browser (Internet Explorer, Microsoft Edge, Safari, Chrome, etc.) on the PC you are using for the setup. When the login password configuration page appears, enter the password to configure for BR-310AC and click "Submit". The login password configuration page is displayed only when BR-310AC is configured for the first time. If this page does not appear, please skip to next step. The password can be configured later. Note: Please make sure the password is up to 15 characters long (it cannot be more than 15 characters). For example, if you type "abcdefghijklmnop" to set the password, it is actually set as "abcdefghijklmno". (the "p" is truncated.) If SX-BR-4600WAN2 and BR-300AN web page show different maximum length, please follow the web page instruction.



If the Web page is not automatically displayed, enter <http://silex> in the address bar of the Web browser.



If the Web page is still not displayed after entering <http://silex/>, check the IP address of the LAN Ethernet adapter of the PC connected to BR-310AC.

- Launch "Command Prompt" on PC
- Run "ipconfig" command
- Look for the Ethernet adapter connected to BR-310AC

```
Command Prompt
C:\Users\ >ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix . . . : 
    IPv6 Address. . . . . : 2600:8802:1100:d11:28f7:7734:7b70:4e9c
    Temporary IPv6 Address. . . . . : 2600:8802:1100:d11:e9f9:495b:c871:64fe
    Link-local IPv6 Address . . . . . : fe80::28f7:7734:7b70:4e9c%11
    Autoconfiguration IPv4 Address. . . : 169.254.78.156
    Subnet mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : fe80::7e9a:54ff:fe6b:fa2e%11

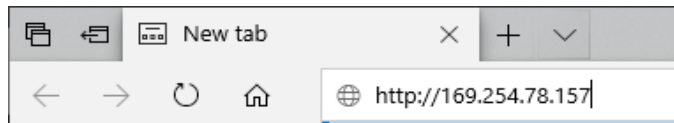
Wireless LAN adapter Local Area Connection* 1:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . . . : 

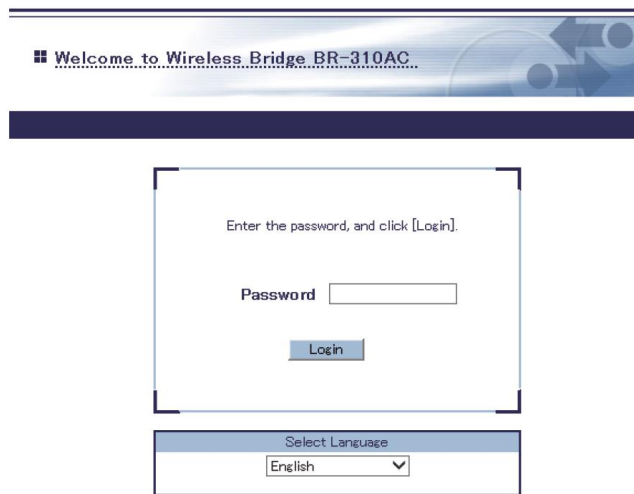
Wireless LAN adapter Local Area Connection* 2:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . . . :
```

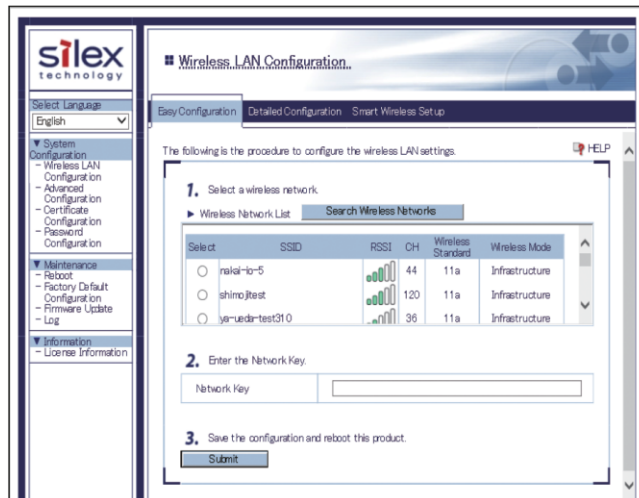
If the static IP address is configured to the Ethernet adapter, please use it. Once the IP address on the Ethernet adapter is identified, type an IP address adding 1 to the last digit of identified IP address in the browser's address bar. In the case of above, it must be 169.254.78.157.



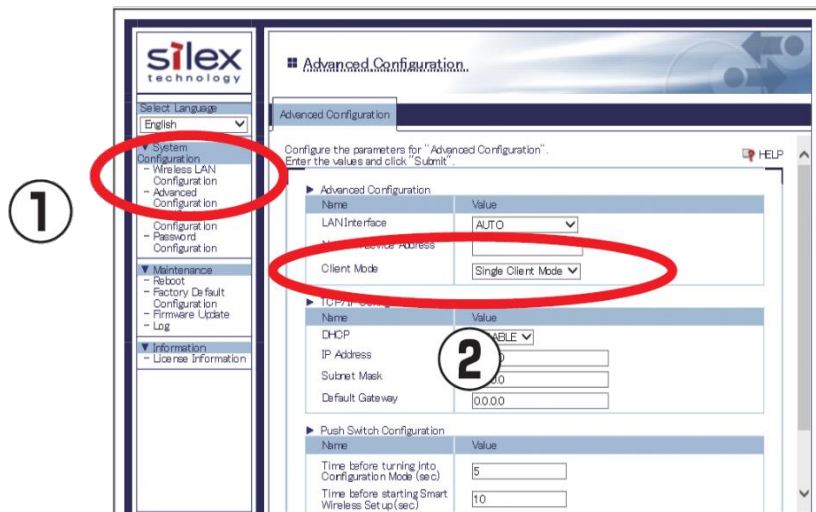
- 5. Enter the login password you have configured in step 4 and click "Login" if it appears.



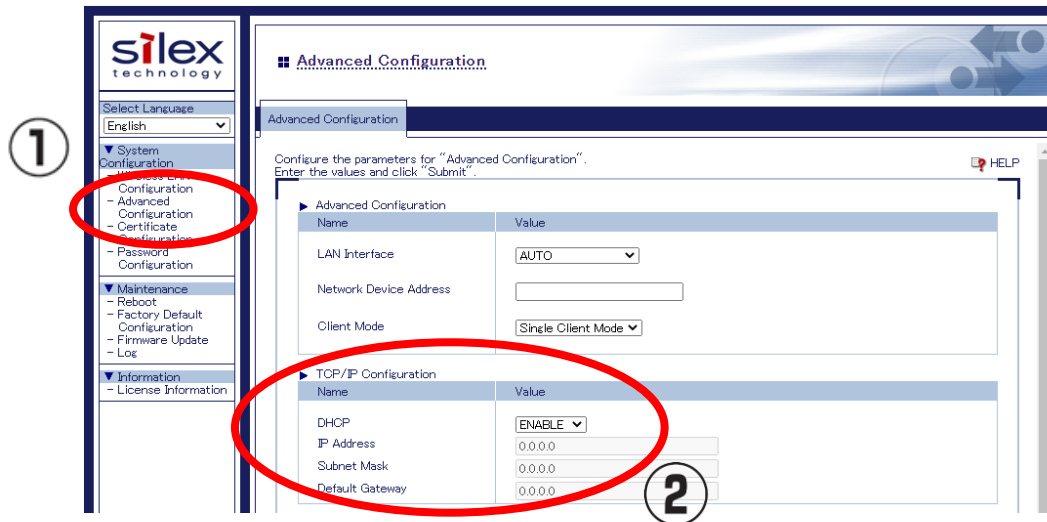
6. The Web page of BR-310AC is displayed.



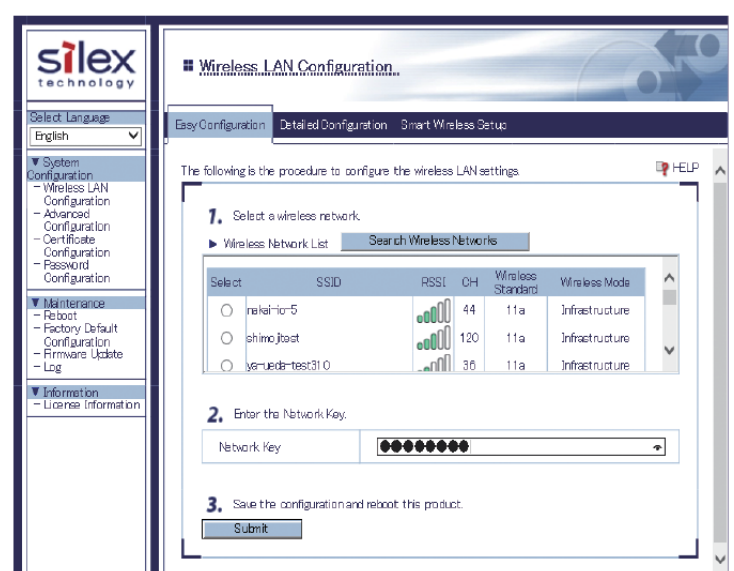
7. (Optional) To connect multiple network devices using an Ethernet HUB, click "Advanced Configuration" and select "Multi-Client Mode" for "Client Mode".



- (Optional) If it is planned to configure BR-310AC later through the wireless network by the Web GUI or AMC Manager®, enable DHCP client or set the IP address in the “Advanced Configuration” window:

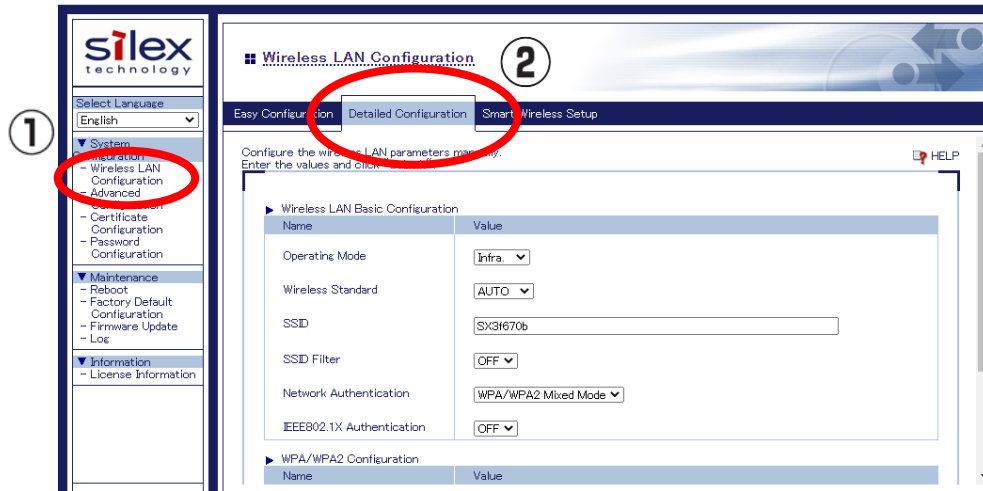


- In the Web page, select the destination network from the “Wireless Network List” and enter the WEP Key or Shared Key for the “Network Key”. Click “Submit” when finished.

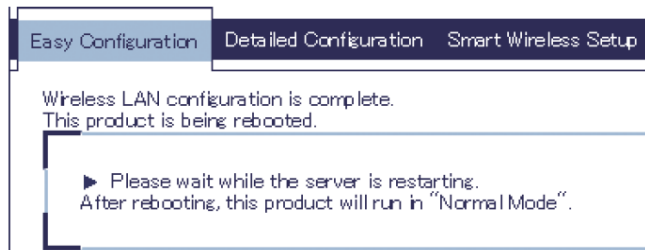




If the destination network is not displayed in the “Wireless Network List”, click “Detailed Configuration” tab at the top of the page. In the page displayed, enter the wireless settings of the network that you wish to connect BR-310AC to, and click the “Submit” button. Refer to the HELP for details on each setting.



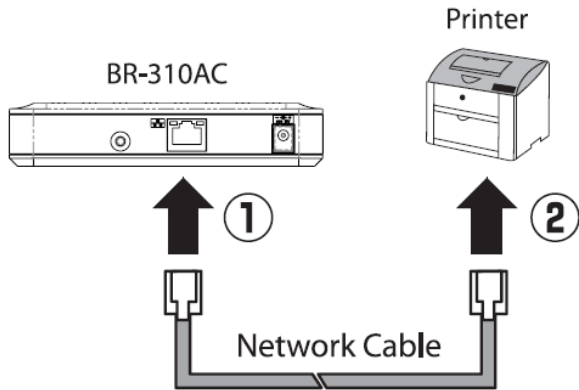
10. Once a message appears indicating that the configuration has been completed, close the Web browser.



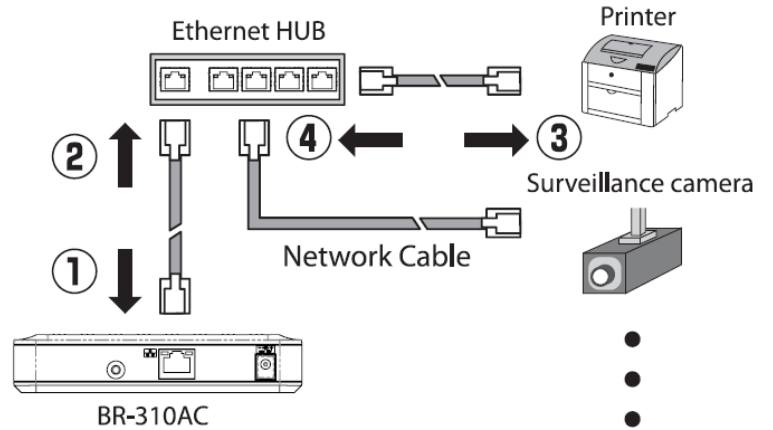
11. The wireless bridge configuration has now been completed. To use the same PC as the Ethernet client device, restart the PC. To use another Ethernet client device, turn off both BR-310AC and the PC, and remove BR-310AC from the PC. Refer to the following steps to connect BR-310AC to the Ethernet client device using a network cable.

12. Turn off the network device that you wish to use wirelessly and connect it to BR-310AC using the network cable.

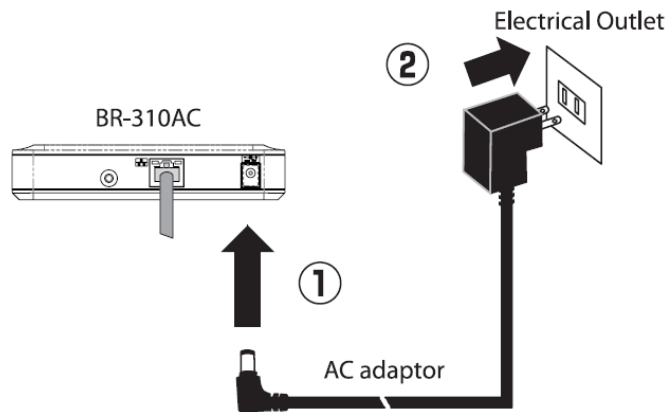
Sample connection in **Single Client Mode**



Sample connection in **Multi-Client Mode**



13. Connect the AC adaptor to BR-310AC and plug the AC adaptor into the electrical outlet.



14. Turn on the network device connected to BR-310AC

**NOTE**

- Some network devices require additional network settings. In such cases, refer to the manual that came with the network device.
- When turning on BR-310AC and network devices, turn on BR-310AC first. Do not press the push switch at this time.

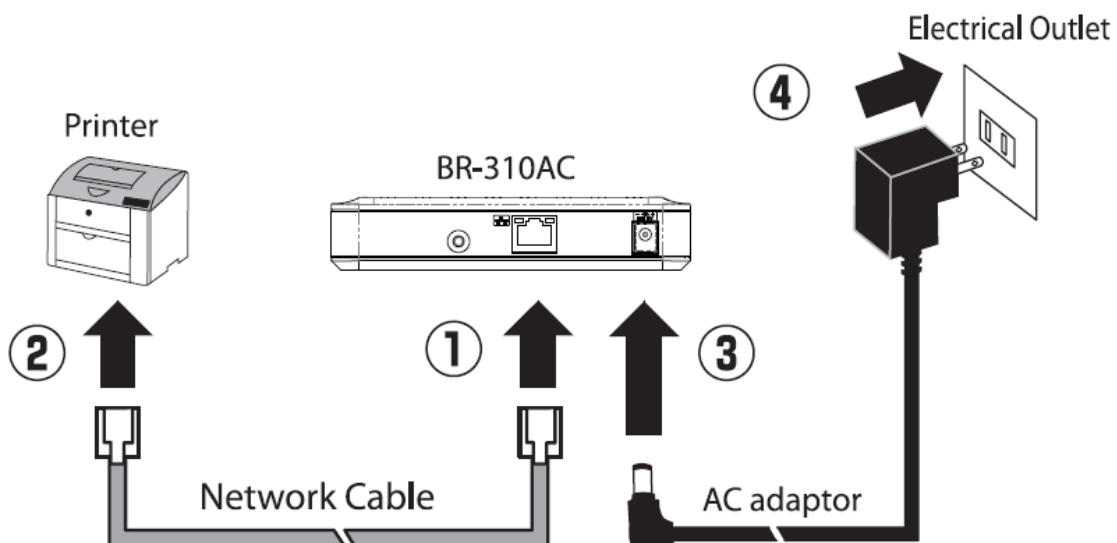
## Configuration Method 2: Easy Configuration Using Smart Wireless Setup

BR-310AC allows to configure its wireless settings easily by a push switch if the wireless router supports WPS (Wi-Fi Protected Setup).

### NOTE

- For wireless configuration using WPS, your wireless router must support WPS.
- During this configuration, please temporarily move BR-310AC closer to your wireless router to make it easier for both devices to communicate.
- WPS may need to be enabled manually on your wireless router. For details, refer to the operation manual that came with your wireless router
- If a security feature such as MAC address filtering is enabled on your wireless router, disable it temporarily so that BR-310AC can communicate with your wireless router.
- If you plan to connect two or more network devices to BR-310AC using an Ethernet Hub, please go back to Configuration Method 1 – Setup Using Configuration Mode. The Client mode can be configured only when BR-310AC is running in Configuration Mode.

1. Connect the network device and BR-310AC using the network cable that came with BR-310AC. Connect the AC adaptor to BR-310AC and plug the AC adaptor into an electrical outlet.

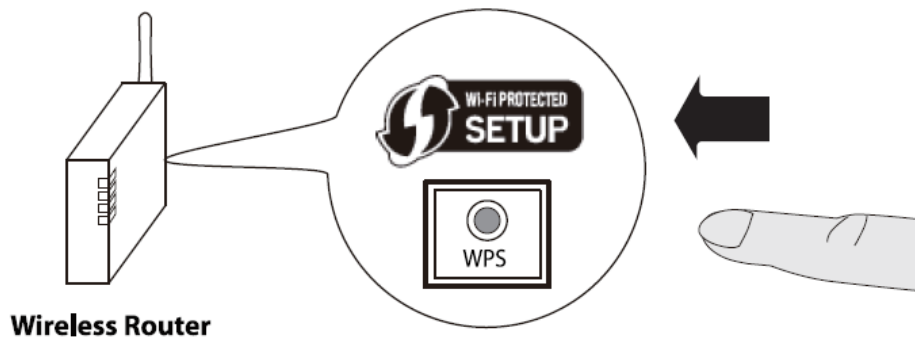


2. Turn on the network device connected to BR-310AC.

**NOTE**

- Some network devices require additional network settings. In such cases, refer to the manual that came with the network device.
- When turning on BR-310AC and network devices, turn on BR-310AC first. Do not press the push switch at this time.

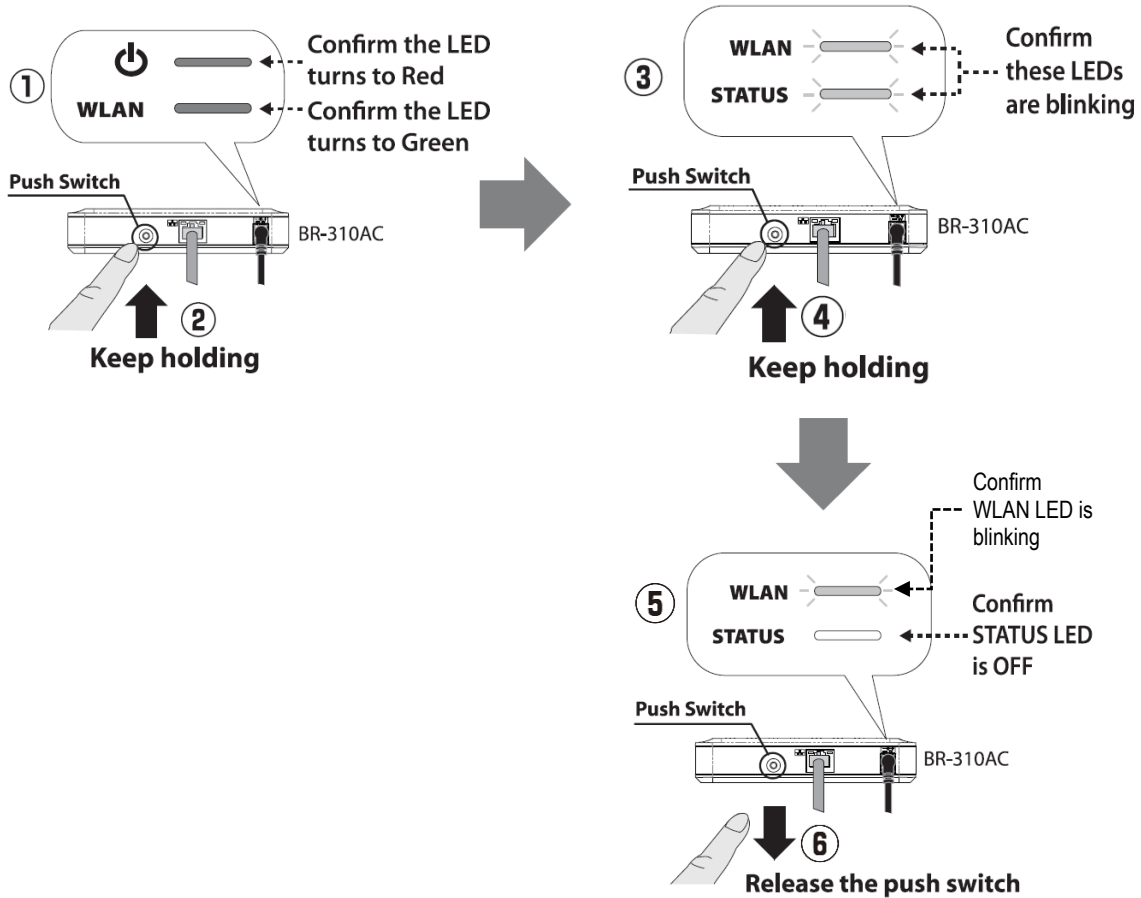
3. Press the WPS button on the wireless router. Confirm that your wireless router is waiting for wireless connection.



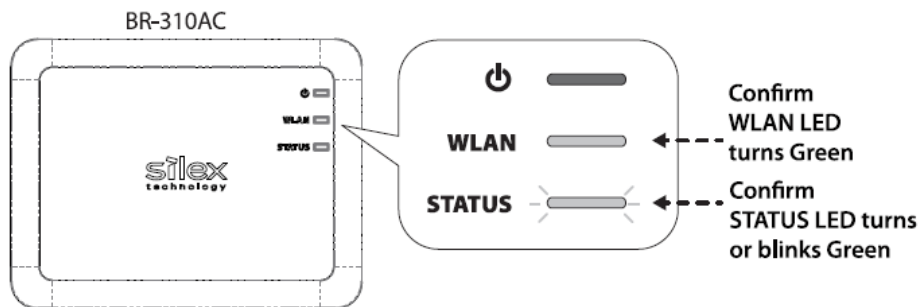
**NOTE**

- The name, position, and shape of the WPS button will differ depending on the wireless router. For details, refer to the operation manual that came with the wireless router
- Use only one wireless router. If two or more routers are waiting for wireless connections, BR-310AC will not be able to connect properly.

- When the WLAN LED turns Green after the POWER LED turns Red, press and hold the push switch at the front of BR-310AC. The WLAN LED and STATUS LED will start blinking Green together. Release the push switch when the STATUS LED turn off while the WLAN LED keeps blinking (it may take 15sec for the STATUS LED to turn off after both LEDs started blinking).



- BR-310AC will start to communicate with the wireless router. When the wireless configuration is successfully completed, the WLAN LED turns Green and the STATUS LED turns/blinks Green.



## NOTE

- It may take a while to complete the wireless configuration depending on the environment (up to a few minutes).
- If the wireless configuration has failed, the WLAN LED will flash rapidly. In such case, please go back to step 3 and try again.

## Firmware Update

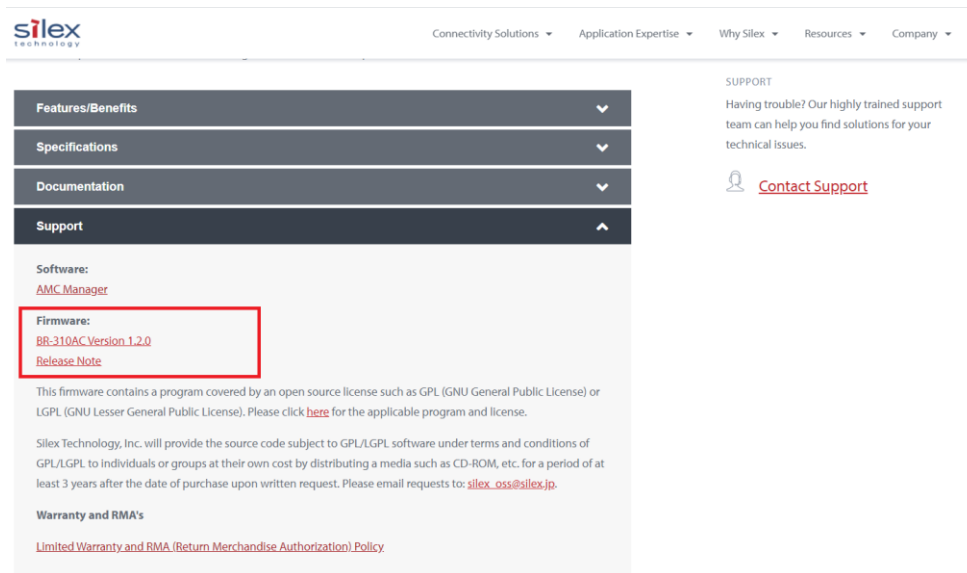
### Update using AMC Manager®:

1. Download the firmware from “Support” or “Software and Support” tab in a product page.

SX-BR-4600WAN2: <https://www.silextechnology.com/connectivity-solutions/device-connectivity/sx-br-4600wan2>

BR-310AC: <https://www.silextechnology.com/connectivity-solutions/device-connectivity/br-310ac>

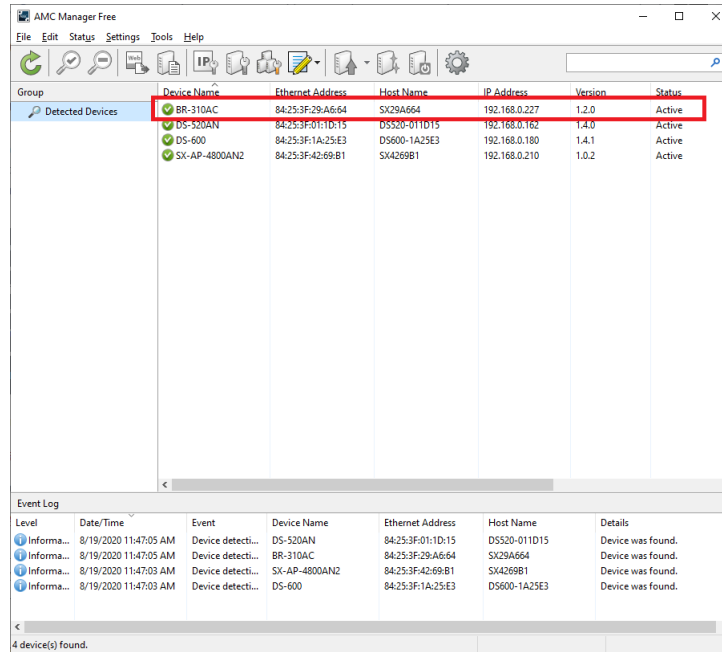
BR-300AN: <https://www.silextechnology.com/connectivity-solutions/display-connectivity/br-300an>



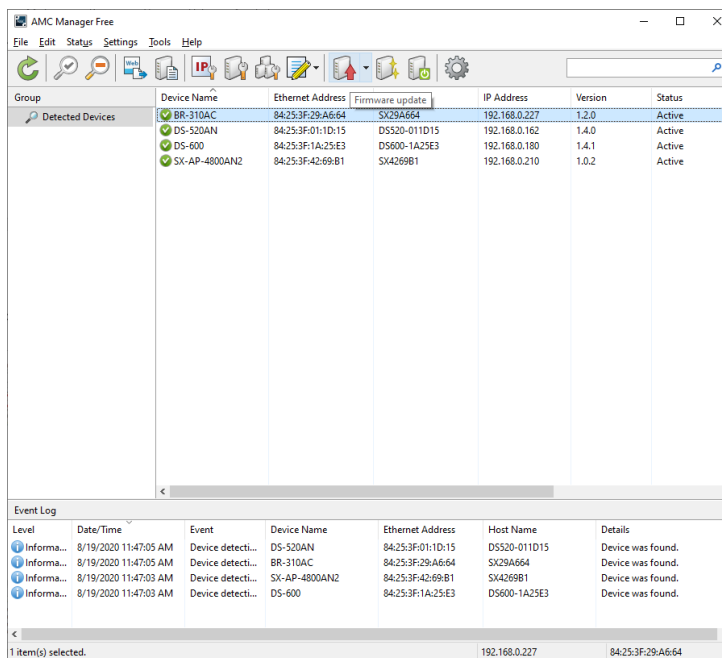
The screenshot shows the Silex Technology website interface. The top navigation bar includes the Silex Technology logo and several dropdown menus: Connectivity Solutions, Application Expertise, Why Silex, Resources, and Company. On the left, a vertical navigation menu has four items: Features/Benefits, Specifications, Documentation, and Support (which is currently selected and highlighted). The main content area displays the 'Support' section, which includes links for 'Software: AMC Manager' and 'Firmware: BR-310AC Version 1.2.0' (with a 'Release Note' link below it). A red rectangular box highlights the 'Firmware' section. Below the links, there is a paragraph of text regarding open source licenses (GPL and LGPL) and a link to 'here' for applicable program and license. Further down, there is a section for 'Warranty and RMA's' with a link to the 'Limited Warranty and RMA (Return Merchandise Authorization) Policy'.

2. After downloading the firmware, extract the archive to a folder. After the archive is extracted, {product\_name}.bin file should be in the folder.

- If AMC Manager<sup>®</sup> is not installed, please install AMC Manager<sup>®</sup>, which is available on the same web page where the firmware is downloaded, and launch AMC Manager<sup>®</sup>. AMC Manager<sup>®</sup> should automatically find the BR-310AC if the BR-310AC is on the same network as the computer that is running the AMC Manager<sup>®</sup> software.

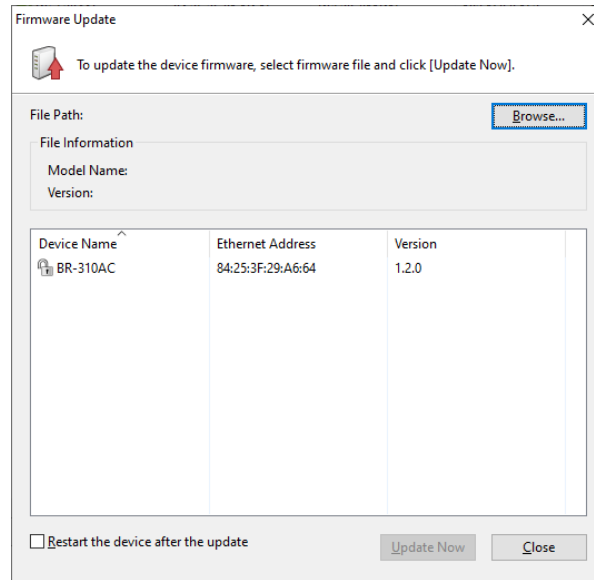


- "Firmware Update" button becomes active after BR-310AC is selected.

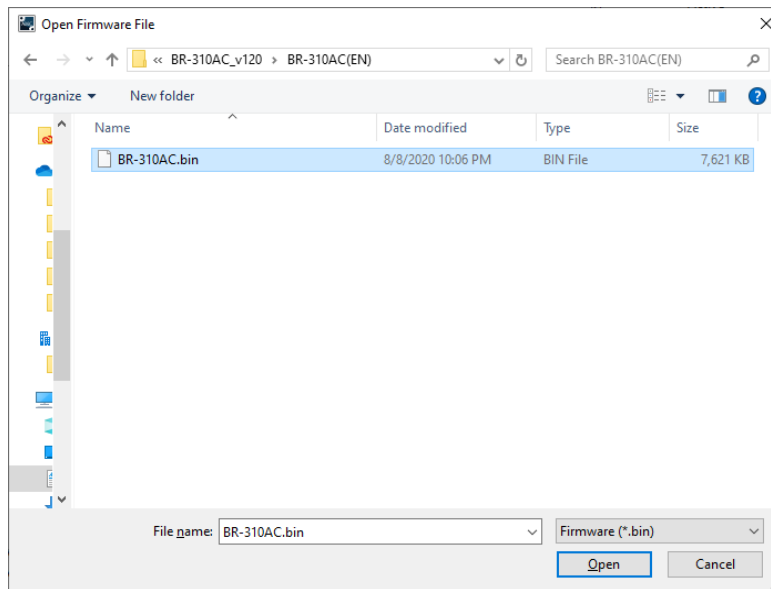




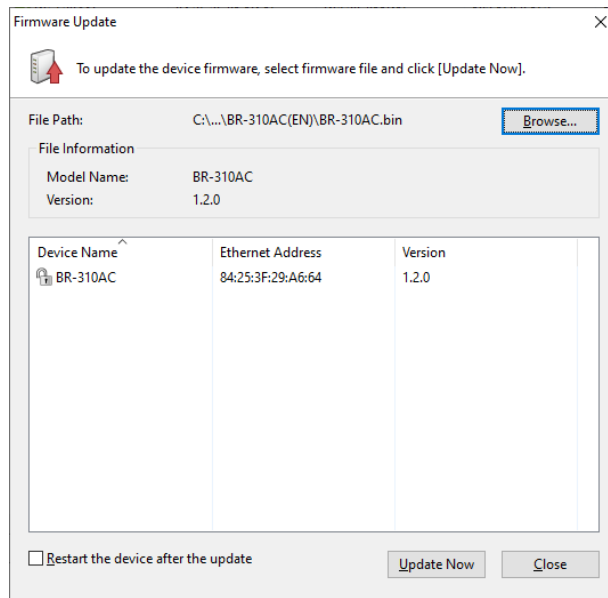
5. Click the "Firmware Update", then the pop-up window appears to select the file.



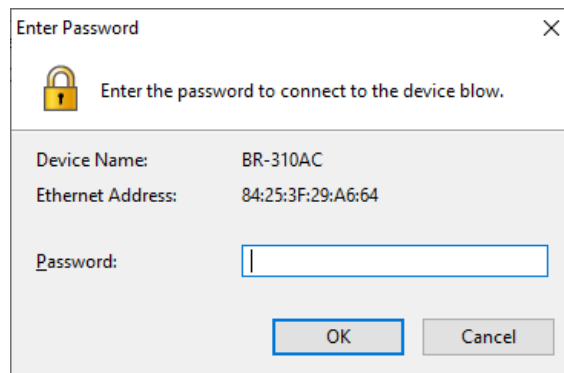
6. Click "Browse", choose the {product\_name}.bin file which was downloaded from the BR-310AC web page and click "Open"



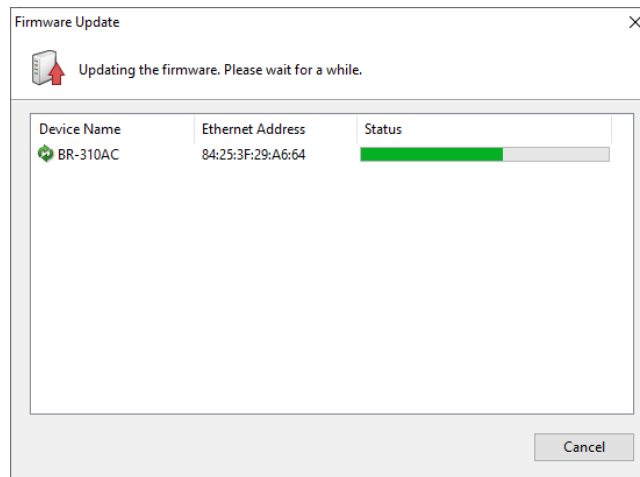
7. Click "Update Now". To complete the firmware update, select the check box next to "Restart the device after the update" before clicking "Update Now".



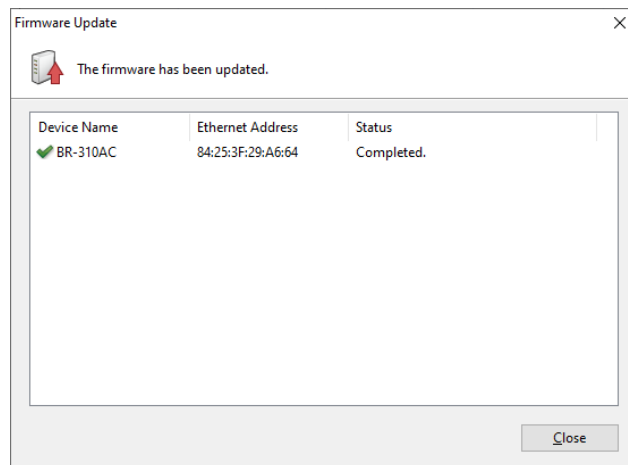
8. Input the password which was configured during the initial set-up. If the password is not set, leave it blank. Then, click "OK".



9. The firmware update should start.



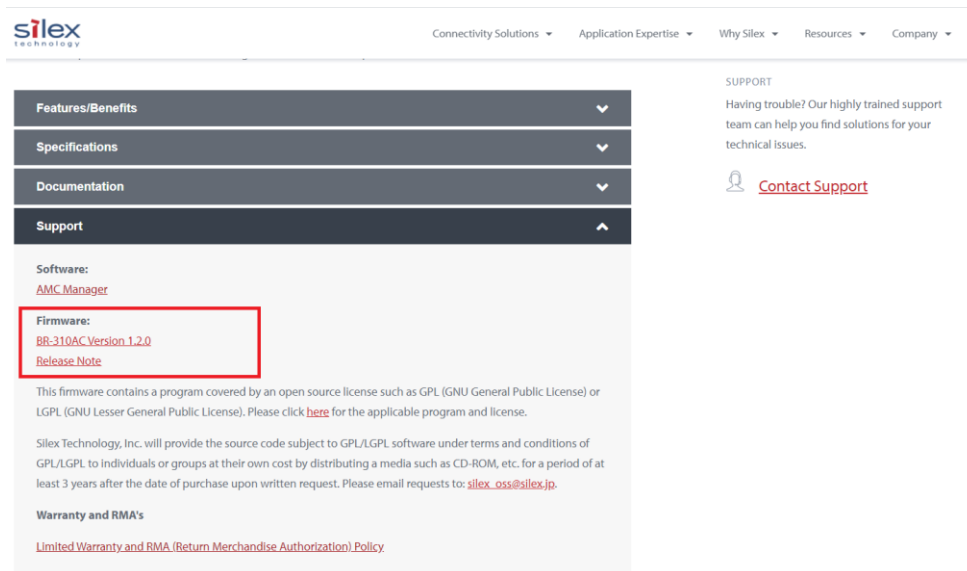
10. The Status becomes "Completed" once the firmware update is successfully completed.



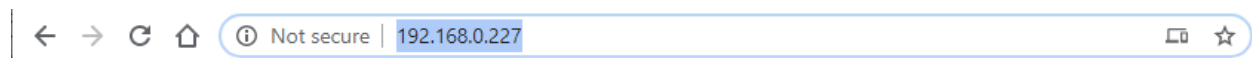
## Firmware Update using a Web Browser

If the IP address is known by configured static IP address, the firmware can be updated through a web browser.

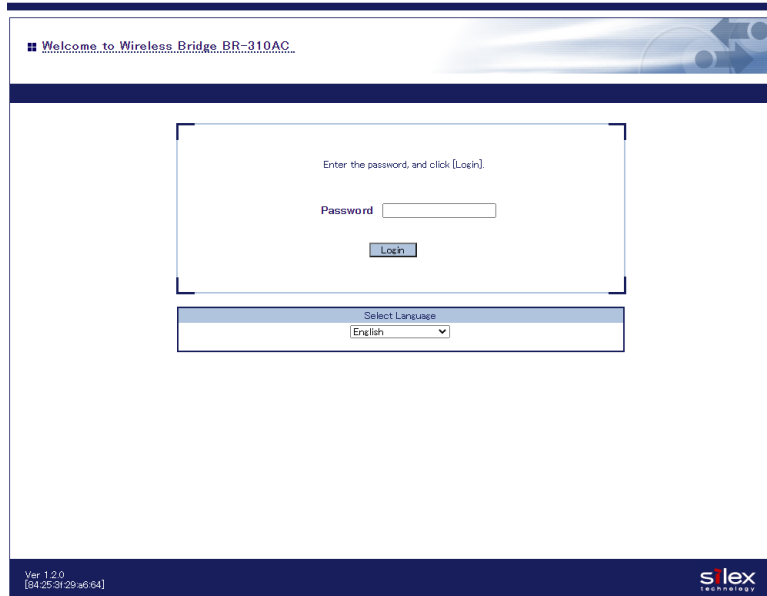
1. Download the firmware from "Support" or "Software and Support" tab in a product page.  
SX-BR-4600WAN2: <https://www.silextechnology.com/connectivity-solutions/device-connectivity/sx-br-4600wan2>  
BR-310AC: <https://www.silextechnology.com/connectivity-solutions/device-connectivity/br-310ac>  
BR-300AN: <https://www.silextechnology.com/connectivity-solutions/display-connectivity/br-300an>



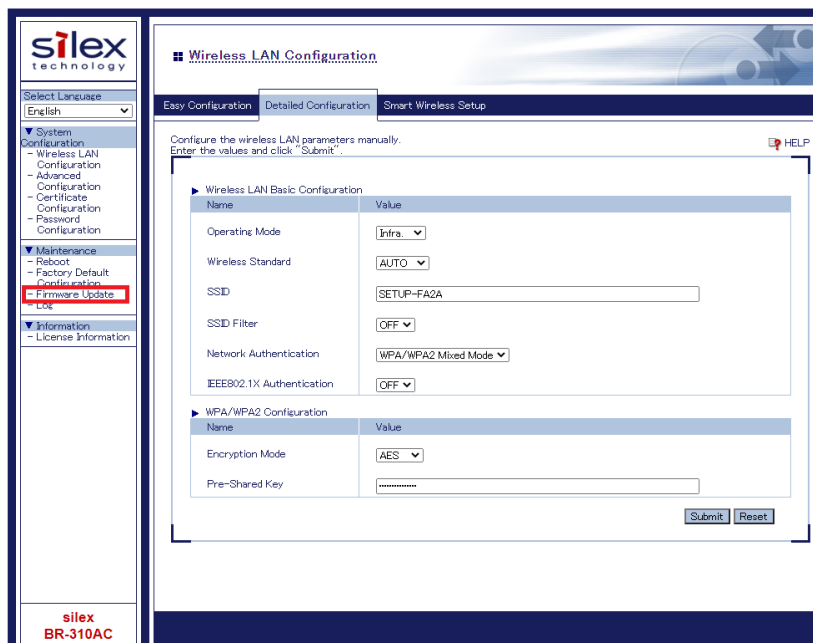
2. After downloading the firmware, extract the archive to a folder. After the archive is extracted, {product\_name}.bin file should be found in the folder.
3. On a web browser, type "http://{ip address}.



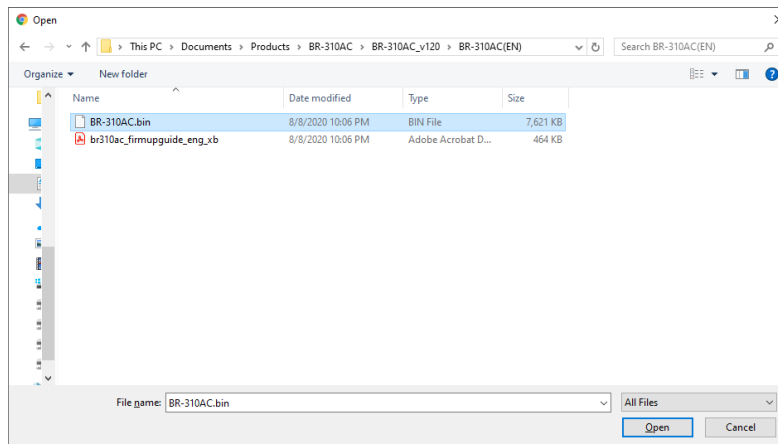
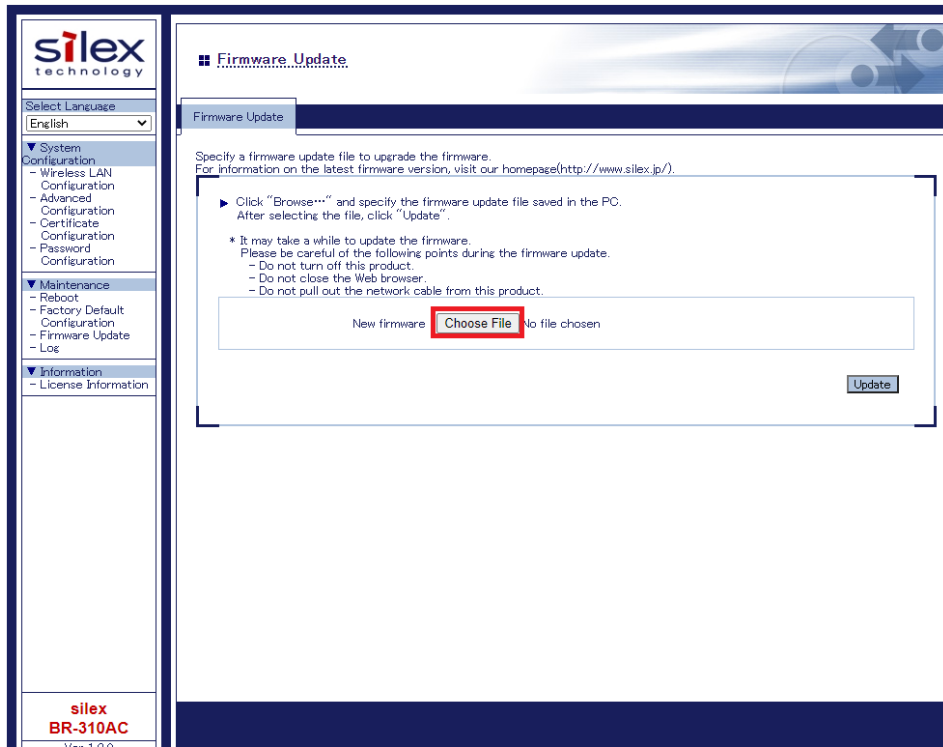
Then the configuration page will be appeared.



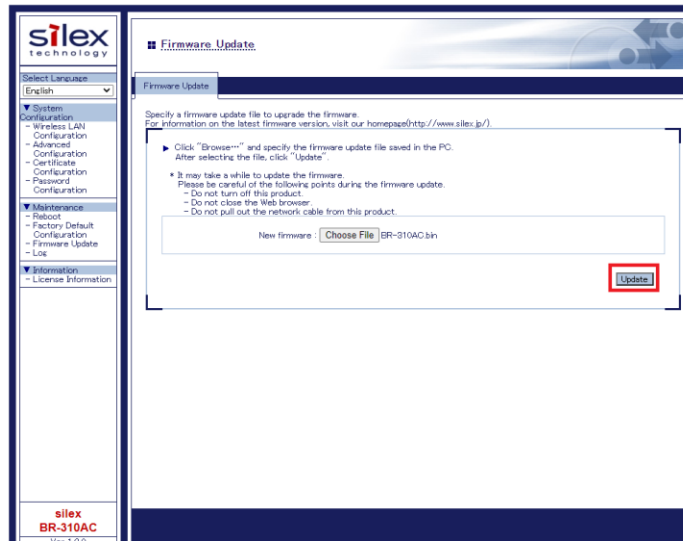
4. After logging in the device, "Firmware Update" is found as shown below.



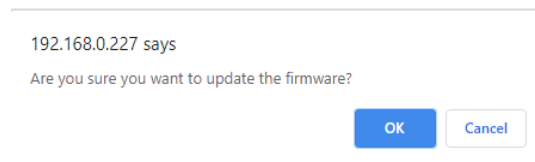
5. Once the "Firmware Update" page appears, click "Choose File" and select the {product name}.bin file which was downloaded from the BR-310AC product web page.



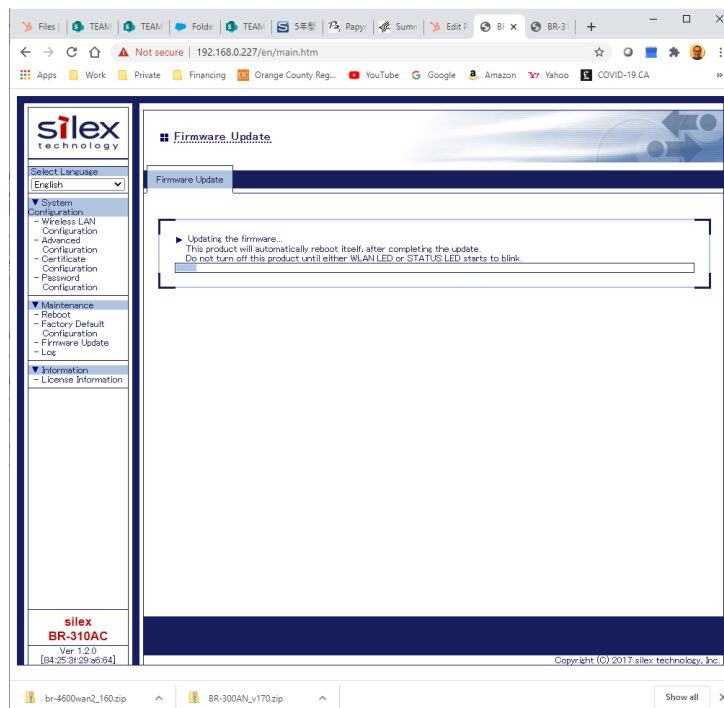
6. Once the firmware file is selected, click "Update".



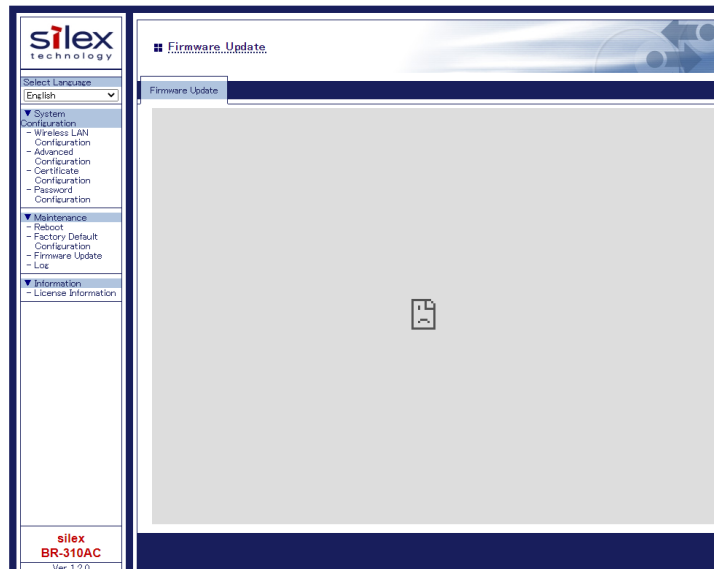
7. If the pop-up window appears, click "OK".



8. The firmware update should start.



9. After the firmware update is completed, the web page may indicate “{ip address} took too long to response” because the BR-310AC automatically restarts after the firmware update.



By refreshing the browser, the BR-310AC responds again and the proper page should appear.



## AMC Manager® Software for Remote Management

Silex offers our AMC Manager® software. It allows network administrators to manage a large number of Silex products from a Windows computer.

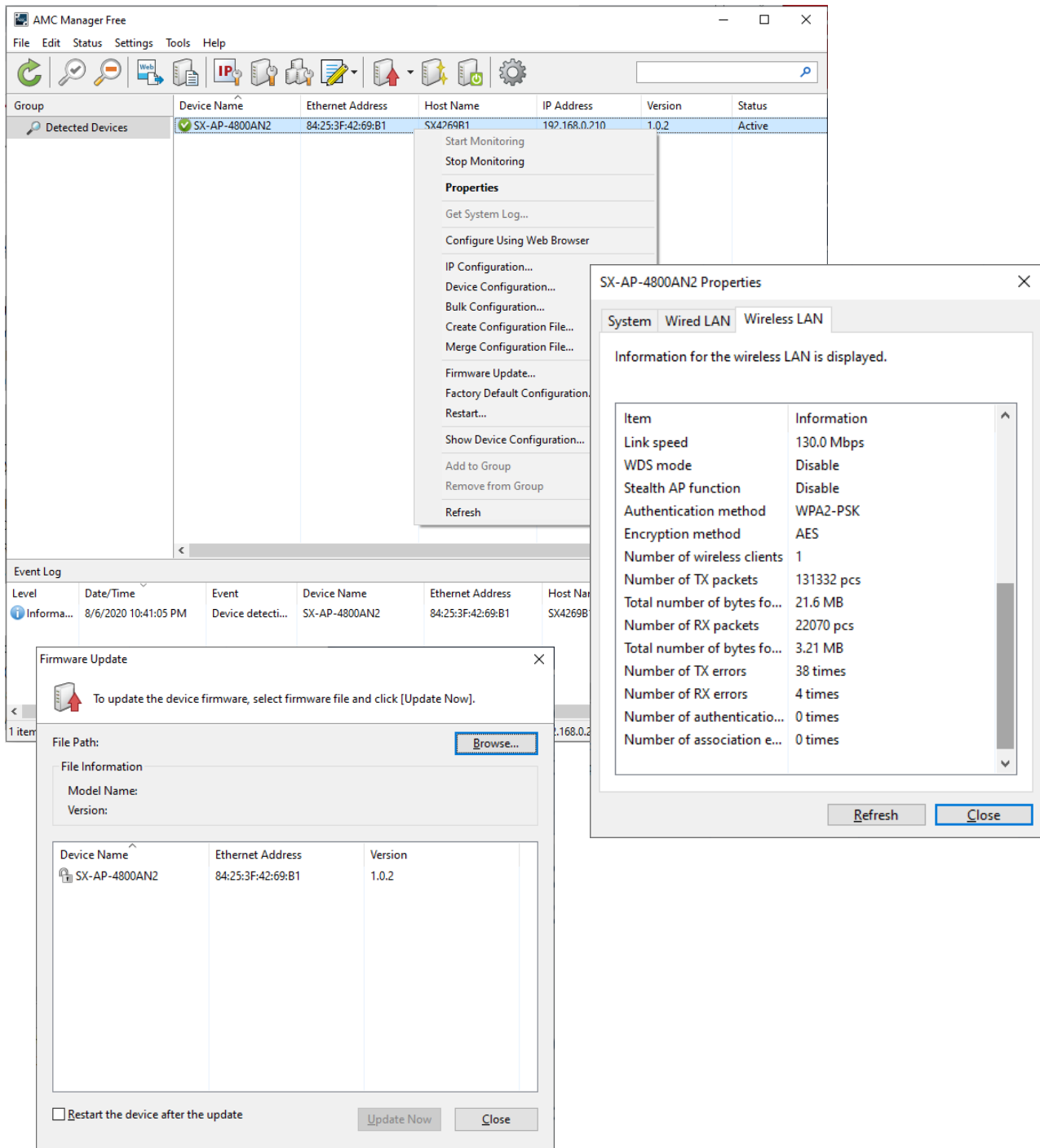
AMC Manager® software allows remote monitoring of Silex wireless products including RSSI value, noise level, number of DFS channels being used, and more that can help maintain a healthy wireless environment. It also enables users to easily configure, manage, and monitor Silex products connected to a wired or wireless network remotely including status monitoring, configuration changes, firmware update, and device rebooting. AMC Manager® optimizes operation management of multiple wired and wireless devices installed at multiple locations, detects issues early, and helps to reduce support costs for trouble shooting your network and wireless devices.



### Features:

- Integrated user interface listing of your Silex products on the network.
- Remote configuration and monitoring of wireless and network parameters including detailed wireless signal analysis of each node, RF channel usage, Wi-Fi and TCP/IP network settings, and more.
- Efficient batch configuration allowing configuration updates and firmware upgrades for multiple Silex products simultaneously.
- Currently compatible with: DS-600, DS-520AN, SD-330AC, SD-320AN, AP-500AC, AP 511AC, SX-AP-4800AN2, SX-AP-4800AN, FBR-100AN, BR-310AC, BR-300AN, SX-BR-4600WAN, BR-400AN, MNS-300EM, NX-1, and SX-590

**Supported OS:** Windows 7 SP1 (32bit / 64bit), Windows 8 (32bit / 64bit), Windows 8.1 (32bit / 64bit), Windows 10 (32bit / 64bit), Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, and Windows Server 2016



For more resources about AMC Manager®, please visit <https://www.silextechnology.com/connectivity-solutions/device-connectivity/amc-manager> or contact us <https://www.silextechnology.com/contact-us>.