

IEEE 802.11ah Wireless Bridge BR-100AH Setup Guide

Thank you for purchasing the Wireless Bridge BR-100AH. BR-100AH is a wireless bridge (station device) that supports IEEE 802.11ah (Wi-Fi HaLow™) and can connect your network device to IEEE 802.11ah-compatible Access Point. This Setup Guide explains how to configure and use BR-100AH in a wireless network.

silex
technology

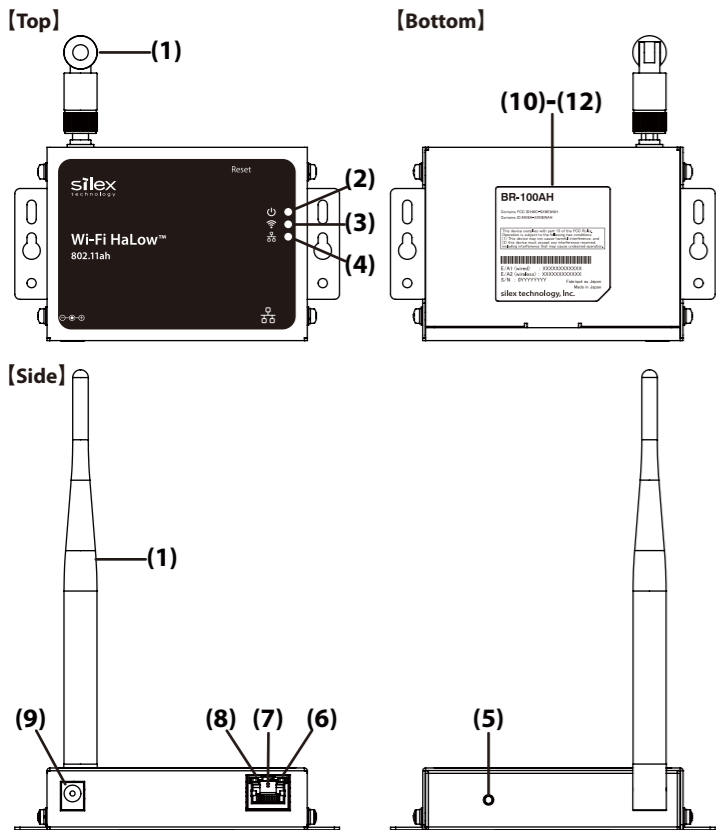
WA106510XX

Package Contents

Following items are bundled with BR-100AH.

- ☐ BR-100AH
- ☐ AC adaptor
- ☐ Wireless LAN antenna
- ☐ Rubber feet (4pcs)
- ☐ Network cable
- ☐ Setup Guide (this document)
- ☐ GPL license notice

Parts and Function



(1) Wireless LAN Antenna	Antenna for wireless communication
(2) Power LED ((U)) (Orange) (*)	ON: Powered on
(3) Wireless LED ((W)) (Yellow) (*)	ON: Has connected to an AP (host device). BLINK: Data communication is occurring.
(4) Wired LED ((W)) (Green) (*)	ON: Has connected to wired LAN.
(5) Push Switch	Press this switch for the following operations when BR-100AH is on. Initialization: Press and hold, and release the switch in 5 sec or longer. Restart: Press and hold, and release the switch in 5 sec or shorter.
(6) Status LED(Yellow)	Blinks while communicating in a wired LAN.
(7) Network Port	Connect a network cable.
(8) Link LED (Green)	Turns on when connected to a wired LAN.
(9) DC Connector	Connect an AC adaptor.
(10) E/A1 (wired)	Ethernet Address of the wired LAN
(11) E/A2 (wireless)	Ethernet Address of the wireless LAN
(12) S/N	Serial Number

(*) LED light pattern

All 3 LEDs (Power/Wireless/Wired LEDs) turn on when BR-100AH is started. Then, Wireless/Wired LEDs turn off in 1 sec, and start to turn on/blink as described in the above table.

Configuration Method

BR-100AH can be configured by the following methods:

- 1) Configuration Using BR-100AH's Web Page
- 2) Configuration Using AMC Manager®

When you have only one BR-100AH unit, see **Configuration Using BR-100AH's Web Page**.

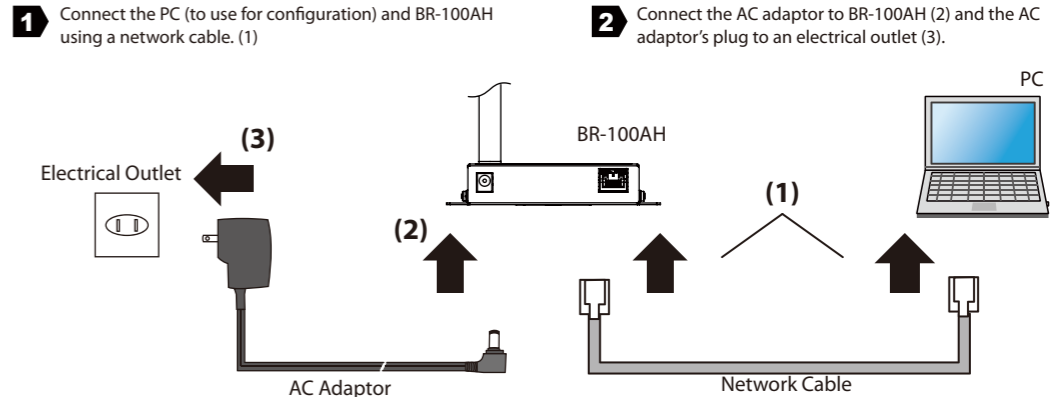
When you have multiple BR-100AH units, see **Configuration Using AMC Manager®** and configure them one by one.

Necessary Items

Following items are required.

- ☐ Network Cable
- ☐ PC to use for configuration

Connection to PC



Configuration Using BR-100AH's Web Page

Network Setting of PC

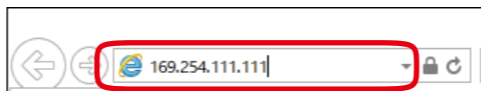
- 1 Change the network settings of the PC to allow accessing BR-100AH.

Example:
When BR-100AH has the factory default setting, the IP Address of BR-100AH is set to "169.254.111.111". Then, change the network settings of your PC as below:
- IP Address : 169.254.111.1
- Subnet Mask : 255.255.0.0

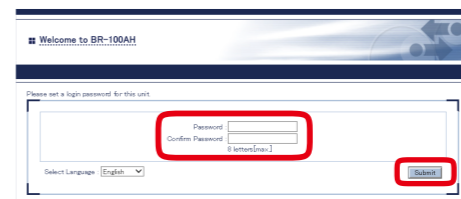
* Please be sure to set a unique address to your PC, that is not used by BR-100AH.
By default, BR-100AH has an IP Address of "169.254.111.111".

Access to BR-100AH's Web Page

- 2 Start a Web browser (Internet Explorer, Microsoft Edge, etc.) on the PC, enter the IP address of BR-100AH in the address bar and press the **ENTER** key.

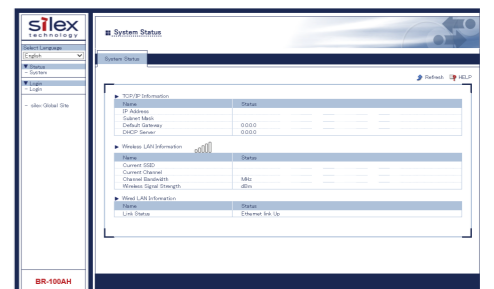


- 3 The login password configuration page is displayed. Enter the password to configure for BR-100AH and click **Submit**.



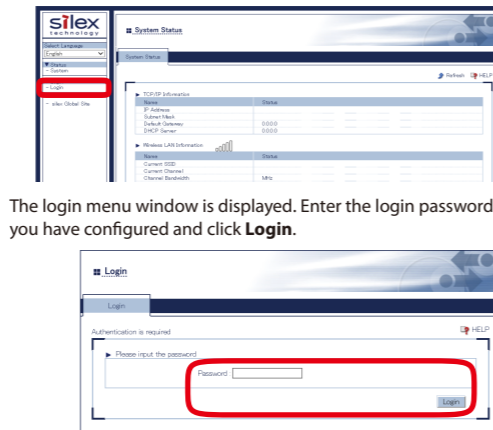
* The login password configuration page is displayed only when BR-100AH is configured for the first time.

- 4 The Web page of BR-100AH is displayed. Log into the Web page to continue the configuration.



Login Authentication

- 5 Click **Login** from the page menu.



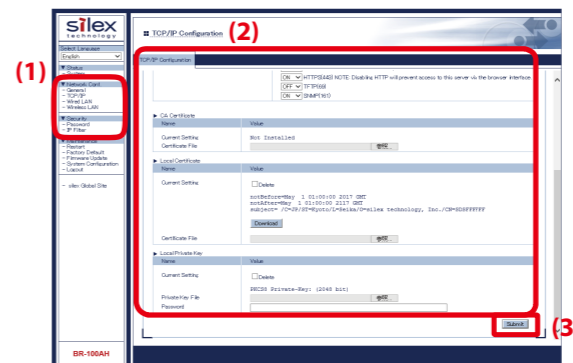
The login menu window is displayed. Enter the login password you have configured and click **Login**.

- 6 The login is completed.

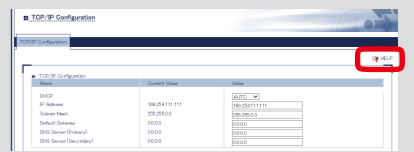


Basic Configuration

- 7 Click the setting from the page menu (1), enter the necessary settings at the displayed page (2) and click **Submit** (3).



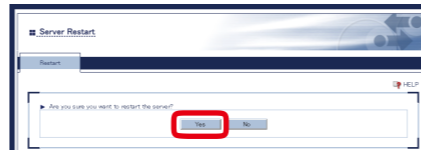
* For details on each setting, refer to the User's Manual or the Help page. Clicking **HELP** on top right of the page will open the Help page.



- 8 To take effect of the changes, restart BR-100AH. Click **Restart** from the page menu.



- 9 Click **Yes** to restart BR-100AH.



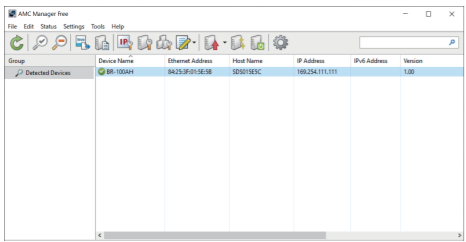
The configuration has now been completed.

Configuration Using AMC Manager®

* For the configuration, connect BR-100AH to the PC using a network cable, and configure it one by one.

Start AMC Manager®

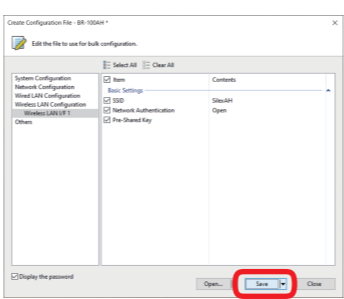
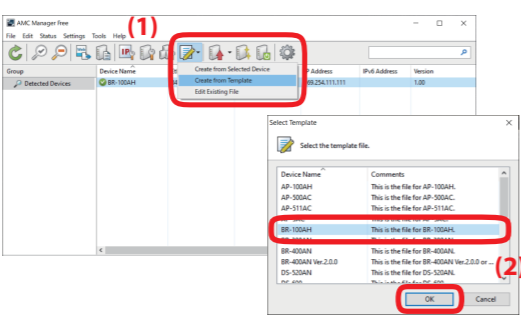
- 1
- Download AMC Manager® from the Silex Technology's website and install it to the PC.
Click **Start - silex Tools - AMC Manager**.
The AMC Manager will be started.



* In this document, AMC Manager® Free is used as an example, however, if you have a license key of AMC Manager® (non-free program), it can also be used for configuration.

Create Configuration File

- 2
- Create a configuration file using the template.
Click the icon **Create the configuration file** (📄) and click **Create from Template** from the toolbar (1).
In the **Select Template** window, select the device to configure and click **OK** (2).
- 3
- In the **Create Configuration File** window, check the check box of the items you want to use for the configuration file, edit the settings and click **Save**.
In the dialog to save the configuration file, specify the file name and click **Save**.



* When BR-100AH is used for the first time, the login password needs to be set.
* Change the following wireless settings of BR-100AH according to the Access Point to connect.
- SSID
- Network Authentication
- Pre-Shared Key

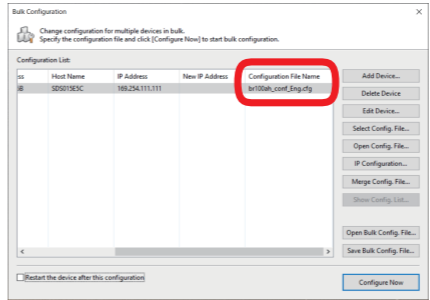
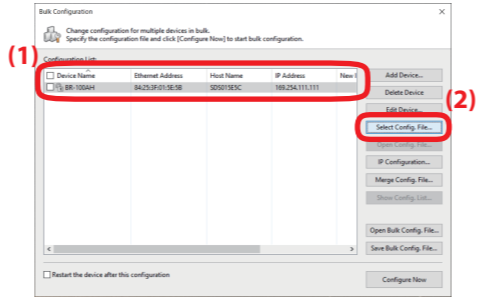
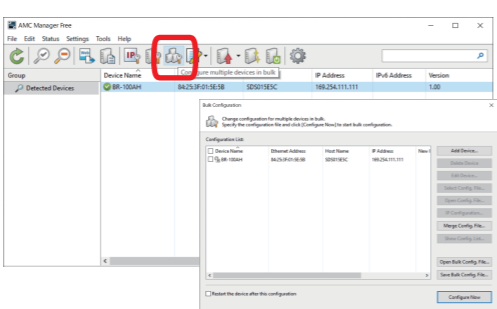
Connection to PC & Network Setting

- 4
- Connect BR-100AH to the PC and change the network setting of the PC according to the instructions given at **Connection to PC** and **Network Setting of PC** in the back page.
For the IP address to set to the PC, use the one communicable with BR-100AH.

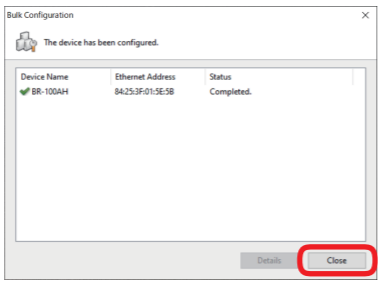
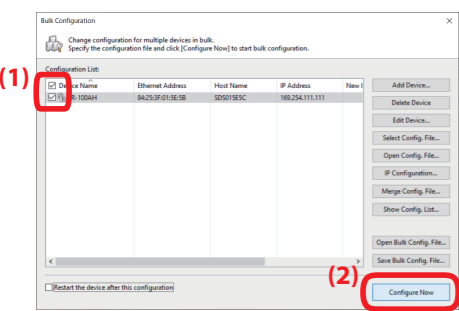
Example:
When BR-100AH has the factory default setting, the IP Address of BR-100AH is set to "169.254.111.111".
Then, change the network settings of your PC as below:
- IP Address : 169.254.111.1
- Subnet Mask : 255.255.0.0

Basic Configuration

- 5
- Select the BR-100AH unit to configure from the device list of AMC Manager®, and click the icon **Configure multiple devices in bulk** (👤).
- 6
- In the **Bulk Configuration** window, select the BR-100AH unit to configure from the **Configuration List** (1) and click the **Select Config. File** button (2).
When a file selection dialog appears, select the configuration file that you have created and click **Open**.
- 7
- The selected file is displayed at **Configuration File Name**.



- 8
- Check the check box of the BR-100AH unit to configure (1) and click **Configure Now** (2).
- 9
- The configuration performs and the result is displayed.
Click **Close**.
- 10
- When there are more BR-100AH units to configure, repeat the process of **4** to **9** and configure them one by one.



The configuration has now been completed.

FCC / ISED Notice



FCC Notice

BR-100AH
This device complies with Part 15 of 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.

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Santa Ana, CA 92707
USA
Phone: 657-218-5199

FCC CAUTION
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Contains FCC ID:N6C-SXNEWAH

FCC Rules Part 15 Subpart B
Note: 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 or more 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.

RF exposure compliance
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

Co-Location Rule
This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Antennas
To prevent violation of the law, do not use antennas other than those provided or specified by Silex Technology.

ISED Notice

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:
1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Contains IC: 4908A-SXNEWAH

RF exposure considerations
This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.
Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

Antenna Type
This radio transmitter (4908A-SXNEWAH) has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna type	Gain	Impedance
Rod Antenna	3.4dBi	50ohms

Le présent émetteur radio (4908A-SXNEWAH) a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Type d'antenne	Gain	l'impédance
Antenne à tige	3.4dBi	50ohms

How to Download AMC Manager®

AMC Manager® can be downloaded from the Silex Technology's website.
Access the URL below to download it.

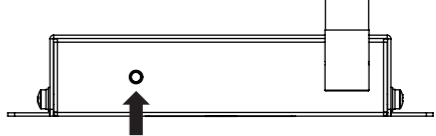
<https://www.silextechnology.com/>

- 1
- When the website is displayed, click **Support** from the top menu.
- 2
- Click **Software Download**.
- 3
- In the **Software Download** page, click **AMC Manager®**.
- 4
- Download AMC Manager®.

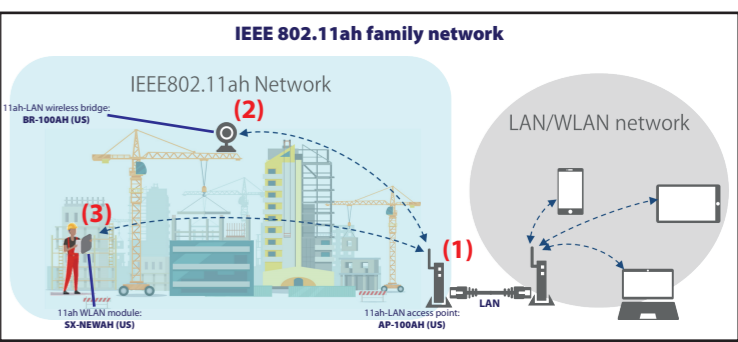
Factory Default Configuration

Follow the instructions below to reset BR-100AH to the factory default setting.

- 1
- Press and hold the push switch of BR-100AH and release it in 5 sec or longer to start the factory default configuration.
When the factory default configuration is finished, BR-100AH will automatically be restarted. After the restart, all 3 LEDs on the top surface will turn on, and then the Wireless/Wired LEDs will turn off once.



IEEE 802.11ah Product Lineup and Installation Image



- (1)
- AP-100AH: IEEE 802.11ah-compatible Access Point
- (2)
- BR-100AH: IEEE 802.11ah-compatible wireless bridge
- (3)
- SX-NEWAH: IEEE 802.11ah-compatible wireless LAN module

Trademarks

- AMC Manager® is a registered trademark of Silex Technology.
- Wi-Fi HaLow™ is a trademark of Wi-Fi Alliance.
- Company names and product names contained in this document are trademarks or registered trademarks of their respective companies.

Customer Support Center

Silex Technology will support you by e-mail and phone to solve your problems.

Customer Support Center information

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