

Wireless Bridge SX-BR-4600WAN Setup Guide

Thank you for purchasing the Wired LAN-to-Wireless LAN bridge, Wireless Bridge SX-BR-4600WAN (hereinafter, "This product").

This product is the wireless bridge which can add a wireless connection feature to non-wireless devices with a 10/100/1000BASE-T wired LAN interface. In addition to printers with a wired LAN port, various devices such as surveillance cameras, etc. can easily be connected to a wireless LAN. Also, wireless security feature of this product will allow secure use of your network devices.

This Setup Guide explains how to setup and use this product in a wireless network.

silex
technology



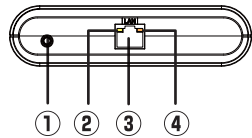
Package contents

Following items are bundled with this product.

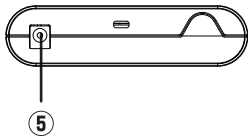
- ☐ Wireless Bridge SX-BR-4600WAN
- ☐ Power supply
- ☐ Network cable
- ☐ Setup Guide (this document)
- ☐ Warranty booklet
- ☐ GPL license notice (Distribution of source code licensed under the open source software license)

Parts and function

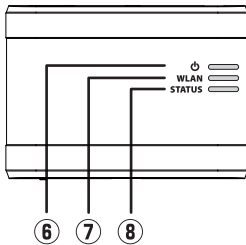
FRONT



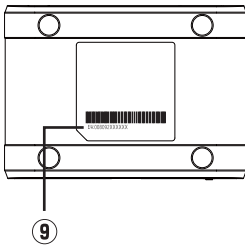
BACK



TOP



BOTTOM

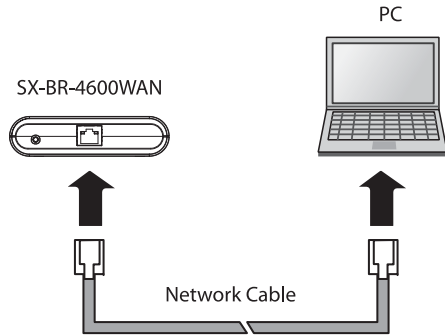


⑥ POWER LED (Orange)	Turns ON when this product is powered on.
⑦ WLAN LED (Green)	ON : Running in Infrastructure mode. OFF : Running in Ad hoc mode. BLINK : Processing setup using the WPS feature * Blinks together with STATUS LED when running in Configuration Mode .
⑧ STATUS LED (Green)	ON : A network connection is established. BLINK : Transferring data. * Blinks together with WLAN LED when running in Configuration Mode .
⑨ Ethernet address	The Ethernet (MAC) Address of this product is found on the bottom. The last 6 digits are the product's serial number. Example) If the Ethernet Address is 00:80:92:00:11:22 (noted as 008092001122) then the product's serial number is 001122.

Configuration Method 1 - Setup Using Configuration Mode

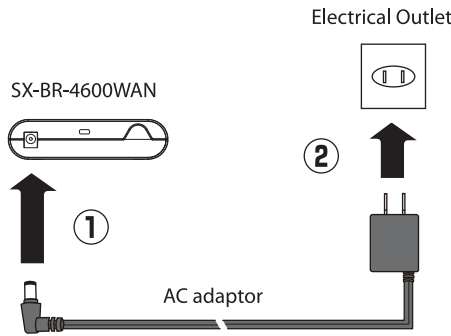
Step1 Start in Configuration Mode

- 1 Connect this product to the PC using the network cable that came with this product.



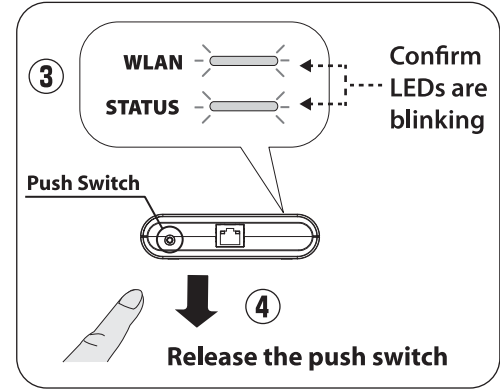
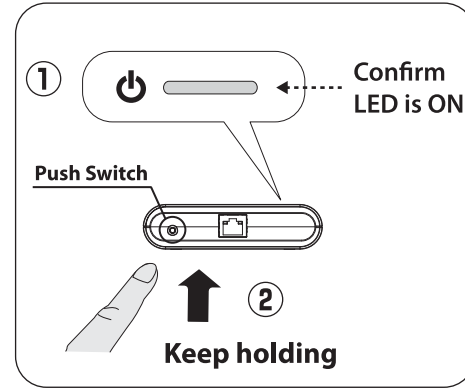
2

- 2 Connect the AC adapter to this product, and the AC adapter's plug to an electrical outlet.



3

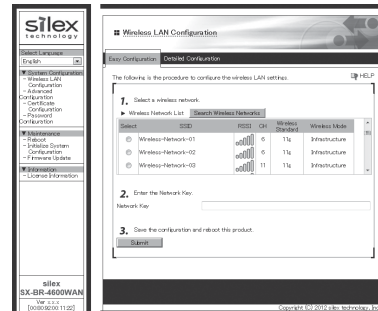
- 3 When the POWER LED (at the top) turns ON, press and hold the push switch (at the front). Release the push switch when WLAN LED and STATUS LED start to blink together (It may take 20sec until blinking). This product will start running in the **Configuration Mode** then. Now you can configure this product from the PC that has been connected to this product via a network cable.



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

Step2 Setup

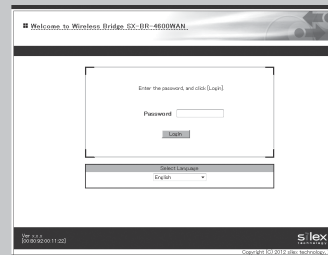
- 1 Start a Web browser (Internet Explorer, Safari, etc) on the PC you are using for the setup. The Web page of this product is displayed.



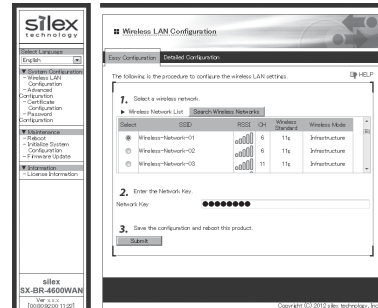
* If the Web page is not displayed, enter "silex" in the address bar of the Web browser and press the **Enter** key.



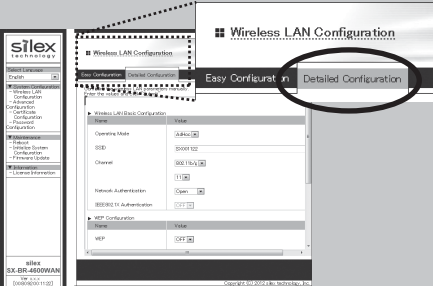
* If a password is set to this product, a password entry screen is displayed. Enter the password and click **Login**.
* This screen is not displayed at the initial setup. Go on to **2** then.



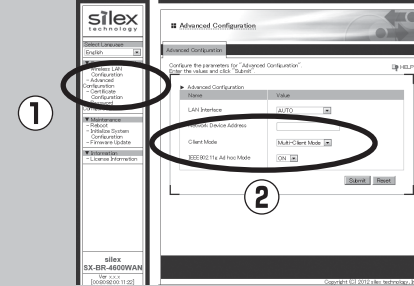
- 2 In the Web page, select the destination network from the **Wireless Network List** and enter the WEP Key or Shared Key for the **Network Key**. Click **Submit** when finished.



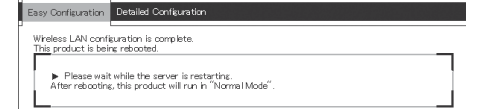
* If the destination network is not displayed in the **Wireless Network List**, click **Detailed Configuration** at the top of the page. In the page displayed, enter the wireless settings of the network that you wish to connect this product to, and click the **Submit** button. Refer to the HELP for details on each setting.



* To connect multiple network devices using an Ethernet HUB, click **Advanced Configuration** and select **Multi-Client Mode** for **Client Mode**.



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

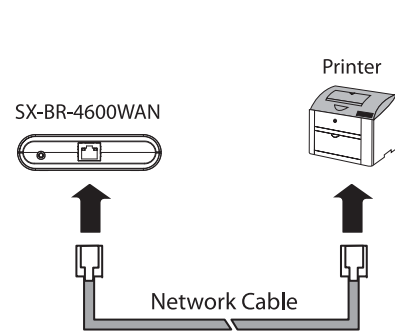


- 4 The configuration has now been completed. To give a wireless feature to the same PC (the one you have been using for configuration), please restart the PC.
To give a wireless feature to the other device, turn off both this product and the PC, and remove this product from the PC. Refer to **Step3** to connect this product to the network device using a network cable.

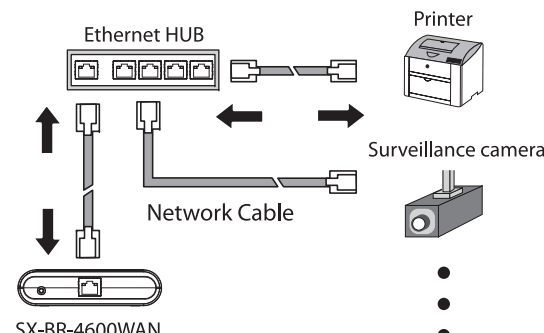
Step3 Connect to the network device you wish to use wirelessly

- 1 Turn off the network device that you wish to use wirelessly via this product. Connect it to this product using the network cable.

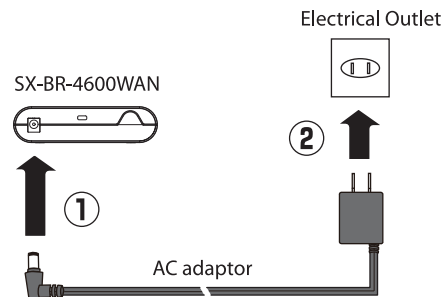
Sample connection in Single Client Mode



Sample connection in Multi-Client Mode



- 2 Connect the AC adaptor to this product and the AC adapter's plug to the electrical outlet.



- 3 Turn on the network device connected to this product.

* Some network devices may require additional network settings. In such cases, refer to the manual that came with the network device.
* When turning on this product and network devices, be sure to turn on this product first. Also, do not press the push switch then.

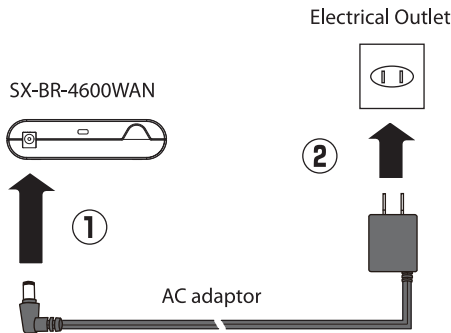
Configuration Method 2 - Easy Setup Using WPS Feature

This product allows you to configure its wireless settings easily using a push switch if your wireless router supports WPS (Wi-Fi Protected Setup). How to configure wireless settings using the push switch is explained below.

! NOTE

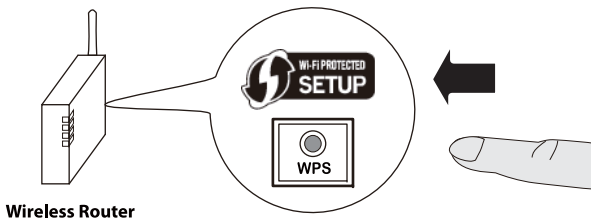
- To perform the wireless configuration using WPS, your wireless router must support WPS. Please make sure that a wireless router supporting WPS is set up in your environment.
- While performing this configuration, please temporarily move this product closer to your wireless router to make it easier for both devices to communicate.
- Depending on your wireless router, WPS may need to be enabled manually. 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 this product can communicate with your wireless router.
- If you plan to connect two or more network devices to this product using an Ethernet Hub, please go back to **Configuration Method 1 - Setup Using Configuration Mode**. The **Client Mode** can be configured only when this product is running in **Configuration Mode**.

1 Connect the AC adapter to this product, and the AC adapter's plug to an electrical outlet.



- It is not necessary to connect a network cable to this product.

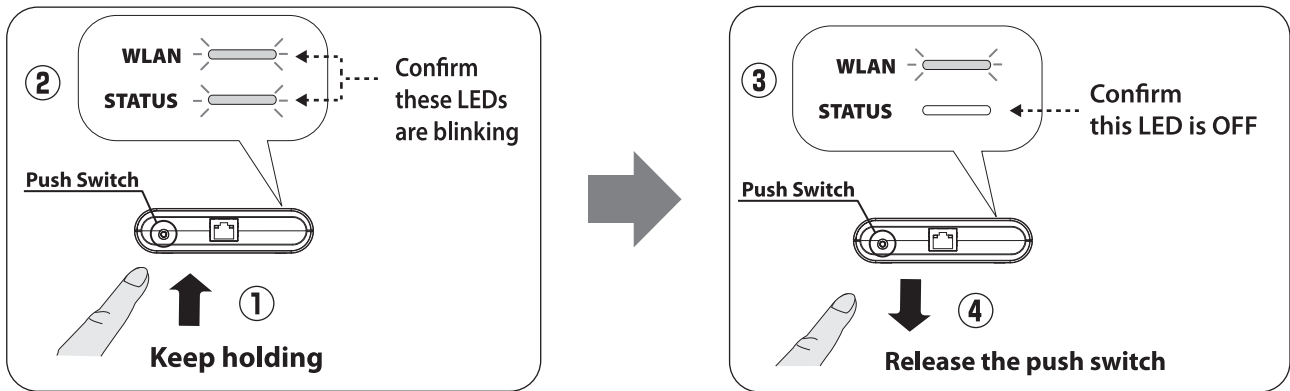
2 Press the WPS button on your wireless router. Confirm that your wireless router is ready for a wireless connection to be made.



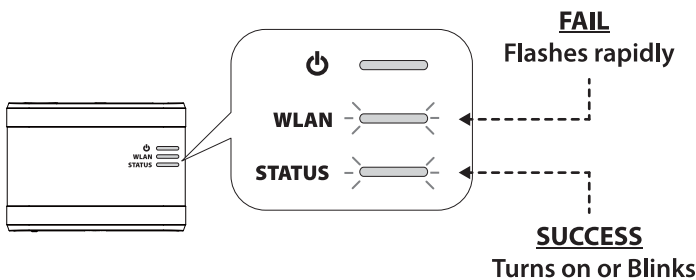
Wireless Router

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

3 Press and hold the push switch (at the front). The WLAN LED and STATUS LED will start to blink together. Release the push switch when the STATUS LED turns off while the WLAN LED keeps blinking (it may take 15sec for the STATUS LED to turn off after both LEDs started blinking).



4 This product will start to communicate with your wireless router. The WLAN and STATUS LED's lighting pattern will show you if the wireless configuration succeeded or failed.



- It may take a while to complete the wireless configuration depending on your environment (up to 2 min).

Initialize System Configuration

Initialize the system information configured to this product and reset it to the factory default settings.

- (1) Disconnect the AC plug of this product from the electrical outlet.
- (2) While reconnecting the AC plug to this product, press and hold the push switch at the front of this product. Keep pressing and the factory default configuration will begin.
- (3) When Link LED on a LAN port turns to Orange and then Green, the factory default configuration is complete. Release the push switch.

Safety instructions

To ensure safe and proper use, please read the following information carefully before using this product. The safety instructions include important information on safe handling of the product and on general safety issues. Cautions regarding the device connected to this product are also included.

[Danger]

"Danger" indicates the existence of a hazard that could result in bodily injury if the safety instruction is not observed.

- Do not allow physical impact: When damaged, unplug this product and the device from power and contact your point of purchase. Failure to take this action could cause fire or an electrical shock.
- If this product becomes hot, or you smell smoke, turn off the device, disconnect the power plug from this product, and then unplug the power cable from electric outlet immediately. If a foreign object (liquid, metal) gets into this product, turn off the device, disconnect the power plug, and then unplug the power cable from electric outlet immediately.
 - Failure to take this action could cause fire or an electrical shock.
 - Contact your point of purchase about repairing this product.
- Keep the cord and cables away from children. They may be injured or receive a shock.
- If the device has a ground wire, it must be used to prevent electrocution and power surges.
- Do not disassemble or modify this product. Contact your point of purchase about repairing this product.
- Do not disassemble or alter the AC adapter bundled with the product.

[Warning]

"Warning" indicates the existence of a hazard that could result in material damage if the safety instruction is not observed.

- When unplugging this product or a device, do not pull on the cord. The cord may break resulting in fire and/or electric shock. Pull only on the plug.
- When moving this product, disconnect the power and device cables. Fire or electric shock may occur.
- Always use the AC adapter bundled with this product. Other AC adapters may cause this product to malfunction.
- Verify all cables are properly and safely before using this product.
- When the product will not be used for an extended time, disconnect and unplug the power cable.
- Do not allow physical impact: When damaged, unplug this product and the device from power and contact your point of purchase. Failure to take this action could cause fire or an electrical shock.
- Do not use or store this product under the following conditions to avoid potential damage to this product.
 - [Prohibited]
 - Hard vibrations
 - Tilted or unstable places
 - Exposure to the direct rays of the sun
 - Humid or dusty places
 - Wet place (kitchen or bathroom)
 - Heated places (near stove or heater)
 - Wide temperature change
 - Strong electromagnetic field (near magnet, radio or wireless device)

Safety instructions regarding the radio waves

Please note the following instructions:

- Do not use this product near medical devices such as a heart pacemaker. The radio wave generated by this product may interfere with the operation of these devices and may threaten one's life.
- Do not use this product near microwave ovens. The radio wave used by microwave ovens may cause interference to this product.

Notes on wireless devices using 2.4GHz band:

This product uses a 2.4GHz band. This band of equipment is used by a microwave, industry, science, medical equipment and licensed in room or low power (non licensed) radio stations.

1. Before you use this equipment, verify that it will not interfere with other broadcasting.
2. If interference happens, stop using the equipment or change the band. Contact us to discuss ways of avoiding interference (example: create the wall).

Notes on using 5GHz band:

This product uses a 5GHz band. This product does not support Ad hoc mode when it is running in 5GHz band.

Notes on Security

Because a wireless LAN uses electromagnetic signals instead of a network cable to establish communication with network devices, it has the advantage of allowing devices to connect to the network easily. However, a disadvantage of this is that within a certain range, the electromagnetic signals can pass through barriers such as walls, and if security countermeasures are not implemented in some way, problems such as the following may occur.

- Communication is intercepted by a third party
- Unauthorized access to the network
- Leakage of personal information (ID and Card information)
- Spoofing and the falsification of intercepted data
- System crashes and data corruption

Nowadays, wireless LAN cards or access points are equipped with security measures that address such security problems, so that you can enable security-related settings for wireless LAN products in order to reduce the likelihood of problems occurring.

We recommend that you make yourself fully acquainted with the possible implications of what might happen if you use a wireless product without enabling security features, and that you configure security-related settings and use wireless products at your own responsibility.

About trademarks

- Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- AirMac, AirPort, Macintosh, Mac OS and Safari are registered trademarks of Apple Inc.
- Other brand or product names are registered trademarks or trademarks of their respective owners.

About OpenSSL license

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. For details, refer to **License Information** in the Web page.

User registration

After finishing the configuration for this product, please go on to the user registration on our home page. User registration is highly recommended to assure you better support for your product. For user registration, please visit our web site at:

Global Site;	http://www.silex.jp/register/
USA Site;	http://www.silexamerica.com/us/regist/index.html
Europe Site;	https://www.silexeurope.com/euro/regist/index.html

* For user registration, a "Serial Number" is required.
The serial number is the last 6 digits of the Ethernet Address that can be found on the bottom.

Wireless Bridge SX-BR-4600WAN Specifications

Operating environment	Temperature : +0 C to +40 C , +32 F to +104 F Humidity : 20% to 80%RH (Non-condensing)	
Storage environment	Temperature : -10 C to +50 C , +14 F to +122 F Humidity : 20% to 90%RH (Non-condensing)	
EMI	VCCI Class B / FCC Class B / ICES Class B / EN301489-1/-17 (EN55032 Class-B)	
Wired network interface	10BASE-T/100BASE-TX /1000BASE-T (Auto-sensing) x 1 port Auto MDI/MDIX	
Wireless network interface	IEEE802.11 a/b/g/n (2Tx2R) (For channels you can use, check the regulations in your country.)	
Push Switch	1	
LED	Top	POWER (Orange) WLAN (Green) STATUS (Green)
	LAN port	Status (Yellow) Link (Green/Orange)
Supported devices	Network devices with a network port (RJ-45) on them	
Max number of devices that can be connected	Single Client Mode: 1 device / Multi-Client Mode: 16 devices	

FCC / IC Notice



Federal Communication Interference Statement (United States only)

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, it 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.

This radio module and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter.

Canadian Department of Communications Industry Canada Notice (Canada only)

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC Rules, Part 15 / Industry Canadian

This device complies with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
This device may not cause harmful interference, and
This device must accept any interference, including interference that may cause undesired operation of this device.

Le présent appareil est conforme aux la partie 15 des règles de la FCC et CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
l'appareil ne doit pas produire de brouillage, et
l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated with the radiator at least 20cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles les radioélectriques (RF) de la FCC lignes directrices d'exposition dans le Supplément C à OET65 et d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps (à l'exception des extrémités : mains, poignets, pieds et chevilles).

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This radio transmitter 4908B-SXPCEAN has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio 4908B-SXPCEAN a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

For product available in the USA/Canada market, only channels 1~11 can be operated. Selection of other channels is not possible. If this device is to be operated in the 5.15~5.35GHz frequency range, it is restricted to indoor environment only.

Antenna information: Sleeve Antenna: 1.5dBi (2.4GHz), 2.1dBi (5GHz)
Frequency Tolerance: +/-20ppm

WARNING:

The FCC / Industry Canada regulations provide that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Notice



Customer Support Center

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

Customer Support Center information

	Phone	E-mail
USA	+1-801-748-1199	support@silexamerica.com
Europe	+49 (0)2154-88967-0	support@silexeurope.com
Japan	+81-(0)774-98-3981	support@silex.jp