

Wireless Access Point for Industrial Devices

AP-415AN

User's Manual



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1. Introduction

1-1. Introduction

About Notation

This manual uses the following symbols to indicate specific information for operating AP-415AN.

Be sure to carefully review before using AP-415AN.



: This symbol indicates important information that needs to be observed when operating AP-415AN. Make sure to read this information for safe and proper use.



: This symbol indicates information that is useful when using AP-415AN. If you experience difficulties operating AP-415AN, please refer to this information first.

Disclaimers

- * In this manual, screenshots captured from Windows 10 are used as example. Actual screens or menu items may vary depending on the version of your operating system.
- * The unauthorized transfer or copying of the content of this manual, in whole or in part, without prior written consent is expressly prohibited by law.
- * The content of this manual is subject to change without notice.
- * This manual was prepared to accurately match the content of each OS, but the actual information shown on the computer monitor may differ from the content of this manual due to future OS version upgrades, modifications, and other changes.
- * Although every effort was made to prepare this manual with the utmost accuracy, Silex Technology will not be held liable for any damages as a result of errors, setting examples, or other content.

Trademarks



- * Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * Other brand or product names are registered trademarks or trademarks of their respective owners.

1-2. Safety Instructions







This page provides the safety instructions for safe use of AP-415AN.

To ensure safe and proper use, please read the following information carefully before using AP-415AN. The safety instructions include important information on safe handling of AP-415AN and on general safety issues.

< Indication of the warning >

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

< Indication of the symbol >

	This symbol indicates the warning and notice. (Example:  "Danger of the electric shock")
	This symbol indicates the prohibited actions. (Example:  "Disassembly is prohibited")
	This symbol indicates the necessary actions. (Example:  "Remove the AC plug from an outlet")



Warning

	<ul style="list-style-type: none"> * In the following cases, turn off the connected devices and unplug the AC plug of this product from a power outlet. Failure to follow these instructions may cause fire or an electrical shock. <ul style="list-style-type: none"> - When this product emits a strange smell, smoke or sound or becomes too hot to touch. - When foreign objects (metal, liquid, etc.) gets into this product. - When this product is dropped or the case is broken or cracked.
	<ul style="list-style-type: none"> * Do not disassemble or modify this product. It may cause fire, electrical shock or malfunction. * Do not disassemble or modify the AC adaptor that came with this product. It may cause fire, electrical shock or malfunction.
	<ul style="list-style-type: none"> * Do not cover up the vents on this product. The temperature inside may rise and cause fire or malfunction. * Do not place any objects on top of this product. It may cause fire, electrical shock or malfunction. * Do not place any objects on top of this product. It may cause fire, electrical shock or malfunction. * Do not roll up or wrap the AC cord. It may cause fire or an electrical shock. * Do not plug or unplug the AC adaptor or any other cables with wet hands. It may cause an electrical shock or malfunction. * Keep the small parts out of reach of young children. If these are swallowed, consult a doctor immediately.
	<ul style="list-style-type: none"> * For use of the devices connected to this product, please follow all warnings, cautions and notices given by that manufacturer and carefully use them in a proper manner. * Failure to follow these instructions may cause fire, electrical shock or malfunction. * Use the correct power voltage. Improper voltage may cause fire or an electrical shock. * If a ground wire is supplied with your device to use with, connect it to the ground terminal in order to prevent an electrical shock. Do not connect the ground wire to gas pipe, water pipe, lighting rod or telephone ground wire. It may cause malfunction. * Keep the cords and cables away from children. It may cause an electrical shock or serious injury.



Caution



- * Use the AC adaptor supplied with this product. Other AC adaptors may cause malfunction.
- * Do not place any objects on the cable or bend, twist, or pull it excessively.
- * Do not use or store this product under the following conditions.
- * It may cause malfunction.
 - Locations subject to vibration or shock
 - Shaky, uneven or tilted surfaces
 - Locations exposed to direct sunlight
 - Humid or dusty places
 - Wet places (kitchen, bathroom, etc.)
 - Near a heater or stove
 - Locations subject to extreme changes in temperature
 - Near strong electromagnetic sources (magnet, radio, wireless device, etc.)



- * Do not pull on the cord to disconnect the plug from the power supply. The cord may be broken, which could result in fire or an electrical shock.
- * Follow the law of each country when you discard this product.
- * Verify all codes or cables are plugged correctly before using this product.



- * When this product will not be used for a long time, unplug the power cables of this product and the other devices you are using with it.
- * When removing this product, disconnect the AC plugs of both this product and the other devices you are using with it.

1-3. User Registration and Customer Services

User Registration

To enable us to provide better services (support and repair), please perform the user registration process from our website below:

URL	
China	http://www.silex.com.cn/contact/support.aspx

**TIP**

* Be sure to complete the user registration or otherwise, Silex Technology may not be able to provide the technical support and repair services.

**Note**

* For user registration, a serial number is required. The serial number is a last 6-digit number of the Ethernet Address (12-digit number) which can be found on bottom of the product. (e.g. If the Ethernet Address is "84:25:3F:00:11:22", it would be noted as "84253F001122" and then the serial number is "001122".)

Services

The services below are available from the Silex Technology website. For details, please visit the Silex Technology website.

- * Latest firmware download
- * Latest software download
- * Latest manual download
- * Support information (FAQ)

URL	
Japan	http://www.silex.com.cn/

Customer Support Center

Customer Support is available by e-mail or telephone for any problems that you may encounter. If you cannot find the relevant problem in this manual or on our website, or if the corrective procedure does not resolve the problem, please contact Silex Technology Customer Support.

Contact Information		
China	+86-(10)64403958	support@silex.com.cn

2. Specifications

2-1. Package Contents

Package Contents

AP-415AN



Stand



Connector caps

(Already attached to AP-415AN. Use them to cover up the connector and switch interfaces.)



LAN port caps x 3



DC connector cap x 1



USB port cap x 1



DIP switch cap x 1

Screw to fix the unit x 4

Use them to attach AP-415AN to the stand.



Declaration of Conformity

Warranty booklet

Setup Guide (I) (for Installation)

Setup Guide (II) (for Configuration)

China RoHS note

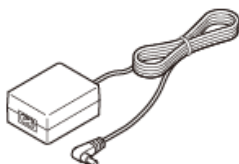
GPL note

Option

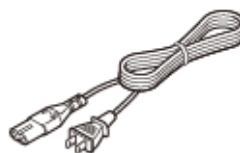
The following AC adaptors and power codes are sold separately.

Destination: Indonesia, China, Japan, Europe

AC adaptor

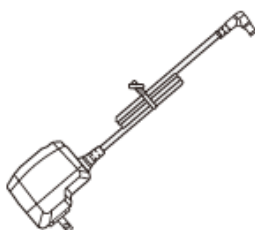


Power code



Destination: United States

AC adaptor

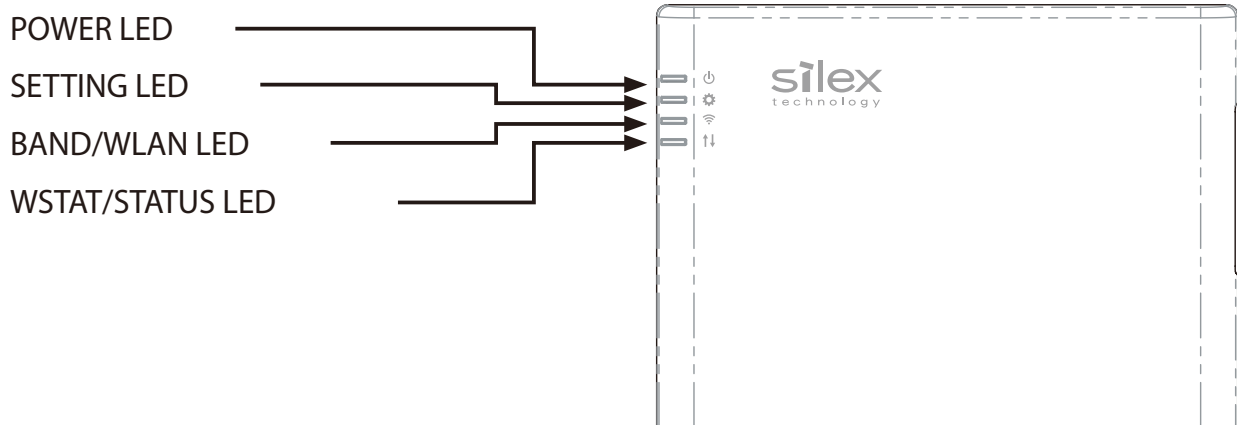


2-2. Parts and Functions

The part name and function are as follows.

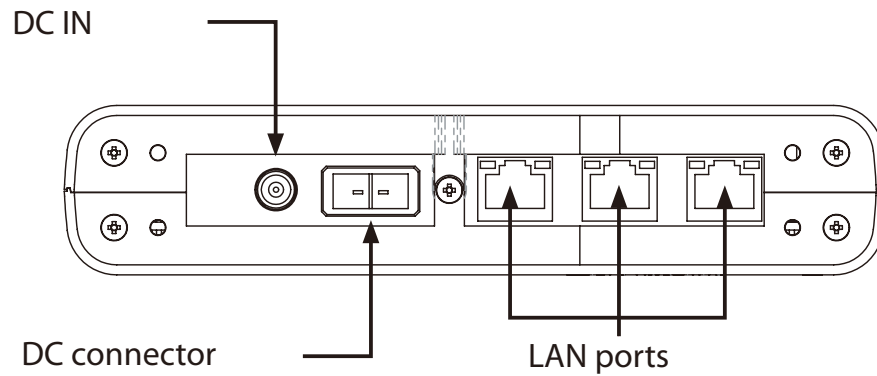
2-2-1. AP-415AN Unit

Side

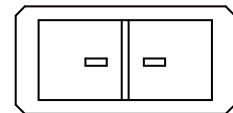
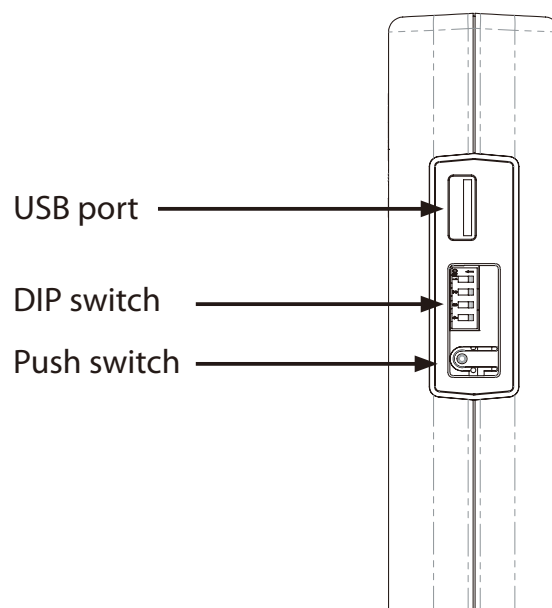


Each LED turns on/off or blinks depending on the operating status.

Name	Color	State	Details	Mode	
				AP	RP
POWER LED	Green	On	Power-on process completed	┐	┐
		Blink	Power-on in progress	┐	┐
	Red	Blink	Loop is detected	┐	┐
SETTING LED	Orange	Off	Operating normally	┐	┐
		Blink	Configuration in progress	┐	┐
BAND/WLAN LED	Green	On	Operating in 2.4GHz band	┐	-
		On	Link is established	-	┐
	Orange	Blink	Trying to connect to AP(not connected yet)	-	┐
		On	Operating in 5GHz band	┐	-
WSTAT/STATUS LED	Green	Blink	Turning on/off for every 100 msec when the packet is sent/received	┐	┐
	Orange	Blink	DFS in progress	┐	┐

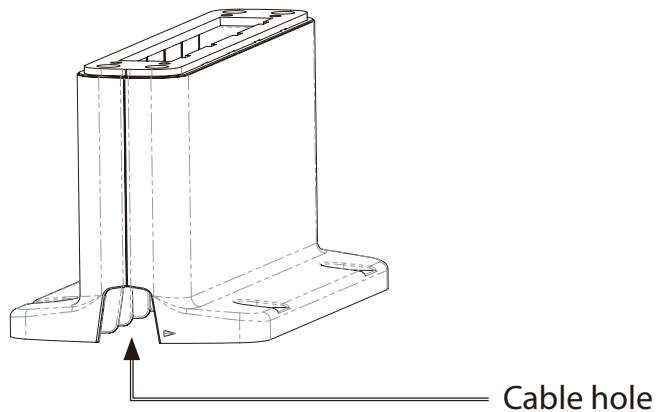
Bottom

Name	Details		
DC IN	Connect the AC adaptor.		
DC connector	Connect the DC connector. Used connector: JST' S02B-F32SK-GGXR(LF)(AU)		
	PIN	Signal Name	Details
	1	DCIN	12±10% - 26V±10%
	2	GND	GND
LAN Port	Connect the LAN cable.		
	LINK LED (Green)	On	A wired LAN (10Base-T/1000Base-T) is connected.
		Off	A wired LAN (100Base-TX) is connected. A wired LAN is disconnected.
	STATUS LED (Orange)	On	A wired LAN is connected.
		Blink	Packets are received.

**Back**

Name	Details		
USB Port	Connect the USB device.		
DIP switch	SW1	Operating mode switch	ON: AP mode / OFF: RP mode
	SW2	UDP port filter	ON: Using UDP port filter
	SW3	Not used	
	SW4	Not used	
Push switch	Use this to reset AP-415AN to the factory default setting.		

2-2-2. Stand



Name	Details
Cable hole	Pull cables through this hole after they are connected to AP-415AN.

2-3. Specifications

2-3-1. Software Specification

TCP/IP	Network layer	ARP, IP, ICMP
	Transport layer	TCP, UDP
	Application layer	TELNET, SSH(TCP/UDP#22) BOOTP, DHCP(Client/Server) HTTP SX-SMP(TCP/UDP#60000/60001)

Wireless LAN	Authentication method	Open, WPA2-PSK
	Encryption mode	AES

Wired LAN	Auto-sensing
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Web browsers (Recommended Web browsers)	Windows 7 :Internet Explorer 11 Windows 8.1 :Internet Explorer 11 Windows 10 :Edge Android :Chrome
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2-3-2. Hardware Specification

ROM	SPI Flash ROM 32MB
RAM	DDR3 128MB

USB port	USB2.0(Hi-Speed) 1 Port	
LED	LAN port: 2	Link (Green) Status (Orange)
	Side: 4	POWER (Green / Red) BAND/WLAN (Green / Orange) WSTAT/STATUS (Green / Orange) SETTING (Orange)
Switch	Push Switch	1
	DIP-SW	4
Power source	DC Jack	12V \pm 10%
	DC Connector	12V \pm 10% - 26V \pm 10%

Environmental Condition

Operating environment	Temperature	0 degrees to +45 degrees
	Humidity	20% to 95%RH (Non-condensing)
Storage environment	Temperature	-20 degrees to +60 degrees
	Humidity	20% to 95%RH (Non-condensing)

Wireless LAN

MIMO	2x2 2Stream		
802.11a	Frequency Range	5.2GHz, 5.3GHz, 5.6GHz, 5.8GHz	
	Channel	W52	36,40,44,48
		W53	52,56,60,64
		W56	100,104,108,112,116,120,124,128,132,136,140
		W58	149,153,157,161,165
802.11b	Frequency Range	2.4GHz	
802.11g	Channel	1-13	
802.11n	Frequency Range	2.4GHz, 5.2GHz, 5.3GHz, 5.6GHz, 5.8GHz	
	Channel	Any channels available at 802.11a/b/g	
Antenna	Non-directional antenna x 2		


TIP

- Available channels differ depending on each country.

Wired LAN

LAN Port	3 Ports	10Base-T/100 Base-TX/1000Base-T Auto MDI/MDI-X compatible
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2-3-3. Regulatory Compliance

Japan

This is a Class A device. If this device is used in a home, it may cause radio interference. In such a case, the user may be required to take the corrective action.

VCCI-A

USA**FCC CAUTION**

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

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Europe

China

1.

■使用频率：2.4 – 2.4835 GHz

■等效全向辐射功率 (EIRP)：

天线增益 < 10dBi 时：≤ 100 mW 或 ≤ 20 dBm

天线增益 ≥ 10dBi 时：≤ 500 mW 或 ≤ 27 dBm

■最大功率谱密度：

天线增益 < 10dBi 时：≤ 10 dBm / MHz (EIRP)

天线增益 ≥ 10dBi 时：≤ 17 dBm / MHz (EIRP)

■载频容限：20 ppm

■带外发射功率（在 2.4-2.4835GHz 频段以外）

≤ -80 dBm / Hz (EIRP)

■杂散发射（辐射）功率（对应载波 ±2.5 倍信道带宽以外）：

≤ -36 dBm / 100 kHz (30 – 1000 MHz)

≤ -33 dBm / 100 kHz (2.4 – 2.4835 GHz)

≤ -40 dBm / 1 MHz (3.4 – 3.53 GHz)

≤ -40 dBm / 1 MHz (5.725 – 5.85 GHz)

≤ -30 dBm / 1 MHz (其它 1 – 12.75 GHz)

2. 不得擅自更改发射频率、加大发射功率（包括额外加装射频功率放大器），不得擅自外接天线或改用其它发射天线；

3. 使用时不得对各种合法的无线电通信业务产生有害干扰；一旦发现有干扰现象时，应立即停止使用，并采取措施消除干扰后方可继续使用；

4. 使用微功率无线电设备，必须忍受各种无线电业务的干扰或工业、科学及医疗应用设备的辐射干扰；

5. 不得在飞机和机场附近使用。

■工作频率范围：5150 – 5350 MHz

■等效全向辐射功率 (EIRP)：≤ 200mW

■最大功率谱密度：≤ 10 dBm / MHz

■载频容限：20 ppm

■带外发射功率 (EIRP)：≤ -80 dBm / Hz

■杂散发射（辐射）功率：≤ -36 dBm / 100 kHz (30 ~ 1000 MHz)

≤ -54 dBm / 100 kHz (48.5 – 72.5MHz, 76–118MHz, 167–223MHz, 470–798MHz)

≤ -40 dBm / 1 MHz (2400 ~ 2483.5 MHz)

≤ -33 dBm / 100 KHz (5150 ~ 5350 MHz)

≤ -40 dBm / 1MHz (5470 ~ 5850 MHz)

≤ -30 dBm / 1 MHz (其它 1 ~ 40 GHz)

2. 不得擅自更改发射频率、加大发射功率（包括额外加装射频功率放大器），不得擅自外接天线或改用其它发射天线；

3. 使用时不得对各种合法的无线电通信业务产生有害干扰；一旦发现有干扰现象时，应立即停止使用，并采取措施消除干扰后方可继续使用；
4. 使用微功率无线电设备，必须忍受各种无线电业务的干扰或工业、科学及医疗应用设备的辐射干扰；

1.

- 工作频率范围：5725 - 5850 MHz
- 发射功率： ≤ 500 mW 和 ≤ 27 dBm
- 等效全向辐射功率 (EIRP)： ≤ 2 W 和 ≤ 33 dBm
- 最大功率谱密度： ≤ 13 dBm / MHz 和 ≤ 19 dBm / MHz (EIRP)
- 载频容限：20 ppm
- 带外发射功率 (EIRP)： ≤ -80 dBm / Hz (≤ 5725 MHz 或 ≥ 5850 MHz)
- 杂散发射 (辐射) 功率： ≤ -36 dBm / 100 kHz (30 ~ 1000 MHz)
 - ≤ -40 dBm / 1 MHz (2400 ~ 2483.5 MHz)
 - ≤ -40 dBm / 1 MHz (3400 ~ 3530 MHz)
 - ≤ -33 dBm / 100 kHz (5725 ~ 5850 MHz)(注：对应载波 2.5 倍信道带宽以外)
 - ≤ -30 dBm / 1 MHz (其它 1 ~ 40 GHz)

2. 不得擅自更改发射频率、加大发射功率 (包括额外加装射频功率放大器)，不得擅自外接天线或改用其它发射天线；
3. 使用时不得对各种合法的无线电通信业务产生有害干扰；一旦发现有干扰现象时，应立即停止使用，并采取措施消除干扰后方可继续使用；
4. 使用微功率无线电设备，必须忍受各种无线电业务的干扰或工业、科学及医疗应用设备的辐射干扰；
5. 不得在飞机和机场附近使用。

2-4. Wireless Interference Information

Notes on Use

Do not use AP-415AN near the following devices or places.

- Industrial, scientific and medical devices (e.g. microwave, pacemaker, etc.)
- Licensed radio station in a factory
- Small power radio station (A non-licensed radio station)

These devices may use the same band. If you use AP-415AN near these devices, the radio waves emitted from AP-415AN may interfere with them.

Do not use AP-415AN near a cellular phone, TV or Radio.

A cellular phone, TV and radio use a different radio band than our products. Generally, if they are used near AP-415AN, it will not cause any problems. However, when they approximate AP-415AN, sound or image noise may occur.

If there is reinforced concrete/metal between wireless devices, they may not connect.

AP-415AN can connect through wood or glass, but may have troubles connecting through reinforced concrete/metal.

AP-415AN complies with the certification of conformance to technical standards.

Please pay attention to the following points:

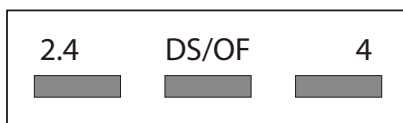
- Please do not disassemble or remodel the product. Such action is prohibited by law.
- Please do not remove the certificate label. Using the product without a label is prohibited.




Wireless devices using 2.4GHz band

The same frequency band of AP-415AN is used for a microwave, industry, science, medical equipment and licensed in room or low power (non-licensed) radio stations.

- Before you use AP-415AN, check that it does not interfere with other devices.
- If interference occurs, stop using AP-415AN or change the wireless band. Please consider to create a wall between these devices to avoid interference. Contact us to for possible solution.

*The meaning of the symbols in the bottom of the unit:



2.4	: Wireless devices using 2.4GHz frequency band
DS/OF	: DS-SS or OFDM is used as modulation.
4	: The range of interference is equal to or lower than 40m.
  	: All bands can be used to avoid interference.

Notes on using 5GHz band

- Use of 5.2GHz band (W52) and 5.3GHz band (W53) outdoors is prohibited by the radio law. When AP-415AN is used outdoors, use W56 channels only and do not use W52/W53 channels.

2-5. 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.

3. Using AP-415AN Setup Tool

3-1. Operating Environment

The operating environment for AP-415AN Setup Tool is as follows.

Supported OS

- * Microsoft Windows 7 SP1 (32/64bit)
- * Microsoft Windows 8 (32/64bit)
- * Microsoft Windows 8.1 (32/64bit)
- * Microsoft Windows 10 (32/64bit)



- AP-415AN Setup Tool runs as a desktop application on Windows 8 or newer.
- Windows RT is not supported.
- Fast User Switching Function is not supported.

Necessary Components

- * .Net Framework 3.5

3-2. Features

AP-415AN Setup Tool has following features:

- * Shows the AP-415AN status information
- * Configuration change (bulk configuration is supported)
- * Firmware update (multiple AP-415AN units can be updated at once)
- * Factory default configuration (multiple AP-415AN units can be initialized at once)
- * Restart (multiple AP-415AN units can be restarted at once)
- * A request for dynamic WDS reconstruction can be sent to AP-415AN.
- * Opens an internal Web page of AP-415AN using your browser.
- * Device list information can be saved as CSV file.

3-3. Installing AP-415AN Setup Tool

This section explains how to install AP-415AN Setup Tool to your network environment.

3-3-1. Downloading AP-415AN Setup Tool

AP-415AN Setup Tool can be downloaded from Silex Technology's homepage.

1. Access the URL below from the PC.

<http://www.silex.com.cn/contact/support.aspx>

2. Download AP-415AN Setup Tool on your PC.

3-3-2. Installation Procedure

Use the AP-415AN Setup Tool installer to install it to PC.



- For installation, you must login to the PC with administrative privileges.

TIP

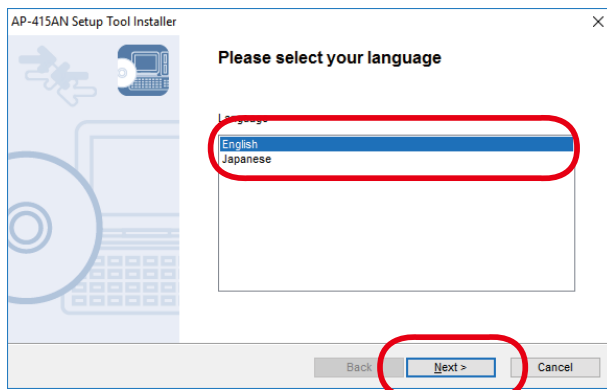
1. Double-click **Setup.exe** in a folder of AP-415AN Setup Tool to start the installer.



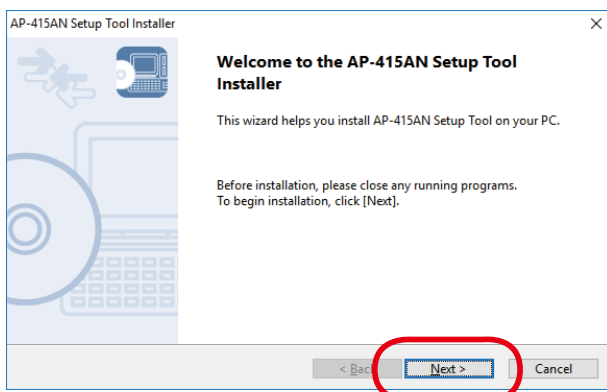
- The **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

TIP

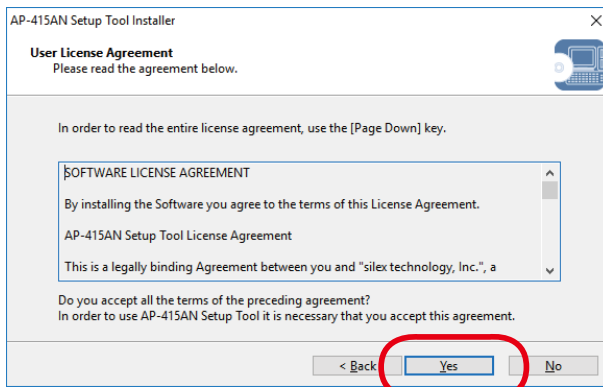
2. When the AP-415AN Setup Tool Installer wizard is displayed, select your language and click **Next**.



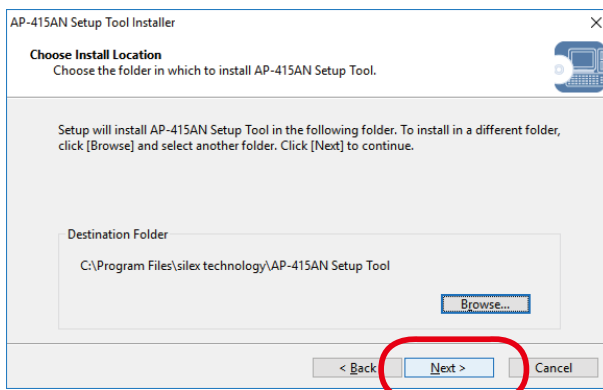
3. Click **Next**.



4. Read the software license notes and click **Yes** when you have agreed with the terms and conditions.



5. Select a folder to install the AP-415AN Setup Tool into and click **Next**.



TIP

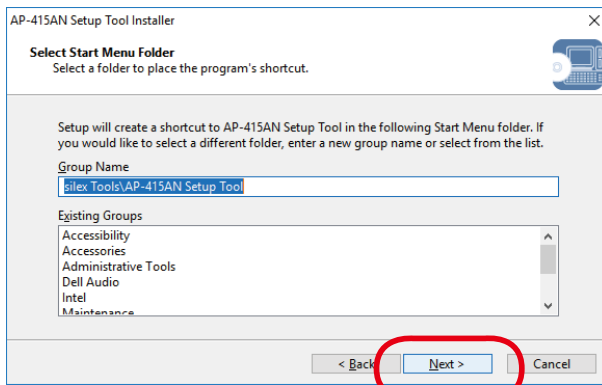
- Use of following characters is prohibited. It causes an error.
 - (1) Marks or symbols such as [/] [:] [:] [*] [?] ["] [<] [>] [[]]
 - (2) ¥¥ (two consecutive yen marks)
 - (3) .. (two consecutive periods)
 - (4) ' ' (there is a blank on the last)
 - (5) The specified drive name is not valid.



Note

- By defaults, the AP-415AN Setup Tool is installed to **(X:¥Program Files) ¥silex technology¥ AP-415AN Setup Tool**.
- By clicking **Browse**, you can change the folder to install the AP-415AN Setup Tool into.

6. Specify a group name to be displayed at the start menu and click **Next**.



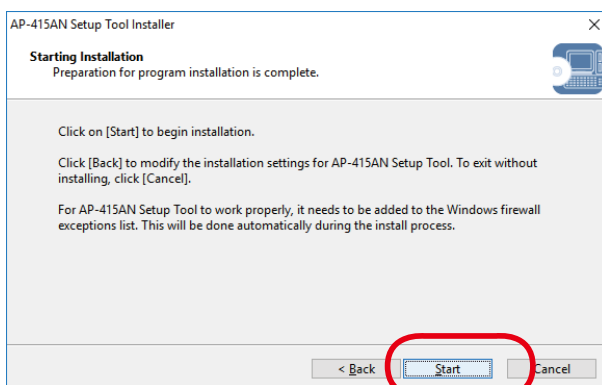
- Use of following characters is prohibited. It causes an error.
 - (1) Marks or symbols such as [/] [:] [:] [*] [?] ["] [<] [>] []
 - (2) ¥¥ (two consecutive yen marks)
 - (3) .. (two consecutive periods)
 - (4) ' ' (there is a blank on the last)



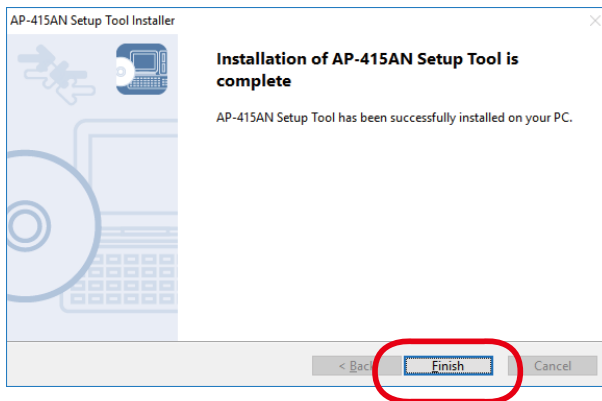
Note

- By defaults, the group name is set as **AP-415AN Setup Tool**.

7. Click **Start** to start the installation.

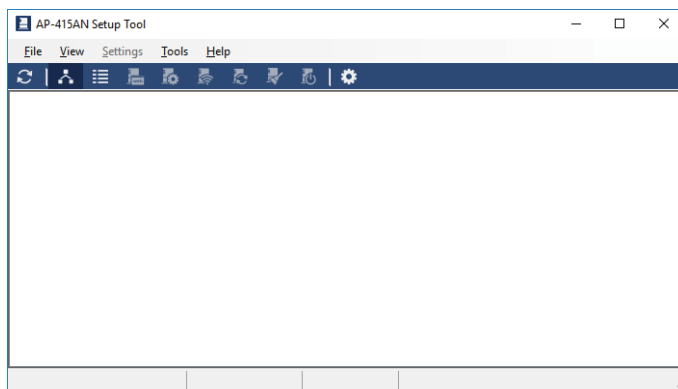


8. When installation is completed, click **Finish**.



- The **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

9. The AP-415AN Setup Tool's main window is displayed.



AP-415AN Setup Tool has been installed.

3-4. Starting/Finishing AP-415AN Setup Tool

This section explains how to start/finish AP-415AN Setup Tool.

3-4-1. Starting AP-415AN Setup Tool

1. Show the **Apps** view from the start screen and click **AP-415AN Setup Tool**.

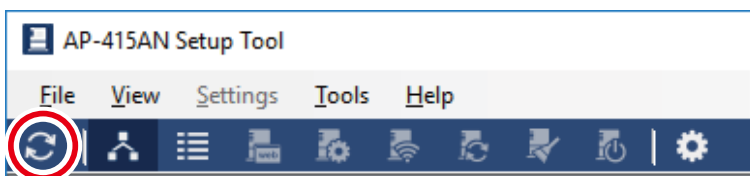


- The **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

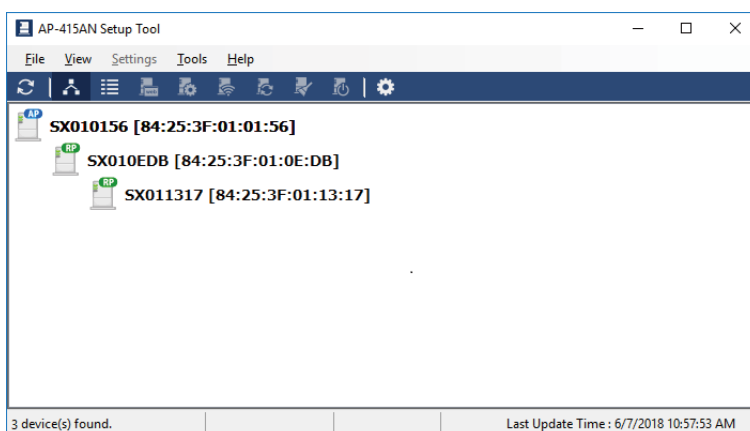


- On Windows 7, start AP-415AN Setup Tool by a method below.
- Click **Start - (All) Programs - silex Tools - AP-415AN Setup Tool**.

2. When the AP-415AN Setup Tool's main window is displayed, click the **Refresh** icon from toolbar.



3. AP-415AN units are displayed when they are active on network.



3-4-2. Finishing AP-415AN Setup Tool

AP-415AN Setup Tool can be finished by following methods.

Main window

In the main window, the utility can be finished by following methods.

- (1) Clicking the **[X]** button on top right of the window
- (2) Pressing **[Alt] + [F4]** keys

File menu

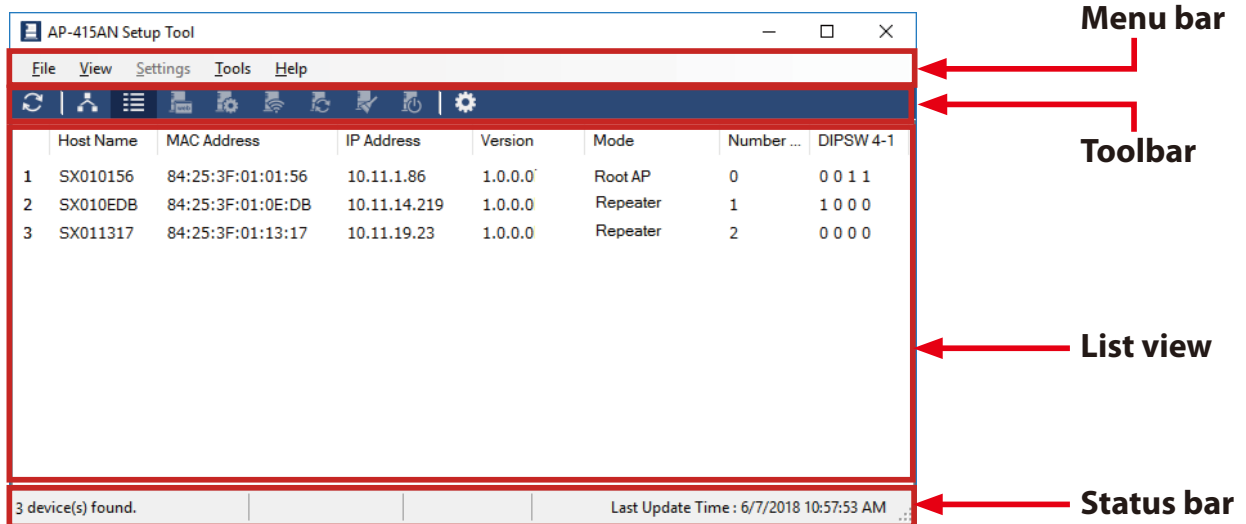
Clicking **Exit** from the **File** menu

3-5. Window and Menu

This section explains on the AP-415AN's main window and configuration menu.

3-5-1. Main Window

In the main window, AP-415AN units are found and displayed as a list based on the group information that is previously registered. The selected AP-415AN units can be connected and disconnected.



Menu bar

Provides the search setting, device information and help information.

Toolbar

Updates, shows and configures the device setting.

List view

Shows the device list and status information.

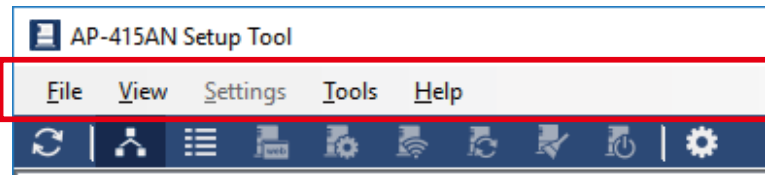
The list view can be switched between a device list view and topology view.

Status bar

Shows the information of devices selected in the list view.

Menu Bar

Search setting, device information and help information are provided.



File

Menu	Functions
Refresh	Refreshes the list view.
Export CSV	Outputs the list view information to a CSV file.
Exit	Finishes AP-415AN Setup Tool.

View

Menu	Functions
Show in Topology View	Shows the list view information in a topology view.
Show in List View	Shows the list view information in a device list view.

Settings

Menu	Functions
Configure Using Web Browser	Opens the Web page of the selected device. (This setting is disabled when multiple devices are selected.)
Device Configuration	Configures the selected device.
Reconstruct WDS	Sends the WDS reconstruction command to the selected device.
Firmware Update	Updates firmware of the selected device.
Factory Default Configuration	Resets the selected device to factory default setting.
Restart	Restarts the selected device.

Tools

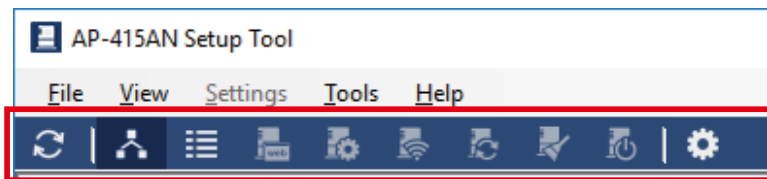
Menu	Functions
Option	Opens the option setting window.

Help

Menu	Functions
About AP-415AN Setup Tool	Displays the version of AP-415AN Setup Tool.

Tool Bar

The device setting can be updated, referred and configured.



Refresh

Refreshes the list view.



Show in Topology View

Shows the list view information in a topology view.



Show in List View

Shows the list view information in a device list view.



Configure Using Web Browser

Opens the Web page of the selected AP-415AN unit.
The URL is "**http://AP-415AN's IP address/**".



Device Configuration

Configures the selected AP-415AN unit.
Opens the device configuration window.



Reconstruct WDS

Sends the WDS reconstruction command to the selected AP-415AN unit.



Firmware Update

Updates firmware of the selected AP-415AN unit.
Open the firmware update window.



Factory Default Configuration

Resets the selected AP-415AN unit to factory default setting.
Opens the factory default setting window.

**Restart**

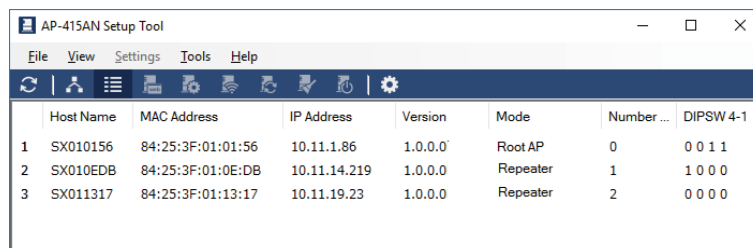
Restarts the selected AP-415AN unit.
Opens the device restart window.

**Option**

Configures the refresh interval and search setting of the list view on AP-415AN Setup Tool.

List View (Device List)

Provides a list of devices and status information.



	Host Name	MAC Address	IP Address	Version	Mode	Number ...	DIPSW 4-1
1	SX010156	84:25:3F:01:01:56	10.11.1.86	1.0.0.0	Root AP	0	0 0 1 1
2	SX010EDB	84:25:3F:01:0E:DB	10.11.14.219	1.0.0.0	Repeater	1	1 0 0 0
3	SX011317	84:25:3F:01:13:17	10.11.19.23	1.0.0.0	Repeater	2	0 0 0 0

Host Name

Shows the host name.

MAC Address

Shows the MAC address.

IP Address

Shows the IP address.

Version

Shows the firmware version.

Operating Mode

Shows the operating mode.

Number of Hops

Shows the number of hops for the AP-415AN units.

* Numbers counted from 0 are displayed in a list.

```

|--AP(Hop 0)
|  |--BR1(Hop 1)
|  |--BR2(Hop 1)
|    |--BR3(Hop 2)

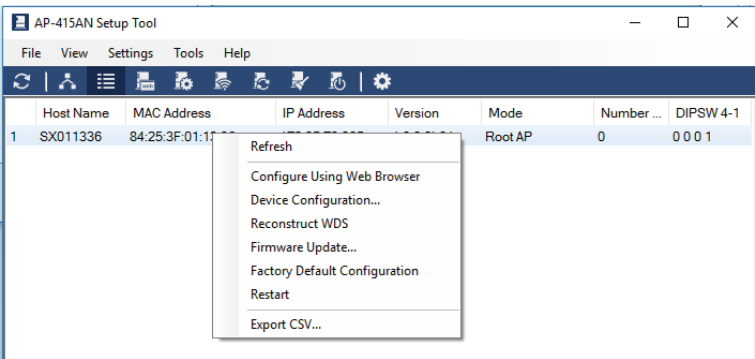
```

DIPSW 4-1

Shows the DIP Switch status of the AP-415AN unit.

Context Menu

Right-clicking on the AP-415AN unit on the list shows the context menu.



Refresh

Refreshes the list view.

Configure Using Web Browser

Opens the Web page of the AP-415AN unit.

Device Configuration

Opens the device configuration window.

Reconstruct WDS

Sends the WDS reconstruction command to the selected AP-415AN unit.

Firmware Update

Updates firmware of the selected AP-415AN unit.

Factory Default Configuration

Resets the selected AP-415AN unit to factory default setting.

Restart

Restarts the selected AP-415AN unit.

Export CSV

Saves the list view information to a CSV file.

Configuration Page

Double-clicking on the AP-415AN unit on the list view opens the configuration page.

**Note**

- For details on configuration menu, refer to **5-3. Configuration Using AP-415AN Setup Tool - Configuration Menu of AP-415AN Setup Tool.**

Status Bar

The status information is displayed according to the selected AP-415AN units.

When none of AP-415AN units are selected on the list view

Shows the number of detected units and last update time.

Topology view	List view
Supported	Supported

3 device(s) found.			Last Update Time : 6/7/2018 10:57:53 AM
--------------------	--	--	---

When a single AP-415AN unit is selected on the list view

Shows the general information (MAC address and IP address) of the selected AP-415AN unit and the last update time.

Topology view	List view
Supported	Supported

1 item(s) selected.	84:25:3F:01:13:3A	172.25.73.206	Last Update Time : 6/7/2018 10:57:53 AM
---------------------	-------------------	---------------	---

When two or more AP-415AN units are selected on the list view

Shows the number of selected AP-415AN units and the last update time.

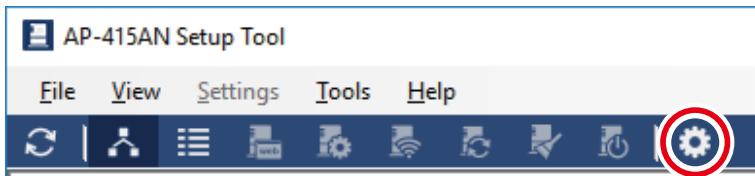
Topology view	List view
Not supported	Supported

3 item(s) selected.			Last Update Time : 6/7/2018 11:18:45 AM
---------------------	--	--	---

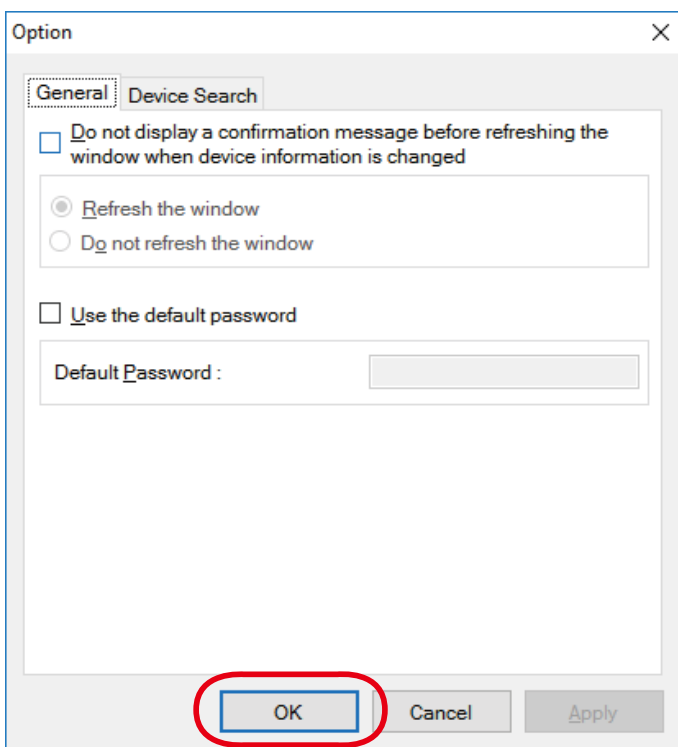
3-6. Option Setting

This section explains on the option setting of AP-415AN Setup Tool.

1. Click the **Option** icon from the toolbar.



2. When the option setting window is displayed, configure the setting on each tab and click **OK**.



General Tab

Do not display a confirmation message before refreshing the window when device information is changed.

This shows or hides a refresh confirmation message box that is displayed when the device information is changed. (Default: OFF)

Refresh the window

Hides a refresh confirmation message and automatically refreshes the main window. (Default: ON)

Do not refresh the window

Hides a refresh confirmation message and does not refresh the main window automatically. (Default: OFF)

Use the default password

If the check box is checked, authentication automatically runs using the string set to **Default Password**.

If the check box is cleared, users will need to enter a password each time when the authentication is required. (Default: OFF)

Default Password

If the check box is checked at "**Use the default password**", password authentication runs using the specified string. (Default: blank)

Device Search Tab

Option

General Device Search

By configuring addresses for device search, devices outside of the network your computer is on can be searched and used.

☒ Use broadcast addresses for search

☐ Use specific addresses for search

_____._____._____ Add

_____ Delete

Search Timeout : 5 sec

OK Cancel Apply

Use broadcast addresses for search

To search for AP-415AN, broadcast packets are distributed to the Subnet Mask of PC. (Default: ON)

Use specific addresses for search

Specify whether to use the search address. (Default: OFF)

Search address field

Register the address to search for the AP-415AN units.

Up to 64 addresses can be registered.

Search Timeout

Specify the period of search.

The value must be 5-60 sec. (Default: 5sec)

3-7. Uninstalling AP-415AN Setup Tool

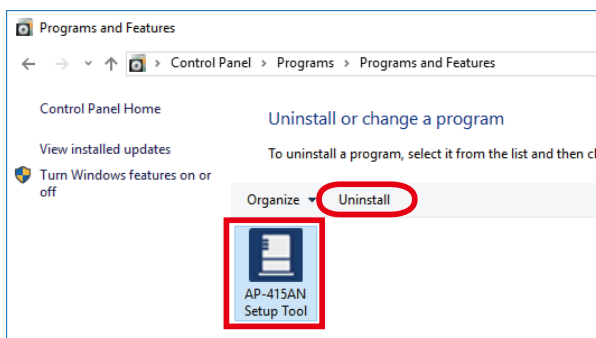
This section explains how to uninstall AP-415AN Setup Tool. AP-415AN Setup Tool can be uninstalled from **Control Panel** of Windows.



- For uninstallation, you must login to the PC with administrative privileges.

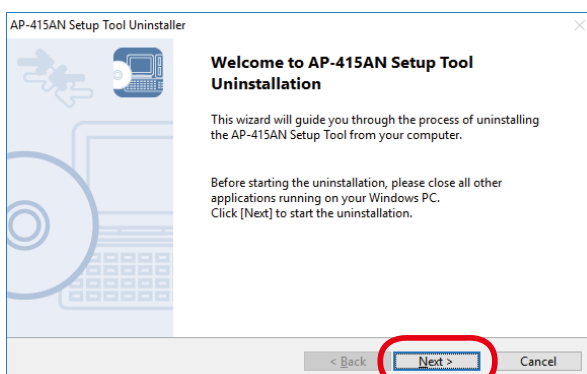
1. Go to **Control Panel** and click **Uninstall a program** (or **Programs and Features**).

2. Select **AP-415AN Setup Tool** from a list and click **Uninstall** (or **Uninstall/Change**).

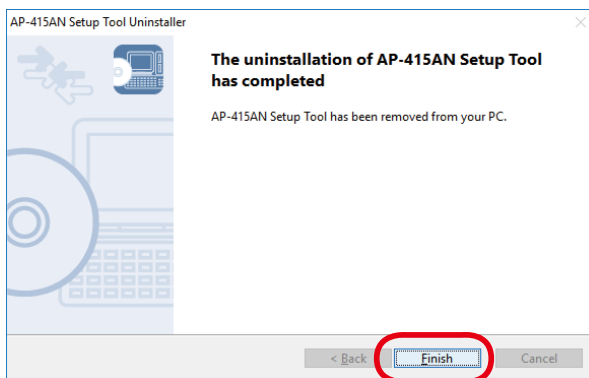


- After uninstaller is started, the **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.
- Be sure to finish AP-415AN Setup Tool before starting uninstallation.

3. Click **Next** to start uninstallation.



4. When uninstallation is completed, the screen below is displayed. Click **Finish**.

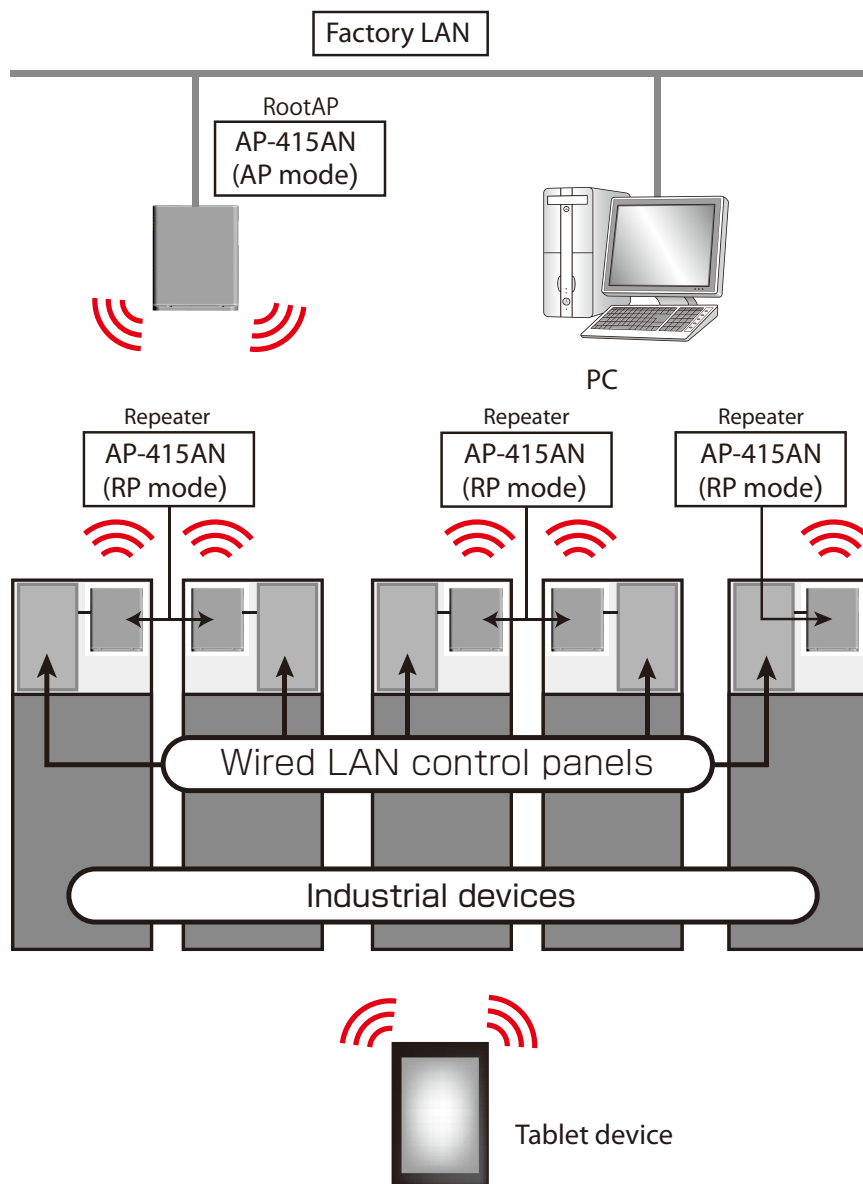


AP-415AN Setup Tool has been uninstalled.

4. Installing AP-415AN

4-1. Installation Example

The following diagram is an example of how to allocate AP-415AN units to establish a wireless connection between PC and wired LAN control panel in a factory. In this network, tablet devices can easily be connected to AP-415AN wirelessly.



4-2. Before Starting Installation

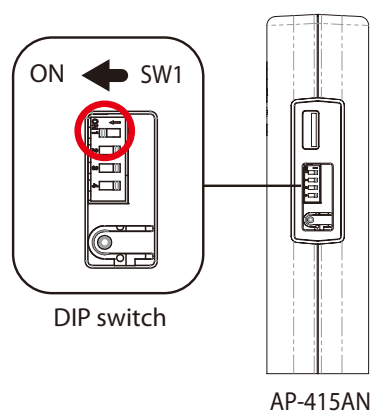
4-2-1. Changing the Operating Mode

Use the dip switch "SW1" on back of AP-415AN to switch the operating mode between the Access Point mode (AP mode) and Repeater mode (RP mode).

To change the operating mode to AP mode

Turn on the dip switch SW1.

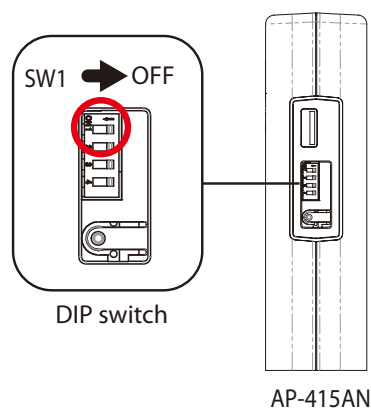
If the operating mode is changed to AP mode, AP-415AN works as RootAp of WDS.



To change the operating mode to RP mode

Turn off the dip switch SW1.

If the operating mode is changed to RP mode, AP-415AN works as repeater of WDS.



- After the operating mode is changed, attach the protection cap back to the dip switch area.

TIP

4-2-2. Configuration

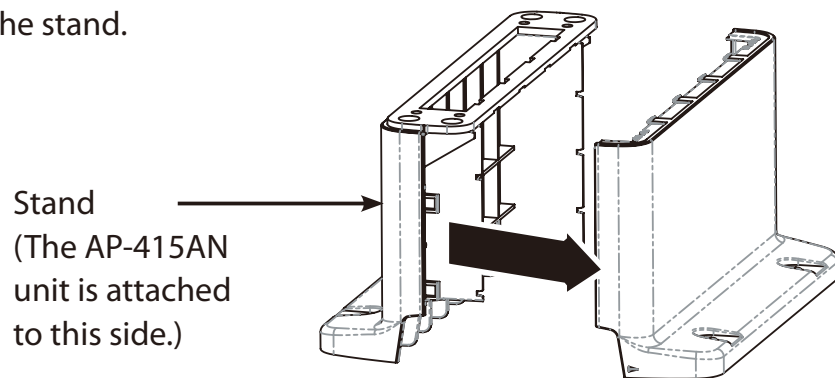
When you want to use AP-415AN with the factory default setting, go ahead to **4-2-3. Attaching the Stand** below.

When you want to change the setting from default one, see the instructions at **5. Configuration**. When the configuration change is finished, go to **4-2-3. Attaching the Stand** below.

4-2-3. Attaching the Stand

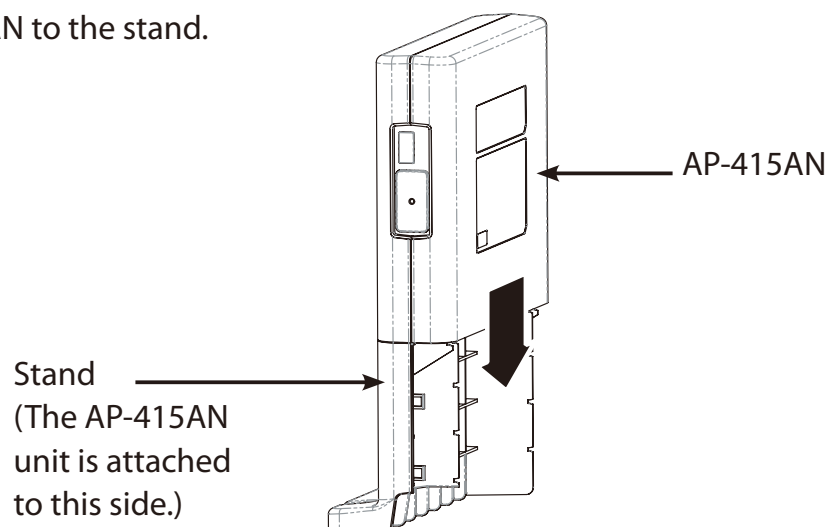
How to attach the stand is explained.

1. Open the cover of the stand.

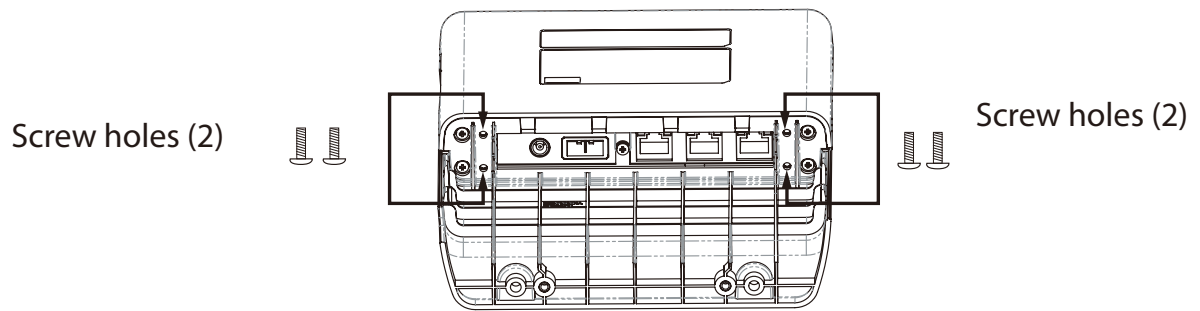


2. Attach AP-415AN to the stand and screw 4 holes to fix it.

(1) Attach AP-415AN to the stand.



(2) Fix AP-415AN to the stand by screwing 4 holes.



Do not close the stand cover yet.

The stand cover should be closed when AP-415AN is installed to an actual location.

See **4-3. Installing AP-415AN** for details on how to install AP-415AN.

4-3. Installing AP-415AN

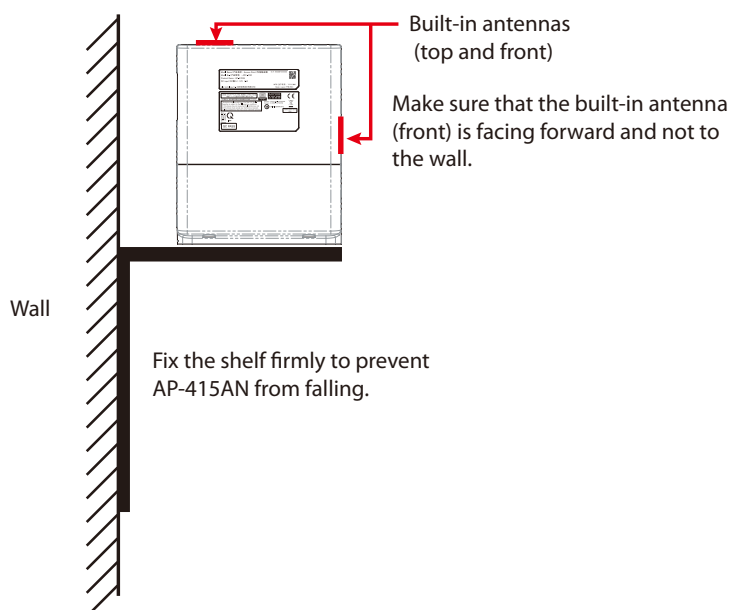
4-3-1. Installation (for AP Mode)

How to install AP-415AN (AP mode) is explained.

Location of Installation (for AP Mode)

Install AP-415AN (AP mode) in a high place. Make sure that the built-in antennas of AP-415AN (AP mode) are facing toward the AP-415AN (RP mode) to communicate.

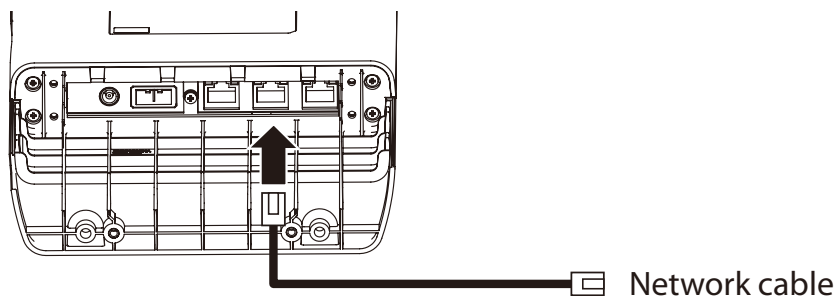
When placing the unit on a shelf mounted on a wall:



- Use a wood or plastic shelf (recommended).
- Leave a gap of 10 cm or more between AP-415AN (AP mode) and the wall so that you can press the DIP/ Push switches later.

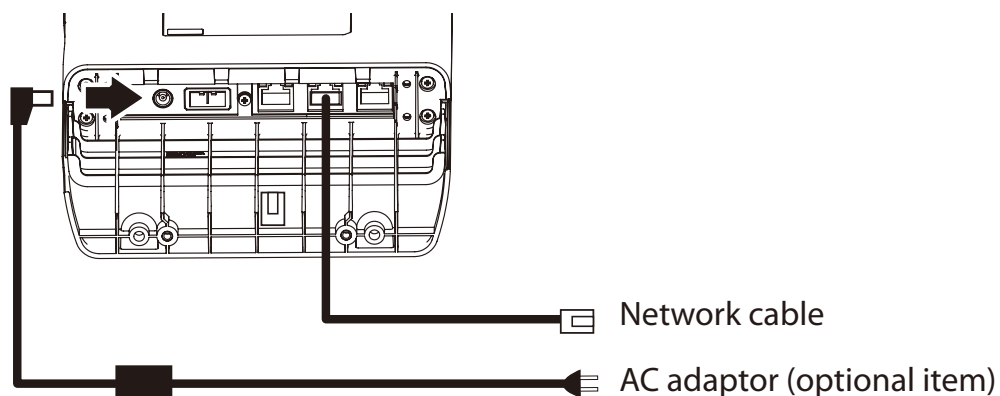
Installation Method (for AP Mode)

1. Connect the network cable to the network port.

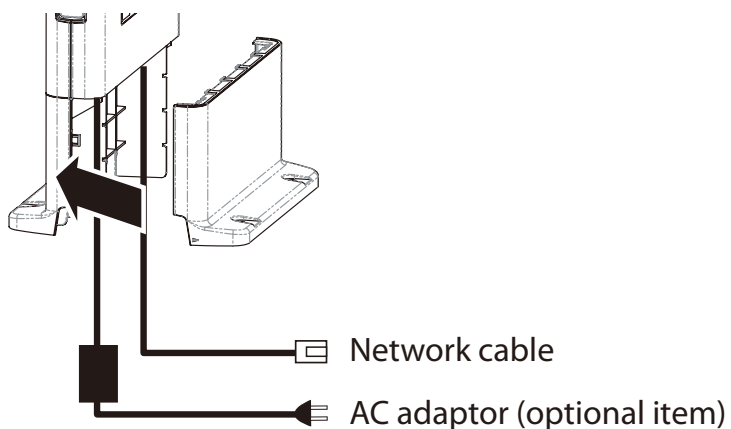


- Attach the protection caps to unused network ports.

2. Connect the AC adaptor (optional item) to the power code tightly, then insert the plug into the DC IN of AP-415AN (AP mode).

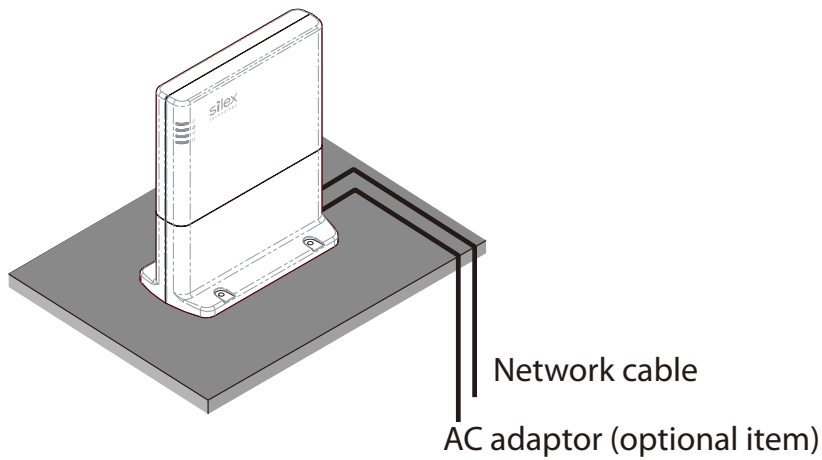


3. Close the cover of the stand.

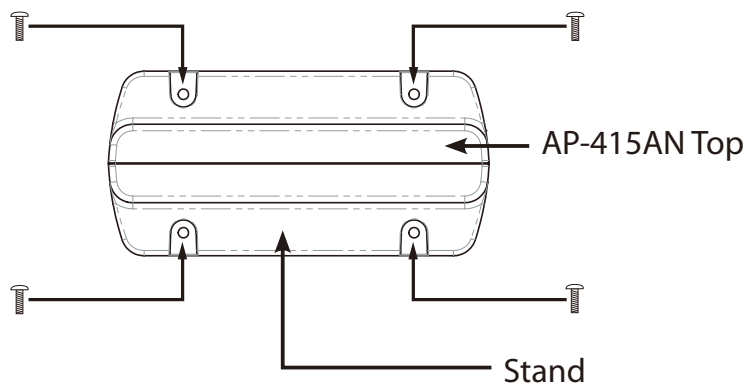


4. Fix AP-415AN (AP mode) to a shelf.

(1) Place AP-415AN unit on the shelf attached to a wall and fix it with the screws.

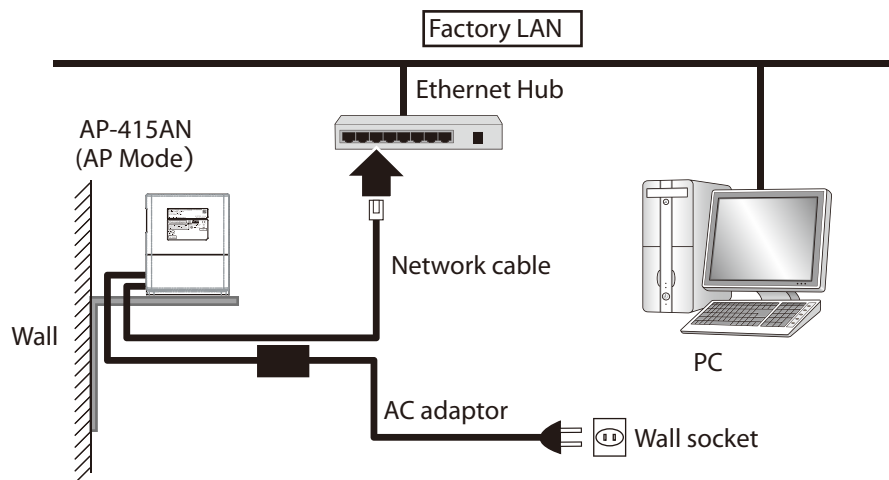


(2) Fix the AP-415AN (AP mode) by screwing 4 holes.



- The screws do not come with AP-415AN. Prepare your own screws.
Size of screw : 4.0mm in diameter
- Pull the cables through the cable hole of the stand.
- Silex Technology is not responsible for any damage or loss caused by falling. Make sure that the stand is firmly fixed to the shelf to prevent from falling.

- 5.** Connect the other end of network cable to the factory LAN to which PC has been connected, and plug the power code to outlet.



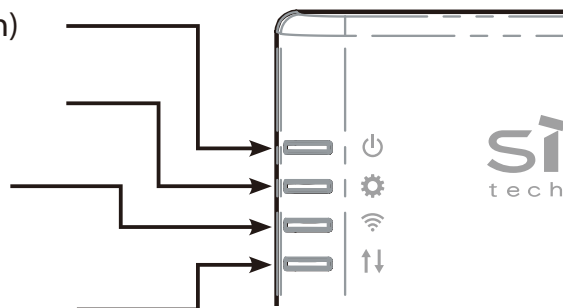
- 6.** Check the LED lamps.

POWER LED: On (Green)

SETTING LED: Off

BAND/WLAN LED:
On (Green or Orange)

WSTAT/STATUS LED:
Blink (Green)

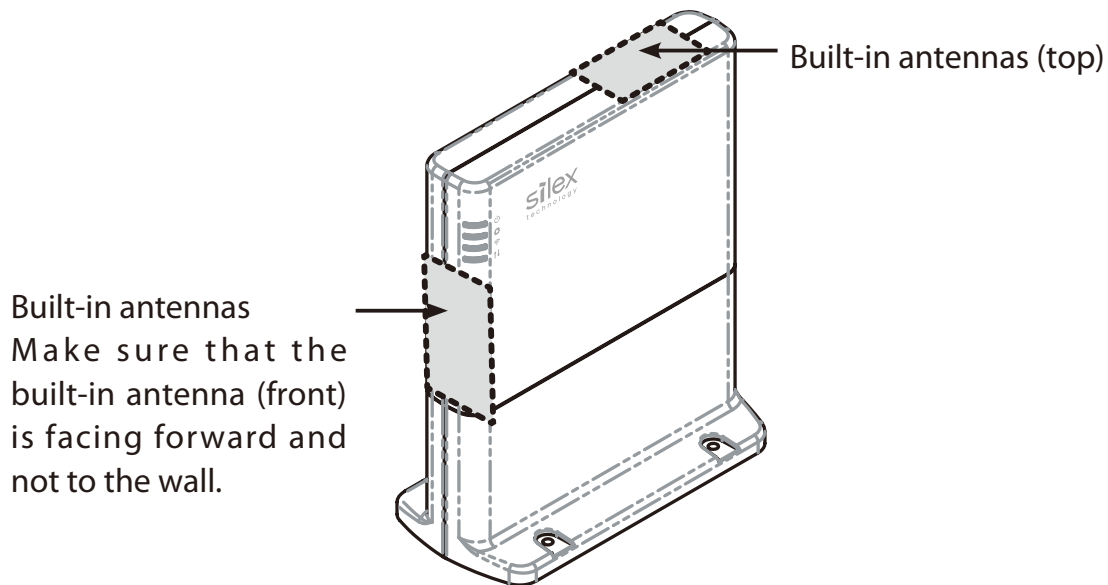


4-3-2. Installation (for RP Mode)

How to install AP-415AN (RP mode) is explained.

Location of Installation (for RP Mode)

Install AP-415AN (RP mode) on an industrial device. Make sure that the built-in antennas of AP-415AN (RP mode) are facing toward the AP-415AN (AP mode) to communicate.



Installation Method (for RP Mode)

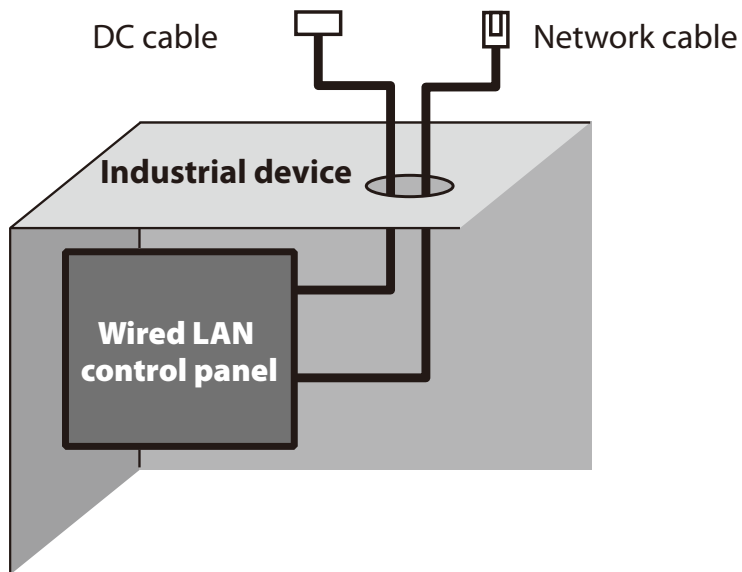
For all AP-415AN units (RP mode), finish the following steps (1-4).



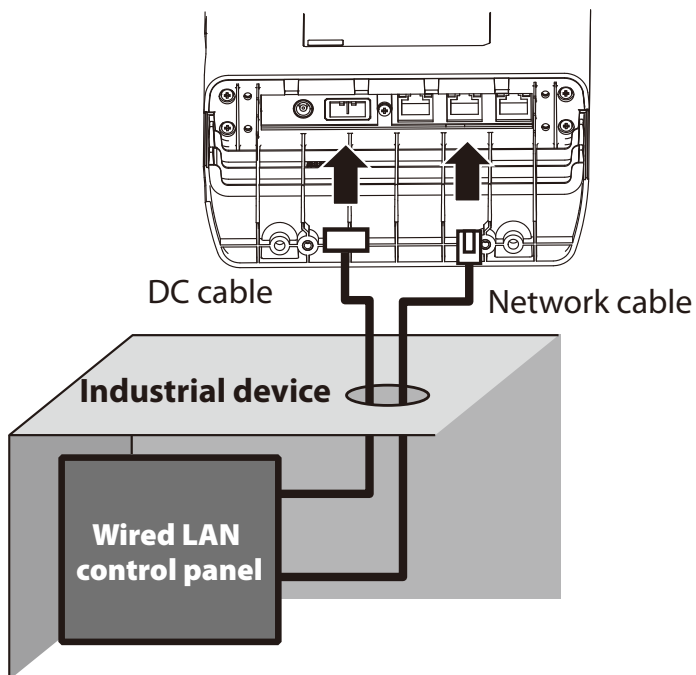
TIP

- Do not turn on AP-415AN (RP mode) until the installation is completed.

1. Connect the network cable and DC cable to the wired LAN control panel of industrial device, and pull these cables through a hole of the industrial device.

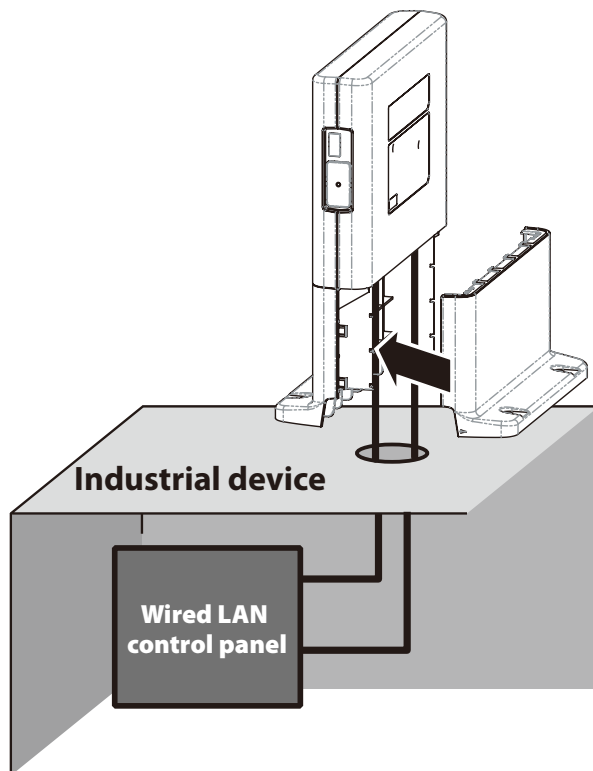


2. Connect the network cable to AP-415AN's LAN port and the DC cable to the DC IN.

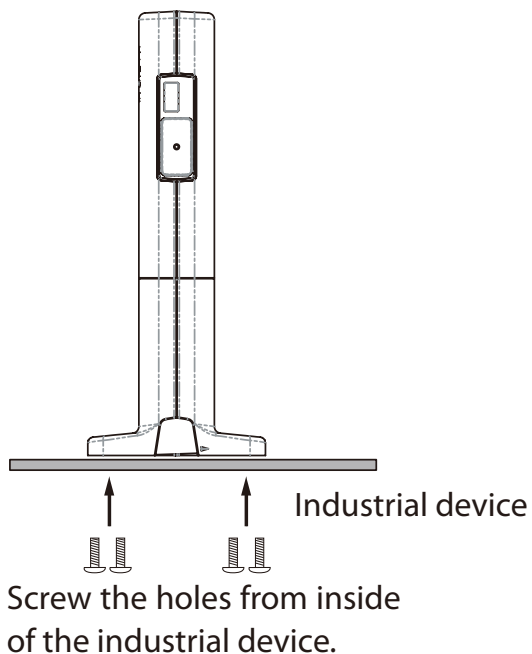


- Attach the protection caps to unused network ports.

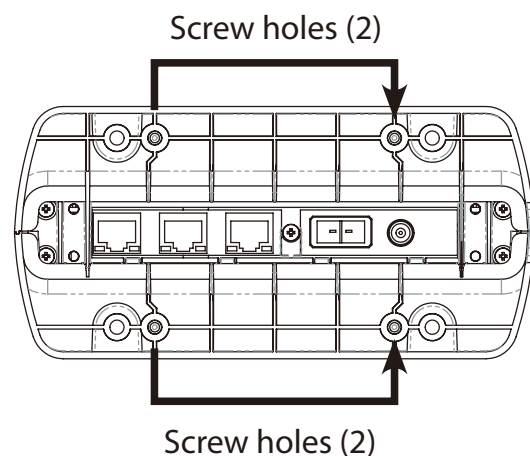
3. Close the cover of the stand.



4. Place AP-415AN (RP mode) on the industrial device and fix it by screwing 4 holes.



Bottom of the stand after
AP-415AN is attached



- The screws do not come with AP-415AN. Prepare your own screws.
Depth of screw hole : 6mm
Type of screw : M3

Turning on AP-415AN (for RP Mode)



- Check that AP-415AN (AP mode) is turned on before turning on AP-415AN (RP mode).

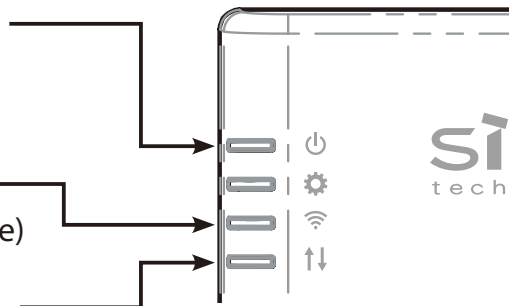
1. Turn on AP-415AN (RP mode).

2. Check the LED lamps.

POWER LED: On (Green)

BAND/WLAN LED:
On (Green) or Blink (Orange)

WSTAT/STATUS LED:
Blink (Green or Orange)



4-4. Checking Installation Status

Check that AP-415AN units (both AP mode/RP mode) are installed correctly using AP-415AN Setup Tool.

Change the network setting of the PC to allow access from the PC to AP-415AN units.

See **6-1. Product Display on AP-415AN Setup Tool - 6-1-1. Showing AP-415AN Units in Topology View** to check the installation status.

5. Configuration

5-1. Before Starting Configuration

This section explains how to configure AP-415AN.

5-1-1. Preparation

Start with the following when you want to change the configuration of AP-415AN before installing it.

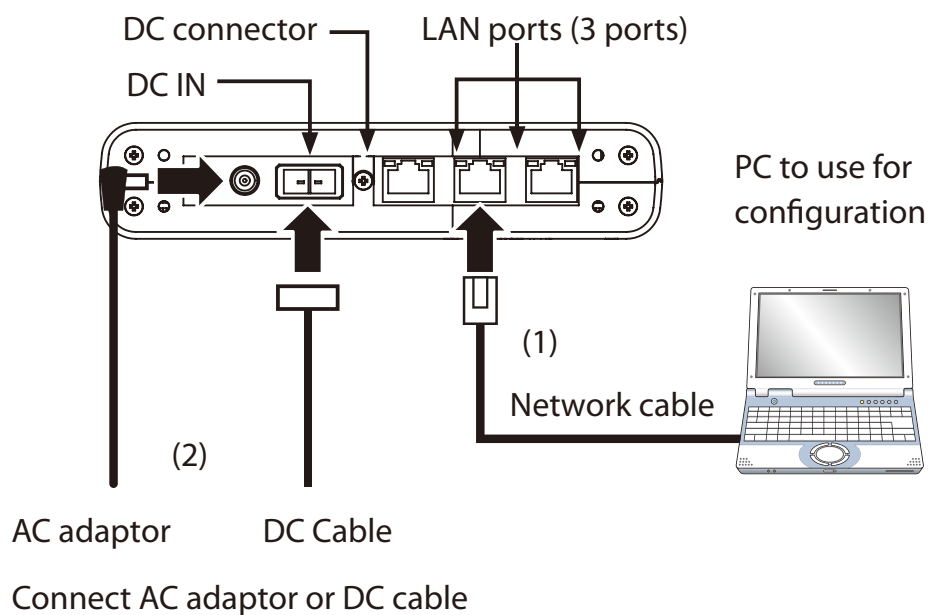
Necessary Items

Following items are required for initial configuration.

- PC (to use for configuration)
- Network cable

Connecting AP-415AN and PC

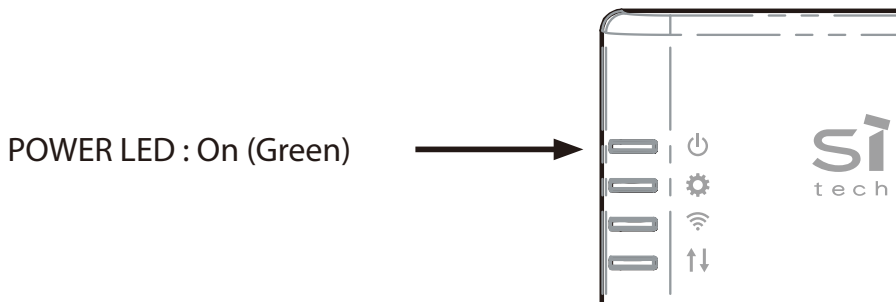
1. Connect AP-415AN and the PC using a network cable. (1)



2. Turn on AP-415AN by one of following methods. (2)

- Connect the AC adaptor to DC-Input terminal and the AC plug to outlet.
- Connect the DC cable to DC connector.

When the POWER LED lights as below, AP-415AN is ready.



- When you use AC adaptor, please always use the AC adaptor of AP-415AN. Using your own AC adaptor may result in malfunction.
- AC adaptor of AP-415AN is sold separately.

5-1-2. Changing Network Setting of the PC

The PC's network setting needs to be changed to allow communication between the PC and AP-415AN.

By default, Class A IP address (10.XXX.XXX.XXX) is configured to AP-415AN.
For the PC, please avoid using the same IP address.

Example: When AP-415AN has an default IP address (10.xxx.xxx.xxx), set the IP address of PC to the following:

IP address: 10.0.0.1 - 10.0.0.15

Subnet mask: 255.0.0.0



Note

- The default IP address of AP-415AN is automatically generated from a lower 24 bit of the Ethernet Address.

5-2. Configuration Using AP-415AN's Web Page

This section explains how to configure AP-415AN using the Web page.

AP-415AN supports HTTP. The network settings can be configured by accessing the AP-415AN's Web page using your Web browser.



Note

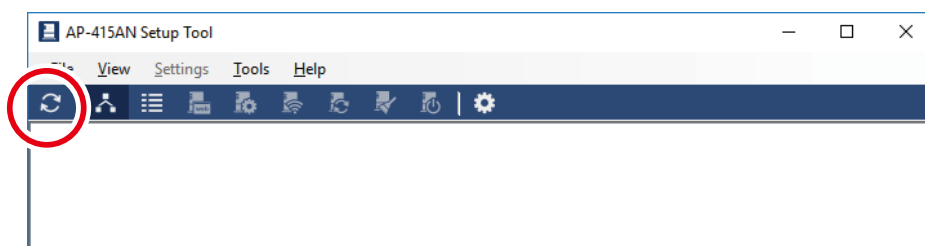
Recommended Web browsers:

- Internet Explorer11
- Microsoft Edge
- Chrome

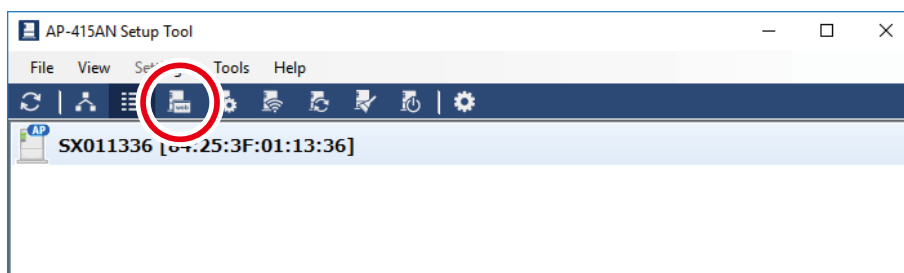
5-2-1. Accessing AP-415AN's Web Page

Accessing the Web Page Using AP-415AN Setup Tool

1. On the PC (to use for configuration), start AP-415AN Setup Tool.
2. When the main window is displayed, click the **Refresh** icon from the toolbar.



3. Select AP-415AN that you wish to configure from the list and click **Configure Using Web Browser** icon from the toolbar.



4. The Web browser starts and the login page is displayed.
Enter the login password then click **Login**.



Note

- No password is set to AP-415AN by default. Leave it blank and just click **Login** then.

5. The Web page of AP-415AN is displayed.
Configure the necessary setting according to your environment.

Link to Help

Opens the Help page that provides the detailed explanation of each setting.

Configuration menu

Changes the language (JP/EN) and configuration page

Accessing the Web Page Using IP Address

1. Start your Web browser on the PC.
2. To access the Web page, enter the IP address of AP-415AN to the address bar.



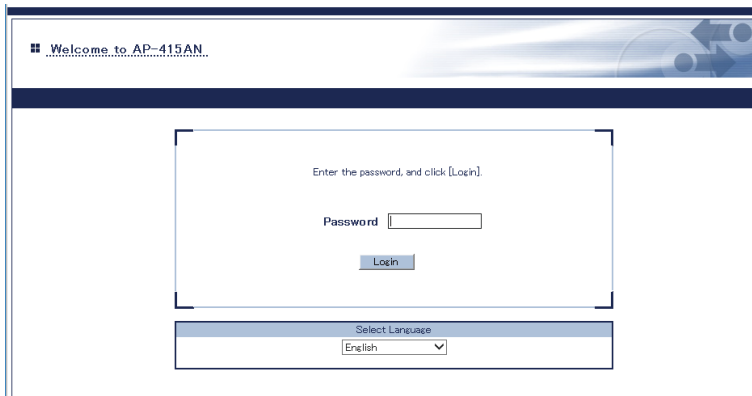
- This is a sample IP address. If you are not sure what IP address is set to AP-415AN, see **Accessing the Web Page Using AP-415AN Setup Tool** to access the Web page using AP-415AN Setup Tool.



Note

- The default IP address of AP-415AN is "10.XXX.XXX.XXX".
"XXX.XXX.XXX" of the address is automatically generated from a lower 24bit of the Ethernet Address.

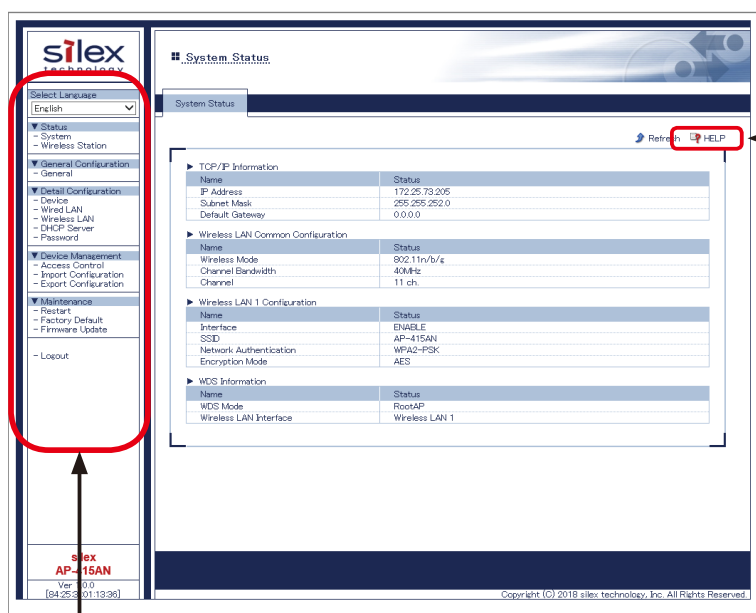
3. The login page is displayed.
Enter the login password then click **Login**.



Note

- No password is set to AP-415AN by default. Leave it blank and just click **Login** then.

4. The Web page of AP-415AN is displayed.
Configure the necessary setting according to your environment.



Link to Help

Opens the Help page that provides the detailed explanation of each setting.

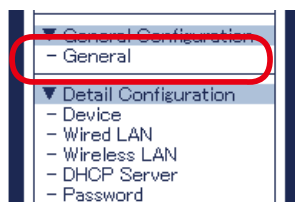
Configuration menu

Changes the language (JP/EN) and configuration page

5-2-2. General Configuration

Basic setting can be configured.

1. Click **General** from the configuration menu.



2. The **General Configuration** page is displayed.
Configure the necessary setting.

General Configuration

General Configuration

▶ Device Configuration

Name	Value
Host Name	SX011336

▶ TCP/IP Configuration

Name	Value
DHCP	DISABLE
IP Address	172.25.73.205
Subnet Mask	255.255.252.0
Default Gateway	0.0.0.0

▶ Wireless LAN Common Configuration

Name	Value
Wireless Mode	802.11n/b/g
Channel Bandwidth	40MHz
Channel	11
Ext. Channel	7

▶ Wireless LAN Basic Configuration

Name	Value
Interface	ENABLE
SSID	AP-415AN
Stealth Mode	DISABLE

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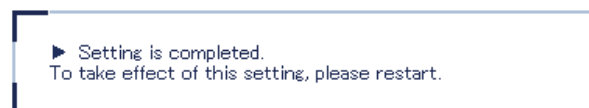
- For details on each setting, refer to **5-2-3. Detailed Configuration**.

Note

3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.



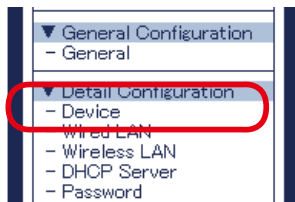
Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

5-2-3. Detailed Configuration

Device Configuration

1. Click **Device** from the configuration menu.



2. The **Device Configuration** page is displayed.
Configure the necessary settings.

 A screenshot of the 'Device Configuration' page. The page has a title bar with 'Device Configuration' and a 'HELP' icon. Below the title bar, there are two main sections. The first section, 'Device Configuration', contains two rows: 'Host Name' with a text input field containing 'SX011336' and 'LED Blink Timeout' with a numeric input field containing '60' and a 'minutes' label. The second section, 'TCP/IP Configuration', contains four rows: 'DHCP' with a dropdown menu set to 'DISABLE', 'IP Address' with a text input field containing '172.25.73.205', 'Subnet Mask' with a text input field containing '255.255.252.0', and 'Default Gateway' with a text input field containing '0.0.0.0'. A 'Submit' button is located at the bottom right of the form.

Category	Name	Setting	Default Value
Device Configuration	Host Name	Alphanumeric string(0-15 characters)	SXxxxxxx
	LED Blink Timeout	1-60	60
TCP/IP Configuration	DHCP	ENABLE/DISABLE	DISABLE
	IP Address	0.0.0.0 - 255.255.255.255	10.xxx.xxx.xxx
	Subnet Mask	0.0.0.0 - 255.255.255.255	255.0.0.0
	Default Gateway	0.0.0.0 - 255.255.255.255	0.0.0.0



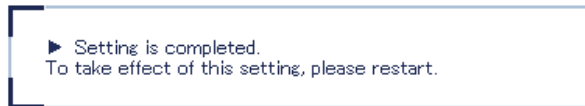
Note

- The last 3-digit numbers (XXX.XXX.XXX) of the IP address is automatically generated from a lower 24bit of the Ethernet Address.

3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.

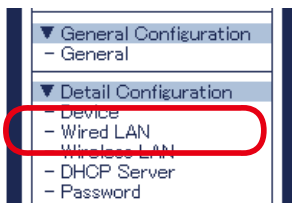


Note

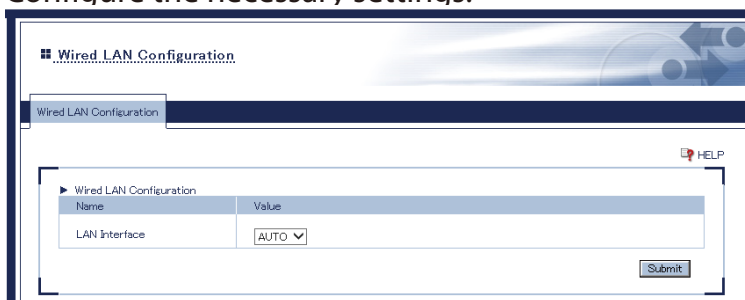
- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

Wired LAN Configuration

1. Click **Wired LAN** from the configuration menu.



2. The **Wired LAN Configuration** page is displayed. Configure the necessary settings.



Category	Name	Setting	Default Value
Wired LAN Configuration	LAN Interface	AUTO	AUTO

3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.

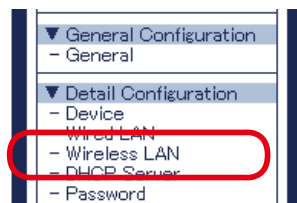


Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

Wireless LAN Configuration

1. Click **Wireless LAN** from the configuration menu.



2. The **Wireless LAN Configuration** page is displayed. Configure the necessary settings.

Category	Name	Setting	Default Value
Wireless LAN Common Configuration	Wireless Mode	802.11b, 802.11b/g, 802.11n/b/g, 802.11a, 802.11n/a	802.11n/b/g
	Channel	1-13/ 36/40/44/48/52/56/60/64/ 100/104/108/112/116/120/124/ 128/132/136/140/149/153/157/ 161/165/	11
	Channel Bandwidth	20MHz/40MHz	40MHz
	Ext Channel	Depending on the channel	7
	DFS Primary Channel	Depending on the channel	Depending on region setting
Wireless LAN Basic Configuration	Interface	ENABLE/DISABLE	ENABLE
	SSID	Alphanumeric string (1-32 characters)	AP-415AN
	Stealth Mode	ENABLE/DISABLE	DISABLE
	Network Authentication	Open, WPA2-PSK,	WPA2-PSK
WPA2 Configuration	Encryption Mode	AES	AES
	Pre-Shared Key	Alphanumeric string (8-63 characters) 64 hexadecimal characters	PreSharedKey
	Group key renew interval	0-1440	60

3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.

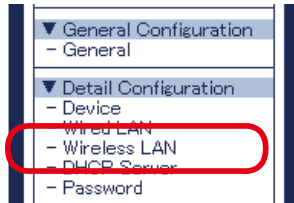


Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

Wireless LAN - WDS

1. Click **Wireless LAN** from the configuration menu.



2. Click the **WDS Configuration** tab and configure the necessary settings.

 A screenshot of the 'Wireless LAN Configuration' web interface. The 'WDS Configuration' tab is selected. It shows a 'Dynamic WDS Configuration' section with a table of settings. The settings are: 'Group ID' with a dropdown set to 'Z (A - Z)', 'Maximum Number of Hops' with a text box containing '1', and 'RSSI Threshold' with a text box containing '-65 dBm'. There is a 'Submit' button at the bottom right of the configuration area.

Category	Name	Setting	Default Value
Dynamic WDS Configuration	Group ID	A - Z	Z
	Maximum Number of Hops	1 - 3	1
	RSSI Threshold	-100 to -10	-65

Group ID

Set the group ID for dynamic WDS.

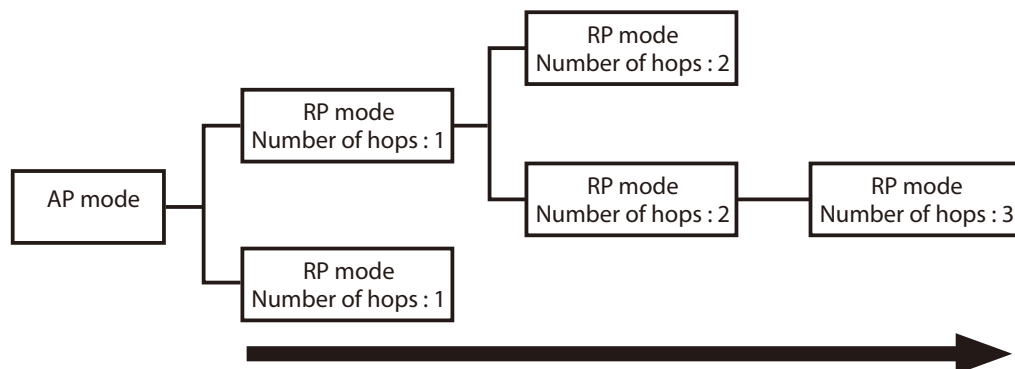
The devices sharing the same ID will be treated as connection target for WDS, or otherwise they will not be connected when the ID is different.

Maximum Number of Hops

This is a total number of AP-415AN units (RP mode) that transmission data passes through until it reaches AP-415AN units (AP mode).

The maximum number of hops is 3.

In a sample network below, the number of hops is 0 for AP-415AN (AP mode). The number of hops for AP-415AN (RP mode) is 1 when it is directly connected to AP-415AN (AP mode). The number of hops will increase one by one when new AP-415AN (RP mode) is added. As the number of hops increases, the communication quality and speed decrease.



3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.

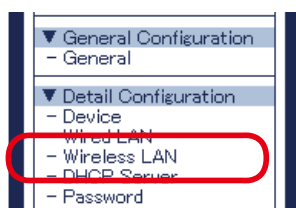


Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

Wireless LAN - Security

1. Click **Wireless LAN** from the configuration menu.



2. Click the **Security Configuration** tab and configure the necessary settings.

Wireless LAN Configuration

General Configuration WDS Configuration **Security Configuration** Extension Configuration

Wireless Interface: Wireless LAN 1

MAC Address Filter Configuration

Name	Value
Filter Type	DISABLE
MAC Address	

00:00:00:00:00:00 Add Delete

Submit

Category	Name	Setting	Default Value
MAC Address Filter Configuration	Filter Type	DISABLE/DENY/ALLOW DISABLE : Allows communication with all devices. DENY : Denies communication with the registered MAC Address. ALLOW : Allows communication with the registered MAC Address only.	DISABLE
	MAC Address	Valid MAC Address	None

3. When finished entering the setting, click **Submit**.

Submit

4. Restart AP-415AN.

► Setting is completed.
To take effect of this setting, please restart.

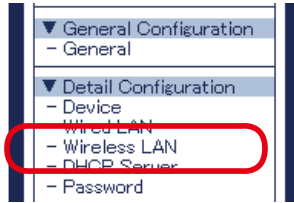


Note

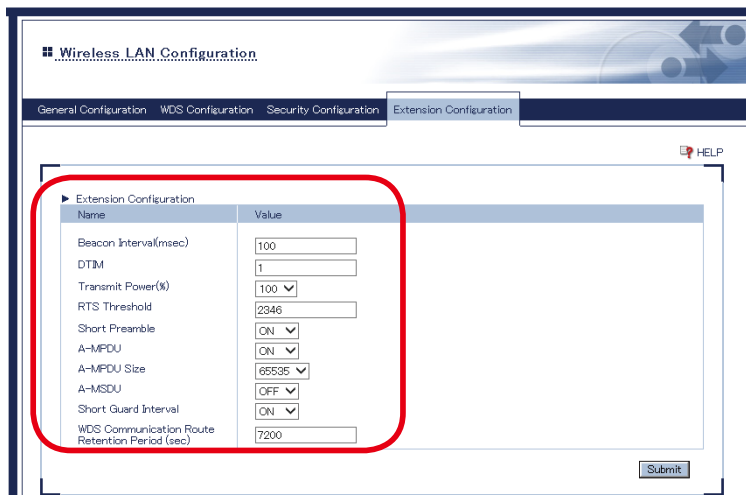
- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

Wireless LAN - Extension

1. Click **Wireless LAN** from the configuration menu.



2. Click the **Extension Configuration** tab and configure the necessary settings.

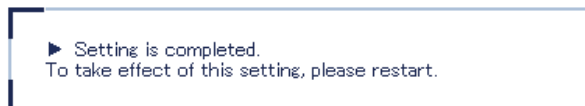


Category	Name	Setting	Default Value
Extension Configuration	Beacon Interval(msec))	20 - 1000	100
	DTIM	1 - 255	1
	Transmit Power(%)	5 - 100	100
	RTS Threshold	1 - 2346	2346
	Short Preamble	OFF/ON	ON
	A-MPDU	OFF/ON	ON
	A-MPDU Size	4096/8192/16384/ 32768/65535	65535
	A-MSDU	OFF/ON	OFF
	Short Guard Interval	OFF/ON	ON
	WDS Communication Route Retention Period (sec)	60 - 86400	7200 (2 hours)

- When finished entering the setting, click **Submit**.



- Restart AP-415AN.

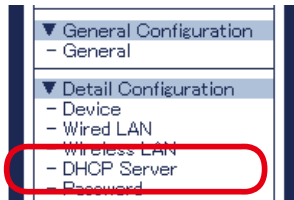


Note

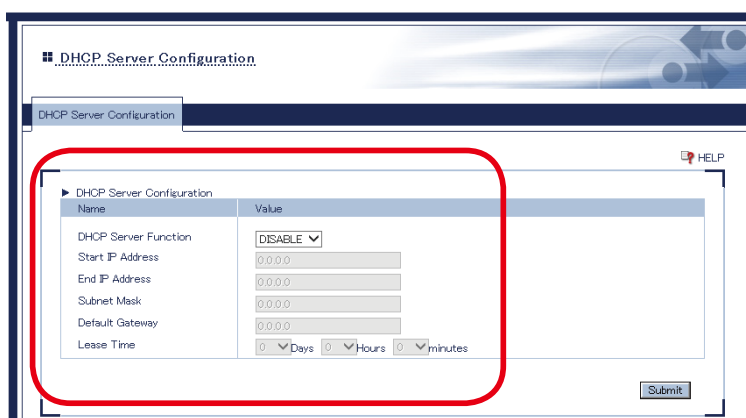
- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

DHCP Server

- Click **DHCP Server** from the configuration menu.



- The **DHCP Server Configuration** page is displayed. Configure the necessary settings.

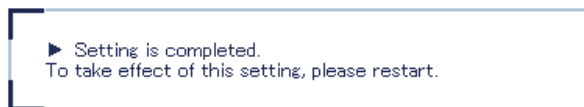


Category	Name	Setting	Default Value
DHCP Server Configuration	DHCP Server Function	ENABLE/DISABLE	DISABLE
	Start IP Address	0.0.0.0 - 255.255.255.255	0.0.0.0
	End IP Address	0.0.0.0 - 255.255.255.255	0.0.0.0
	Subnet Mask	0.0.0.0 - 255.255.255.255	0.0.0.0
	Default Gateway	0.0.0.0 - 255.255.255.255	0.0.0.0
	Lease Time	0 Days 0 Hours 0 minutes - 43 Days 23 Hours 59 minutes	0 Days 0 Hours 0 minutes

3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.

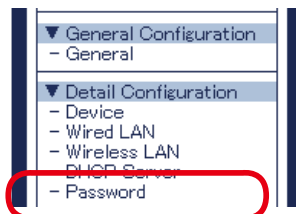


Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

Password

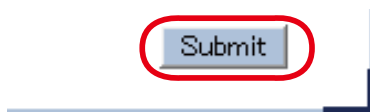
1. Click **Password** from the configuration menu.



2. The **Password Configuration** page is displayed.
Configure the login password.

Name	Setting	Default Value
New Password	Alphanumeric string (0-15 characters)	None
Confirm New Password	Enter the same password as above.	None

3. When finished entering the setting, click **Submit**.



4. Restart AP-415AN.



Note

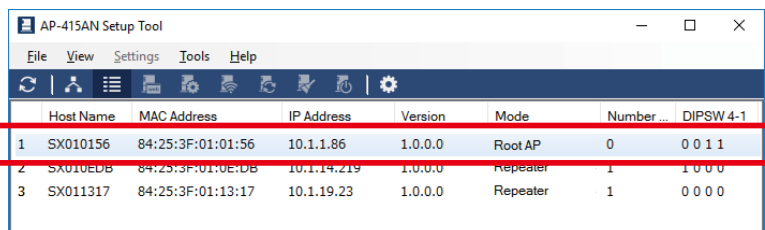
- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

5-3. Configuration Using AP-415AN Setup Tool

1. Select the AP-415AN units to configure from the list.

To configure a single unit:

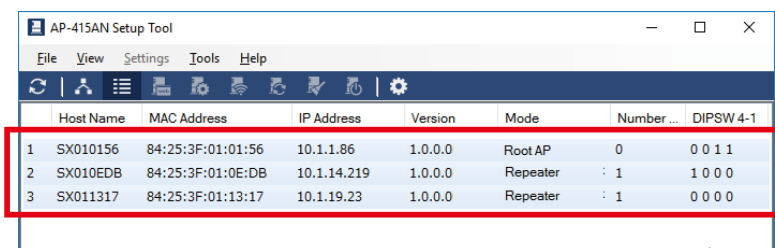
Select a single AP-415AN unit to configure.



	Host Name	MAC Address	IP Address	Version	Mode	Number ...	DIPSW 4-1
1	SX010156	84:25:3F:01:01:56	10.1.1.86	1.0.0.0	Root AP	0	0 0 1 1
2	SX010EDB	84:25:3F:01:0E:DB	10.1.14.219	1.0.0.0	Repeater	1	1 0 0 0
3	SX011317	84:25:3F:01:13:17	10.1.19.23	1.0.0.0	Repeater	1	0 0 0 0

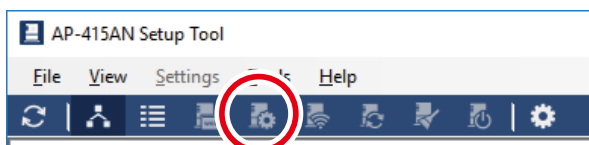
To configure multiple units:

Select multiple AP-415AN units to configure.

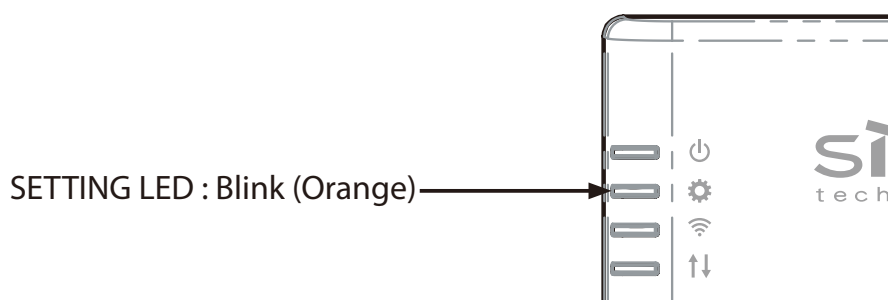


	Host Name	MAC Address	IP Address	Version	Mode	Number ...	DIPSW 4-1
1	SX010156	84:25:3F:01:01:56	10.1.1.86	1.0.0.0	Root AP	0	0 0 1 1
2	SX010EDB	84:25:3F:01:0E:DB	10.1.14.219	1.0.0.0	Repeater	1	1 0 0 0
3	SX011317	84:25:3F:01:13:17	10.1.19.23	1.0.0.0	Repeater	1	0 0 0 0

2. Click the **Configure the device** icon from the toolbar.



Once the icon is clicked, SETTING LED blinks in orange.



3. When the password is required, enter the configuration password of AP-415AN and click **OK**.



- The configuration password is set to **admin** by default.
- It is impossible to login when someone else is currently accessing the Web page.

Note

4. In the **Device Configuration** window, configure the necessary setting on each tab and click **OK**.



- For details on each setting, refer to **Configuration Menu of AP-415AN Setup Tool**.

Note

5. When the password is required, enter the configuration password of AP-415AN and click **OK**.



- Even if you have changed the configuration password, keep using the previous password until the new password takes effect.
- It is impossible to login when someone else is currently accessing the Web page.



Note

- The configuration password is set to **admin** by default.

6. The confirmation message is displayed.
Click **Yes** to refresh the main window with the new setting.
Click **No** to skip it.



Note

- If the check box at **Do not display this message again** is checked, the following options are enabled.
 - **Automatically refresh the window**
 - **Do not automatically refresh the window**

Configuration Menu of AP-415AN Setup Tool

General Tab

Device Configuration - 84:25:3F:01:13:36

General | TCP / IP | Wireless LAN | WDS | Access Control

Host Name : SX011336

Configuration Password :

LED Blink Timeout : 60 min

OK Cancel

Name	Setting	Default Value	Single	Multiple
Host Name	Enter the host name.	SXxxxxxx	Supported	–
	Alphanumeric string (0-15 characters)			
Configuration Password	Set the password to use on AP-415AN Setup Tool.	admin	Supported	–
	Alphanumeric string (0-15 characters)			
LED Blink Timeout	Enter the timeout period for LED blink process (min).	60	Supported	Supported
	1-60			

TCP/IP Tab

Device Configuration - 84:25:3F:01:13:36

General TCP/IP Wireless LAN WDS Access Control

DHCP : Disable

IP Address : . . .

Subnet Mask : . . .

Default Gateway : . . .

OK Cancel

Name	Setting	Default Value	Single	Multiple
DHCP	Enable/Disable DHCP.	Disable	Supported	-
	Enable / Disable			
IP Address	Enter the IP address.	10.xxx.xxx.xxx	Supported	-
	0.0.0.0 -255.255.255.255			
Subnet Mask	Enter the subnet mask.	255.0.0.0	Supported	-
	0.0.0.0 -255.255.255.255			
Default Gateway	Enter the default gateway.	0.0.0.0	Supported	-
	0.0.0.0 -255.255.255.255			

Wireless LAN Tab

Device Configuration - 84:25:3F:01:13:36

General TCP/IP **Wireless LAN** WDS Access Control

Wireless Mode : 802.11n/b/g

Channel Bandwidth : 40MHz

Channel : 11

Extended Channel : Lower

DFS Primary Channel (W53) : 36

DFS Primary Channel (W56) : 36

Stealth Mode : Disable

SSID : AP-415AN

Network Authentication : WPA2-PSK

Encryption Mode : AES

Pre-Shared Key :

Group Key Renew Interval : 60 min

OK Cancel

Name	Setting	Default Value	Single	Multiple
Wireless Mode	Select the wireless mode.	802.11n/b/g	Supported	Supported
	802.11b, 802.11b/g, 802.11n/b/g, 802.11a, 802.11n/a			
Channel Bandwidth	Select the channel bandwidth.	40MHz	Supported	Supported
	20MHz/40MHz			
Channel	Select the wireless channel.	11	Supported	Supported
	1 -13/ 36/40/44/48/52/56/60/64/ 100/104/108/112/116/120/ 124/128/132/136/140/149/ 153/157/161/165/			
Extended Channel	Select the extended channel.	Lower	Supported	Supported
	Depending on the channel.			
DFS Primary Channel (W53)	Select the DFS primary channel (W53).	36	Supported	Supported
	Depending on the channel.			
DFS Primary Channel (W56)	Select the DFS primary channel (W56).	36	Supported	Supported
	Depending on the channel.			

Name	Setting	Default Value	Single	Multiple
Stealth Mode	Enable/Disable the stealth mode.	Disable	Supported	Supported
	Enable/Disable			
SSID	Enter the SSID.	AP-415AN	Supported	Supported
	Alphanumeric string (1-32 characters)			
Network Authentication	Select the network authentication method.	WPA2-PSK	Supported	Supported
	Open, WPA2-PSK			
Encryption Mode	Select the encryption mode.	AES	Supported	Supported
	AES			
Pre-Shared Key	Enter the Pre-Shared Key.	PreSharedKey	Supported	Supported
	Alphanumeric string (8-63 characters) 64 hexadecimal characters			
Group Key Renew Interval	Specify the renew interval for group key (min).	60	Supported	Supported
	0-1440			

WDS Tab

Device Configuration - 84:25:3F:01:13:36

General TCP / IP Wireless LAN **WDS** Access Control

Group ID : Z

Maximum Number of Hops : 1

RSSI Threshold : -65 dBm

OK Cancel

Name	Setting	Default Value	Single	Multiple
Group ID	Select the WDS group ID.	Z	Supported	Supported
	A - Z			
Maximum Number of Hops	Set the maximum number of hops for WDS.	1	Supported	Supported
	1 - 3			
RSSI Threshold	Specify the RSSI threshold value for WDS connection.	-65	Supported	Supported
	-100 to -10			

Access Control Tab

Device Configuration - 84:25:3F:01:13:36

General

TCP / IP

Wireless LAN

WDS

Access Control

UDP Port Filter (From) :

0

UDP Port Filter (To) :

0

OK

Cancel

Name	Setting	Default Value	Single	Multiple
UDP Port Filter (From)	Specify the start port for UDP port filter. This value must be smaller than the end port.	0	Supported	Supported
	0-65535			
UDP Port Filter (To)	Specify the end port for UDP port filter. This value must be larger than the start port.	0	Supported	Supported
	0-65535			

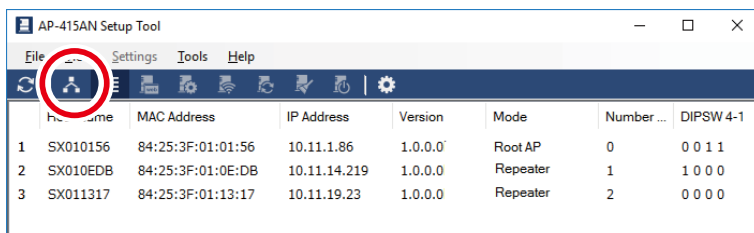
6. Showing AP-415AN

6-1. Showing AP-415AN

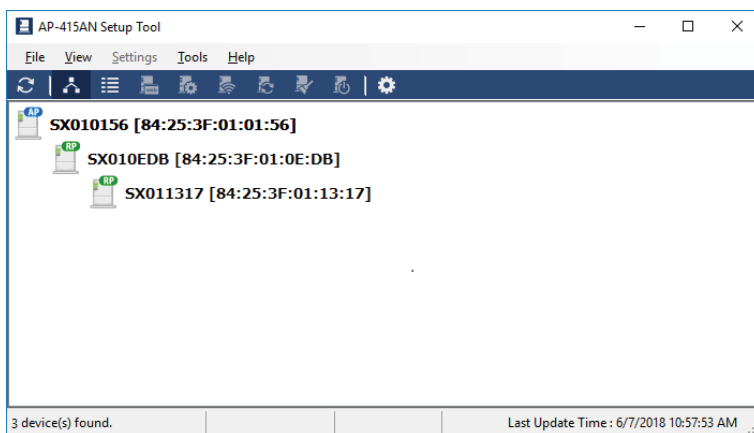
6-1-1. Showing AP-415AN Units in Topology View

The detected AP-415AN units are displayed in a hierarchical view.

1. Click the **Show in Topology View** icon from toolbar.



2. AP-415AN units are displayed in a topology view.
Each one is displayed with a host name + MAC address.

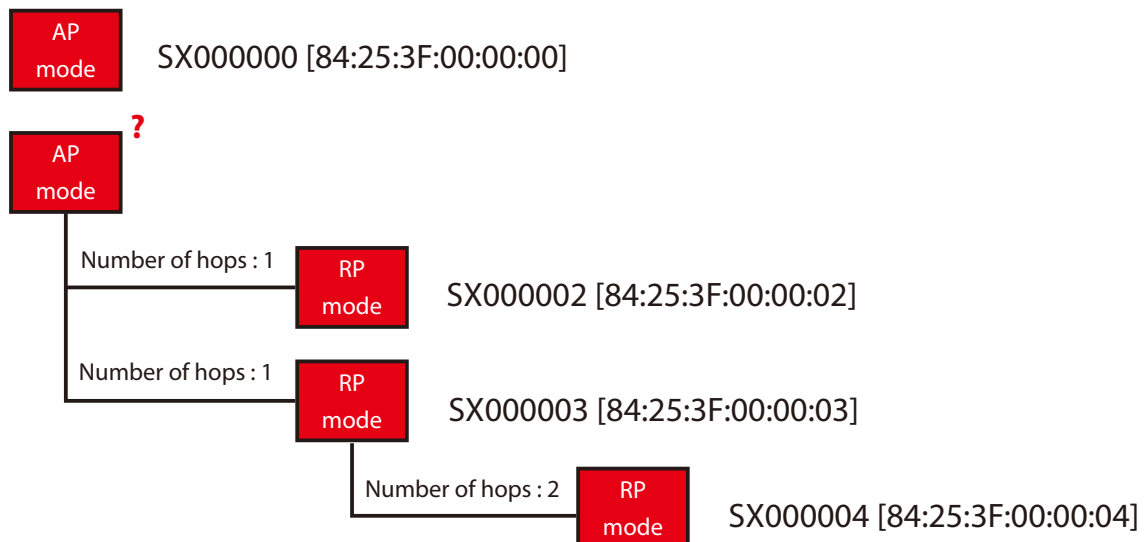


When a Host Device Is Not Found

When AP is not found

A virtual AP is created temporarily and RP units are allocated under it.

Image of error (When SX000001 is not found):



When a relay BR is not found

If AP-415AN Setup Tool found the AP-415AN units (RP mode) whose number of hops is '2' but lost the AP-415AN units (RP mode) whose number of hops is '1', virtual AP and virtual RP units are created and AP-415AN units (RP mode) are allocated under them as it is not sure which AP they should connect to.

Image of success:

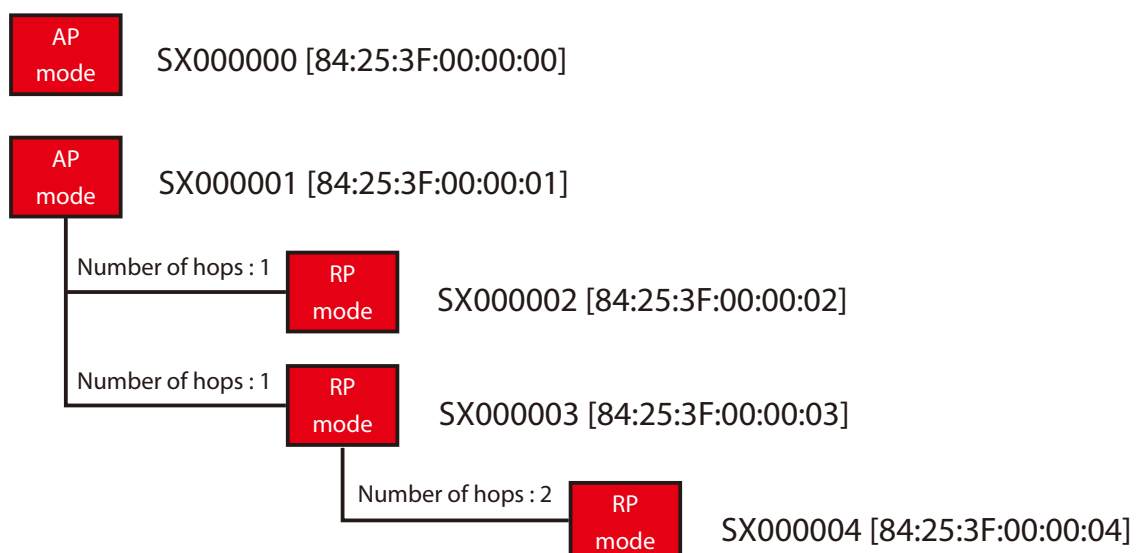
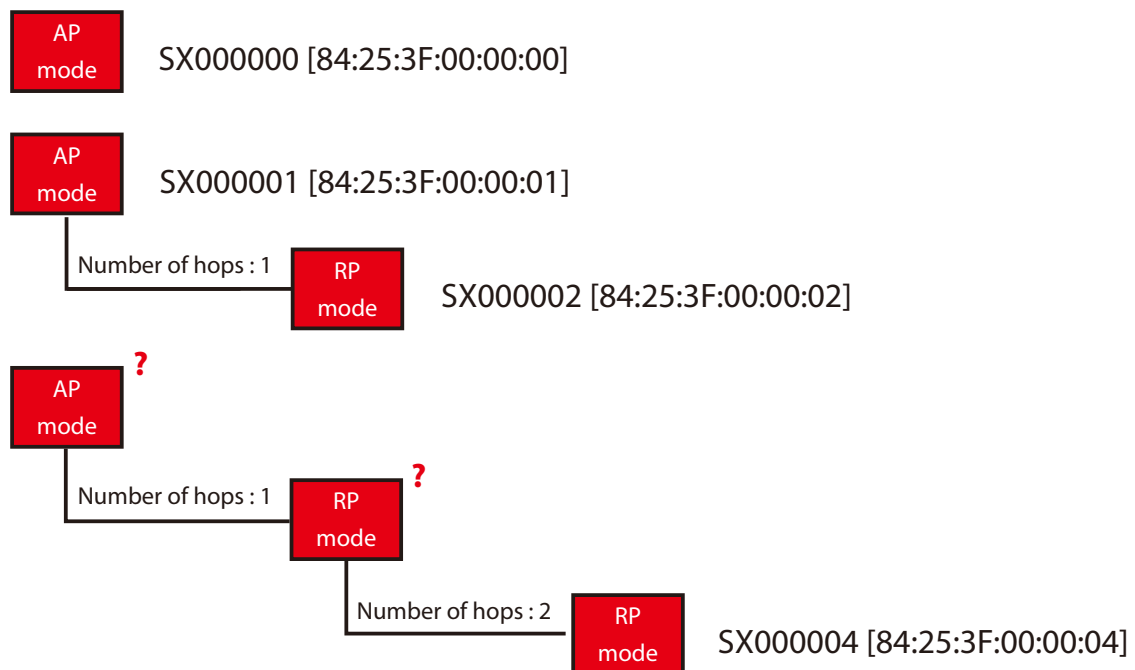


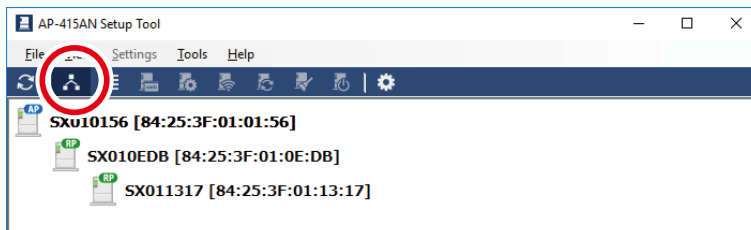
Image of failure (when SX000003 is lost):



6-1-2. Showing AP-415AN Units in Device List View

The detected AP-415AN units and the status information are displayed.

1. Click the **Show in List View** icon from toolbar.



2. AP-415AN units are displayed in a device list view.

The screenshot shows the 'AP-415AN Setup Tool' window with the 'View' menu selected. The 'Show in List View' icon in the toolbar is highlighted. The main area displays a table of detected AP units:

	Host Name	MAC Address	IP Address	Version	Mode	Number ...	DIPSW 4-1
1	SX010156	84:25:3F:01:01:56	10.11.1.86	1.0.0.0	Root AP	0	0 0 1 1
2	SX010EDB	84:25:3F:01:0E:DB	10.11.14.219	1.0.0.0	Repeater	1	1 0 0 0
3	SX011317	84:25:3F:01:13:17	10.11.19.23	1.0.0.0	Repeater	2	0 0 0 0

At the bottom of the window, it states: 3 device(s) found. Last Update Time : 6/7/2018 10:57:53 AM

6-2. Status Information on AP-415AN's Web Page

The operating status information can be found on the Web page. It provides the TCP/IP information and wireless LAN setting of AP-415AN, and the MAC address, received signal strength, etc. of the connected station devices.

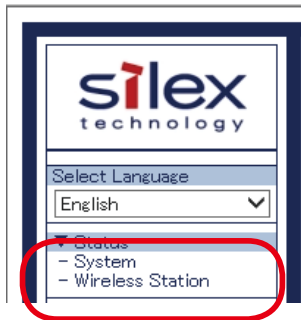
1. Access the Web page of AP-415AN.



Note

- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page**.

2. Click **System** or **Wireless Station** from the configuration menu.



3. The system status page is displayed.

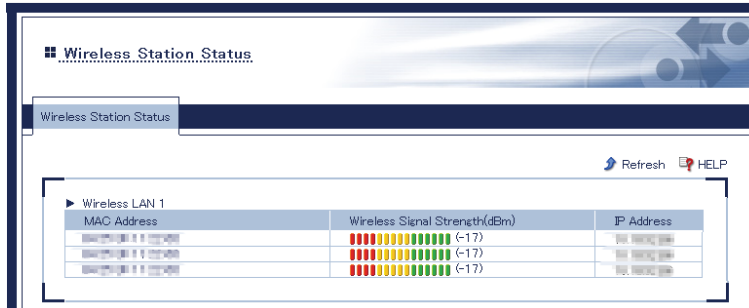
System Status

TCP/IP information and wireless LAN setting are displayed.

System Status											
<div> <div>Refresh</div> <div>HELP</div> </div>											
<div> <div>TCP/IP Information</div> <table border="1"> <thead> <tr> <th>Name</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>IP Address</td> <td>172.25.73.205</td> </tr> <tr> <td>Subnet Mask</td> <td>255.255.252.0</td> </tr> <tr> <td>Default Gateway</td> <td>0.0.0.0</td> </tr> </tbody> </table> </div>		Name	Status	IP Address	172.25.73.205	Subnet Mask	255.255.252.0	Default Gateway	0.0.0.0		
Name	Status										
IP Address	172.25.73.205										
Subnet Mask	255.255.252.0										
Default Gateway	0.0.0.0										
<div> <div>Wireless LAN Common Configuration</div> <table border="1"> <thead> <tr> <th>Name</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Wireless Mode</td> <td>802.11n/b/g</td> </tr> <tr> <td>Channel Bandwidth</td> <td>40MHz</td> </tr> <tr> <td>Channel</td> <td>11 ch.</td> </tr> </tbody> </table> </div>		Name	Status	Wireless Mode	802.11n/b/g	Channel Bandwidth	40MHz	Channel	11 ch.		
Name	Status										
Wireless Mode	802.11n/b/g										
Channel Bandwidth	40MHz										
Channel	11 ch.										
<div> <div>Wireless LAN 1 Configuration</div> <table border="1"> <thead> <tr> <th>Name</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Interface</td> <td>ENABLE</td> </tr> <tr> <td>SSID</td> <td>AP-415AN</td> </tr> <tr> <td>Network Authentication</td> <td>WPA2-PSK</td> </tr> <tr> <td>Encryption Mode</td> <td>AES</td> </tr> </tbody> </table> </div>		Name	Status	Interface	ENABLE	SSID	AP-415AN	Network Authentication	WPA2-PSK	Encryption Mode	AES
Name	Status										
Interface	ENABLE										
SSID	AP-415AN										
Network Authentication	WPA2-PSK										
Encryption Mode	AES										
<div> <div>WDS Information</div> <table border="1"> <thead> <tr> <th>Name</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>WDS Mode</td> <td>RootAP</td> </tr> <tr> <td>Wireless LAN Interface</td> <td>Wireless LAN 1</td> </tr> </tbody> </table> </div>		Name	Status	WDS Mode	RootAP	Wireless LAN Interface	Wireless LAN 1				
Name	Status										
WDS Mode	RootAP										
Wireless LAN Interface	Wireless LAN 1										

Wireless Station Status

MAC address, RSSI (Received Signal Strength Indicator) and IP address of the connected wireless stations are displayed.



MAC Address	Wireless Signal Strength(dBm)	IP Address
00:0C:8C:00:00:00	(-17)	192.168.1.1
00:0C:8C:00:00:01	(-17)	192.168.1.2
00:0C:8C:00:00:02	(-17)	192.168.1.3

7.

Product Management

7-1. Access Control

This section explains how to control access to AP-415AN using the Web configuration page.

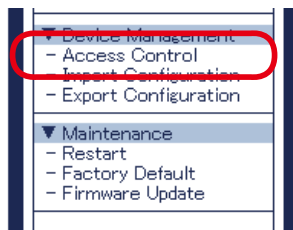
1. Access the Web page of AP-415AN.



- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page**.

Note

2. The system status page is displayed. Click **Access Control** from the menu on the Web page.



3. The **Access Control** page is displayed. Enter the necessary settings.

Access Control		
Name	Wired LAN	Wireless LAN
TELNET	ENABLE	ENABLE
SSH	ENABLE	ENABLE
HTTP	ENABLE	ENABLE

UDP Port Filter Configuration	
Name	Value
Start Port	0
End Port	0

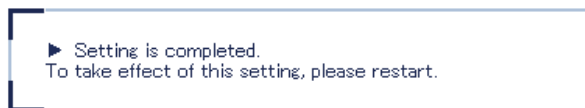
Submit

Name	Setting		Options	Default
Access Control	Wired LAN	TELNET	ENABLE/DISABLE	ENABLE
		SSH	ENABLE/DISABLE	ENABLE
		HTTP	ENABLE/DISABLE	ENABLE
	Wireless LAN	TELNET	ENABLE/DISABLE	ENABLE
		SSH	ENABLE/DISABLE	ENABLE
		HTTP	ENABLE/DISABLE	ENABLE
UDP Port Filter Configuration	Start Port		0-65535	0
	End Port		0-65535	0

4. Configure the necessary settings and Click **Submit**.



5. Restart AP-415AN.



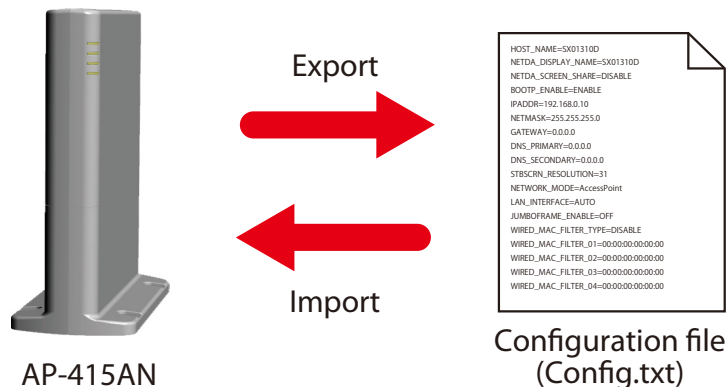
Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

7-2. Configuration Import/Export

7-2-1. Configuration Import/Export

The configuration can be exported (for backup) and imported (for restore) using the Web page of AP-415AN.



Export: Saves the configuration of AP-415AN as a file.

Import: Imports the configuration file to AP-415AN to restore the setting.



TIP

- The configuration file you can import to AP-415AN must be the one you had exported from AP-415AN.
- After the configuration file is exported, please do not change the file name as well as edit the information. If the file is altered, you may not be able to import.
- If there are differences in firmware versions on AP-415AN between the one exporting the configuration file and the one importing the configuration file, the file may not be imported correctly.

7-2-2. Configuration Export

The section explains how to export configuration using the Web configuration page.

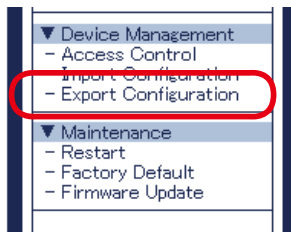
1. Access the Web page of AP-415AN.



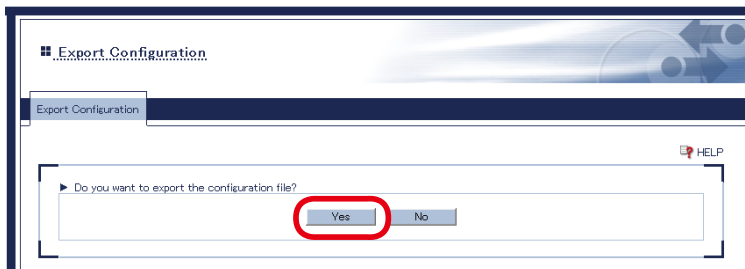
Note

- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page.**

2. The system status page is displayed. Click **Export Configuration** from the menu.



3. The configuration export page is displayed. Click **Yes**.



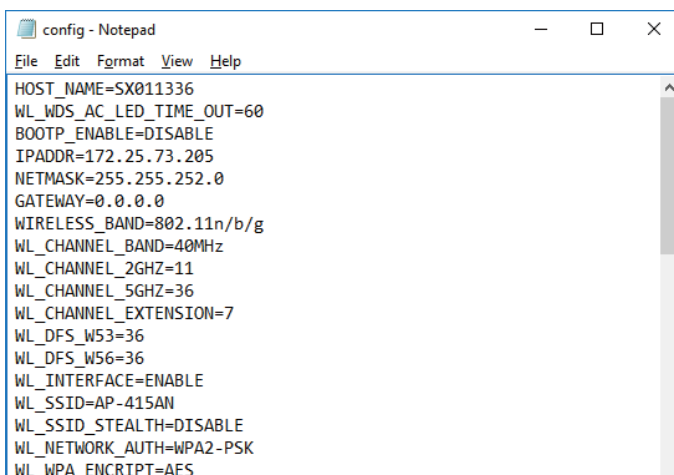
4. A message dialog to confirm where to save the configuration file (config.txt) is displayed. Click **Save** and then click **Open file**.



- By clicking ▼, you can select **Save as option**.

Note

5. The configuration file (config.txt) is output.



7-2-3. Configuration Import

The section explains how to import configuration using the Web configuration page.

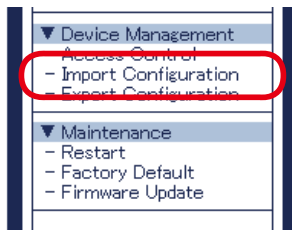
1. Access the Web page of AP-415AN.



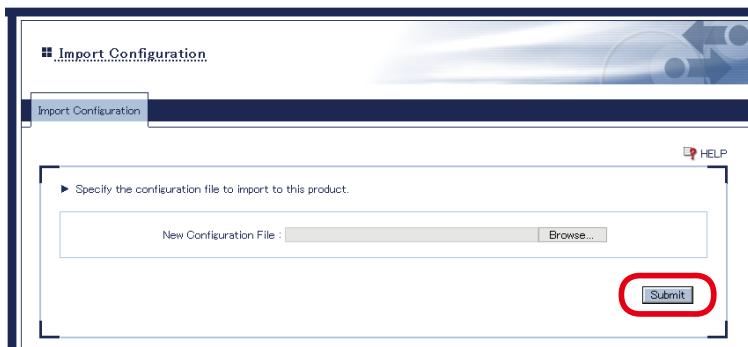
Note

- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page.**

2. The system status page is displayed. Click **Import Configuration** from the menu.



3. The configuration import page is displayed. Click **Browse**, select the configuration file to upload (config.txt) and click **Open**.

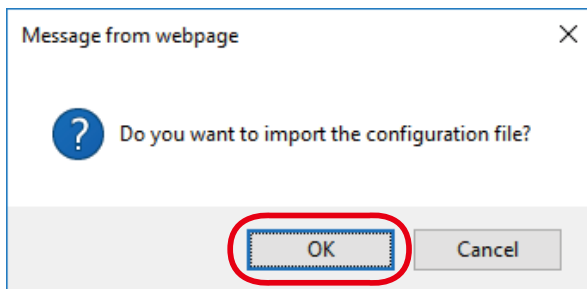


Note

- The configuration file you can import to AP-415AN must be the one you had exported from AP-415AN.

4. Check that the configuration file you have selected is displayed at the **New Configuration File** field and click **Submit**.

5. Click **OK** in a confirmation message.



6. The configuration import is started.

7. Restart AP-415AN.



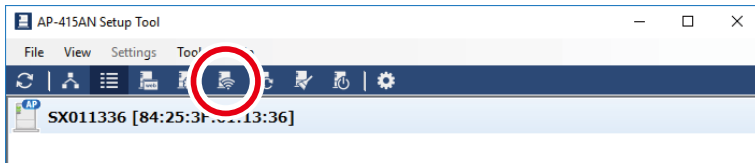
Note

- For details on how to restart AP-415AN, refer to **8-1. How to Restart AP-415AN**.
- If you are to continue configuration on the other pages, you do not have to restart AP-415AN. Restart AP-415AN when you finished configuration on all other pages.

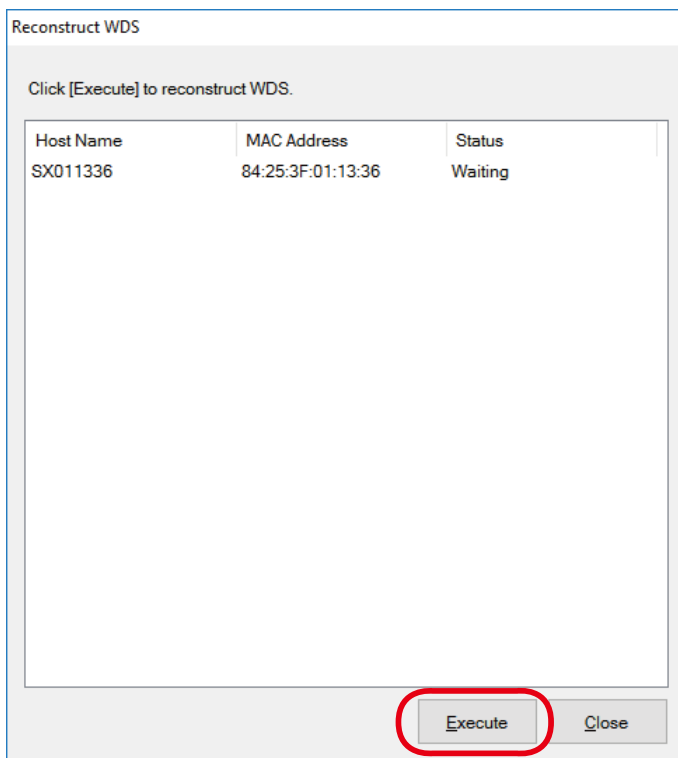
7-3. WDS Reconstruction

This section explains how to reconstruct WDS using AP-415AN Setup Tool.

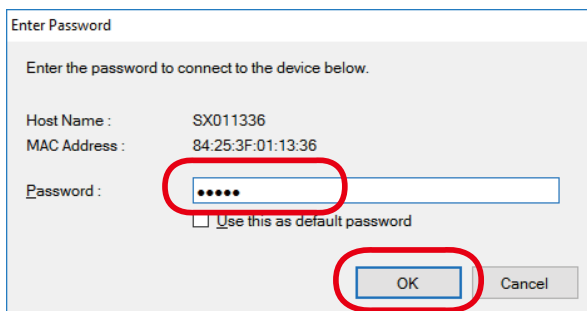
1. Select AP-415AN from the device list and click **Reconstruct WDS** from the toolbar.



2. Click **Execute** to start WDS reconstruction.
When WDS reconstruction is in progress, buttons are hidden or disabled.



3. The password entry screen is displayed. Enter the configuration password and click **OK**.



Enter Password

Enter the password to connect to the device below.

Host Name : SX011336
MAC Address : 84:25:3F:01:13:36

Password :

☐ Use this as default password

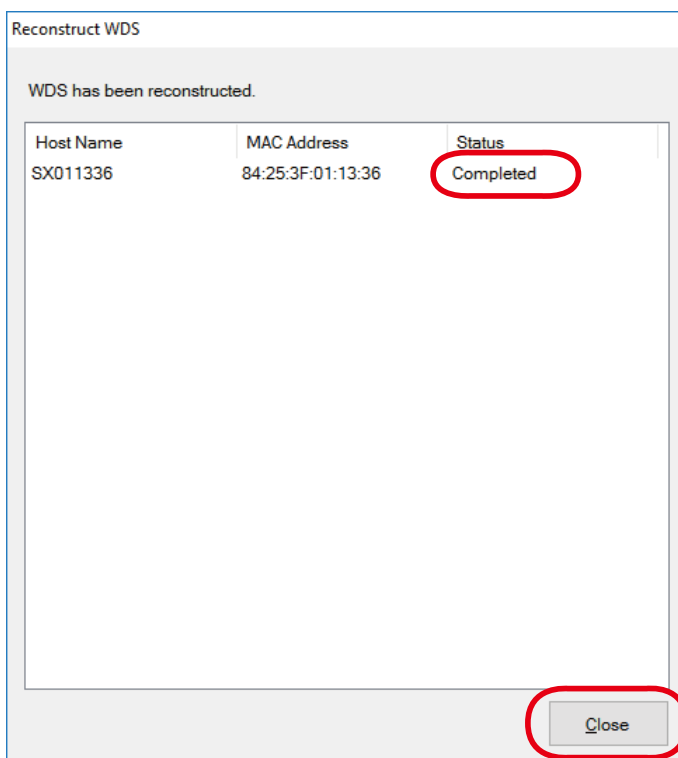
OK Cancel



- By default, the configuration password is **admin**.
- It is impossible to login when someone else has logged in.

Note

4. WDS reconstruction is completed. Click **Close**.



Reconstruct WDS

WDS has been reconstructed.

Host Name	MAC Address	Status
SX011336	84:25:3F:01:13:36	Completed

Close

8. Maintenance

8-1. Restart

8-1-1. Restart by Unplugging the AC Adaptor

This section explains how to restart AP-415AN by unplugging the AC adaptor.

1. Restart AP-415AN by one of the following methods.

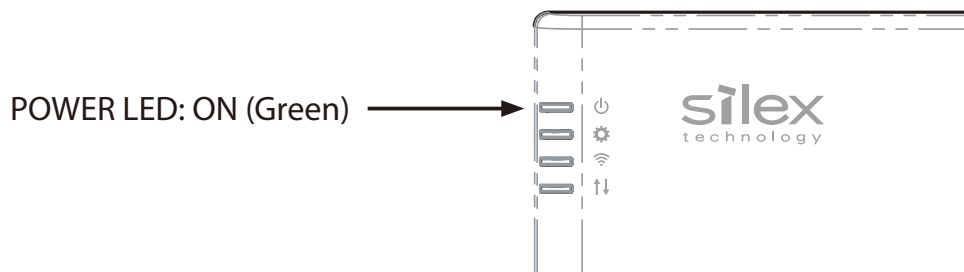
When the AC adaptor is connected to AP-415AN

Remove the AC adaptor's plug from the outlet and plug it back to the outlet.

When the DC cable is connected to AP-415AN

Remove the DC cable from AP-415AN and plug it back to AP-415AN.

2. When the POWER LED turns on as follows, the restart is completed.



8-1-2. Restart by Using the Web Configuration Page

This section explains how to restart AP-415AN by using the Web configuration page.

1. Access the Web page of AP-415AN.



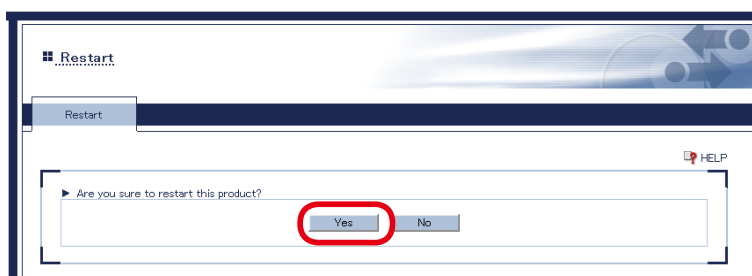
Note

- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page.**

2. The system status page is displayed. Click **Restart** from the menu.



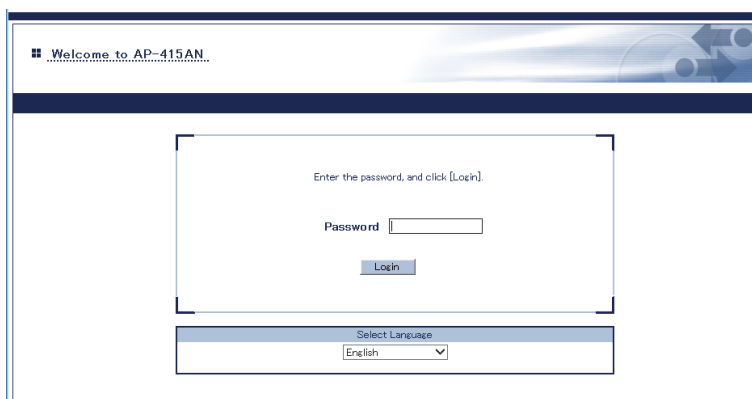
3. The restart page is displayed. Click **Yes**.



4. AP-415AN is restarted.



5. When the restart is finished, the login page is displayed again. Close the Web browser then.



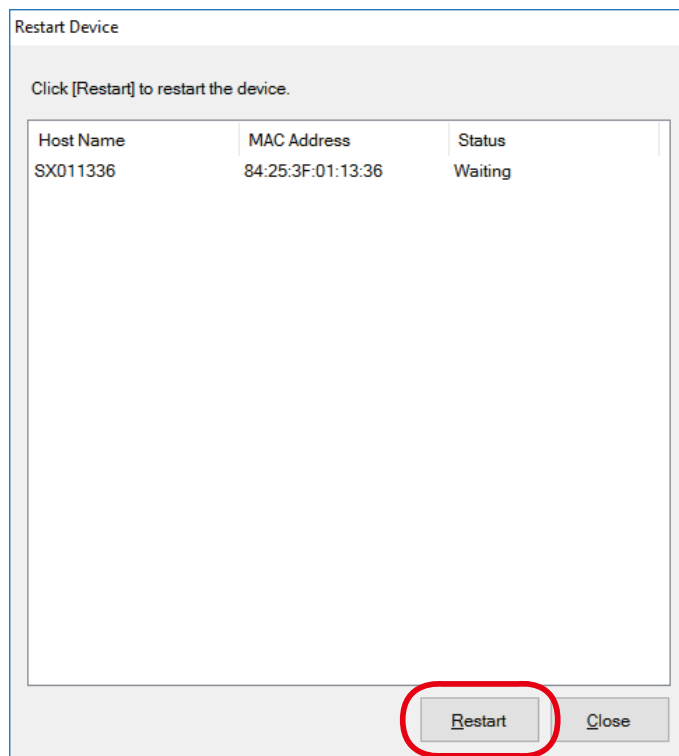
8-1-3. Restart Using AP-415AN Setup Tool

This section explains how to restart AP-415AN using AP-415AN Setup Tool.

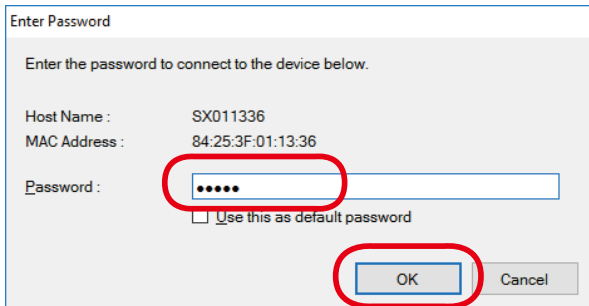
1. Select AP-415AN to restart from the device list and click the icon "Restart" from the toolbar.



2. The restart window is displayed. Click **Restart** to restart AP-415AN. When the restart is in progress, buttons are hidden or disabled.



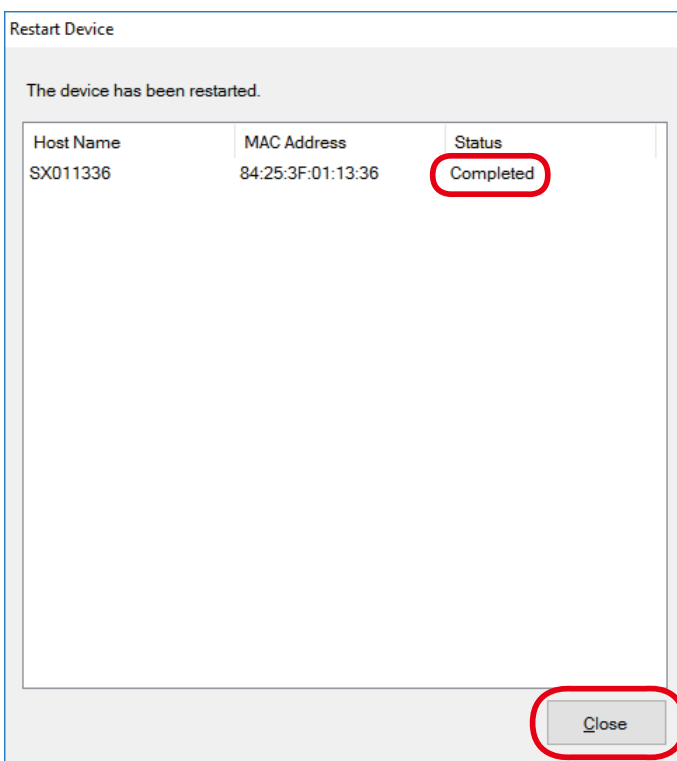
3. The password entry screen is displayed. Enter the configuration password and click **OK** to restart AP-415AN.



- By default, the configuration password is **admin**.
- It is impossible to login when someone else has logged in.

Note

4. When the restart is finished, click **Close**.



Host Name	MAC Address	Status
SX011336	84:25:3F:01:13:36	Completed

8-2. Factory Default Configuration

8-2-1. Factory Default Configuration Using the Push Switch

This section explains how to reset AP-415AN to factory default setting using the push switch.

1. Turn off AP-415AN.
2. Push and hold the push switch on AP-415AN while turning on AP-415AN again.
When the SETTING LED turns green and then turns red, release the push switch.

When SETTING LED turns green
and then turns red, release the
push switch.



3. When the POWER LED and SETTING LED turn on as follows, factory default configuration is completed.

POWER LED: ON (Green)

SETTING LED: OFF



- If AP-415AN is reset to factory default setting, AP-415AN may be lost from the PC and the login page is not displayed as the IP address is reset to "10.XXX.XXX.XXX". In such a case, change the IP address of your PC or AP-415AN to allow communication between them.

8-2-2. Factory Default Configuration Using the Web Configuration Page

This section explains how to reset AP-415AN to factory default setting using the Web configuration page.

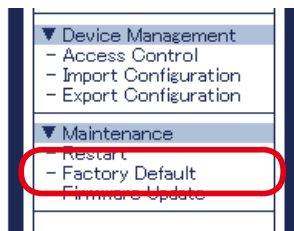
1. Access the Web page of AP-415AN.



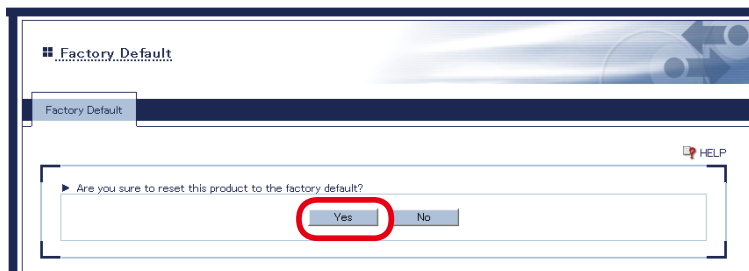
- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page.**

Note

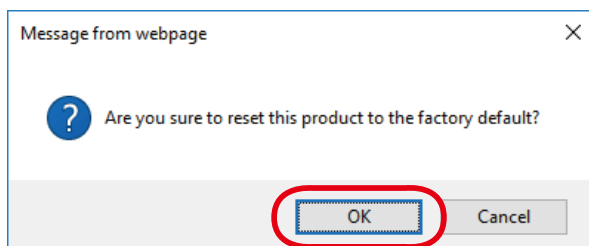
2. The system status page is displayed. Click **Factory Default** from the menu.



3. The factory default configuration page is displayed. Click **Yes**.



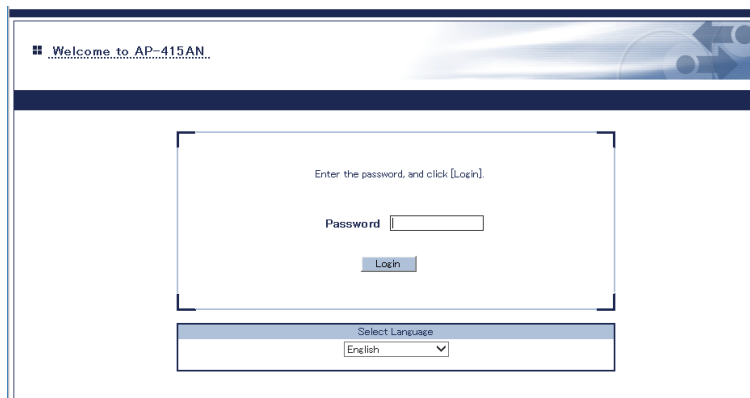
4. Click **OK** to the confirmation message.



5. The factory default configuration begins. When it is finished, AP-415AN is restarted.



6. The login page is displayed again when the factory default configuration is completed. Finish the Web browser then.

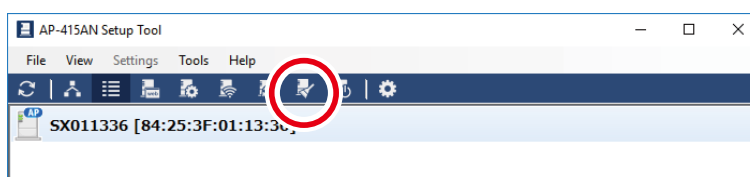


- If AP-415AN is reset to factory default setting, AP-415AN may be lost from the PC and the login page is not displayed as the IP address is reset to "10.XXX.XXX.XXX". In such a case, change the IP address of your PC or AP-415AN to allow communication between them.

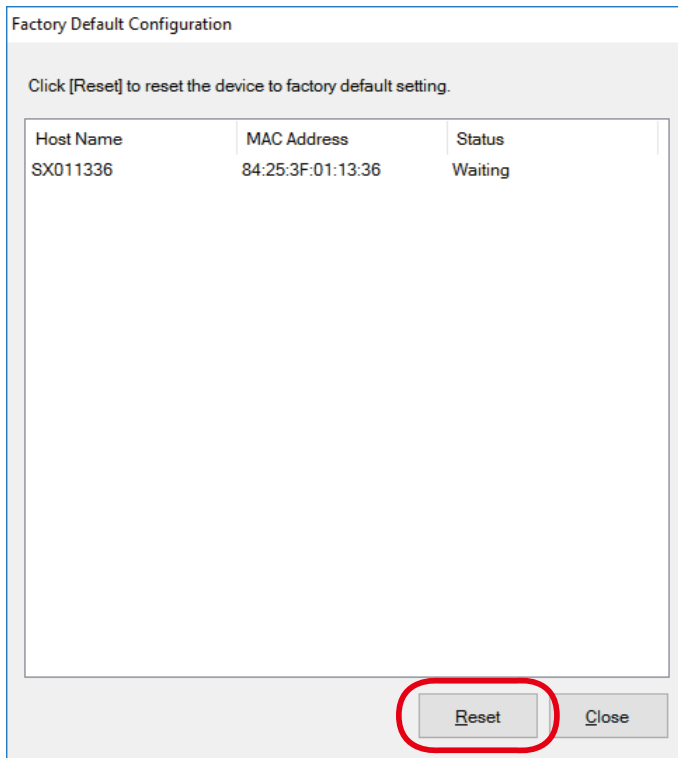
8-2-3. Factory Default Configuration Using AP-415AN Setup Tool

This section explains how to reset AP-415AN to factory default setting using AP-415AN Setup Tool.

1. Select AP-415AN to initialize from the device list and click the icon "Factory Default Configuration" from the toolbar.



2. The factory default configuration window is displayed. Click **Reset** to start initialization. When initialization is in progress, buttons are hidden or disabled.



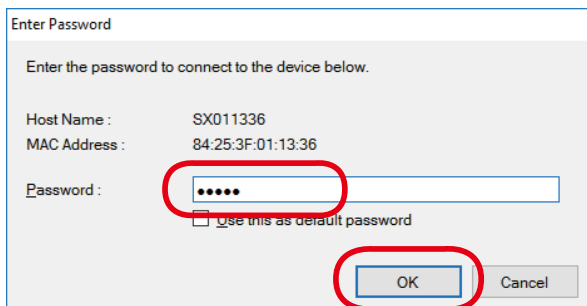
Factory Default Configuration

Click [Reset] to reset the device to factory default setting.

Host Name	MAC Address	Status
SX011336	84:25:3F:01:13:36	Waiting

Reset Close

3. The password entry screen is displayed. Enter the configuration password and click **OK**.



Enter Password

Enter the password to connect to the device below.

Host Name : SX011336
MAC Address : 84:25:3F:01:13:36

Password :

☐ Use this as default password

OK Cancel

**Note**

- By default, the configuration password is **admin**.
- It is impossible to login when someone else has logged in.

4. The factory default configuration is started.

Factory Default Configuration

Factory default configuration is in process. Please wait for a while.

Host Name	MAC Address	Status
SX011336	84:25:3F:01:13:36	Processing

Close

5. When the factory default configuration is finished, click **Close**.

Factory Default Configuration

Factory default configuration has been completed.

Host Name	MAC Address	Status
SX011336	84:25:3F:01:13:36	Completed

Close

8-3. Firmware Update

8-3-1. Downloading Latest Firmware

See **3-3-1. Downloading AP-415AN Setup Tool** for details on how to download the latest firmware of AP-415AN.

8-3-2. Firmware Update Using the Web Configuration Page

This section explains how to update the firmware of AP-415AN using the Web configuration page.

1. Access the Web page of AP-415AN.



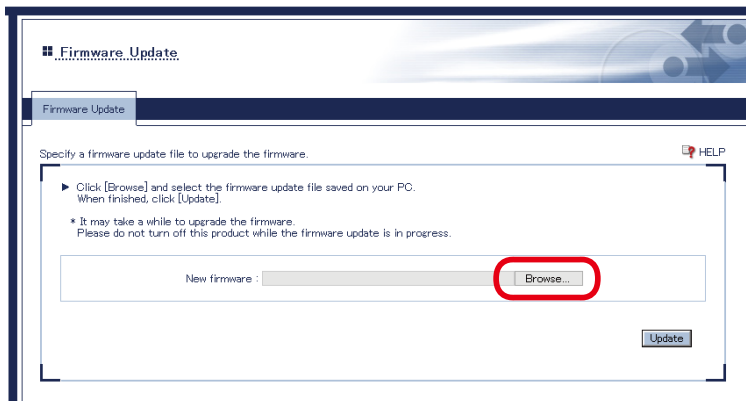
- For details on how to access the Web page, see **5-2-1. Accessing AP-415AN's Web Page**.

Note

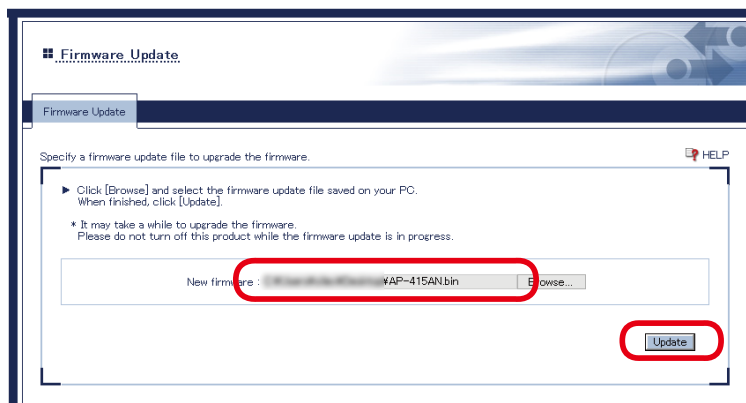
2. The system status page is displayed. Click **Firmware Update** from the menu.



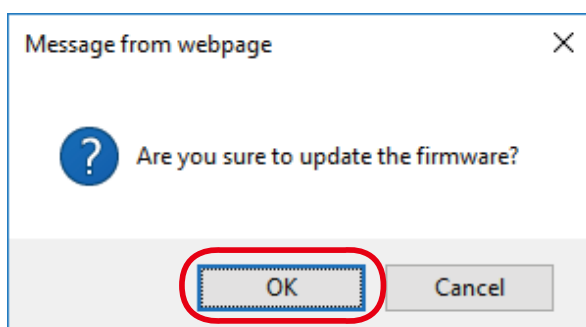
3. The firmware update page is displayed.
Click **Browse** to specify the firmware update file (AP-415AN.bin) and click **Open**.



4. Check that the firmware file name is displayed at **New Firmware** field and click **Update**.



5. When the confirmation message is displayed, click **OK**.

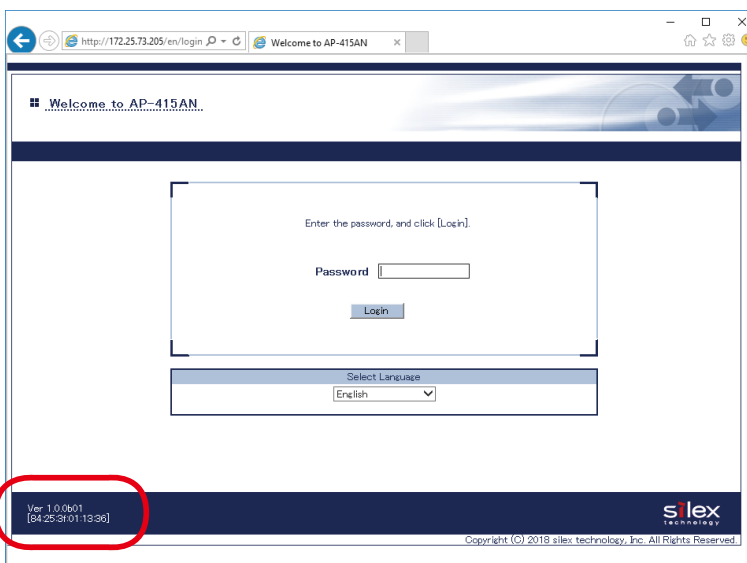


6. The firmware update begins.



7. When the login page is displayed, firmware update is completed.

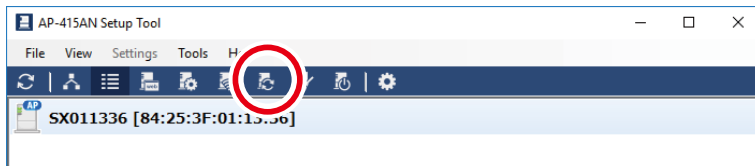
Check that the version information is changed at the bottom left of the login page.
Close the Web browser.



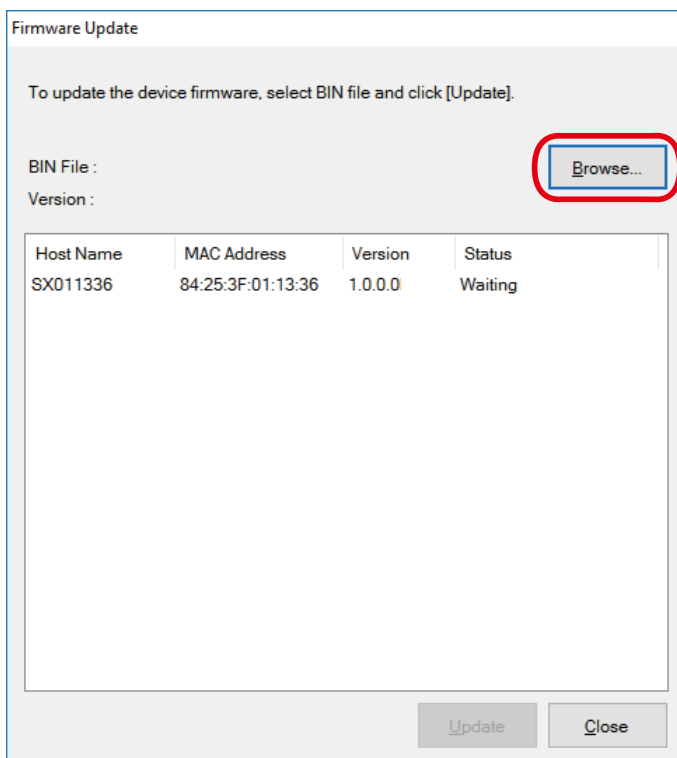
8-3-3. Firmware Update Using AP-415AN Setup Tool

This section explains how to update the firmware of AP-415AN using AP-415AN Setup Tool.

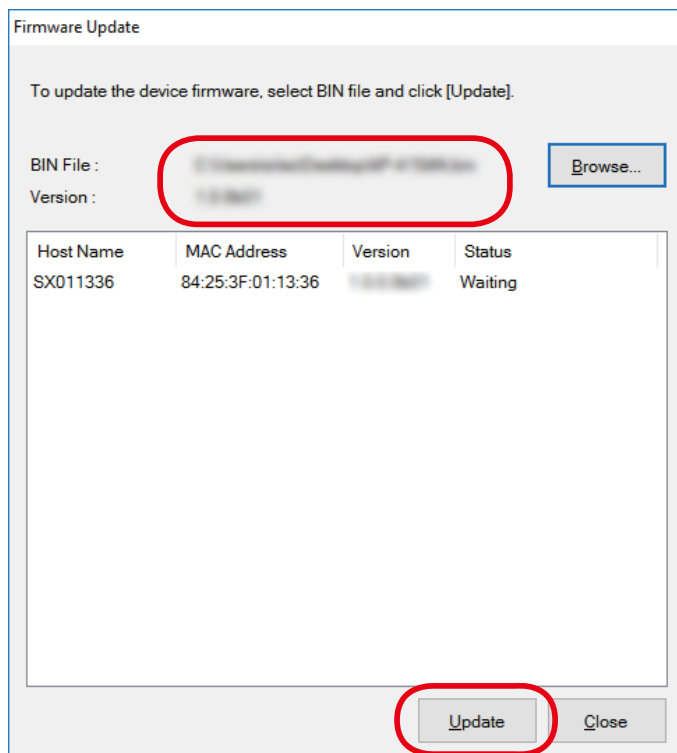
1. Select AP-415AN to update the firmware from the device list and click the icon "Firmware Update" from the toolbar.



2. The firmware update window is displayed. Click **Browse** to select the firmware to upload.



3. Click **Update** to update AP-415AN.
When the firmware update is in progress, buttons are hidden or disabled.



Firmware Update

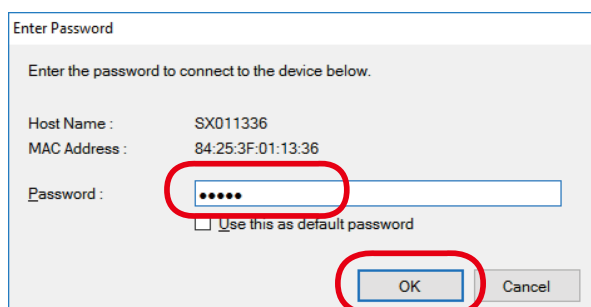
To update the device firmware, select BIN file and click [Update].

BIN File :

Version :

Host Name	MAC Address	Version	Status
SX011336	84:25:3F:01:13:36	1.0.0.0	Waiting

4. The password entry screen is displayed. Enter the configuration password and click **OK**.



Enter Password

Enter the password to connect to the device below.

Host Name : SX011336

MAC Address : 84:25:3F:01:13:36

Password :

☐ Use this as default password



Note

- By default, the configuration password is **admin**.
- It is impossible to login when someone else has logged in.

5. The firmware update is started.

Firmware Update

Updating the firmware. Please wait for a while.

BIN File :

Version :

Host Name	MAC Address	Version	Status
SX011336	84:25:3F:01:13:36		<div></div>

6. When the firmware update is finished, click **Close**.

Firmware Update

The firmware has been updated.

BIN File :

Version :

Host Name	MAC Address	Version	Status
SX011336	84:25:3F:01:13:36		Completed

Close