

Wireless Serial Device Server
SD-330AC

User's Manual



Index

| | |
|---|----------|
| 1. Introduction | 1 |
| 1-1. Introduction | 2 |
| About the notation | 2 |
| Disclaimers..... | 2 |
| Trademarks | 2 |
| 1-2. Safety Instructions | 3 |
| 1-3. Product Information and Customer Services..... | 6 |
| Product Information | 6 |
| Customer Support Center..... | 6 |
| 2. About SD-330AC | 7 |
| 2-1. Package Contents | 8 |
| 2-2. Features | 9 |
| 2-3. Parts and Functions..... | 11 |
| Parts and Functions | 11 |
| Serial Port PIN Assignment and Serial Cable | 14 |
| 2-4. LED Lighting Pattern | 15 |
| 2-5. Hardware Specifications | 17 |
| Hardware specification list..... | 17 |
| Standards compliance | 20 |
| 2-6. Software Specifications..... | 24 |
| Software Specifications..... | 24 |

| | |
|--|-----------|
| RFC2217 Command List..... | 25 |
| 2-7. Wireless Interference Information..... | 26 |
| Notes..... | 26 |
| 2-8. Notes on Security..... | 28 |
| 3. Software Overview | 29 |
| 3-1. What is Serial Device Server Setup? | 30 |
| Select Configuration Method..... | 30 |
| TCP/IP Settings | 31 |
| Wireless LAN Settings | 32 |
| 3-2. What is SX Virtual Link for Serial Device Server? | 33 |
| About SX Virtual Link for Serial Device Server | 33 |
| Functional Overview | 33 |
| 3-3. Download the Utilities..... | 35 |
| 4. How to Configure | 37 |
| 4-1. Before Setup..... | 38 |
| About configuration methods..... | 38 |
| Check your wireless LAN settings..... | 39 |
| 4-2. Configure through a wired LAN (Recommended) | 40 |
| Necessary Items | 40 |
| Connect a Network Cable to and Power on SD-330AC | 41 |
| Configure the Network Settings from your PC | 42 |
| Enable the new settings..... | 48 |

| | |
|--|----|
| 4-3. Password Configuration | 50 |
| 4-4. Configure SD-330AC Using Smart Wireless Setup | 51 |
| Confirm that your wireless router supports WPS..... | 51 |
| Configure Network Settings..... | 51 |
| Push Button Method | 53 |
| PIN Code Method | 55 |

5. How to Use 59

| | |
|---|----|
| 5-1. Link to Serial Device Using the Serial Device Connection Utility..... | 60 |
| What is Serial Port Emulation Mode? | 60 |
| Install Application | 60 |
| Start SX Virtual Link for Serial Device Server | 65 |
| Link to a serial device | 66 |
| Start a serial communication software..... | 68 |
| Unlink from a serial device | 69 |
| 5-2. Ecable Mode..... | 70 |
| What is Ecable Mode? | 70 |
| Before You Begin..... | 71 |
| Link to Serial Device | 75 |
| 5-3. Raw TCP Connection Mode | 76 |
| What is Raw TCP Connection Mode?..... | 76 |
| Before You Begin..... | 76 |
| Link to Serial Device | 79 |

| | |
|---------------------------------------|----|
| 5-4. Use Access Point Feature..... | 80 |
| Before You Begin..... | 80 |
| Link to Wireless Client Devices | 82 |

6. Other Functions 87

| | |
|--|-----|
| 6-1. Configure Using the SD-330AC Web Page..... | 88 |
| Access the SD-330AC Web Page | 88 |
| Log in to the SD-330AC Web Page | 91 |
| Log out the SD-330AC Web Page | 92 |
| Configure Advanced Network Settings..... | 93 |
| Configure Serial Port Settings..... | 98 |
| Configuration Item List..... | 100 |
| 6-2. Security Settings..... | 114 |
| Change the Password | 114 |
| Allow Communication Only from a Particular PC..... | 115 |
| 6-3. Maintenance | 117 |
| Reboot SD-330AC..... | 117 |
| Reset to Factory Default..... | 119 |
| Update Firmware | 122 |
| 6-4. About the Print Server Feature..... | 124 |
| About the Print Server Feature..... | 124 |
| Before Using Standard Windows Printing | 125 |
| Printing Using the Standard TCP/IP Port on Windows 7 / Server 2008R2..... | 126 |

| | |
|---|-----|
| Printing Using the LPR Port on Windows 7 / Server 2008R2..... | 131 |
| Printing Using the Standard TCP/IP Port on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016..... | 136 |
| Printing Using the LPR Port on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016 | 141 |
| Printing Using the Standard TCP/IP Port on Windows 11 | 146 |
| Printing Using the LPR Port on Windows 11 | 151 |
| 6-5. SX Virtual Link for Serial Device Server..... | 156 |
| 6-5-1. Main Window and Menu..... | 156 |
| Main window and buttons..... | 156 |
| Device server icons | 158 |
| USB device icons..... | 159 |
| Status icons..... | 160 |
| Right-click menu..... | 161 |
| 6-5-2. USB Device Operational Settings | 162 |
| Change the USB device name displayed in SX Virtual Link for Se- rial Device Server's main window..... | 162 |
| Automatically connect to a USB device when it is detected | 162 |
| Automatically reconnect to a USB device when it is disconnected abnormally..... | 163 |
| Automatically start a designated application when a USB device is connected | 163 |
| About the USB device properties dialog..... | 164 |
| 6-5-3. How to Use a Printer..... | 168 |
| 6-5-4. SX Virtual Link for Serial Device Server and the Task Tray .. | 170 |

| | |
|---|-----|
| Controlling SX Virtual Link for Serial Device Server from the task tray | 170 |
| 6-5-5. How to Request for Disconnect | 171 |
| 6-5-6. SX Virtual Link for Serial Device Server Optional Settings.. | 173 |
| 6-5-7. Uninstall | 180 |

7. Troubleshooting 181

| | |
|--|-----|
| 7-1. Problems During the Setup | 182 |
| 7-2. Problems While Using SD-330AC | 186 |
| 7-3. Wireless LAN Problems..... | 190 |

1. Introduction

Thank you for purchasing the Serial Device Server SD-330AC.
This manual provides information on how to configure and use SD-330AC.
Please read the **1-2.Safety Instructions** carefully before using SD-330AC.

1-1. Introduction

About the notation

- * This manual uses the following symbols to indicate specific information for operating SD-330AC.
- * Be sure to carefully review before using SD-330AC.



TIP

: This symbol indicates important information that needs to be observed when operating SD-330AC. Make sure to read this information for safe and proper use.



Note

: This symbol indicates information that is useful when using SD-330AC. If you experience difficulties operating SD-330AC, please refer to this information first.

Disclaimers

- * 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.
- * The screen display may vary depending on the SD-330AC firmware version, or the operating system, Web browser and its version of the PC. Some instructions may not be applicable.
- * 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



- * AMC Manager® is a registered trademark of Silex Technology, Inc.
- * Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- * Wi-Fi, Wi-Fi Protected Setup, WPA(Wi-Fi Protected Access), WPA2 and related marks and logos are trademarks or registered trademarks of Wi-Fi Alliance.
- * 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 SD-330AC.

To ensure safe and proper use, please read the following information carefully before using SD-330AC. The safety instructions include important information on safe handling of SD-330AC 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

| | |
|--|---|
| | <p>* 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.</p> <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. |
| | <p>* Do not disassemble or modify this product. It may cause fire, electrical shock or malfunction.</p> <p>* Do not disassemble or modify the AC adaptor that came with this product. It may cause fire, electrical shock or malfunction.</p> |
| | <p>* Do not cover up the vents on this product. The temperature inside may rise and cause fire or malfunction.</p> <p>* Do not place any objects on top of this product. It may cause fire, electrical shock or malfunction.</p> <p>* Do not roll up or wrap the AC cord. It may cause fire or an electrical shock.</p> <p>* Do not plug or unplug the AC adaptor or any other cables with wet hands. It may cause an electrical shock or malfunction.</p> <p>* Keep the small parts out of reach of young children. If these are swallowed, consult a doctor immediately.</p> |
| | <p>* 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.</p> <p>* Failure to follow these instructions may cause fire, electrical shock or malfunction.</p> <p>* Use the correct power voltage. Improper voltage may cause fire or an electrical shock.</p> <p>* 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.</p> <p>* Keep the cords and cables away from children. It may cause an electrical shock or serious injury.</p> |



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 cords 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. Product Information and Customer Services

Product Information

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

Silex Technology website
URL:<https://www.silextechnology.com/>

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

Customer Support Center

Customer Support is available 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 | |
|---------------------|--------------------------|
| USA | support@silexamerica.com |



- Refer to the Silex Technology website (<https://www.silextechnology.com/>) for the latest FAQ and product information.

Note

2. About SD-330AC

2-1. Package Contents

Following items are bundled:

- * SD-330AC
- * AC adaptor
- * Rubber foot (4pcs)
- * Warranty Booklet
- * Setup Guide
- * GPL License Notice
(Distribution of source code subject to open source software)

2-2. Features

SD-330AC is a serial device server which allows you to connect to serial devices via wired or wireless LAN.

SD-330AC has the following features:

* **Share various serial devices**

By using SD-330AC and the serial device connection utility, "SX Virtual Link for Serial Device Server", you can share various serial devices among Windows PCs (for details on the supported OS, refer to **2-6. Software Specifications**). Serial devices can be used as if they were connected directly to your PC.

* **Support various applications**

In addition to **SX Virtual Link for Serial Device Server**, SD-330AC has 2 communication modes as follows to support a wide variety of network environments and operating systems.

Ecable Mode

If two SD-330AC's are used, you can communicate with serial devices or PCs with no network interface over the network. For details, refer to **5-2. Ecable Mode (Link to the Registered Device)**.

Raw TCP Connection Mode

Serial port data can be sent or received transparently over TCP/IP. You can communicate with a serial device using an application that runs on the TCP Socket API. For details, refer to **5-3. Raw TCP Connection Mode (Link to Serial Device Using TCP Raw Port)**.

* **IEEE802.11a/b/g/n/ac Wireless LAN standard**

SD-330AC supports IEEE802.11a/b/g/n/ac which allows sharing of various serial devices over a wireless network.

For authentication method, WEP, WPA and WPA2 can be selected, and 128 bit for WEP, AUTO for WPA and AES for WPA2 can be selected respectively as the encryption method. Also, as IEEE802.1X is supported, LEAP/EAP-TLS/EAP-TTLS/PEAP/EAP-FAST can be used.

*** Access Point Feature**

Various wireless devices can be used over a wireless network using the Access Point feature of SD-330AC.



- To connect to a wireless network using the Access Point feature of SD-330AC, the same wireless setting needs to be configured to SD-330AC and your wireless client device.

Note

*** Easy Wireless Configuration**

Wireless configuration using the push button or PIN code is available to configure SD-330AC when your wireless router supports WPS.

*** AMC Manager® (non-free program) / AMC Manager® (free program)**

SD-330AC supports the total management software, "AMC Manager®". The AMC Manager® provides the useful features as follows:

- Remote device control and monitoring
- Bulk configuration and firmware updates



TIP

- Download and use the latest version of AMC Manager®.



Note

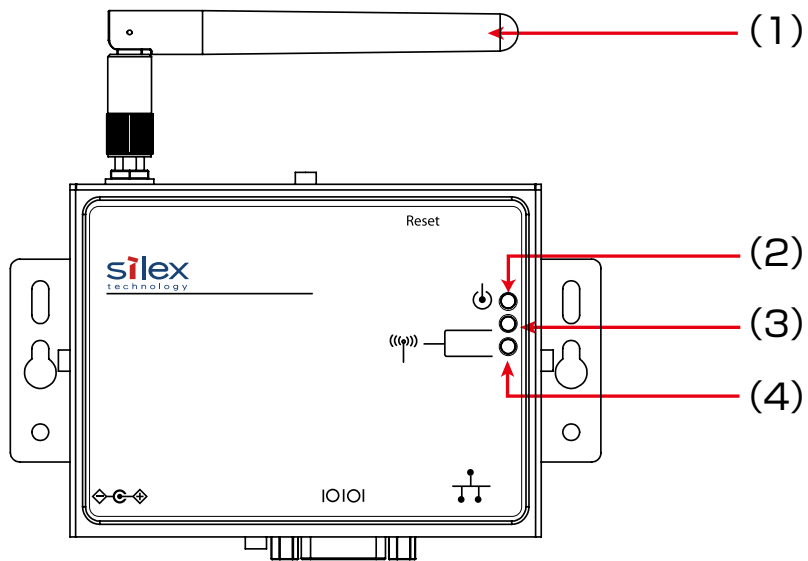
- For details on the "AMC Manager®", please visit our website.

2-3. Parts and Functions

Parts and Functions

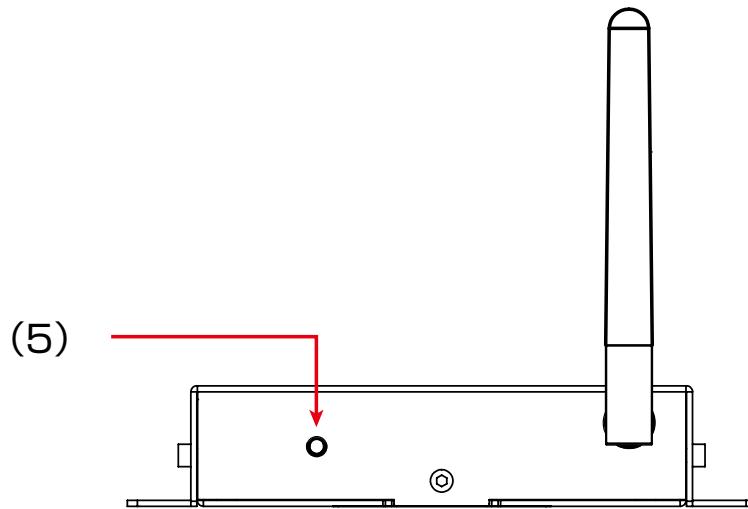
The parts name and functions are as follows:

<<Front>>



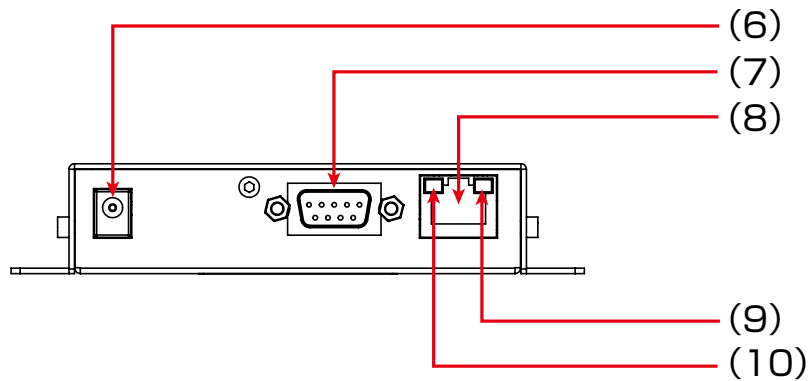
| | | |
|-----|----------------------|---|
| (1) | Wireless LAN antenna | This antenna is used for a wireless communication. |
| (2) | Orange LED | For details, refer to 2-4. LED Lighting Pattern. |
| (3) | Yellow LED | |
| (4) | Green LED | |

<<Top>>



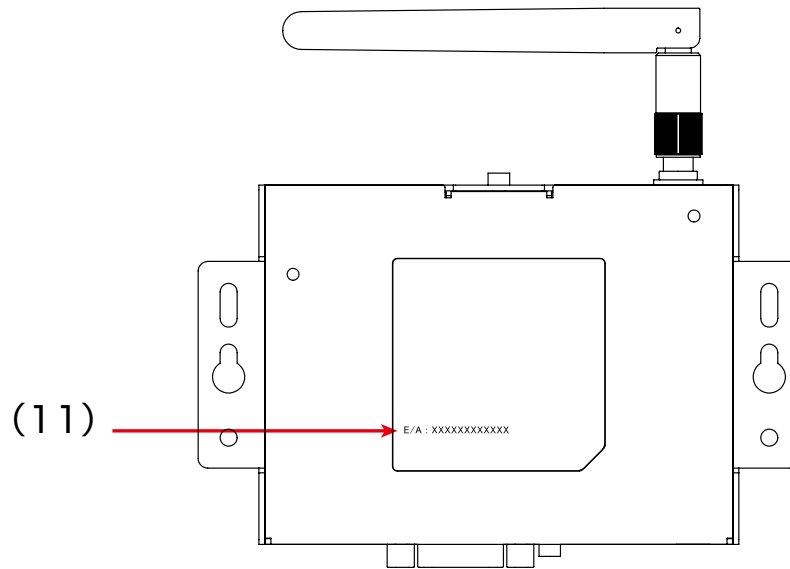
| | | |
|-----|-------------|---|
| (5) | Push Switch | This push switch is used to reset to the factory defaults. For details on the factory default configuration, refer to Reset to Factory Default . |
|-----|-------------|---|

<<Bottom>>



| | | |
|------|--------------|---|
| (6) | DC Connector | Connect an AC adaptor. |
| (7) | Serial Port | Connect a serial cable. |
| (8) | Network Port | Connect a network cable. |
| (9) | Yellow LED | Indicates the network connection status. For details, refer to 2-4. LED Lighting Pattern . |
| (10) | Green LED | |

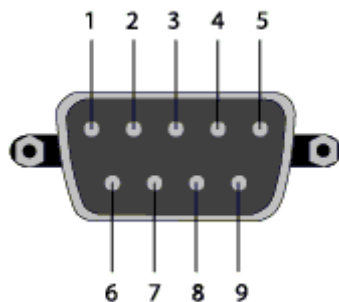
<<Back>>



| | | |
|------|-------------|-------------------------|
| (11) | MAC Address | MAC Address of SD-330AC |
|------|-------------|-------------------------|

Serial Port PIN Assignment and Serial Cable

The serial port PIN assignment is as follows:



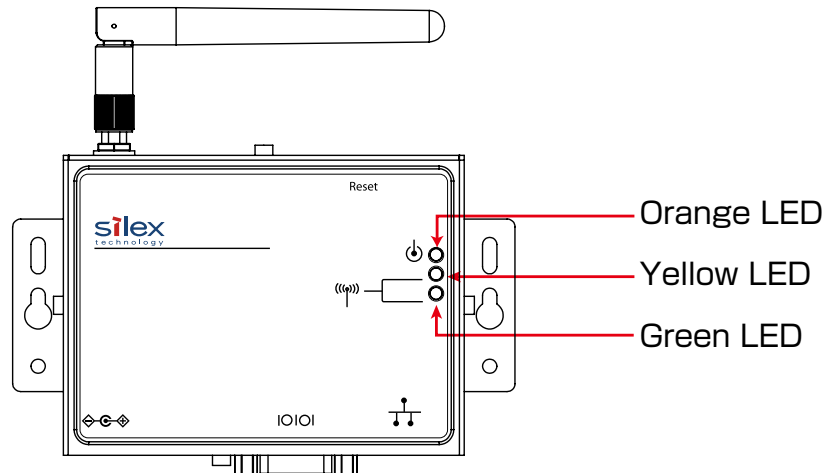
| PIN No. | Details | Input / Output |
|---------|--------------------------|----------------|
| 1 | DCD(Data Carrier Detect) | Input |
| 2 | RxD(Receive Data) | Input |
| 3 | TxD(Transmit Data) | Output |
| 4 | DTR(Data Terminal Ready) | Output |
| 5 | GND(Ground) | Input |
| 6 | DSR(Data Set Ready) | Input |
| 7 | RTS(Request To Send) | Output |
| 8 | CTS(Clear To Send) | Input |
| 9 | RI(Ring Indicate) | Input |

Use the serial cable that came with your serial device (the one you may have been using to directly connect the PC and serial device) or that is recommended in the operating manual of your serial device.

2-4. LED Lighting Pattern

SD-330AC has 3 LEDs (Orange, Yellow, Green) to show the operating status.

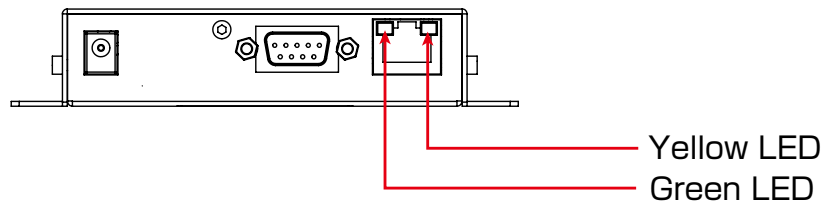
<<FRONT>>



| Orange LED | Product Status |
|------------|----------------------------|
| ON | SD-330AC is powered on |
| OFF | SD-330AC is not powered on |
| Blink | Updating the firmware |

| Yellow / Green LED | | Product Status |
|--------------------|-----------|---|
| Yellow LED | Green LED | |
| OFF | OFF | Operating in a wired LAN mode |
| OFF | ON | Connected to Access Point in Infrastructure mode (Authentication is not completed) |
| Blink | OFF | Connected to Access Point in Infrastructure mode (Trying to obtain an IP address) |
| ON | OFF | Connected to Access Point in Infrastructure mode (IP address is determined) |
| ON | ON | Connected in Raw TCP mode |
| OFF | Blink | Operating in AccessPoint mode |

<<BOTTOM>>



| Yellow / Green LED | | Product Status |
|--------------------|-----------|----------------------------------|
| Yellow LED | Green LED | |
| OFF | OFF | A network cable is not connected |
| OFF | ON | Connected in 10BASE -T network |
| ON | ON | Connected in 100BASE -TX network |

2-5. Hardware Specifications

Hardware specification list

| | | |
|-------------------------|---|---|
| Memory | RAM : 128MByte | |
| | FlashROM : 32MByte | |
| Wired network interface | 10BASE-T / 100BASE-TX 1 port (auto-sensing) | |
| Serial Interface | RS-232C : 1 port | |
| Power supply | Operating voltage : 5V | |
| Push Switch | 1 button | |
| LED | Front | 3 Orange LED Yellow LED Green LED |
| | Wired LAN connector | 2 Yellow LED Green LED |
| EMC | VCCI Class-B FCC Part 15 Subpart B Class-B ICES-003 Class-B | |
| Radio regulation | MIC FCC Part 15 Subpart C / Subpart E ISED RSS-247 | |

| | |
|-----------------------|--|
| Operating environment | Temperature : 0°C to +50°C * AC adaptor (that comes with SD-330AC) : 0°C to +40°C |
| | Humidity : 20% to 80%RH (Non-condensing) |
| Storage environment | Temperature : -20°C to +70°C |
| | Humidity : 20% to 90%RH (Non-condensing) |

| | | | |
|----------------------------|-------------------|---------------------|--|
| Wireless network interface | IEEE802.11a | Bandwidth | 5GHz |
| | | Transmission system | OFDM |
| | | Transmission speed | 6M / 9M / 12M / 18M / 24M / 36M / 48M / 54M (auto-sensing) |
| | | Channel | W52 : 36, 40, 44, 48 W53 : 52, 56, 60, 64 W56 : 100, 104, 108, 112, 116, 132, 136, 140 W58 : 149, 153, 157, 161, 165 * When the Access Point feature is used, W53 and W56 channels cannot be used. |
| | IEEE802.11b | Bandwidth | 2.4GHz |
| | | Transmission system | DS-SS |
| | | Transmission speed | 1M / 2M / 5.5M / 11M (auto-sensing) |
| | | Channel | 1-11ch |
| | IEEE802.11g | Bandwidth | 2.4GHz |
| | | Transmission system | OFDM |
| | | Transmission speed | 6M / 9M / 12M / 18M / 24M / 36M / 48M / 54M (auto-sensing) |
| | | Channel | 1-11ch |
| | IEEE802.11ng HT20 | Bandwidth | 2.4GHz |
| | | Transmission system | DSSS-OFDM |
| | | Transmission speed | MCS 0 / 1 / 2 / 3 / 4 / 5 / 6 / 7 |
| | | Channel | 1-11ch |

| | | | |
|--------------------------------|---------------------------------------|-------------------------|--|
| Wireless network interface | IEEE802.11n HT20 / HT40 | Bandwidth | 5GHz |
| | | Transmission system | OFDM |
| | | Transmission speed | MCS 0 / 1 / 2 / 3 / 4 / 5 / 6 / 7 |
| | | Channel | W52 : 36, 40, 44, 48 W53 : 52, 56, 60, 64 W56 : 100, 104, 108, 112, 116, 132, 136, 140 W58 : 149, 153, 157, 161, 165 * When the Access Point feature is used, W53 and W56 channels cannot be used. |
| | IEEE802.11ac VHT20 / VHT40 / VHT80 | Bandwidth | 5GHz |
| | | Transmission system | OFDM |
| | | Transmission speed | MCS0/1/2/3/4/5/6/7/8/9 |
| | | Channel | W52 : 36, 40, 44, 48 W53 : 52, 56, 60, 64 W56 : 100, 104, 108, 112, 116, 132, 136, 140 W58 : 149, 153, 157, 161, 165 * When the Access Point feature is used, W53 and W56 channels cannot be used. |
| Antenna (*Wireless model only) | | Non-directional antenna | |

Standards compliance

Notice to US Customers



Contains FCC ID : N6C-SDMAC

FCC Rules Part 15

FCC CAUTION

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

FCC Rules Part 15 §15.19(a)(3)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Rules Part 15 Subpart C §15.247 and Subpart E

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

FCC Rules Part 15 Subpart E §15.407(c)

Data transmission is always initiated by software, which is passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet.

Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

FCC Rules Part 15 Subpart E §15.407(g)

Frequency Tolerance: +/-20 ppm

FCC Rules Part 15 Subpart C §15.247(g) / Subpart E

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

FCC Rules Part 15 Subpart B §15.105(b)

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice to Canadian Customers

CAN ICES-3 (B)/NMB-3 (B)

Contains IC: 4908A-SDMAC

RSS-Gen Issue 5 §8.4

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RSS-Gen Issue 5 §6.8

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

| Antenna type | Gain | Impedance |
|-------------------------|-----------------------------------|-----------|
| Pole antenna(1019-015A) | 2.4GHz : 2.14 dBi 5GHz : 4 dBi | 50Ω |

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

| Type d'antenne | Gain | l'impédance |
|--------------------------|-----------------------------------|-------------|
| Antenne pôle (1019-015A) | 2,4GHz : 2,14 dBi 5GHz : 4 dBi | 50Ω |

RSS-247 Issue 2 §6.2.2.2

for indoor use only (5150-5350 MHz)

Pour usage intérieur seulement (5150-5350 MHz)

RSS-247 Issue 2 §6.4

Data transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

La transmission des données est toujours initiée par le logiciel, puis les données sont transmises par l'intermédiaire du MAC, par la bande de base numérique et analogique et, enfin, à la puce RF. Plusieurs paquets spéciaux sont initiés par le MAC. Ce sont les seuls moyens pour qu'une partie de la bande de base numérique active l'émetteur RF, puis désactive celui-ci à la fin du paquet. En conséquence, l'émetteur reste uniquement activé lors de la transmission d'un des paquets susmentionnés. En d'autres termes, ce dispositif interrompt automatiquement toute transmission en cas d'absence d'information à transmettre ou de défaillance.

RSS-102 Issue 5 §2.6

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

2-6. Software Specifications

Software Specifications

| | | |
|---------------------|-----------------------|---|
| Supported protocols | | TCP/IP |
| Supported OS | | * Windows 7 or later * Windows Server 2008R2 or later |
| Serial port | Baud rate | 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600 (bps) * When the baud rate is higher than 230400bps, the data integrity is not guaranteed. |
| | Bits per character | 7, 8 |
| | Stop bit | 1, 2 |
| | Parity | NONE, ODD, EVEN |
| | Flow control | NONE, XON/XOFF, RTS/CTS |
| Wireless LAN | Authentication method | Open System WPA-PSK WPA2-PSK 802.1X WPA-EAP(TLS, TTLS, LEAP, PEAP(v0,v1), FAST) WPA2-EAP(TLS, TTLS, LEAP, PEAP(v0,v1), FAST) |
| | Encryption mode | WEP(128bit) AES AUTO |
| Others | | RFC2217 support (see below for details) |



- For the latest compatibility information for each operating system, visit our website (<https://www.silextechnology.com/>).

RFC2217 Command List

SD-330AC supports RFC2217. When SD-330AC is used in Serial Port Emulation Mode, you can utilize the following RFC2217 commands over the network.

| Command | Details | Note |
|---------------------|---|-----------------------------------|
| SIGNATURE | Exchanges the device information. | Not supported |
| SET-BAUDRATE | Changes the baud rate. | Client -> Server (one-way) |
| SET-DATASIZE | Change the bits per character. | Client -> Server (one-way) |
| SET-PARITY | Changes the parity. | Client -> Server (one-way) |
| SET-STOPSIZE | Changes the stop bit. | Client -> Server (one-way) |
| SET-CONTROL | Enables/Disables the flow control or use for PIN setting. | Client -> Server (one-way) |
| NOTIFY-LINESTATE | Server notifies the client of line status changes. | * Client -> Server (one-way) |
| NOTIFY-MODEMSTATE | Server notifies the client of modem status changes. | Client -> Server (one-way) |
| FLOWCONTROL-SUSPEND | The receiver of this command will be unable to send any data or commands. | Client <-> Server (bidirectional) |
| FLOWCONTROL-RESUME | The receiver of this command will be able to send data and commands. | Client <-> Server (bidirectional) |
| SET-LINESTATE-MASK | Set the information to send by NOTIFY-LINESTATE. | Client -> Server (one-way) |
| SET-MODEMSTATE-MASK | Set the information to send by NOTIFY-MODEMSTATE. | Client -> Server (one-way) |
| PURGE-DATA | Requests the server to clear the serial buffer. | Client -> Server (one-way) |

2-7. Wireless Interference Information

Notes

Do not use SD-330AC near the following devices or places.

The following equipment may use the same band. If you use this product near this equipment, the radio waves from SD-330AC and the following devices may interfere with each other.

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

Do not use SD-330AC near a cellular phone, TV or Radio.

A cellular phone, TV, and radio use a different radio band than our product. Generally if they are used near SD-330AC, it will not cause a problem. However, when they approximate SD-330AC, sound or image noise can happen.

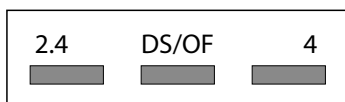
If there is reinforced concrete/metal between wireless devices, they may not connect.


SD-330AC can connect through wood or glass, but may have troubles connecting through reinforced concrete/metal.

Wireless Equipment for 2.4GHz band

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

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



| | |
|---|--|
| 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 regulations. Be sure to use only W56 channel and not to use W52/W53 channels outdoors.

2-8. 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.

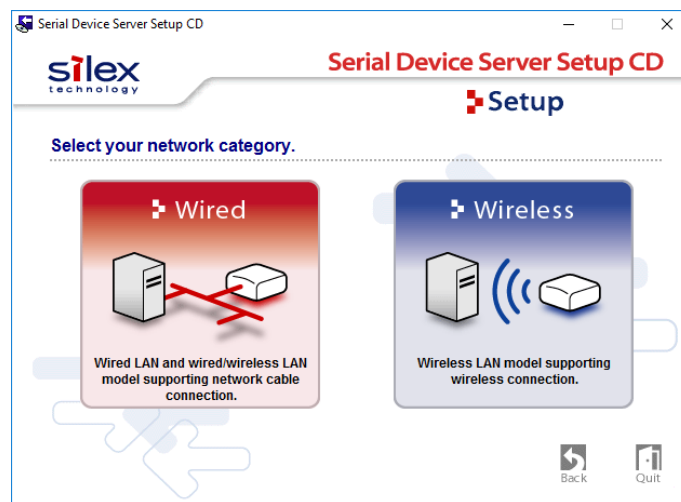
We recommend that you make yourself fully acquainted with the possible implications of what might happen if you use a wireless product without enabling security features, and that you configure security-related settings and use wireless products at your own responsibility.

3. Software Overview

3-1. What is Serial Device Server Setup?

The Serial Device Server Setup is the configuration utility exclusively designed for serial device servers. TCP/IP settings, wireless LAN settings, etc. can be configured by following the instructions on the screen after SD-330AC is powered on and displayed on this utility.

Select Configuration Method



| | |
|----------|--|
| Wired | Connect a network cable to SD-330AC and start the initial configuration from a PC. |
| Wireless | Start the initial configuration from a PC over the wireless network. |



TIP

- SD-330AC does not support the configuration over a wireless LAN by clicking **Wireless**.
- Serial Device Server Setup can be used only for the initial configuration before a password is set to SD-330AC. After a password has been set, it cannot be used to change the configuration. To change the configuration, use the SD-330AC's Web page.

TCP/IP Settings

Configure the IP address appropriate for your environment.

Serial Device Server Setup

Setting TCP/IP
Setting TCP/IP will proceed.

Get IP Address Automatically

Assign IP Address

IP Address: 169 . 254 . 111 . 111

Subnet Mask: 255 . 255 . 0 . 0

Default Gateway: 0 . 0 . 0 . 0

MEMO
If you select [Get IP Address Automatically], the DHCP server assigns an IP address to this product. If a DHCP server is not available, please manually assign an IP address.

< Back Next > Cancel

| | |
|------------------------------|--|
| Get IP Address Automatically | Select this to automatically assign an IP Address using the DHCP server. |
| Assign IP Address | Select this to manually configure IP Address, subnet mask and default gateway. |



- Enter a Subnet Mask and Default Gateway if necessary.
- If there are no DHCP servers on your network and the IP address of your computer is assigned manually, a sample address created with your computer's settings will be displayed in the window below. In such a case, please enter an IP address manually. The IP address used in the screen below is a sample address. Please specify an IP address appropriate for your environment.

Serial Device Server Setup

Setting TCP/IP
Setting TCP/IP will proceed.

Get IP Address Automatically

Assign IP Address

IP Address: 169 . 254 . 111 . 111

Subnet Mask: 255 . 255 . 0 . 0

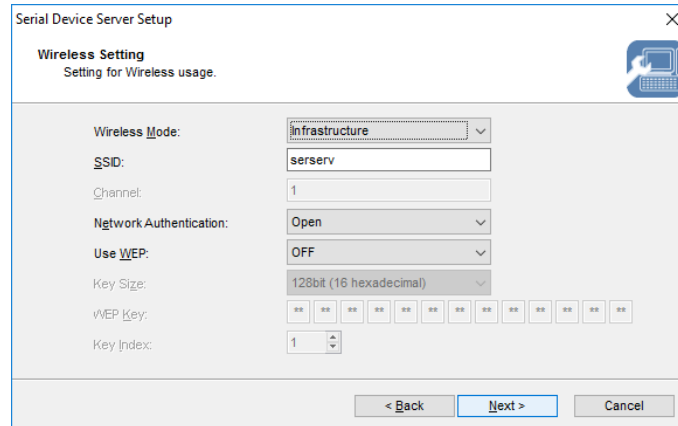
Default Gateway: 0 . 0 . 0 . 0

MEMO
If you select [Get IP Address Automatically], the DHCP server assigns an IP address to this product. If a DHCP server is not available, please manually assign an IP address.

< Back Next > Cancel

Wireless LAN Settings

Configure the wireless LAN settings appropriate for your environment.



The image shows a 'Serial Device Server Setup' dialog box with a 'Wireless Setting' tab. The settings are as follows:

| Setting | Value |
|------------------------|---------------------------------------|
| Wireless Mode | Infrastructure |
| SSID | serserv |
| Channel | 1 |
| Network Authentication | Open |
| Use WEP | OFF |
| Key Size | 128bit (16 hexadecimal) |
| WEP Key | 16 asterisks (hexadecimal characters) |
| Key Index | 1 |

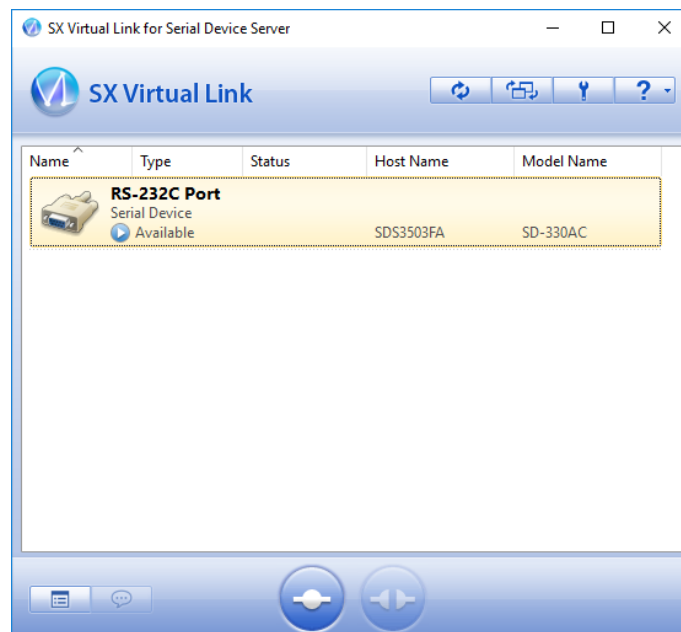
At the bottom of the dialog box, there are three buttons: '< Back', 'Next >', and 'Cancel'.

3-2. What is SX Virtual Link for Serial Device Server?

About SX Virtual Link for Serial Device Server

SX Virtual Link for Serial Device Server allows you to connect your computer to a serial device that is connected to a device server.

Use SX Virtual Link for Serial Device Server when you connect/disconnect to/from the serial device.



- To use SD-330AC with SX Virtual Link for Serial Device Server, the password configuration needs to be finished on SD-330AC. If the password configuration is not finished yet, refer to **4-3. Password Configuration** to set the password.

Functional Overview

* **Easy to Use**

You only have to select the serial device in SX Virtual Link for Serial Device Server and click the **Connect** button.

The serial device can be used from your computer as if it was directly connected to your computer. When finished using the serial device, click the **Disconnect** button in SX Virtual Link for Serial Device Server.

* **Allows Control from the Task tray**

The minimized menu window in the task tray will allow you to connect/disconnect to/from serial devices without displaying SX Virtual Link for Serial Device Server's main window.

* **Send a Remote Message to Another User to Request for Disconnect**

When you are sharing a serial device with several users and one of them occupies the serial device for a long time, you can request to the user to disconnect the device by sending a remote message. If the user accepts the disconnect request, the right of use is automatically passed down to you, so that you can use the serial device.

* **Operating Settings for Each serial Device**

The operational settings such as Start designated application when connected or Automatically connect this device when it is available can be configured for each serial device.

3-3. Download the Utilities

The utilities to configure and use SD-330AC can be downloaded from our website.

1. Access the URL below on the PC to use to configure SD-330AC.

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

2. Go to the **Support** page and select the product model.

| | |
|---------------|----------|
| Product Model | SD-330AC |
|---------------|----------|

3. Download the utilities below and extract them on the PC.

| | |
|-----------|--|
| Utilities | Serial Device Server Setup |
| | SX Virtual Link for Serial Device Server |



- In order to upgrade the firmware version, the firmware file needs to be downloaded.

Note

The download is completed.

Blank page

4. How to Configure

4-1. Before Setup

This page explains the preparation and configuration method to be noted before starting the setup.

About configuration methods

The following configuration methods are available:

* **Configure through a wired LAN (Recommended)**

Connect SD-330AC to the network using a network cable and configure from a PC.

* **Configure using Smart Wireless Setup**

Use the PIN code method or push button method to configure the network settings when the wireless router supports WPS.

Please choose the one appropriate for your environment.



TIP

- Please be sure to read the operation manual of your serial device before you connect it to SD-330AC. The connecting method and position may vary depending on the serial device to be connected.
- Please use the AC adaptor bundled with SD-330AC. Other AC adaptors may cause unexpected damages.
- If SD-330AC has been used in another network, reset it to the factory default settings before you start the configuration. (Please refer to **Reset to Factory Default** for details.)
- If using a firewall function of commercial security software, disable the firewall function while configuring SD-330AC. Refer to FAQ in our website at (<https://www.silextechnology.com/>) for details.

Check your wireless LAN settings

To use SD-330AC over wireless LAN network, you need to configure the wireless settings appropriate for your network. This setting must be the same as that of destination devices such as Access Point. Please collect the following information first:

| | | |
|-------------------|--|--|
| SSID | This name is used to identify the wireless devices. It is also known as ESSID. | |
| Encryption method | No encryption | Communication data is not encrypted. |
| | WEP | Communication data is encrypted based on the encryption key (WEP key). WEP key size (128bit) and WEP key must be the same as that of destination device. |
| | WPA/WPA2 | Communication data is encrypted based on the encryption key (Pre-Shared Key). Pre-Shared Key and Encryption mode (AES / AUTO) must be the same as that of destination device. |






- When you will use SD-330AC in a wired network, you do not have to collect these information.

Note

4-2. Configure through a wired LAN (Recommended)

Necessary Items

The following items are required in order to connect SD-330AC to a network.

| | |
|---|---|
| <p>Ethernet Hub</p>  | <p>Use to connect SD-330AC and other network devices such as a PC. When there are available LAN ports on the network in which SD-330AC is to be installed, you do not have to purchase a new Ethernet Hub or broadband router as SD-330AC can be connected to the available LAN port.</p> |
| <p>Network Cable</p>  | <p>Use to connect SD-330AC and network devices such as an Ethernet Hub, broadband router and PC.</p> |
| <p>Serial Cable</p>  | <p>Use to connect SD-330AC and serial devices. For details on the supported serial cable, refer to 2-3. Parts and Functions - Serial Port PIN Assignment and Serial Cable.</p> |

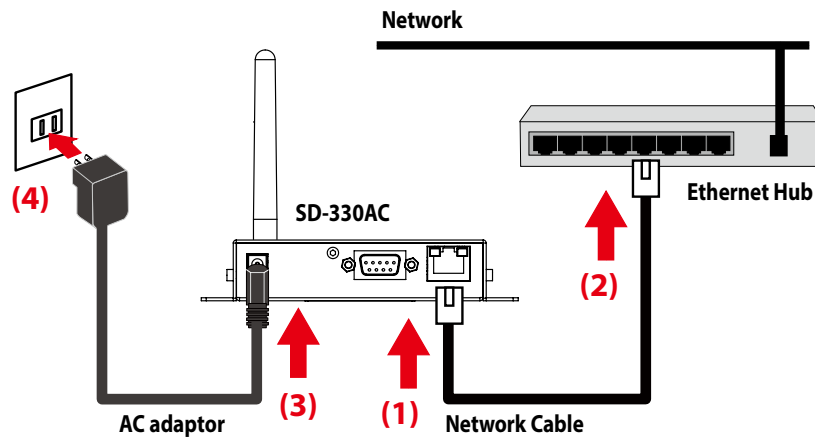


TIP

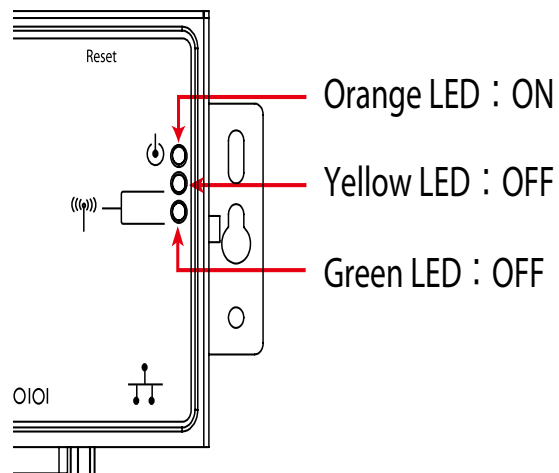
- When you connect SD-330AC to 100BASE-TX network, please use the Ethernet Hub and network cable which support 100BASE-TX (category 5 or above).

Connect a Network Cable to and Power on SD-330AC

1. Connect a network cable to SD-330AC and the other end to an Ethernet Hub (or broadband router, Access Point, PC).
Then, connect the AC adaptor to SD-330AC and the plug to the outlet.



2. Check that the LEDs on SD-330AC light as follows.



| LED | Status |
|---------------------|--------|
| Orange LED | ON |
| Green / Yellow LEDs | OFF |

Configure the Network Settings from your PC

This page explains how to configure SD-330AC from a PC using a network cable.

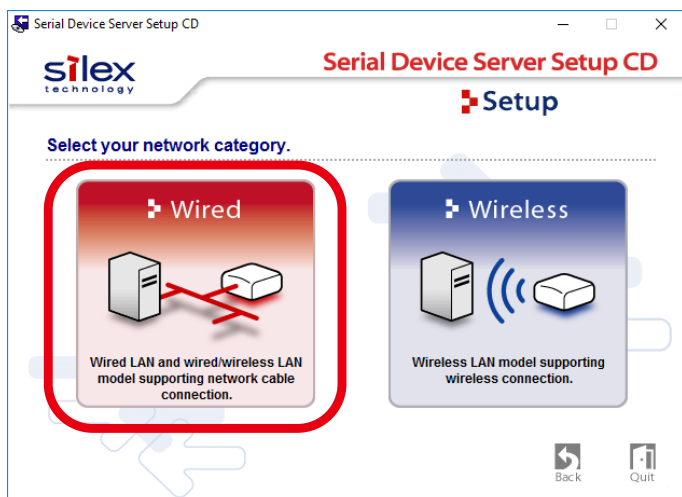


- Serial Device Server Setup can be used only for the initial configuration before a password is set to SD-330AC. After a password has been set, it cannot be used to change the configuration. To change the configuration, use the SD-330AC's Web page.

1. Extract the compressed file of **Serial Device Server Setup** that you have downloaded. Double-click **Sdsetup.exe** in the extracted folder to start the Serial Device Server Setup utility.
2. The startup menu is displayed. Click **Device Server Setup**.

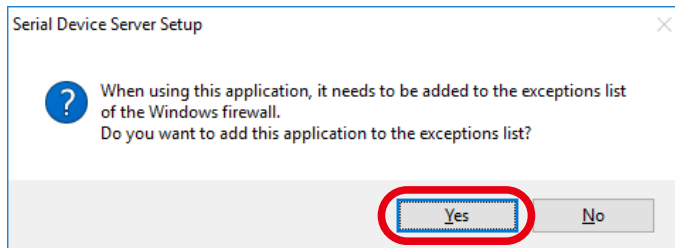


3. Click **Wired**.





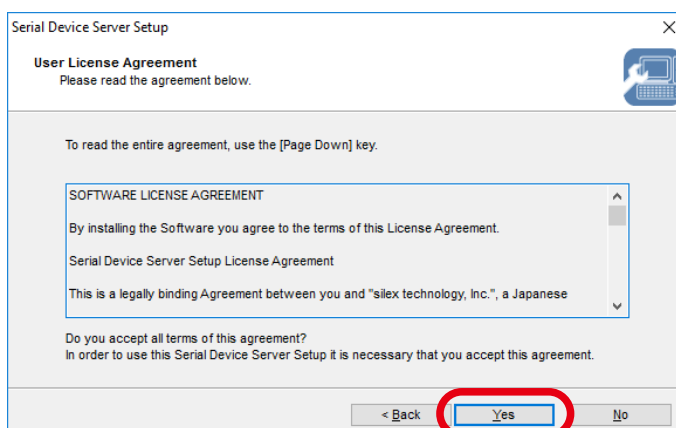
- If the User Account Control screen is displayed, click **Continue** or **Yes**.
- If the message below is displayed, click **Yes**.



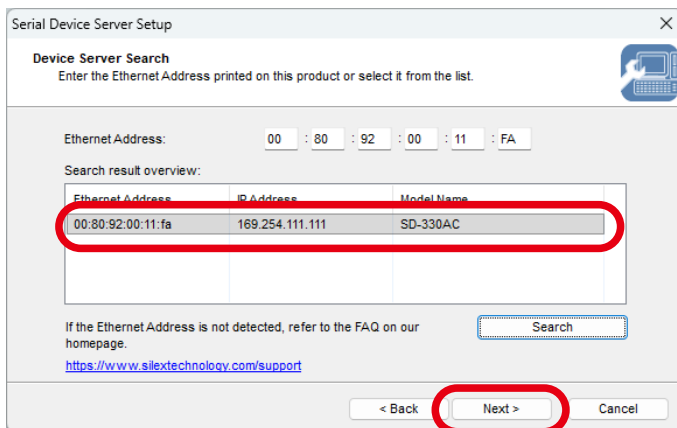
4. The Serial Device Server Setup screen is displayed. Click **Next**.



5. Read the **SOFTWARE LICENSE AGREEMENT** and click **Yes**.



6. Select SD-330AC and click **Next**.



- If SD-330AC is using the factory default settings and an IP address other than 0.0.0.0 is displayed in the list, it means the IP address was obtained from a DHCP server.
- If SD-330AC is not displayed on the list, click Search. If this does not help, refer to **SD-330AC is not displayed in the search result of Serial Device Server Setup.** in **7-1. Problems During the Setup.**

7. Configure the TCP/IP settings appropriate for your environment.

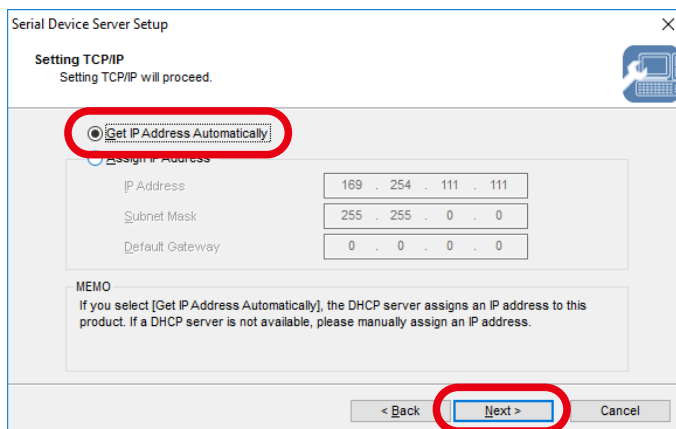


Note

- If you are not sure how to determine the IP address to set, refer to **How should I determine the way to assign IP address to SD-330AC?** in **7-1. Problems During the Setup.**

<< Obtain an IP address automatically from a DHCP server >>

Select **Get IP Address Automatically** and click **Next**.



<< **Assign an IP address manually** >>

Select **Assign IP Address** and enter an IP address. Click **Next**.

Serial Device Server Setup

Setting TCP/IP
Setting TCP/IP will proceed.

Get IP Address Automatically
 Assign IP Address

IP Address: 169 . 254 . 111 . 111

Subnet Mask: 255 . 255 . 0 . 0

Default Gateway: 0 . 0 . 0 . 0

MEMO
If you select [Get IP Address Automatically], the DHCP server assigns an IP address to this product. If a DHCP server is not available, please manually assign an IP address.

< Back **Next >** Cancel

**TIP**

- The IP address used in the screen above is a sample address. Please enter an IP address appropriate for your environment.
- Enter a **Subnet Mask** and **Default Gateway** if necessary.
- If there are no DHCP servers on your network and the IP address of your PC is assigned manually, the screen below will be displayed. Please configure an IP address appropriate for your environment.

Serial Device Server Setup

Setting TCP/IP
Setting TCP/IP will proceed.

Get IP Address Automatically
 Assign IP Address

IP Address: 0 . 0 . 0 . 0

Subnet Mask: 0 . 0 . 0 . 0

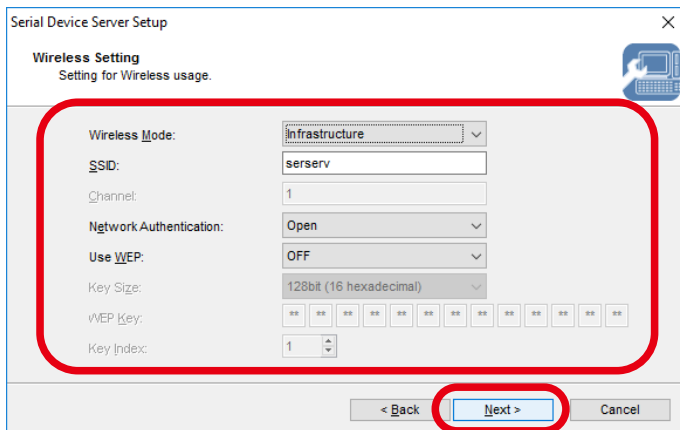
Default Gateway: 0 . 0 . 0 . 0

< Back **Next >** Cancel

**Note**

- Take a note of the configured IP address for future reference.

8. Configure the wireless settings and click **Next**.

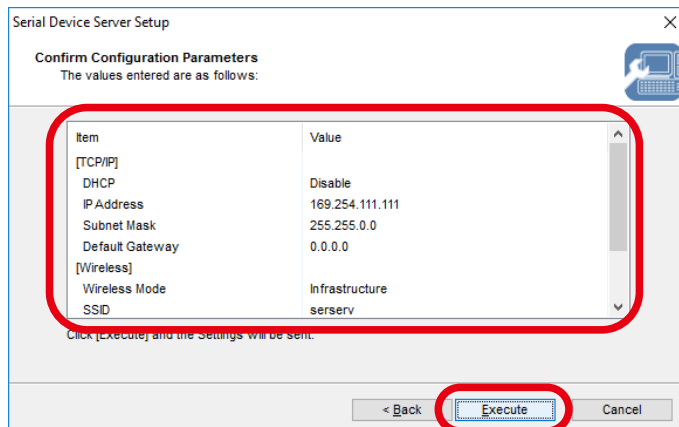


- The settings used in the screen above are sample values. See the information below for your reference.

TIP

| | |
|---|---|
| Wireless Mode | Fixed to Infrastructure . |
| SSID | Enter the same SSID as the Access Point. |
| When encrypting communication using WEP | |
| Network Authentication | Select Open . |
| Use WEP | Select ON . |
| Key Size | Set the same WEP key size as the Access Point (128bit). To enter a WEP key by a string, select 128bit (ASCII) . To enter a WEP key by a number, select 128bit (hexadecimal) . |
| WEP Key | Enter the same WEP key as the Access Point. |
| Key Index | Enter the same key index as the Access Point. |
| When encrypting communication using WPA | |
| Network Authentication | Select WPA . |
| Encryption Mode | Fixed to AUTO . |
| Pre-Shared Key | Enter the same Pre-Shared key as the Access Point. |
| When encrypting communication using WPA2 | |
| Network Authentication | Select WPA2 . |
| Encryption Mode | Fixed to AES . |
| Pre-Shared Key | Enter the same Pre-Shared key as the Access Point. |
| When using no encryption | |
| Network Authentication | Select Open . |
| Use WEP | Select OFF . |

9. Check the settings and click **Execute**.



- The information displayed in this screen will vary depending on the items you have configured.

TIP



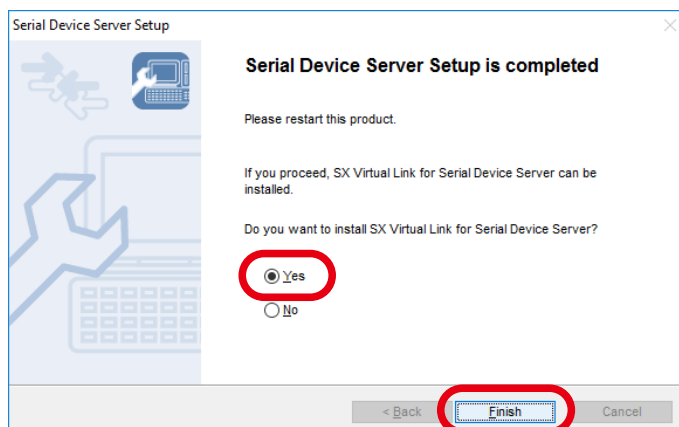
- If an error occurs after clicking Execute, please refer to **Communication error occurs when configuring with Serial Device Server Setup.** in 7-1. Problems During the Setup.

Note

10. Select **Yes** and click **Finish**.

Continue to install the SX Virtual Link for Serial Device Server. For details on the installation, refer to **Install Application**.

After the installation is finished, go on to **Enable the new settings**.



Enable the new settings

The following explains how to activate the new settings.

1. Restart SD-330AC.



Note

- For how to restart SD-330AC, refer to **Reboot SD-330AC**.

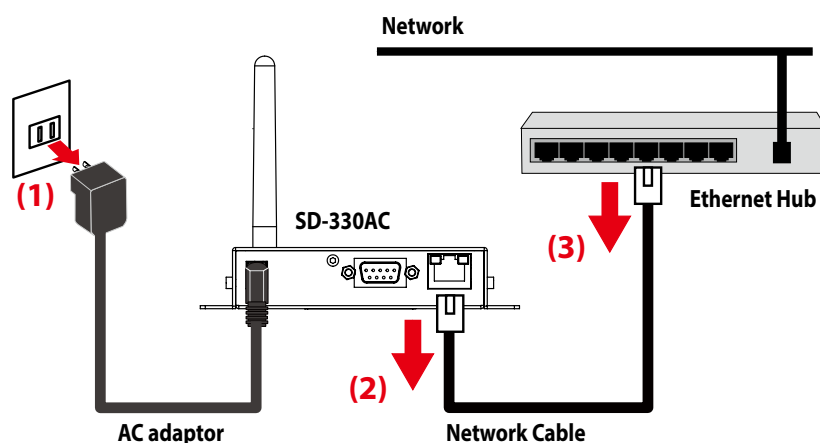
2. Set a password for SD-330AC.



Note

- To use SD-330AC, the password configuration is necessary. Refer to **4-3. Password Configuration** for details.

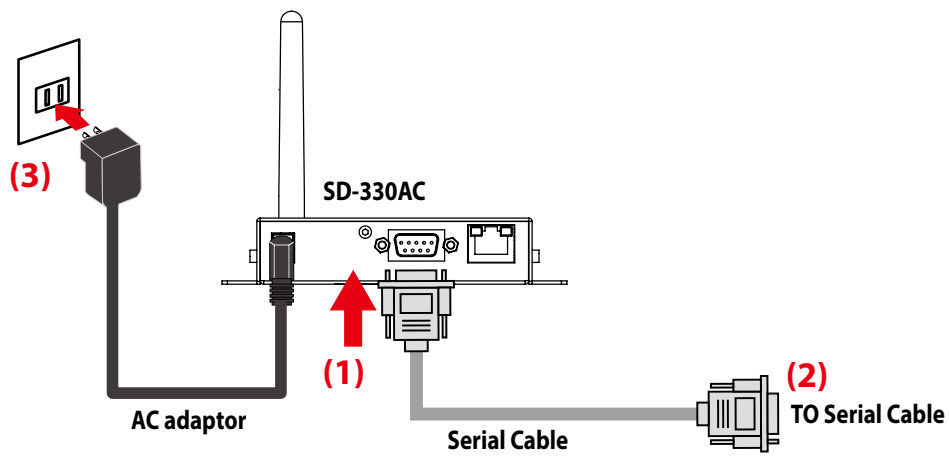
3. Remove the power from the outlet and the network cable from SD-330AC.



TIP

- If you plan to use SD-330AC in a wired network after completing the configuration, the network cable does not need to be unplugged

4. Connect the serial device that you wish to share over the network to SD-330AC using a serial cable and insert the power plug of SD-330AC into the outlet.



Network configuration is complete.

4-3. Password Configuration

This configuration needs to be performed when SD-330AC is directly connected to the PC or used on a secure wired network.

1. Start a Web browser on the PC, enter the IP address into the address bar and press the Enter key to display the Web page of SD-330AC.
2. Enter a password to set for SD-330AC and click **Submit**.

Welcome to SD-330AC

Please set a login password for this unit.

Password:

Confirm Password: 16 letters(max.)

Select Language: English

Submit



- The login password configuration page is displayed only when SD-330AC is configured for the first time.

TIP

3. The password will be registered to SD-330AC.
When the System Status page is displayed, the password configuration is finished.

silex technology

Select Language: English

▼ Status - System

▼ Login - Login

- silex Global Site

System Status

System Status

Refresh HELP

▶ TCP/IP Information

| Name | Status |
|-----------------|-----------------|
| IP Address | 169.254.111.111 |
| Subnet Mask | 255.255.0.0 |
| Default Gateway | 0.0.0.0 |
| DHCP Server | 0.0.0.0 |

▶ Wireless LAN Information

| Name | Status |
|-----------------|--------|
| Current SSID | |
| Current Channel | |

▶ Wired LAN Information

| Name | Status |
|-------------|------------------|
| Link Status | Ethernet link Up |

4-4. Configure SD-330AC Using Smart Wireless Setup

This page explains the Smart Wireless Setup which can be used when your wireless router supports WPS (Wi-Fi Protected Setup).

Confirm that your wireless router supports WPS

To perform the wireless configuration using WPS, your wireless router must support WPS. Please make sure that a wireless router supporting WPS is set up in your environment.

To see if your wireless router supports WPS or not, refer to the operation manual that came with the router or contact the manufacturer.



TIP

- Depending on your wireless router, WPS may need to be enabled manually. For details, refer to the operation manual that came with your wireless router.
- If a security feature such as MAC Address filtering is enabled on your wireless router, disable it temporarily so that SD-330AC can communicate with your wireless router.

Configure Network Settings



TIP

- To use this method, the password configuration needs to be finished on SD-330AC. If the password configuration is not finished yet, refer to **4-3. Password Configuration** to set the password.

1. Configure the TCP/IP settings and install the necessary application according to the instructions from **1** to **10** at **Configure the Network Settings from your PC**.



TIP

- The wireless configuration at 8 will not be necessary. Click **Next** then.

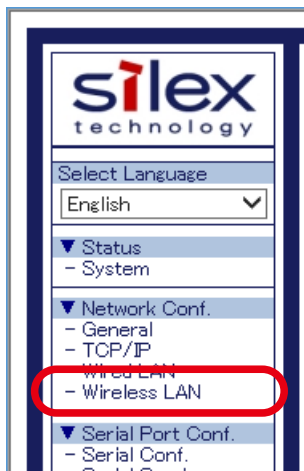
2. Access the Web page of SD-330AC using the Web browser.



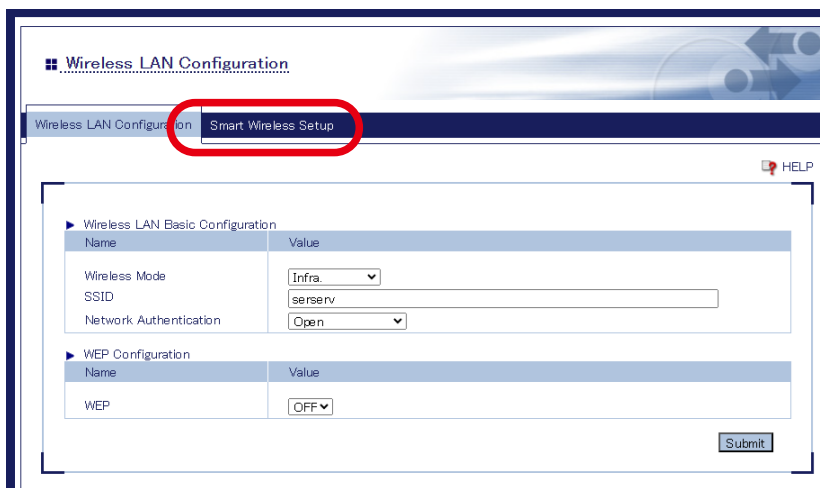
Note

- For details on how to access the Web page of SD-330AC using the Web browser, refer to **Access the SD-330AC Web Page**.

3. From the left menu on the Web page, click **Wireless LAN**.



4. Click the **Smart Wireless Setup** tab.



Push Button Method

1. Press the WPS button on your wireless LAN router.
Check that your wireless router start to wait for a wireless connection.



Note

- The name, position and shape of the WPS button will differ depending on your wireless router. For details, refer to the operation manual that came with your wireless router.
- Please use only one wireless router. If two or more routers are waiting for wireless connections, SD-330AC will not be able to connect properly.

2. In the Web page, click **Execute** at **Push Button**.

Wireless LAN Configuration

Wireless LAN Configuration Smart Wireless Setup

Smart Wireless Setup

| Name | Value |
|----------|--|
| PIN Code | 34744200 <input type="button" value="Generate PIN"/> |

Smart Wireless Setup Execute

| | |
|-------------|--|
| Push Button | <input type="button" value="Execute"/> |
| PIN Code | <input type="button" value="Execute"/> |

3. The Smart Wireless Setup will begin.

Wireless LAN Configuration

Wireless LAN Configuration Smart Wireless Setup

Smart Wireless Setup Running

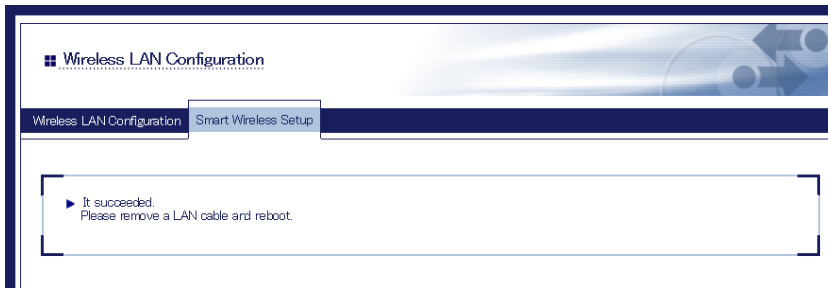
Progress bar: 10 blue dots



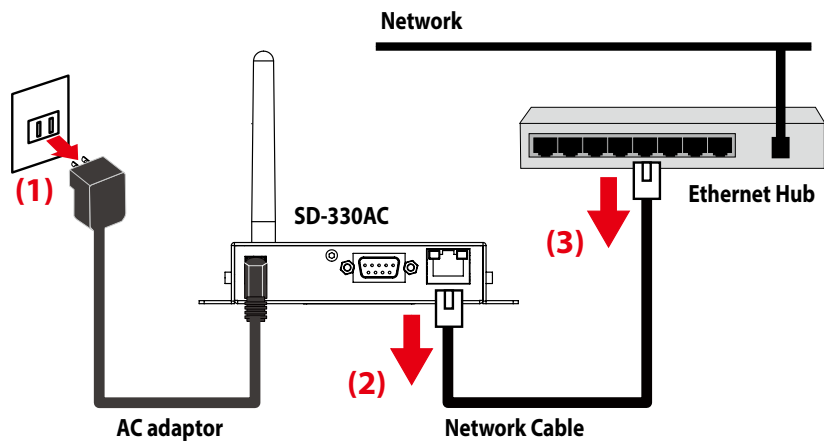
Note

- Depending on your environment, it may take up to 2 mins to finish the wireless configuration.

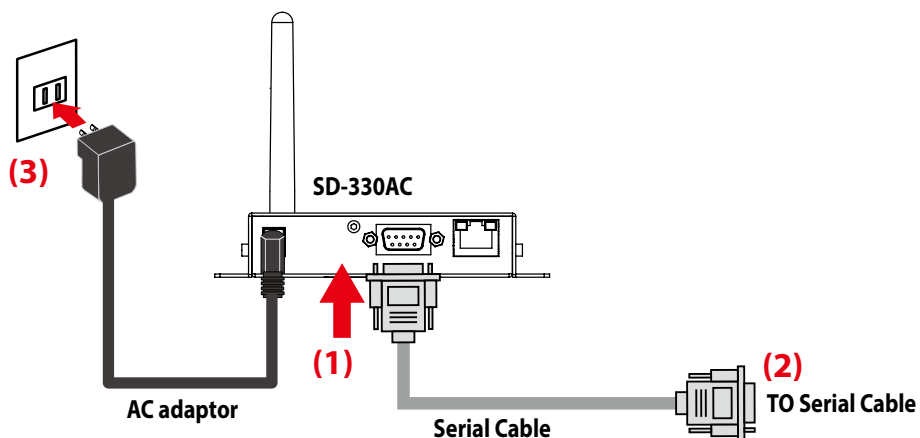
- When the configuration is completed, SD-330AC will be configured with the same setting as the wireless router.



- Remove the power from the outlet and the network cable from SD-330AC.



- Connect the serial device that you wish to share over the network to SD-330AC using a serial cable and insert the power plug of SD-330AC into the outlet.



PIN Code Method

1. Check the PIN code on the Web page.
Keep displaying the Web page as it will be used again after you enter the PIN code on the Access Point side.

Wireless LAN Configuration

Wireless LAN Configuration Smart Wireless Setup

Smart Wireless Setup

| Name | Value |
|----------|--|
| PIN Code | 34744200 <input type="button" value="Generate PIN"/> |

Smart Wireless Setup Execute

| Name | Value |
|-------------|--|
| Push Button | <input type="button" value="Execute"/> |
| PIN Code | <input type="button" value="Execute"/> |



- To change the PIN code, click **Generate PIN**. A new PIN code will be issued.

Note

2. Open the Web page of Access Point using the Web browser (Edge, etc). Enter the PIN code and start the WPS on that page.
3. Go back to the Smart Wireless Setup page of SD-330AC after the WPS is started on the Access Point.
Click **Execute** at **PIN Code**.

Wireless LAN Configuration

Wireless LAN Configuration Smart Wireless Setup

Smart Wireless Setup

| Name | Value |
|----------|--|
| PIN Code | 34744200 <input type="button" value="Generate PIN"/> |

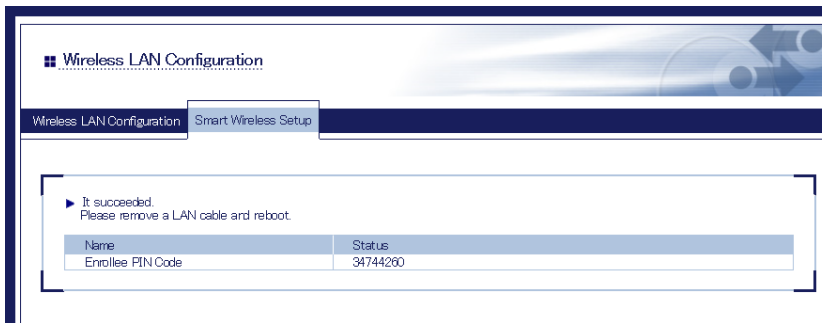
Smart Wireless Setup Execute

| Name | Value |
|-------------|--|
| Push Button | <input type="button" value="Execute"/> |
| PIN Code | <input type="button" value="Execute"/> |

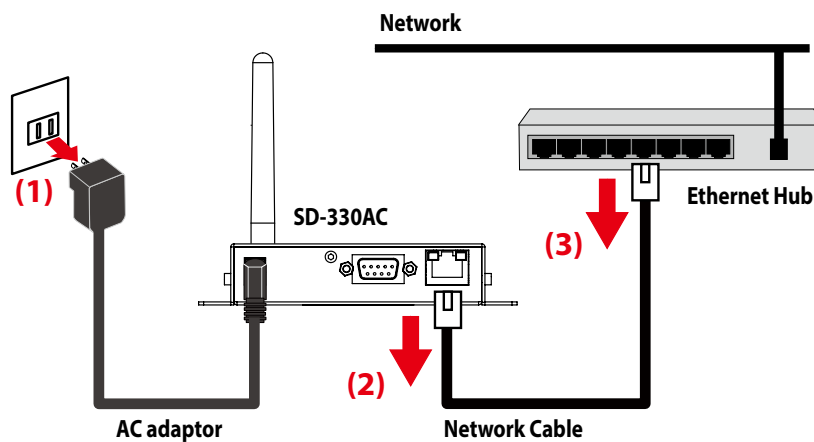
4. The Smart Wireless Setup will begin.



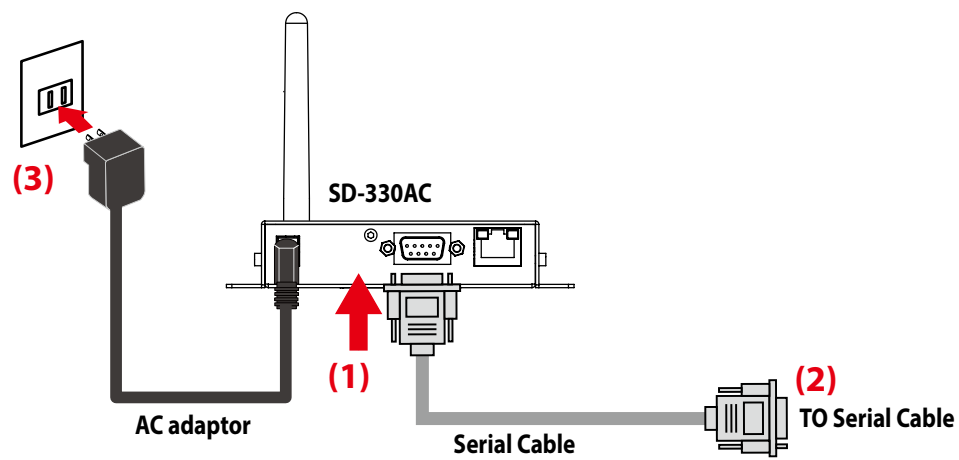
5. When the configuration is completed, SD-330AC will be configured with the same setting as the wireless router.



6. Remove the power plug from the outlet and the network cable from SD-330AC.



7. Connect the serial device that you wish to share over the network to SD-330AC using a serial cable and insert the power plug of SD-330AC into the outlet.



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5. How to Use

5-1. Link to Serial Device Using the Serial Device Connection Utility

(Serial Port Emulation Mode)

What is Serial Port Emulation Mode?

Serial Port Emulation Mode is a function to emulate the standard Windows COM port on network using the serial device connection utility, "SX Virtual Link for Serial Device Server". If this function is used, users can communicate with serial devices over the network using a serial port communication utility (e.g. terminal software, etc.).

**Note**

- If you are using the USB device management utility, "SX Virtual Link", please uninstall it and use "**SX Virtual Link for Serial Device Server**". It can discover, link to and unlink from both USB devices and serial devices. For details on how to install it, see **Install Application**.

Install Application

This page explains how to install the serial device connection utility, "SX Virtual Link for Serial Device Server".

- * If SX Virtual Link for Serial Device Server is not installed yet, install it according to the instructions below.
- * If you have completed the configuration and continue to install the application, start from 3 in this section.

**TIP**

- Administrator privilege is required for installation.

**Note**

- If you are using the USB device management utility, "SX Virtual Link", you can use "SX Virtual Link for Serial Device Server" instead of "SX Virtual Link" to discover, link to and unlink from both USB devices and serial devices.

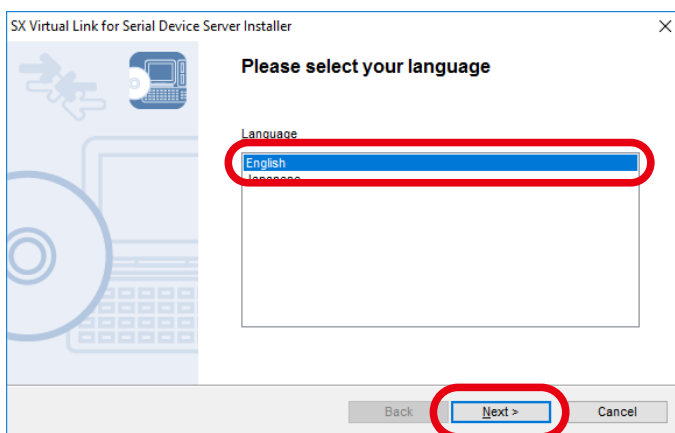
1. Extract the compressed file of **SX Virtual Link for Serial Device Server** that you have downloaded.
Double-click **Cosetup.exe** in the extracted folder to start the **SX Virtual Link for Serial Device Server** installer.



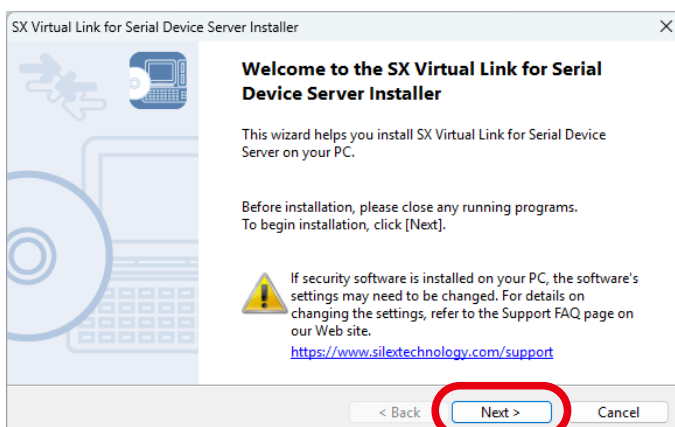
- If the User Account Control screen is displayed, click **Yes** or **Continue**.

TIP

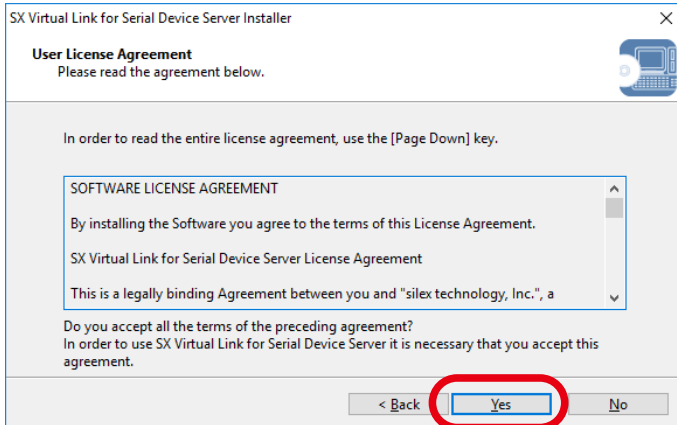
2. Select **English** and click **Next**.



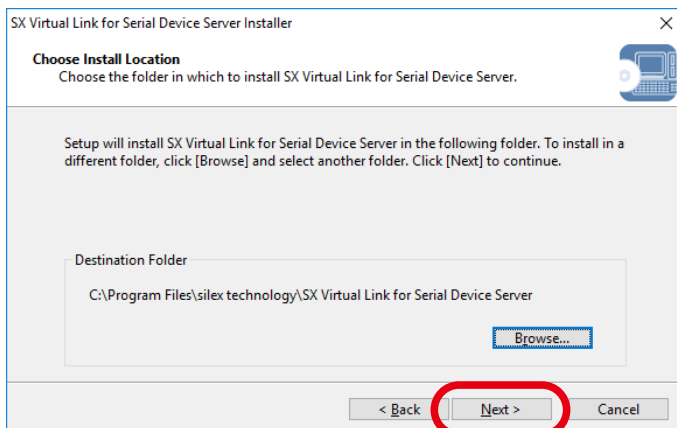
3. SX Virtual Link for Serial Device Server Install wizard is displayed. Click **Next**.



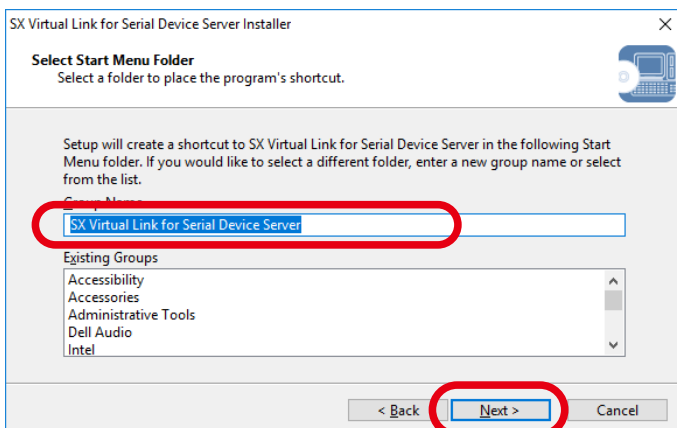
4. Read the **SOFTWARE LICENSE AGREEMENT** and click **Yes**.



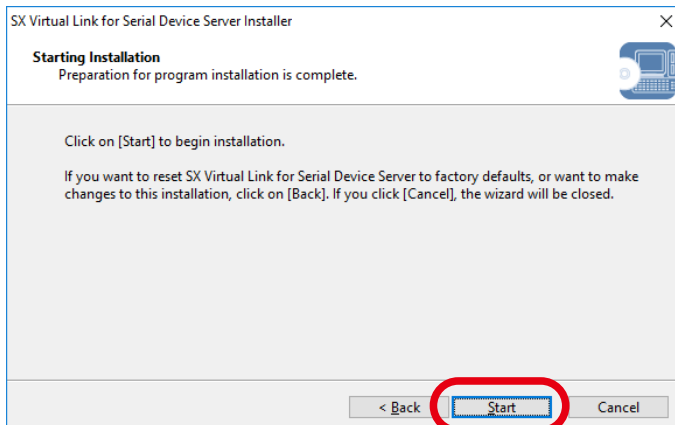
5. Select a folder to install SX Virtual Link for Serial Device Server into and click **Next**.



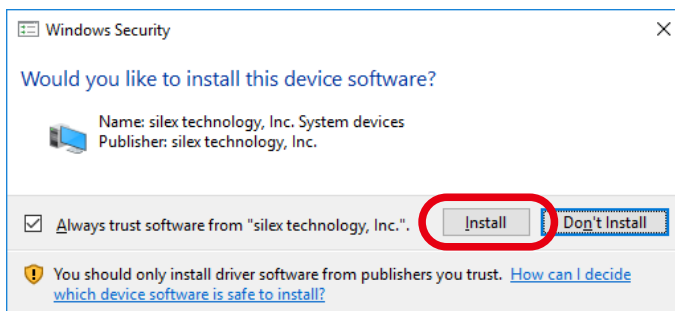
6. Enter a Group Name to be displayed in the Start Menu. Click **Next**.



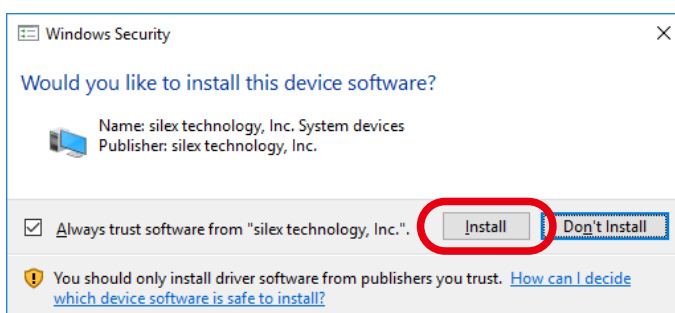
7. Click **Start** to begin the installation.



8. A confirmation message for software installation is displayed. Click **Install**.

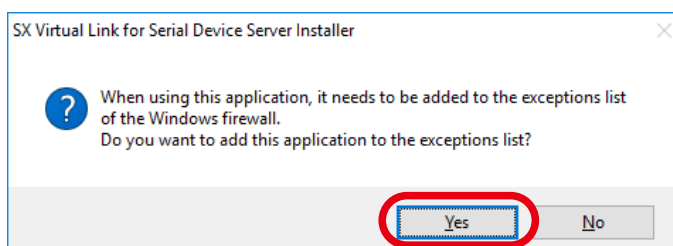


Again, when the confirmation message is displayed, click **Install**.

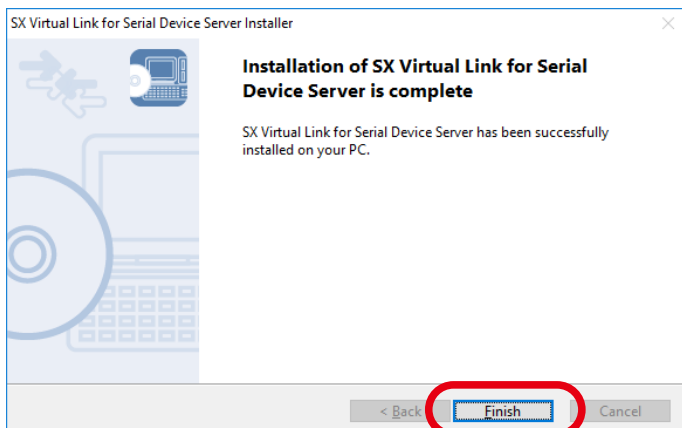


TIP

- If the message below is displayed, click **Yes**.

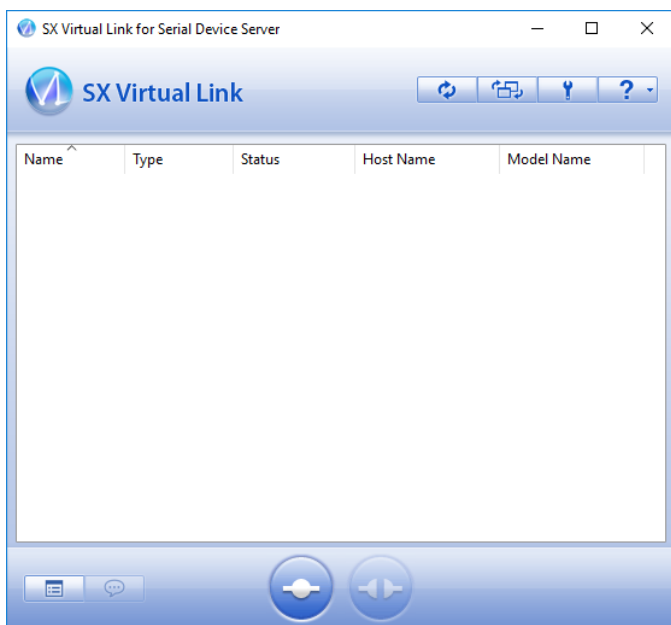


9. SX Virtual Link for Serial Device Server has been installed. Click **Finish**.



- If using a firewall function of commercial security software, please add SX Virtual Link for Serial Device Server to the exception list in your security software. Refer to the FAQ on our website (<https://www.silxtechnology.com/>) for details on adding an application to the exception list.

Application installation is complete. SX Virtual Link for Serial Device Server will run.



Start SX Virtual Link for Serial Device Server

How to start SX Virtual Link for Serial Device Server is as follows:

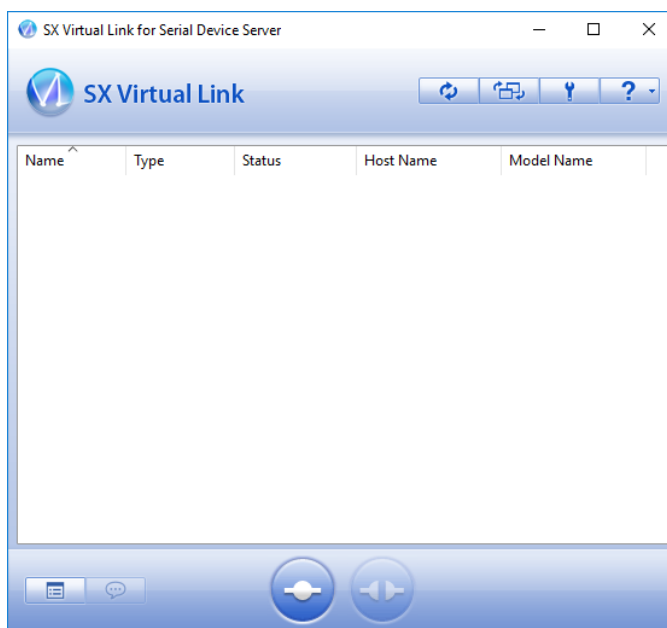
1. click **Start - All(apps) - SX Virtual Link for Serial Device Server**.



Note

- Click the SX Virtual Link for Serial Device Server icon () in the task tray.

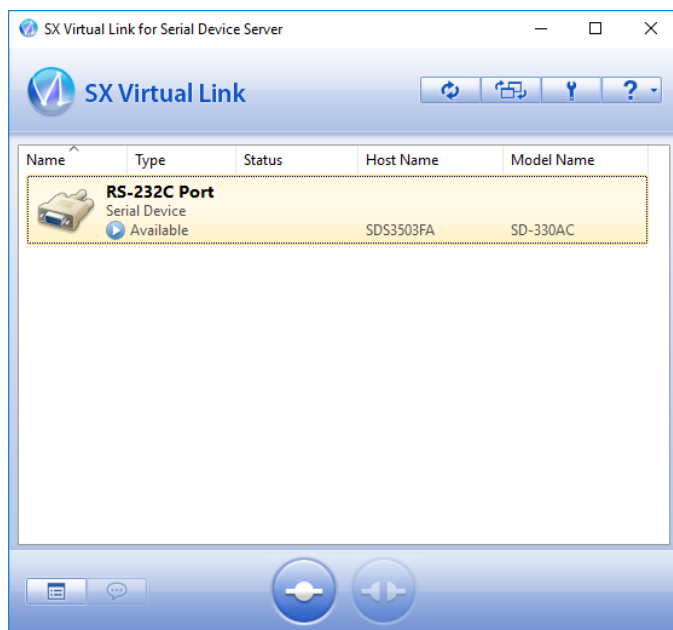
2. The SX Virtual Link for Serial Device Server's main window appears.




Link to a serial device

How to link to serial device is as follows:

1. Select the serial device in SX Virtual Link for Serial Device Server's main window and connect to it.




How to Link:

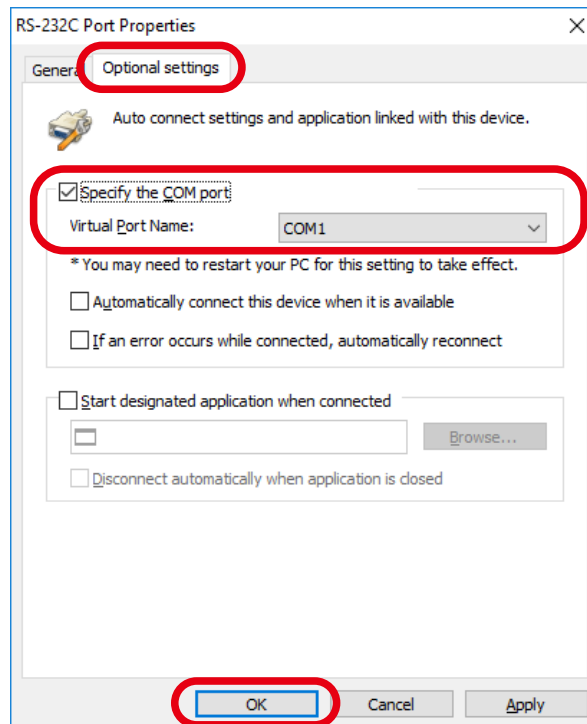
| | |
|----------------|--|
| Double-click | Double-click the serial device in SX Virtual Link for Serial Device Server's main window. |
| Use a button | Select the serial device and click the Connect button  in SX Virtual Link for Serial Device Server's main window. |
| Right-click | Right-click on the serial device in SX Virtual Link for Serial Device Server's main window and click Connect in the menu displayed. |
| Use a keyboard | Select the serial device using the up/down arrow keys and press Alt + C on your keyboard. |

**Note**

- To specify the COM port manually, please complete the following steps before you link to the serial device.



1. Select the serial device that you wish to link and click the Properties button  .
2. In the **Optional settings** tab, check **Specify the COM port** check box and select the COM port that you wish to use from **Virtual Port Name**.

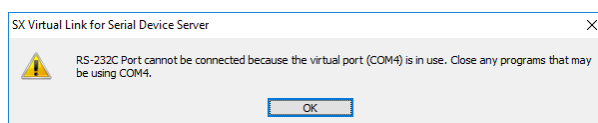
Do not select one that is already used on your system.



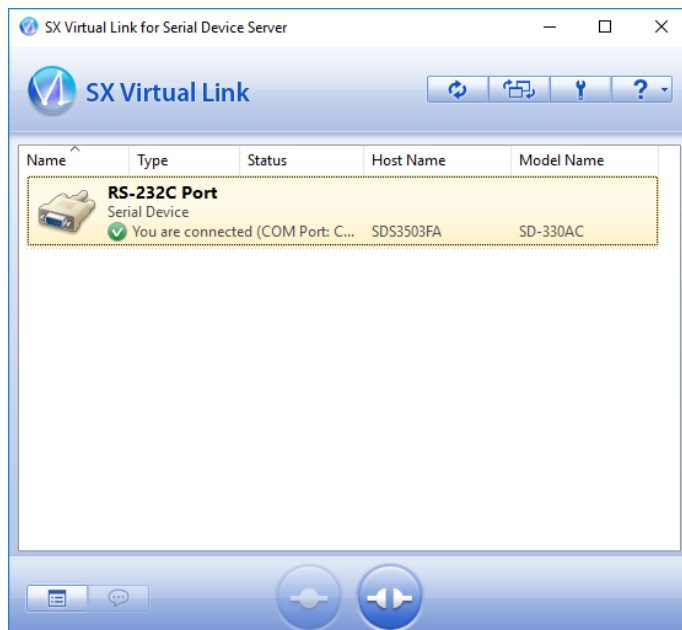
3. Click **OK**.

The COM port has been specified.

- When the Connect button  is clicked, the message below may be displayed. Check the message and click **OK**. Finish the COM port currently used in your system and click the Connect button  again.



2. Once you successfully link to the serial device, the status icon is changed in SX Virtual Link for Serial Device Server's main window.
The COM port that you have selected is displayed in the status column.



Start a serial communication software

Start a serial communication software such as a terminal software program.

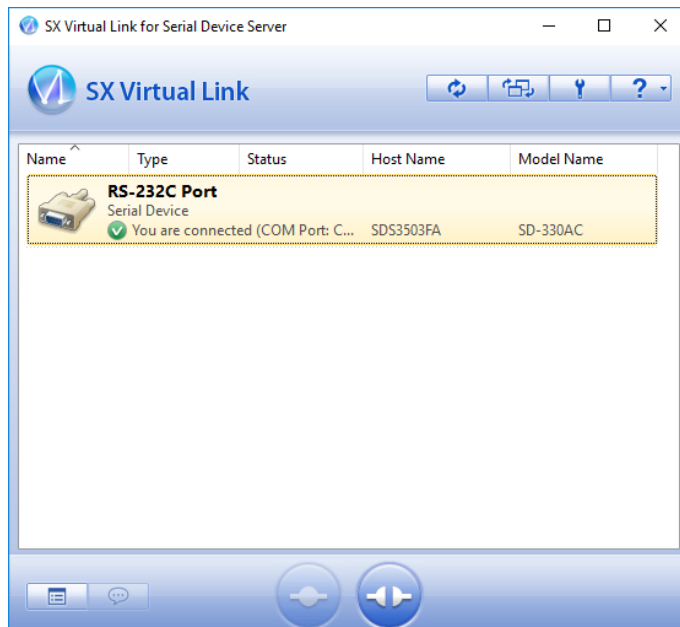
On the serial communication software, select the COM port that is displayed in the status column of SX Virtual Link for Serial Device Server's main window. Also, configure the serial port settings such as baud rate, stop bit, etc.

Once the communication settings are complete, you can communicate with the serial device connected to SD-330AC.


Unlink from a serial device

How to unlink from serial device is as follows:

Select the serial device in SX Virtual Link for Serial Device Server's main window and disconnect from it.



How to Unlink:

| | |
|----------------|---|
| Double-click | Double-click the serial device in SX Virtual Link for Serial Device Server's main window. |
| Use a button | Select the serial device and click the Disconnect button  in SX Virtual Link for Serial Device Server's main window. |
| Right-click | Right-click on the serial device in SX Virtual Link for Serial Device Server's main window and click Disconnect in the menu displayed. |
| Use a keyboard | Select the serial device using the up/down arrow keys and press Alt + D on your keyboard. |

5-2. Ecable Mode

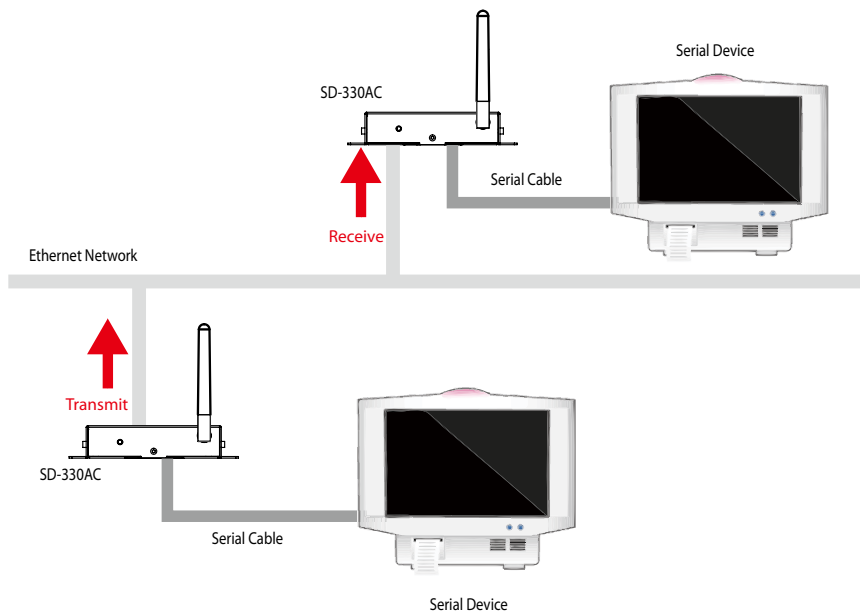
(Link to the Registered Device)

What is Ecable Mode?

Ecable Mode is a feature that allows serial devices with no network interface to communicate with each other using two SD-330AC's.

One SD-330AC is used as a transmitter and the other one is used as a receiver, and a serial device is connected for each end. To allow communication between them, the IP address of the receiver needs to be registered to the transmitter.

When both SD-330AC's are turned on and the network connection is established, the serial devices can communicate with each other via SD-330AC.



When SD-330AC's are communicating with each other using Ecable Mode, the transmitter end sends the serial port data to the receiver end, and the receiver end sends it to the serial device.

Before You Begin

Change the settings to use SD-330AC in Ecable Mode.

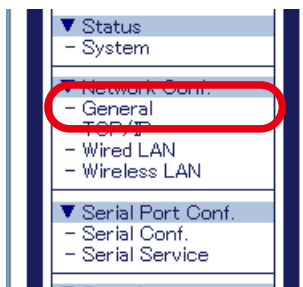
1. Access the Web page of the SD-330AC that you wish to use as the transmitter end.



- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

Note

2. In the left pane of the Web page, click **General**.



3. Select **OFF** for **SX Virtual Link compatibility**.

The image shows the 'General Configuration' web page. The 'General Configuration' section is expanded, showing a table with the following fields and values:

| Name | Value |
|-------------------------|----------------|
| System Name | SCS350GFA |
| System Description | Silex SD-330AC |
| System Contact | |
| System Location | |
| SNMP Get Community Name | |
| SNMP Set Community Name | |

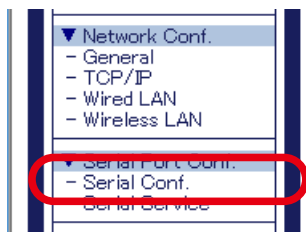
The 'Serial Server' section is also expanded, showing a table with the following fields and values:

| Name | Value |
|-------------------------------|-------|
| SX Virtual Link compatibility | OFF |

The 'Submit' button is located at the bottom right of the configuration area and is highlighted with a red oval.

When completed, click the **Submit** button.

- In the left pane of the Web page, click **Serial Conf.**



- In the page displayed, configure the following settings at **General Configuration** as appropriate for your serial device.

- * Baud Rate
- * Bits per character
- * Stop bits
- * Parity
- * Flow control

Select **Enabled** for **Ecable Mode**.

For **Destination IP Address**, enter the IP address of the receiver end (another SD-330AC).

For **Destination Port**, enter the port number that you wish to use.

For **Connection attempt time**, set the interval for connection retry.

To encrypt the communication, select **Enabled** for **Ecable Encryption**.

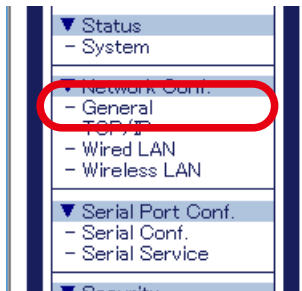
A screenshot of the 'Serial Configuration' web page. The page title is 'Serial Configuration' and the sub-page is 'Serial Configuration S1'. There is a 'HELP' button in the top right. The main content is divided into two sections: 'General Configuration' and 'Ecable Mode Configuration'. Both sections are enclosed in a red rounded rectangle. The 'General Configuration' section has a table with 'Name' and 'Value' columns. The 'Ecable Mode Configuration' section also has a table with 'Name' and 'Value' columns. A 'Submit' button is located at the bottom right of the form area.

| Name | Value |
|---------------------|--------|
| Port Name | S1 |
| Port Type | Serial |
| Baud Rate | 115200 |
| Bit per character | 8 |
| Stop bits | 1 |
| Parity | None |
| Flow control | None |
| Console Mode String | |

| Name | Value |
|------------------------------|----------|
| Ecable Mode | Disabled |
| Ecable I/O Mode | TCP |
| Destination IP Address | 0.0.0.0 |
| Destination Port | 0 |
| Local Port | 0 |
| Connection attempt time | 30 |
| Connection attempt time unit | sec |
| Ecable Encryption | Disabled |

When completed, click the **Submit** button.

6. Also, access the Web page of the receiver end and click **General**.



7. Select **OFF** for **SX Virtual Link compatibility**.

A screenshot of the 'General Configuration' web page. The page title is 'General Configuration'. Below the title, there is a 'General Configuration' tab and a 'HELP' icon. The main content area is divided into two sections: 'General Configuration' and 'Serial Server'. The 'General Configuration' section contains a table with the following data:

| Name | Value |
|-------------------------|----------------|
| System Name | SD63503FA |
| System Description | Silex SD-830AC |
| System Contact | |
| System Location | |
| SNMP Get Community Name | |
| SNMP Set Community Name | |

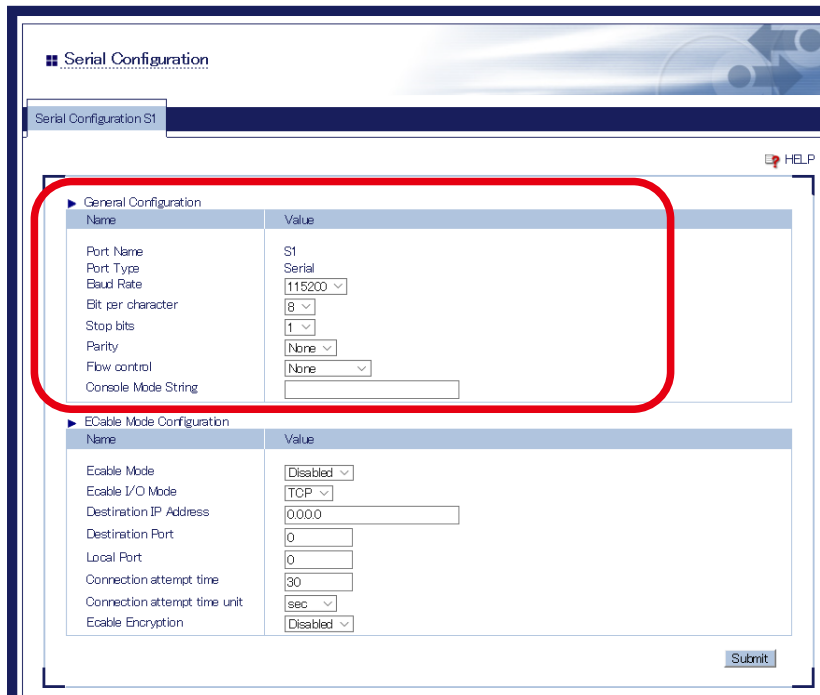
The 'Serial Server' section contains a table with the following data:

| Name | Value |
|-------------------------------|-------|
| SX Virtual Link compatibility | OFF |

The 'SX Virtual Link compatibility' dropdown menu is circled in red. The 'Submit' button is also circled in red.

When completed, click the **Submit** button.

8. In the left pane of the Web page, click **Serial Conf.** and configure the settings at **General Configuration**.



The screenshot shows the 'Serial Configuration S1' web page. The 'General Configuration' section is highlighted with a red box. The settings are as follows:

| Name | Value |
|---------------------|--------|
| Port Name | S1 |
| Port Type | Serial |
| Baud Rate | 115200 |
| Bit per character | 8 |
| Stop bits | 1 |
| Parity | None |
| Flow control | None |
| Console Mode String | |

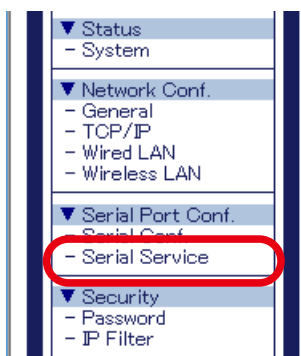
Below the General Configuration section is the 'ECable Mode Configuration' section, which is not highlighted. Its settings are:

| Name | Value |
|------------------------------|----------|
| ECable Mode | Disabled |
| ECable I/O Mode | TCP |
| Destination IP Address | 0.0.0.0 |
| Destination Port | 0 |
| Local Port | 0 |
| Connection attempt time | 30 |
| Connection attempt time unit | sec |
| ECable Encryption | Disabled |

A 'Submit' button is located at the bottom right of the configuration area.

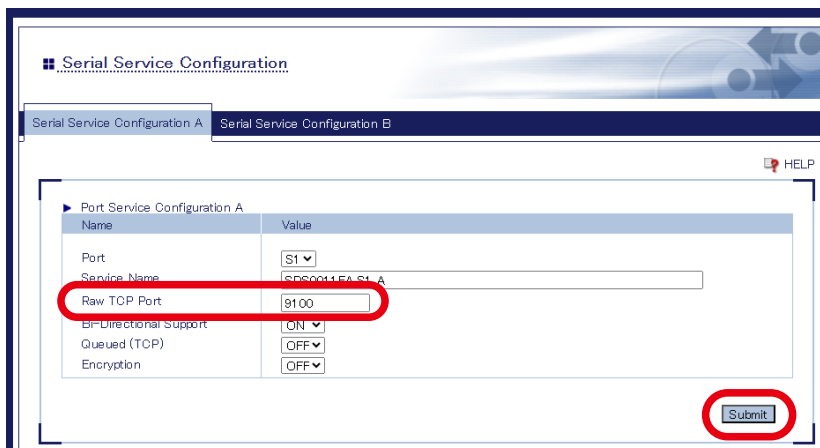
When completed, click the **Submit** button.

9. In the left pane of the Web page, click **Serial Service**.



10. For **Raw TCP Port**, enter the same port number that you have configured for **Destination Port** at the step 5.

If **Ecable Encryption** has been set to **Enabled** at the step 5, select **ON** for **Encryption**.



The screenshot shows the 'Serial Service Configuration' window. Under 'Port Service Configuration A', the following settings are visible:

| Name | Value |
|------------------------|----------------|
| Port | S1 |
| Service Name | SP0001156-S1-A |
| Raw TCP Port | 8100 |
| Bi-Directional Support | ON |
| Queued (TCP) | OFF |
| Encryption | OFF |

The 'Raw TCP Port' field and the 'Submit' button are circled in red.

When completed, click the **Submit** button.

The configuration has been completed.

Link to Serial Device

Power on both serial devices and then both SD-330AC's.

After they are powered on, bidirectional communication will be active between the serial devices.

5-3. Raw TCP Connection Mode

(Link to Serial Device Using TCP Raw Port)

What is Raw TCP Connection Mode?

Raw TCP Connection Mode is a feature used to send or receive serial port data transparently over TCP/IP.

Using this feature, you can directly communicate with a serial device using an application program that runs on the TCP Socket API.

Before You Begin

Change the settings to use SD-330AC in Raw TCP Connection Mode.

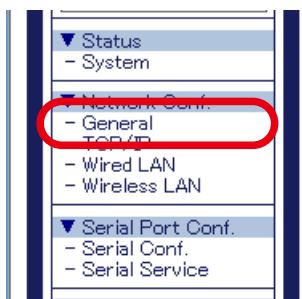
1. Access the Web page of SD-330AC.

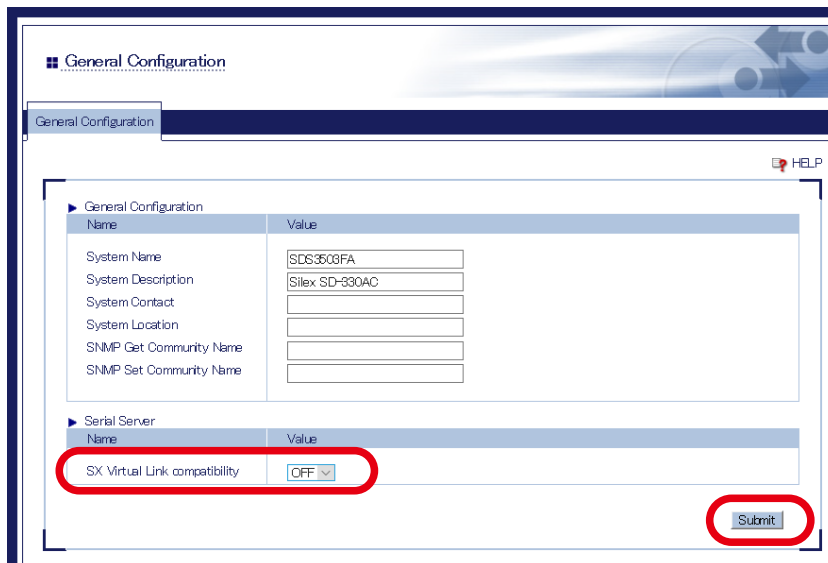


Note

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

2. In the left pane of the Web page, click **General**.



3. Select **OFF** for SX Virtual Link compatibility.

The screenshot shows the 'General Configuration' web page. The 'General Configuration' section is expanded, showing a table with the following fields:

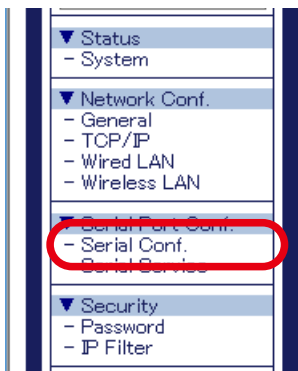
| Name | Value |
|-------------------------|----------------|
| System Name | SDS3503FA |
| System Description | Silex SD-330AC |
| System Contact | |
| System Location | |
| SNMP Get Community Name | |
| SNMP Set Community Name | |

Below this, the 'Serial Server' section is expanded, showing a table with the following field:

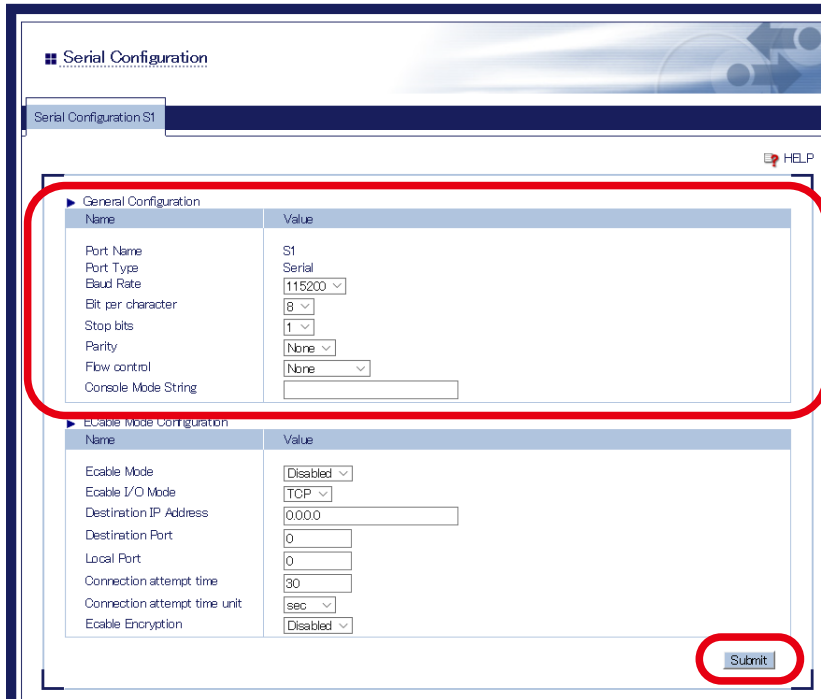
| Name | Value |
|-------------------------------|-------|
| SX Virtual Link compatibility | OFF |

The 'Submit' button is located at the bottom right of the form.

When completed, click the **Submit** button.

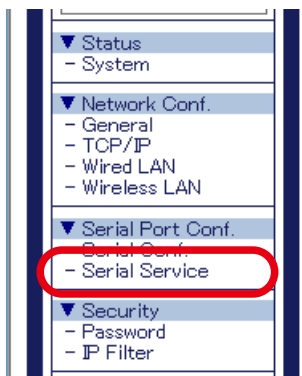
4. In the left pane of the Web page, click **Serial Conf.****5.** In the page displayed, configure the following settings at **General Configuration** as appropriate for your serial device.

- * Baud Rate
- * Bits per character
- * Stop bits
- * Parity
- * Flow control

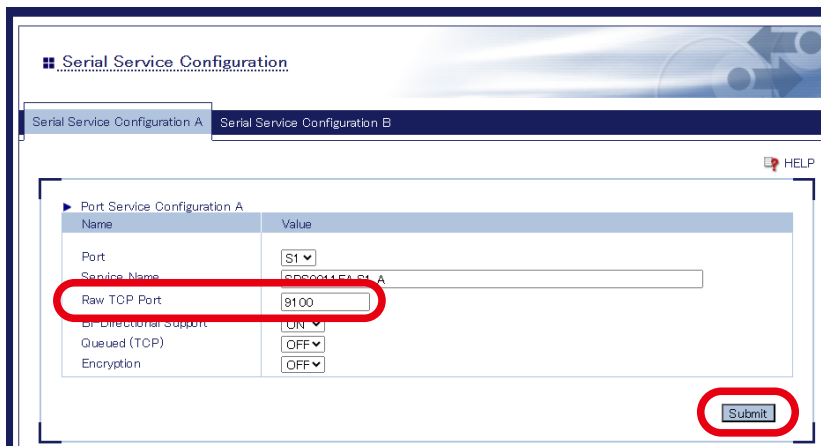


When completed, click the **Submit** button.

6. In the left pane of the Web page, click **Serial Service**.



7. For **Raw TCP Port**, enter the TCP port number that you wish to use for your application.



The screenshot shows the 'Serial Service Configuration' window with two tabs: 'Serial Service Configuration A' and 'Serial Service Configuration B'. The 'Port Service Configuration A' section is expanded, showing a table with the following fields:

| Name | Value |
|------------------------|--------------|
| Port | S1 |
| Service Name | SD330AC-S1-A |
| Raw TCP Port | 9100 |
| Bi-Directional Support | ON |
| Queued (TCP) | OFF |
| Encryption | OFF |

The 'Raw TCP Port' field and the 'Submit' button are circled in red.

When completed, click the **Submit** button.

The configuration has been completed.

Link to Serial Device

Power on the serial devices and then SD-330AC.

Start an application that runs on the TCP Socket API from your PC and bidirectional communication with the serial device will be active when a link is established.

5-4. Use Access Point Feature

Before You Begin

How to turn on the Access Point mode on SD-330AC is explained as follows.

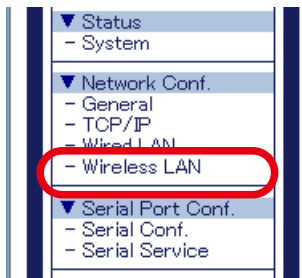
1. Access the Web page of SD-330AC.



Note

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

2. In the left pane of the Web page, click **Wireless LAN**.



3. Select **AccessPoint** at **Wireless Mode** and configure the following settings at **Wireless LAN Basic Configuration**.

- * SSID
- * Channel
- * Network Authentication

| Name | Value |
|------------------------|-------------|
| Wireless Mode | AccessPoint |
| SSID | serserv |
| Stealth Mode | OFF |
| Channel | 11 |
| Network Authentication | Open |

When it is finished, click **Submit**.

4. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

**Note**

- If you are to continue configuration on the other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.

The configuration has been completed.

Link to Wireless Client Devices

The following explains how to make a link from the wireless client device when SD-330AC is operating in Access Point mode.

Below configuration methods are available:

- * Configure the Wireless Settings on a Client Device
- * Make a Link Using the Web Page of SD-330AC
- * Make a Link Using the PIN Code



- To make a link using the Web page or PIN code, your wireless client device needs to support WPS.

TIP

<<Configure the Wireless Settings on a Client Device>>

Configure the client device with the same wireless settings as SD-330AC.

For details on how to configure the settings on the client device, refer to the operating manual that came with the client device.

After the configuration is completed, the client device can be used wirelessly via SD-330AC.

<<Make a Link Using the Web Page of SD-330AC>>



- Move the wireless client device closer to SD-330AC so that both devices can communicate.

TIP

1. Check that the client device supports WPS and is powered on.

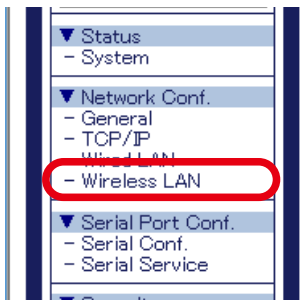
2. Access the Web page of SD-330AC.



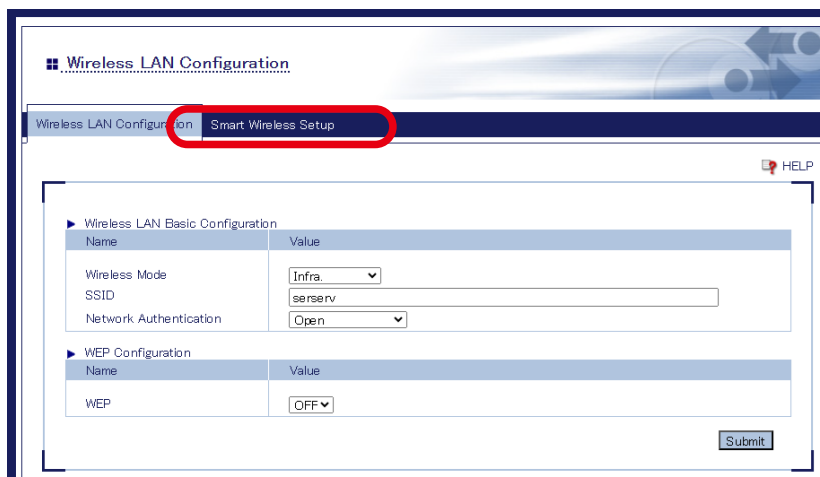
- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

Note

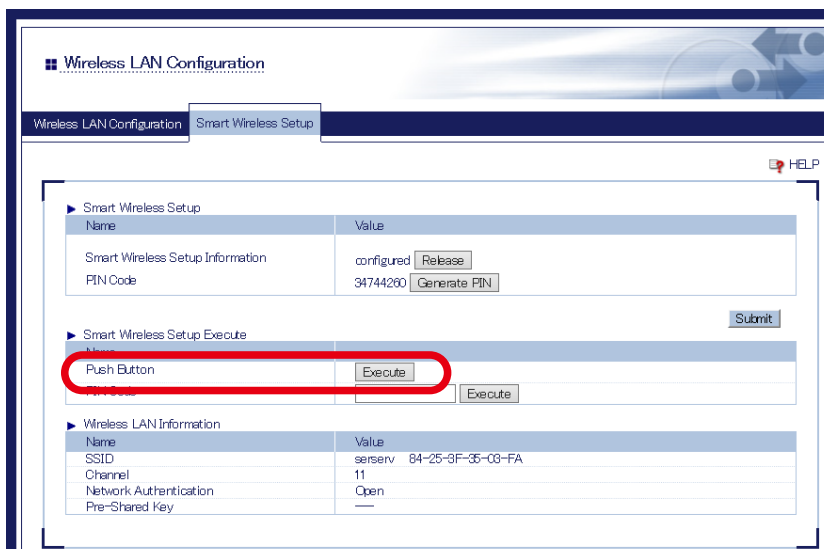
3. In the left pane of the Web page, click **Wireless LAN**.



4. Click the **Smart Wireless Setup** tab.



5. Click **Execute at Push Button**.



6. Press the wireless configuration switch on the client device.



- The name, position and shape of the wireless configuration switch (WPS button) will differ depending on your wireless device. For details, refer to the operation manual that came with your wireless device.

Note

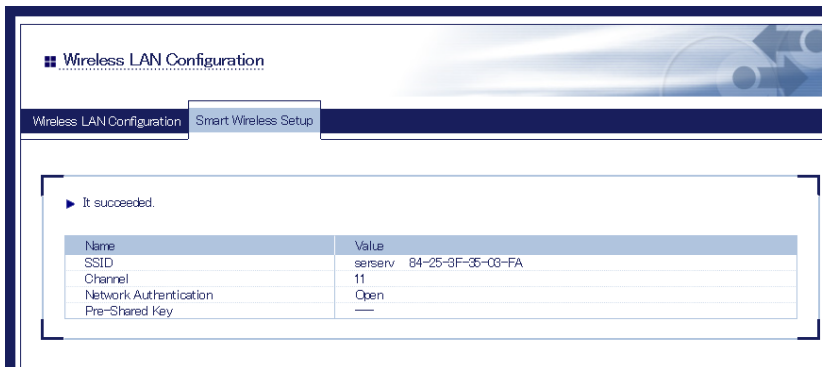
- Please use only one wireless device. Even if two or more devices are waiting for wireless connections, SD-330AC can connect only one device which replied first.

7. The Smart Wireless Setup will begin.



8. When the configuration is completed, the same setting as SD-330AC is configured to the wireless client device.

Check that the client device communicates with SD-330AC.



<<Make a Link Using the PIN Code>>



- Move the wireless client device closer to SD-330AC so that both devices can communicate.

1. Check that the client device supports WPS and is powered on.

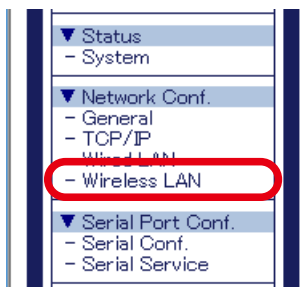
2. Access the Web page of SD-330AC.



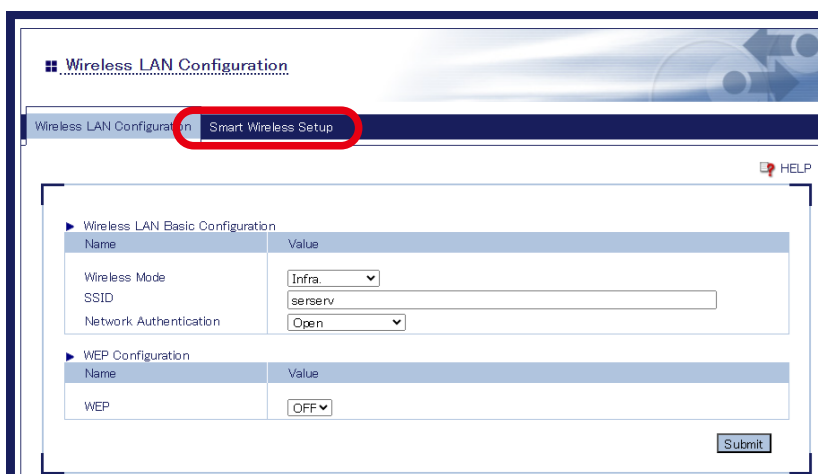
Note

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

3. In the left pane of the Web page, click **Wireless LAN**.



4. Click the **Smart Wireless Setup** tab.



5. Enter the PIN code of the wireless client device at **PIN Code** and click **Execute**.

Wireless LAN Configuration

Smart Wireless Setup

Smart Wireless Setup

| Name | Value |
|----------------------------------|--|
| Smart Wireless Setup Information | configured <input type="button" value="Release"/> |
| PIN Code | 34744260 <input type="button" value="Generate PIN"/> |

Smart Wireless Setup Execute

| Name | Value |
|-------------|---|
| Push Button | <input type="button" value="Execute"/> |
| PIN Code | <input type="text"/> <input type="button" value="Execute"/> |

Wireless LAN Information

| Name | Value |
|------------------------|----------------------------|
| SSID | servserv 84-25-9F-35-03-FA |
| Channel | 11 |
| Network Authentication | Open |
| Pre-Shared Key | — |

6. The Smart Wireless Setup will begin.

Wireless LAN Configuration

Smart Wireless Setup

Smart Wireless Setup Running

Enrollee PIN Code: 42464709

7. When the configuration has completed, the same settings as SD-330AC will be configured for the wireless client device. Check that the client device communicates with SD-330AC.

Wireless LAN Configuration

Smart Wireless Setup

It succeeded.

| Name | Value |
|------------------------|----------------------------|
| Enrollee PIN Code | 42464709 |
| SSID | servserv 84-25-9F-35-03-FA |
| Channel | 11 |
| Network Authentication | Open |
| Pre-Shared Key | — |

6. Other Functions

6-1. Configure Using the SD-330AC Web Page

Since SD-330AC has the HTTP protocol, advanced settings can be configured or changed via a Web browser. Useful functions such as a remote restart or factory default configuration for SD-330AC are available.



- To use a Web browser, the TCP/IP settings need to be enabled, and an IP address needs to be configured.
- We recommend the following Web browsers:

| |
|------------------------------------|
| Microsoft Edge 20 or higher |
| Mozilla Firefox 3.0.0 or higher |
| Google Chrome Version 51 or higher |

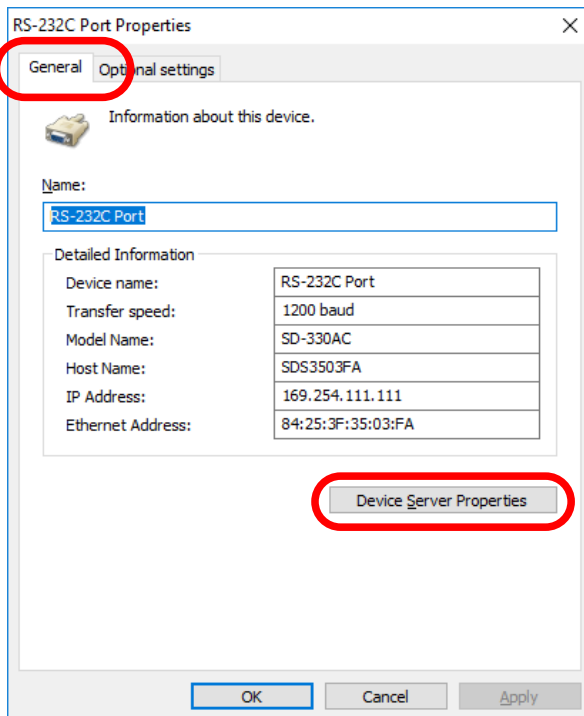
Access the SD-330AC Web Page

<<Use SX Virtual Link for Serial Device Server to display the Web page>>

1. In the SX Virtual Link for Serial Device Server's main window, select the serial device connected to SD-330AC and then click **Properties** button  .



2. The properties dialog is displayed. In the **General** tab, click **Device Server Properties**.



3. The System Status page will be displayed.



<<Use a Web browser to display the Web page>>

1. Enter the IP address that is configured on SD-330AC in the address bar of the Web browser. Press the ENTER key.

Example) Enter 172.25.72.239 and press the ENTER key.



2. The System Status page will be displayed.



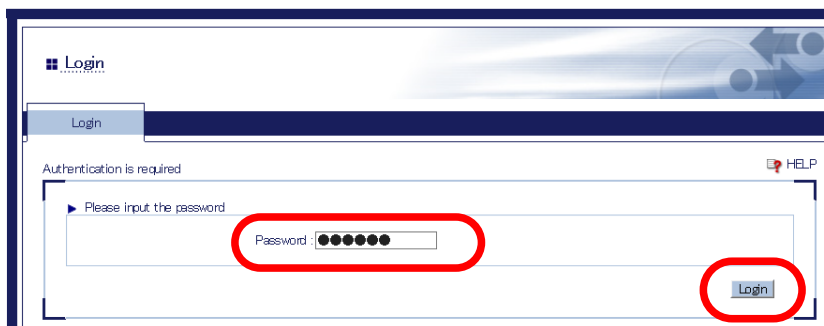
Log in to the SD-330AC Web Page

Follow the instructions below to log in to the Web page.

1. In the left pane of the Web page, click **Login**.



2. In the login page, enter the password and click **Login**.



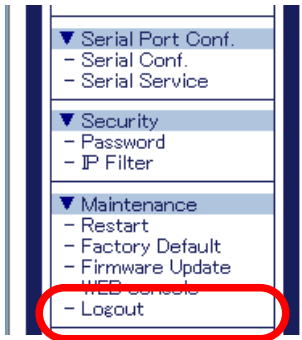
- If the entered password is incorrect, you will not be able to log in for a certain period of time.
- Be sure to log out the Web page when you have finished using it.

TIP

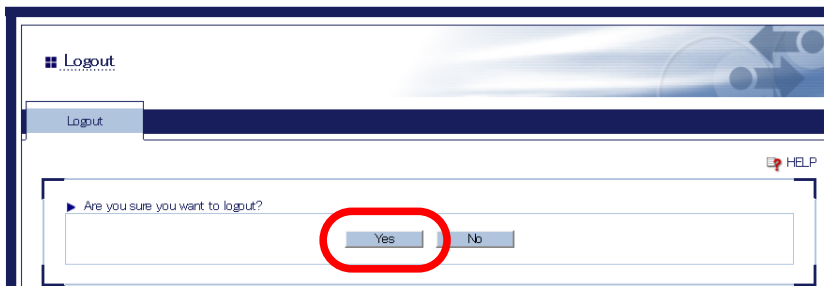
Log out the SD-330AC Web Page

Follow the instructions below to log out the Web page.

1. In the left pane of the Web page, click **Logout**.



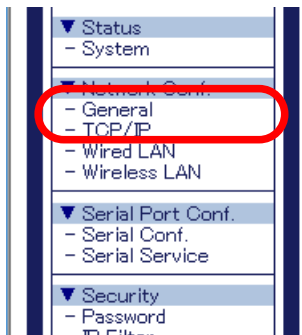
2. Click **Yes** to the confirmation message.



Configure Advanced Network Settings

<<General Configuration>>

1. In the left pane of the Web page, click **General**.



2. Enter or select the setting and click **Submit**.

A screenshot of the 'General Configuration' page. The page title is 'General Configuration'. Below the title, there is a 'General Configuration' section with a table of settings. The 'Submit' button is highlighted with a red oval.

| Name | Value |
|-------------------------|----------------|
| System Name | SDS3503FA |
| System Description | Silex SD-330AC |
| System Contact | |
| System Location | |
| SNMP Get Community Name | |
| SNMP Set Community Name | |

| Name | Value |
|-------------------------------|-------|
| SX Virtual Link compatibility | ON |

3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

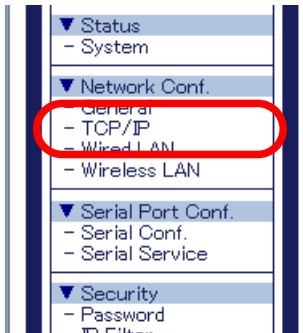


Note

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

<<TCP/IP Configuration>>

1. In the left pane of the Web page, click **TCP/IP**.



2. Enter or select the setting and click **Submit**.

The screenshot shows the 'TCP/IP Configuration' web page. The page has a title bar with 'TCP/IP Configuration' and a 'HELP' button. The main content area is divided into two sections: 'TCP/IP Configuration' and 'IP Protocol Configuration'.

| Name | Current Value | Value |
|------------------------|-----------------|-----------------|
| DHCP | | AUTO |
| IP Address | 169.254.111.111 | 169.254.111.111 |
| Subnet Mask | 255.255.0.0 | 255.255.0.0 |
| Default Gateway | 0.0.0.0 | 0.0.0.0 |
| DNS Server (Primary) | 0.0.0.0 | 0.0.0.0 |
| DNS Server (Secondary) | 0.0.0.0 | 0.0.0.0 |

| Name | Value |
|--|---|
| Protocols which are checked are enabled. | <input type="checkbox"/> Telnet(23) <input checked="" type="checkbox"/> HTTP(80) NOTE: Disabling HTTP will prevent access to this server via the browser interface. <input checked="" type="checkbox"/> HTTPS(443) NOTE: Disabling HTTP will prevent access to this server via the browser interface. <input type="checkbox"/> TFTP(69) <input checked="" type="checkbox"/> SNMP(161) <input checked="" type="checkbox"/> NTP (123) <input checked="" type="checkbox"/> TCP Port (8100,3001) <input checked="" type="checkbox"/> AMC Manager |

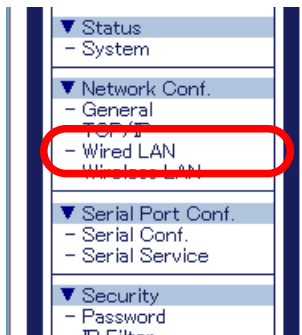
3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

**Note**

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

<<Wired LAN Configuration>>

1. In the left pane of the Web page, click **Wired LAN**.



2. Enter or select the setting and click **Submit**.



3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

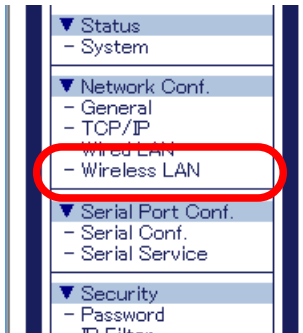


Note

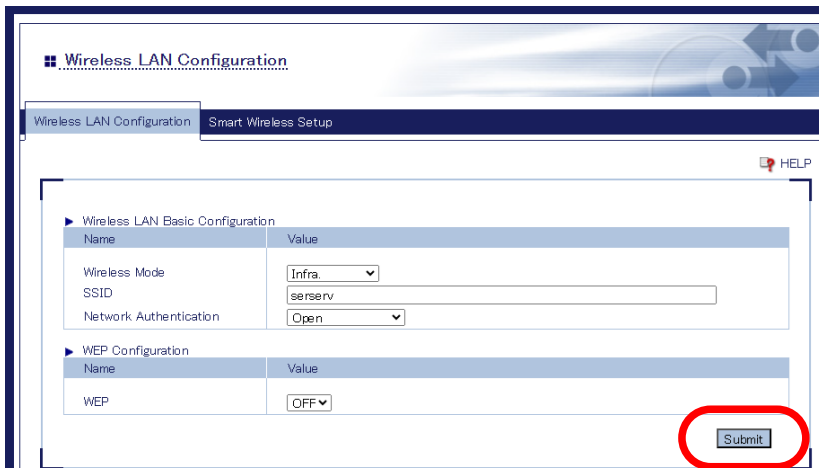
- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

<<Wireless LAN (Wireless LAN Configuration)>>

1. In the left pane of the Web page, click **Wireless LAN**.



2. Enter or select the setting and click **Submit**.



3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

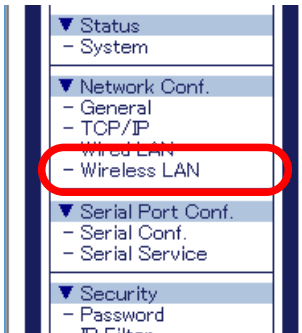


Note

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

<<Wireless LAN (Smart Wireless Setup)>>

1. In the left pane of the Web page, click **Wireless LAN**.



2. Enter or select the setting and click **Submit**.



3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

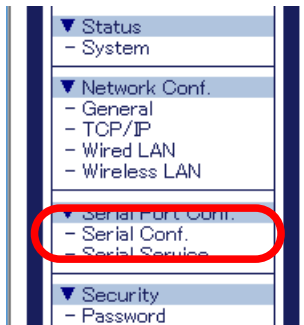
**Note**

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page.**

Configure Serial Port Settings

<<Serial Configuration>>

1. In the left pane of the Web page, click **Serial Conf.**



2. Enter or select the setting and click **Submit**.

The screenshot shows the 'Serial Configuration' web page. It has a tab for 'Serial Configuration S1' and a 'HELP' icon. The page is divided into two main sections:

| General Configuration | |
|-----------------------|--------|
| Name | Value |
| Port Name | S1 |
| Port Type | Serial |
| Baud Rate | 115200 |
| Bit per character | 8 |
| Stop bits | 1 |
| Parity | None |
| Flow control | None |
| Console Mode String | |

| ECable Mode Configuration | |
|------------------------------|----------|
| Name | Value |
| Ecable Mode | Disabled |
| Ecable I/O Mode | TCP |
| Destination IP Address | 0.0.0.0 |
| Destination Port | 0 |
| Local Port | 0 |
| Connection attempt time | 30 |
| Connection attempt time unit | sec |
| Ecable Encryption | Disabled |

A red circle highlights the 'Submit' button at the bottom right of the configuration area.

3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.



Note

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page.**

<<Serial Service Configuration>>

1. In the left pane of the Web page, click **Serial Service**.



2. Enter or select the setting and click **Submit**.

The image shows the 'Serial Service Configuration' page. It has two tabs: 'Serial Service Configuration A' and 'Serial Service Configuration B'. The 'Serial Service Configuration A' tab is active. Below the tabs is a table for 'Port Service Configuration A' with the following settings:

| Name | Value |
|------------------------|----------------|
| Port | S1 |
| Service Name | SDS0011FA_S1_A |
| Raw TCP Port | 9100 |
| Bi-Directional Support | ON |
| Queued (TCP) | OFF |
| Encryption | OFF |

A red circle highlights the 'Submit' button at the bottom right of the configuration area.

3. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

**Note**

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

Configuration Item List

The SD-330AC has the following configuration items:

<<Network Configuration (General)>>

| General Configuration | |
|------------------------------|--|
| Name | System Name |
| Details | Enter a unique name for the server. This name can be up to 32 ASCII printable characters. |
| Default | SDSxxxxxxx (xxxxxx is a last 6 digits of MAC Address) |
| Name | System Description |
| Details | Enter a description for the server that may provide helpful information about the server. This description can be up to 64 ASCII printable characters. |
| Default | Silex xxxxxxxx (xxxxxx is product name) |
| Name | System Contact |
| Details | Enter the name of the person to contact for information about the server. This name can be up to 63 ASCII printable characters. |
| Default | NONE |
| Name | System Location |
| Details | Enter the location of the server. This location can be up to 63 ASCII printable characters. |
| Default | NONE |
| Name | SNMP Get Community Name |
| Details | Enter the name of the community to be used for fetching SNMP information from the server. |
| Default | public |
| Name | SNMP Set Community Name |
| Details | Enter the name of the community to be used for setting SNMP items in the server. |
| Default | public |



- Notes on SNMP Get Community Name and SNMP Set Community Name
- When these items are displayed in the Web page, the current values will not be displayed in the entry fields.
- When the configuration is updated without entering any settings, the configuration will not change.

| Serial Server | |
|----------------------|--|
| Name | SX Virtual Link compatibility |
| Details | Enable or disable the SX Virtual Link compatibility. |
| Default | ON |

<<Network Configuration (TCP/IP)>>

| TCP/IP Configuration | |
|----------------------|--|
| Name | DHCP |
| Details | <p>Set IP address configuration method by selecting from AUTO, DHCP and STATIC.</p> <p>AUTO : Tries to acquire IP address from DHCP server. A static IP address is used when it fails.</p> <p>DHCP : Tries to acquire IP address from DHCP server. Unlike AUTO mode, DHCP request is continuously sent until it is replied.</p> <p>STATIC : Uses a static IP address.</p> |
| Default | AUTO |
| | |
| Name | IP Address |
| Details | <p>Set the IP address.</p> <p>The value must be 4 numbers separated by dots and expressed in the format [xxx.xxx.xxx.xxx].</p> |
| Default | 169.254.111.111 |
| | |
| Name | Subnet Mask |
| Details | <p>Set the subnet mask.</p> <p>The value must be 4 numbers separated by dots and expressed in the format [xxx.xxx.xxx.xxx].</p> <p>When set to "0.0.0.0", a subnet mask appropriate for the IP address is automatically used.</p> |
| Default | 255.255.0.0 |
| | |
| Name | Default Gateway |
| Details | <p>Set the gateway address.</p> <p>The value must be 4 numbers separated by dots and expressed in the format [xxx.xxx.xxx.xxx]. Also, the gateway needs to be running in the same subnetwork as SD-330AC. If "0.0.0.0" is set, this setting is disabled.</p> |
| Default | 0.0.0.0 |
| | |
| Name | DNS Server (Primary) |
| Details | <p>Set a primary DNS server address.</p> <p>When DHCP is enabled, the DNS address obtained from these servers will be given higher priority.</p> |
| Default | 0.0.0.0 |
| | |
| Name | DNS Server (Secondary) |
| Details | <p>Set a secondary DNS server address.</p> <p>When DHCP is enabled, the DNS address obtained from these servers will be given higher priority.</p> |
| Default | 0.0.0.0 |

| IP Protocol Configuration | |
|----------------------------------|--|
| Name | The checked protocols will be enabled. |
| Details | Each selection controls a TCP/IP based protocol. Set "ON" for a protocol to allow a remote host to access the server using that protocol. Set "OFF" to disallow use of the protocol. |
| Default | Telnet(23)/TFTP(69) are OFF, and the other protocols are ON. |



- SNMP / TELNET / TFTP cannot be used until a password is set to SD-330AC.
Note that although SNMP is enabled by default, it cannot be used if a password is not set.

| DHCP Server Configuration | |
|----------------------------------|---|
| Name | DHCP Server |
| Details | Enables/Disables the DHCP Server function (ON/OFF). |
| Default | OFF |
| | |
| Name | Start IP Address |
| Details | Set the start IP Address for lease. |
| Default | 0.0.0.0 |
| | |
| Name | End IP Address |
| Details | Set the end IP Address for lease. |
| Default | 0.0.0.0 |
| | |
| Name | Subnet Mask |
| Details | Set the subnet mask for IP address range. If 0.0.0.0 (default value) is set, the subnet mask appropriate for the Start IP Address will automatically be used. |
| Default | 0.0.0.0 |
| | |
| Name | Default Gateway |
| Details | Set the gateway address. This is disabled if 0.0.0.0 (default value) is set. |
| Default | 0.0.0.0 |
| | |
| Name | Lease Time |
| Details | Set the lease time (Days/Hours/Minutes). When the setting is "0Days 0Hours 0Minutes", assigned lease time is 10days. |
| Default | 10Days 0Hours 0Minutes |

| Application Encryption CA Certificate | |
|--|---|
| Name | Current Setting |
| Details | Shows the CA certificate information. CA certificate is used for an option of the encrypted communication function. When the CA certificate is installed, it is used for verification of the certificate that is sent from the connected device. To delete the certificate, check the checkbox at Delete and click Submit at bottom right of the page. |
| Default | Not Installed |
| | |
| Name | Certificate File |
| Details | Upload a certificate file. When the certificate has already been installed, it is overwritten. The file format must be PEM encoded X.509 format. |
| Default | NONE |

| Application Encryption Local Certificate | |
|---|--|
| Name | Current Setting |
| Details | Shows the local certificate information. The local certificate is used for the encrypted communication function (HTTPS, SSH, Ecable mode, etc.). To delete the certificate, check the checkbox at Delete and click Submit at the bottom right of the page. By clicking the Download button, the local certificate can be downloaded as a PEM-encoded X.509 file. If no certificate is installed, a self-signed certificate is installed when this product is powered on. |
| Default | When a certificate is not set when SD-330AC is turned on, the self-signed certificate below is automatically applied. X509 certificate version : v1 Public key algorithm : RSA Public key size[bits] : 2048 Signature algorithm : SHA256withRSA Common name(CN) : SDSxxxxxxx(System Name) Organization name(O) : silex technology, Inc. City name(L) : Seika State name(ST) : Kyoto Country name(C) : JP Date and time of issue : May 1 01:00:00 2017 GMT Expiration date : May 1 01:00:00 2117 GMT |
| | |
| Name | Certificate File |
| Details | Upload a certificate file. When the certificate has already been installed, it is overwritten. The file format must be PEM encoded X.509 format. |
| Default | NONE |

| Application Encryption Local Private Key | |
|---|---|
| Name | Current Setting |
| Details | Shows the secret key information. The secret key is the information paired with the local certificate. When the local certificate is uploaded, the corresponding secret key also needs to be uploaded. To delete the secret key, check the checkbox at Delete and click [Submit] at bottom right of the page. |
| Default | When a local private key is not set when SD-330AC is turned on, the private key corresponding to the local certificate is automatically set. |
| | |
| Name | Private Key File |
| Details | Upload a secret key file. When the certificate has already been installed, it is overwritten. The file format must be PEM encoded RSA or PKCS#8 format. |
| Default | NONE |
| | |
| Name | Password |
| Details | Enter the password for secret key file. This password must be the one you have set for the secret key file when the secret key file is created. |
| Default | NONE |

**TIP**

- Up to 16,000 Byte files can be uploaded for **Certificate File** and **Private Key File** in the CA certificate and local certificate settings.
- If the key length of the private key file exceeds 2048 bit, it cannot be used.
- If a problem occurs in the configuration of **Certificate File** or **Private Key File** that may affect the functionality of SD-330AC, restarting SD-330AC may resolve the issue. If SD-330AC is restarted, **Certificate File** and **Private Key File** will be deleted, and the self-signed certificate of SD-330AC and its paired private key will be used instead.

<<Network Configuration (Wired LAN)>>

| Wired LAN Basic Configuration | |
|--------------------------------------|---|
| Name | LAN Interface |
| Details | Select the physical network type. In most cases, AUTO is used. If the LINK lamp on your HUB does not light up when SD-330AC is turned on, configure this setting to match that of the HUB. |
| Default | AUTO |

<<Network Configuration (Wireless LAN)>>

| Wireless LAN Basic Configuration | |
|---|--|
| Name | Wireless Mode |
| Details | <p>Select whether SD-330AC will communicate with the wireless network in Infrastructure mode (Infra.) or in AccessPoint mode (AccessPoint).</p> <p>When using an Access Point: Select "Infra.". SD-330AC will communicate with a network device via the Access Point which has the same SSID as SD-330AC.</p> <p>When using as an Access Point : Select "AccessPoint". SD-330AC operates as an Access Point.</p> <p>* When using SD-330AC in AccessPoint mode, the network authentication mode is limited to "Open" or "WPA-Personal/WPA2-Personal".</p> |
| Default | Infra |
| Name | SSID |
| Details | <p>Set an SSID. Up to 32 alphanumeric characters can be used. The SSID is an ID that logically distinguishes one wireless LAN network from another. When different SSIDs are used among wireless devices, they cannot communicate with each other even if they are running in the same area and channel.</p> |
| Default | serserv |
| Name | Stealth Mode |
| Details | <p>Enable/Disable the Stealth Mode (ON / OFF). When the Stealth Mode of SD-330AC is enabled, SD-330AC will not be found by the wireless client devices even when it is searched over the wireless LAN. To connect to SD-330AC, the SSID, authentication method and encryption mode of SD-330AC need to be entered from the wireless client devices.</p> <p>* If the Stealth Mode is enabled, the Smart Wireless Setup feature can no longer be used.</p> |
| Default | OFF |
| Name | Channel |
| Details | <p>Set a channel. A channel needs to be selected only when running in AccessPoint mode. Wireless devices must share the same channel to communicate with each other on a wireless LAN. When a network device running with the same SSID but in a different channel is found, SD-330AC automatically switches the channel to that of the device.</p> |
| Default | 11 |

| | |
|---------|---|
| Name | Network Authentication |
| Details | <p>Select the network authentication mode that will be used to connect to the Access Point. To ensure a secure network, it is recommended to use WPA/WPA2. For IEEE 802.11n, only AES can be used.</p> <p>Open (Open System) Allows all access without authentication. For encryption mode, WEP can be used.</p> <p>WPA-Personal/WPA2-Personal Uses PSK for network authentication. For encryption mode, AUTO is used for WPA-Personal and AES is used for WPA2-Personal. The encryption key will be generated by communicating with the Access Point using a Pre-Shared key. WEP key setting is not used for this mode.</p> <p>802.1X Uses EAP for network authentication. For encryption mode, WEP can be used.</p> <p>WPA-Enterprise/WPA2-Enterprise Uses EAP for network authentication. For encryption mode, AUTO/TKIP/AES can be selected. WEP key setting is not used for this mode.</p> |
| Default | Open |

| WEP Configuration | |
|--------------------------|---|
| Name | WEP |
| Details | Enable/Disable WEP encryption (ON / OFF). |
| Default | OFF |
| | |
| Name | Key Index |
| Details | Set the number of the WEP to be used as the default key (1-4). |
| Default | 1 |
| | |
| Name | WEP Key1-4 |
| Details | <p>Set the WEP key for WEP encryption. Up to 4 WEP keys can be set. This setting must be the same as that of your Access Point or other devices you wish to connect to. A WEP key must be 26-digit hexadecimal characters, which consists of numbers (0-9) and English letters (A-F).</p> |
| Default | 00000000000000000000000000000000 |

| WPA/WPA2 Configuration | |
|-------------------------------|--|
| Name | Encryption Mode |
| Details | <p>Select the encryption mode that you wish to use for WPA/WPA2 authentication. This setting must be the same as that of your Access Point or other devices you wish to connect to.</p> <p>Select one of the following: AUTO: Used for WPA. An appropriate encryption mode is automatically selected for the Access Point. AES : Standard encryption mode used for WPA2.</p> |
| Default | AUTO for WPA AES for WPA2 |
| | |
| Name | Pre-Shared Key |
| Details | Set a Pre-Shared Key for WPA (8-63 character string or 64 hexadecimal characters). |
| Default | Device Server |

| IEEE802.1X Authentication Configuration (only when Infra. mode is on) | |
|--|--|
| Name | 802.1X Authentication Type |
| Details | Select EAP method when 802.1X or WPA/WPA2-Enterprise is selected. Select one from LEAP, EAP-TLS, EAP-TTLS, PEAP or EAP-FAST. |
| Default | EAP-TTLS |
| | |
| Name | User Name in 802.1X |
| Details | Configure the user name used for EAP authentication |
| Default | anonymous |
| | |
| Name | Password in 802.1X |
| Details | Configure the password for EAP authentication when LEAP, EAP-TTLS,PEAP or EAP-FAST is selected. |
| Default | anonymous |

| CA Certificate (only when Infra. mode is on) | |
|---|---|
| Name | Current Setting |
| Details | <p>Shows the current CA certificate. CA certificate is necessary for EAP-TLS and optional for EAP-TTLS, PEAP. To delete the certificate, check the check box at Delete and then click Submit at right bottom of the page.</p> |
| Default | Not Installed |

| | |
|---------|---|
| Name | Certificate File |
| Details | Uploads the certificate. When the certificate is already installed, it will be replaced. Only X.509 (encoded in PEM format) is supported. |
| Default | NONE |

Client Certificate (only when Infra. mode is on)

| | |
|---------|---|
| Name | Current Setting |
| Details | Shows the current client certificate. Client certificate is necessary for EAP-TLS. To delete the certificate, check the check box at Delete and then click Submit at right bottom of the page. Click the Generate Certificate button to create a self-signed client certificate. Click the Download button to download a client certificate as X.509 file (encoded in PEM format). |
| Default | Not Installed |
| Name | Certificate File |
| Details | Uploads the certificate. When the certificate is already installed, it will be replaced. Only X.509 (encoded in PEM format) is supported. |
| Default | NONE |

Client Certificate Secret Key File (only when Infra. mode is on)

| | |
|---------|--|
| Name | Current Setting |
| Details | Shows the current secret key. Secret key is the information paired with client certificate. When client certificate is uploaded, the corresponding secret key also needs to be uploaded. When a self-signed certificate is generated, the corresponding secret key will be generated automatically. To delete the secret key, check the check box at Delete and then click Submit at right bottom of the page. |
| Default | Not Installed |
| Name | Certificate File |
| Details | Uploads the secret key. When the secret key is already installed, it will be replaced. RSA and PKCS8 (encoded in PEM format) are supported. |
| Default | NONE |
| Name | Password |
| Details | Set the password for secret key. This password is set when secret key file is generated. When a self-signed certificate is generated, the corresponding password will automatically be set. |
| Default | NONE |



- Up to 16,000 Byte files can be uploaded for **Certificate File** in the CA certificate, Client certificate and Client certificate secret key file settings.

| Generate Self-Signed Certificate | |
|---|---|
| Name | Generate Self-Signed Certificate |
| Details | Generate a self-signed certificate. The self-signed certificate is a certificate without signature of the third party certificate authority. As validity of information is not verified in an objective way, this certificate is not used for where higher reliability is required, but used for testing or temporal operation for a particular purpose. Modify the certificate setting and click Submit to generate the certificate and secret key. The wireless configuration page will be displayed again then. |
| Default | NONE |

| Smart Wireless Setup | |
|-----------------------------|--|
| Name | PIN Code |
| Details | Displays the PIN Code of SD-330AC. A new PIN Code can be generated randomly by clicking Generate PIN . |
| Default | - |
| Name | PIN Code |
| Details | Enter the PIN code of the wireless device to connect when SD-330AC is used as an Access Point. |
| Default | - |



- The items displayed in the Wireless LAN Configuration page will differ depending on what option is selected at Network Authentication.

Note

<<Serial Port Configuration (Serial Configuration)>>

| General Configuration | |
|------------------------------|---|
| Name | Port Name |
| Details | Port Name |
| Default | S1 |
| Name | Port Type |
| Details | Port Type |
| Default | Serial |
| Name | Baud Rate |
| Details | Select the speed at which the port should send and receive data. (300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600) |
| Default | 115200 |
| Name | Bit per character |
| Details | Select the number of bits per character. (7, 8) |
| Default | 8 |
| Name | Stop bits |
| Details | Select the number of stop bits after each character. (1, 2) |
| Default | 1 |
| Name | Parity |
| Details | Select the parity scheme for each character. (NONE, ODD, EVEN) |
| Default | NONE |
| Name | Flow control |
| Details | Select the flow control method. (NONE, XON/XOFF, RTS/CTS) |
| Default | NONE |
| Name | Console Mode String |
| Details | If this string is defined, input from serial port will be scanned. When a string is received that matches this string, the serial port will switch to console mode. To specify non-printable string, specify the hexadecimal value starting from '\ x'. |
| Default | NONE |

| Ecable Mode Configuration | |
|----------------------------------|--|
| Name | Ecable Mode |
| Details | When Ecable mode is enabled, SD-330AC will try to make a network connection to the remote device defined by following parameters. When the connection is established, data received on serial port will be sent to the remote device and data received on the remote device will be sent to serial port. |
| Default | Disabled |
| | |
| Name | Ecable I/O Mode |
| Details | Select a network protocol for remote host I/O to use when Ecable mode is enabled. |
| Default | TCP |
| | |
| Name | Destination IP Address |
| Details | Enter the IP address of the device to make a connection with when Ecable mode is enabled. It is possible to specify this using a host name when TCP mode is on. |
| Default | 0.0.0.0 |
| | |
| Name | Destination Port |
| Details | Enter the TCP port number of the device to make a connection with when Ecable mode is enabled. |
| Default | 0 |
| | |
| Name | Local Port |
| Details | Enter the port of local server that a remote client sends data to when UDP mode is on and Ecable mode is enabled. |
| Default | 0 |
| | |
| Name | Connection attempt time |
| Details | Specify the Ecable connection attempt interval. |
| Default | 30 |
| | |
| Name | Connection attempt time unit |
| Details | Specify the unit of Ecable connection attempt interval. |
| Default | sec |
| | |
| Name | Ecable Encryption |
| Details | Enable/Disable TLS when TCP mode is on. |
| Default | Disabled |

<<Serial Port Configuration (Serial Service)>>

| Port Service Configuration | |
|-----------------------------------|---|
| Name | Port |
| Details | Specifies the physical port associated with the service. |
| Default | S1 |
| | |
| Name | Service Name |
| Details | Specify the service name. Usually, this field does not need to be changed. |
| Default | SDSxxxxxx_S1_A for port service setting A SDSxxxxxx_S1_B for port service setting B (xxxxxx is a last 6 digits of MAC Address) |
| | |
| Name | Raw TCP Port |
| Details | Specify the TCP port to use when this service is connected. |
| Default | 9100 for port service setting A 3001 for port service setting B |
| | |
| Name | Bi-Directional Support |
| Details | When ON is selected, the service sends data back from the connected device to network. Usually, this setting does not need to be changed. |
| Default | ON |
| | |
| Name | Queued (TCP) |
| Details | When ON is selected and raw TCP port is specified, SD-330AC adds the job to queue after it is sent to that port. When OFF is selected, the received job is discarded when SD-330AC is handling other jobs. |
| Default | OFF |
| | |
| Name | Encryption |
| Details | If this setting is ON, the communication data will be encrypted using TLS. |
| Default | OFF |

<<Security (Password)>>

| | |
|---------|---|
| Name | New Password |
| Details | Set an administrative password as an ASCII string (up to 16 characters). This password is used as authentication for changing the settings from the Web page. |
| Default | NONE |

<<Security (IP Filter)>>

| Add New Range. | |
|-----------------------|---|
| Name | Starting Address Ending Address Add |
| Details | To add the IP address range for a remote host, enter the start address (lower address) and end address (higher address) and click the Add button. All hosts are allowed to access SD-330AC as long as they have the IP address within the registered range. |
| Default | 0.0.0.0 |

| Manage Configured Ranges. | |
|----------------------------------|---|
| Name | Remove |
| Details | To remove the IP address range from the list, select the address range from the list and click the Remove button. When a PC is currently accessing SD-330AC and the IP address of such PC is removed, access to SD-330AC will become unavailable on that PC. Removing all address ranges means allowing access from all hosts. |
| Default | NONE |

6-2. Security Settings

Change the Password

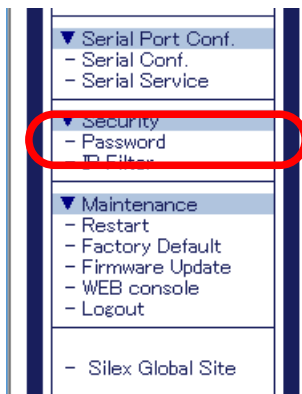
1. Access the Web page of SD-330AC.



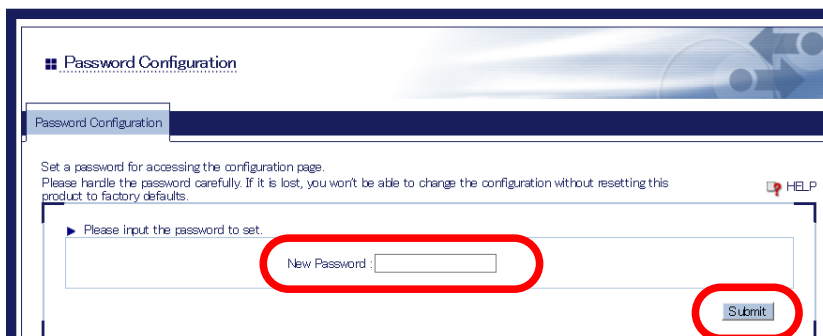
- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

Note

2. In the left pane of the Web page, click **Password**.



3. The Password Configuration page is displayed.
Enter the password to **New Password** and click **Submit**.



- Please handle the password carefully. If the password is lost, you will not be able to change the settings again unless SD-330AC is reset to the factory default setting.

4. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.

**Note**

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

Allow Communication Only from a Particular PC

<<About IP Filter Feature>>

If this feature is used, SD-330AC allows access only from the registered IP address ranges. Up to 4 IP address ranges can be specified.

<<IP Filter Settings>>

IP filter settings can be configured from the Web page.

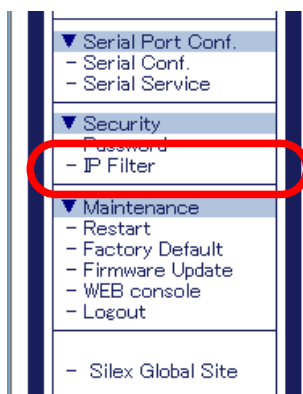
The example below shows how to allow communications only from the IP address range "172.25.72.10" - "172.25.72.20":

1. Access the Web page of SD-330AC.

**Note**

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

2. In the left pane of the Web page, click **IP Filter**.



3. Enter the **Starting Address** and **Ending Address** and click **Add** (up to 4 address ranges can be registered).

In this example, 172.25.72.10 is entered as the start address and 172.25.72.20 is entered as the end address to allow communication from that range.

The screenshot shows the 'IP Filter Configuration' web page. The 'Add New Range' section is highlighted with a red circle. It contains a table with the following data:

| Name | Value |
|------------------|--------------|
| Starting Address | 172.25.72.10 |
| Ending Address | 172.25.72.20 |

Below the table is an 'Add' button. The 'Manage Configured Ranges' section is also visible below.



- If the address range is deleted which includes the IP address of the computer which is currently accessing SD-330AC, the communication for that computer will be lost. It will not recover until the IP filter feature is disabled.



Note

- By deleting all the registered address ranges from **Manage Configured Ranges**, you can disable the IP filter feature as well as allow accesses from all IP addresses.

4. To take effect of the changes, restart SD-330AC by clicking **Restart** from the left pane of the Web page.



Note

- If you are to continue configuration on other pages, you do not have to restart SD-330AC. Restart it when all configuration is done.
- For details on how to restart SD-330AC, refer to **6-3. Maintenance - Reboot SD-330AC - Remote reboot from the Web page**.

6-3. Maintenance

Reboot SD-330AC



- Before you start, please make sure that no PCs are currently linked.

<<Manual reboot at the unit side>>

1. Unplug the AC plug of SD-330AC from the power outlet.
2. Insert the AC plug back into the power outlet again.
3. The reboot will be complete in 30 seconds.

<<Remote reboot from the Web page>>

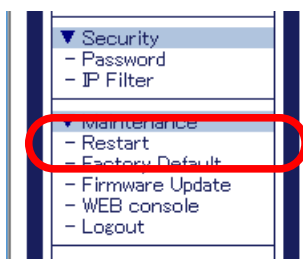
1. Access the Web page of SD-330AC.



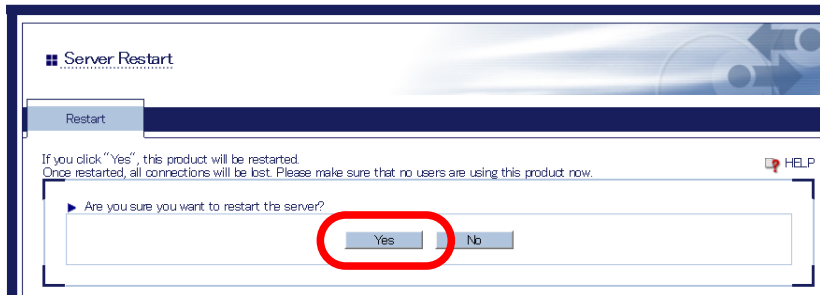
Note

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

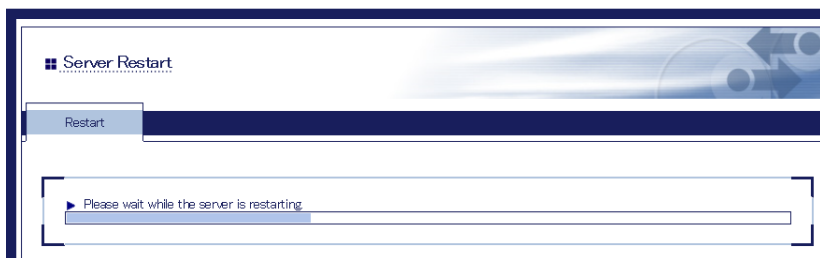
2. In the left pane of the Web page, click **Restart**.



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



4. The reboot will begin.



5. When the system status page is displayed, the reboot is completed.
Finish the Web browser.

Reset to Factory Default

If SD-330AC has been used in a particular network and you wish to change the settings to use it for another network, please initialize SD-330AC first according to the instructions below:



TIP

- The following settings are not initialized even if SD-330AC is reset to the factory defaults.

| Web Page | Item |
|---|--------------------|
| General - General Configuration | System Description |
| TCP/IP - CA Certificate | Certificate File |
| TCP/IP - Application Encryption Local Certificate | Certificate File |
| TCP/IP - Application Encryption Local Private Key | Private Key File |
| | Password |
| Wired LAN - Wired LAN Basic Configuration | LAN Interface |
| Wireless LAN - CA Certificate | Certificate File |
| Wireless LAN - Client Certificate | Certificate File |
| Wireless LAN - Client Certificate Secret Key File | Private Key File |
| | Password |

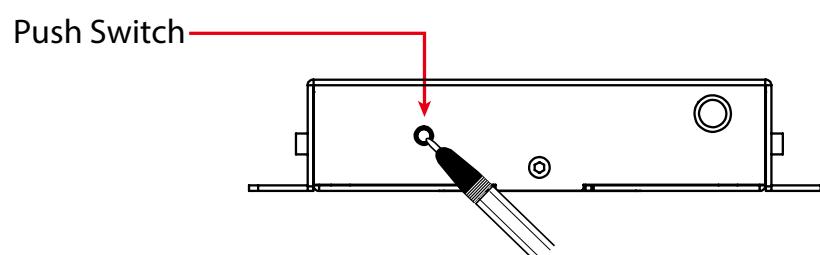
<<Reset using the RESET switch on SD-330AC>>



TIP

- It is recommended to take notes of the current settings. You cannot restore it once the factory default configuration is complete.
- Before you start, please make sure that no PCs are currently linked.
- Do not turn off SD-330AC while resetting to factory default.
- Do not press the push switch on the top when turning on SD-330AC again after it was reset to the factory default settings.
- The following settings will remain even after finishing the factory default configuration.
 - Network Conf. - General - System Description
 - Network Conf. - Wired LAN - LAN Interface

1. Press and hold the push switch with a fine tipped object such as a pen or pencil when the SD-330AC is powered on. Keep pressing it for 5 or more seconds.



2. The factory default configuration will begin when the push switch is released.
3. When the factory default configuration has completed, the SD-330AC will automatically be restarted **after the orange LED turns off**.

<<Reset from the Web page>>

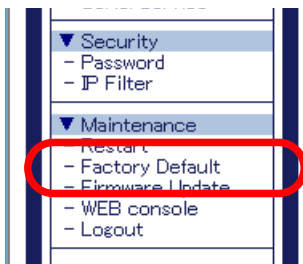
1. Access the Web page of SD-330AC.



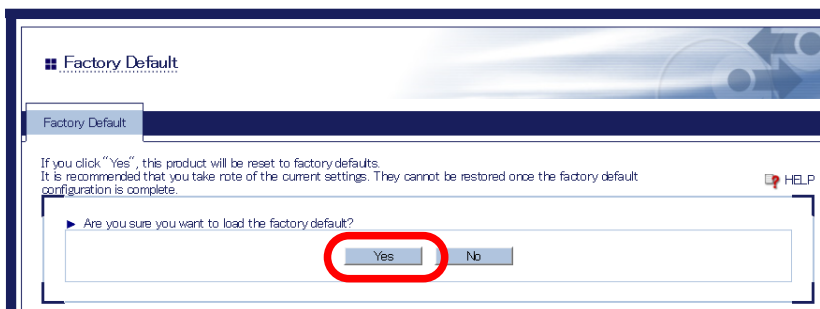
- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

Note

2. In the left pane of the Web page, click **Factory Default**.



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



4. A confirmation dialog is displayed. Click **OK** to start the factory default configuration.

5. When the login password configuration page is displayed, the factory default configuration has completed.
Close the Web browser.

Update Firmware

<<Download the latest firmware file>>

Please download the latest firmware file from our website.
For how to download the firmware file, refer to Download the Utilities.

<<Update the firmware>>



- Before you start, please make sure that no PCs are currently linked.
- Do not turn off SD-330AC while the firmware update is in process.
- It is recommended to take notes of the current settings. You cannot restore it once the firmware update is complete.

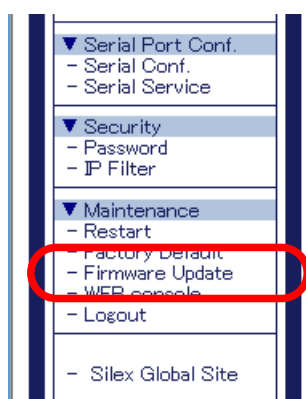
1. Access the Web page of SD-330AC.



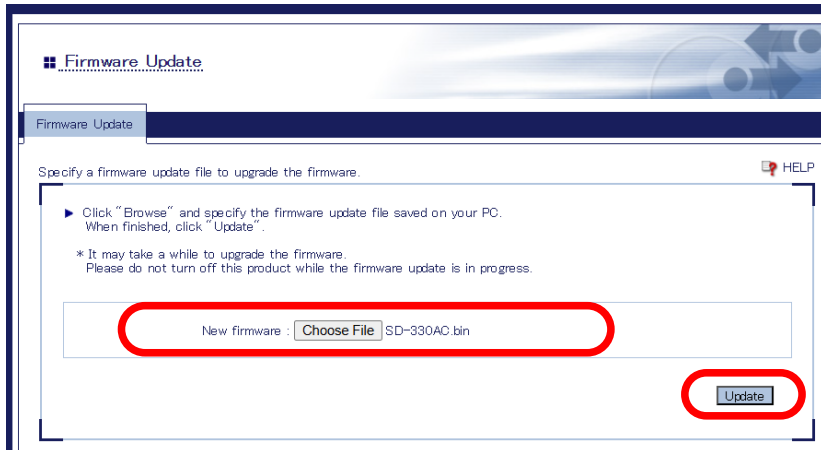
Note

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

2. In the left pane of the Web page, click **Firmware Update**.



- The Firmware Update page is displayed.
Click the button to the right of **New firmware**, and select the latest firmware (SD-330AC. bin) that has been downloaded to the PC.
click **Update**.



- A confirmation dialog is displayed. Click **OK**.

- The firmware update will begin.



- When the system status page is displayed, the firmware update is completed.
See the bottom left of the page and check that the version information is changed.



- Finish the Web browser.

6-4. About the Print Server Feature

About the Print Server Feature

The print server feature uses network printing protocols to allow you to print over the network.

SD-330AC supports the common network printing protocols, "Raw" and "LPR".
When a printer is connected to SD-330AC, standard Windows printing can be used.

Please note that you do not have to use SX Virtual Link for Serial Device Server for printing via the print server feature.



- When using standard Windows printing, up to 1 printer can be used at a time. To connect 2 or more printers, SX Virtual Link for Serial Device Server must be used.
- It is impossible to print to printers connected to other computers via SX Virtual Link for Serial Device Server. Also, when printers are busy with standard Windows printing, they cannot be connected via SX Virtual Link for Serial Device Server.
- To use the print server feature, the SX Virtual Link compatibility needs to be set to **OFF**.

Before Using Standard Windows Printing

Before adding a printer port, access the Web page of SD-330AC and check the destination printer port assigned to the printer connected to SD-330AC.

| Name | Value |
|------------------------|-----------------|
| Port | S1 |
| Service Name | SDS0011 FA_S1_A |
| Raw TCP Port | 9100 |
| Bi-Directional Support | ON |
| Queued (TCP) | OFF |
| Encryption | OFF |

* To use the Raw mode printing

Take a note of the TCP port number assigned to the printer and go on to the following sections for detailed configuration.

- * **Printing Using the Standard TCP/IP Port on Windows 7 / Server 2008R2**
- * **Printing Using the Standard TCP/IP Port on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016**
- * **Printing Using the Standard TCP/IP Port on Windows 11**

* To use the LPR mode printing

Take a note of the service name assigned to the printer and go on to the following sections for detailed configuration.

- * **Printing Using the LPR Port on Windows 7 / Server 2008R2**
- * **Printing Using the LPR Port on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016**
- * **Printing Using the LPR Port on Windows 11**



TIP

- The following procedures will assume that no printer is connected to SD-330AC. If a printer is connected, some screen displays may differ.



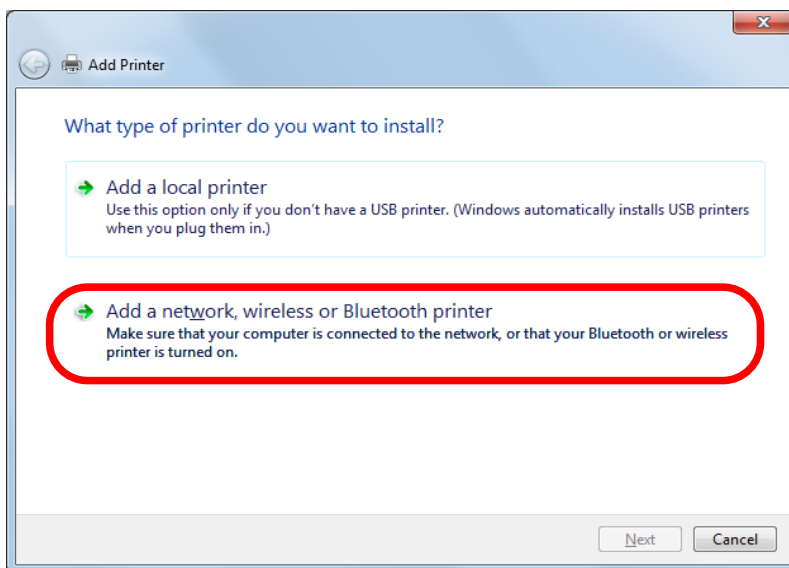
Note

- For details on how to access the Web page, refer to **Access the SD-330AC Web Page**.

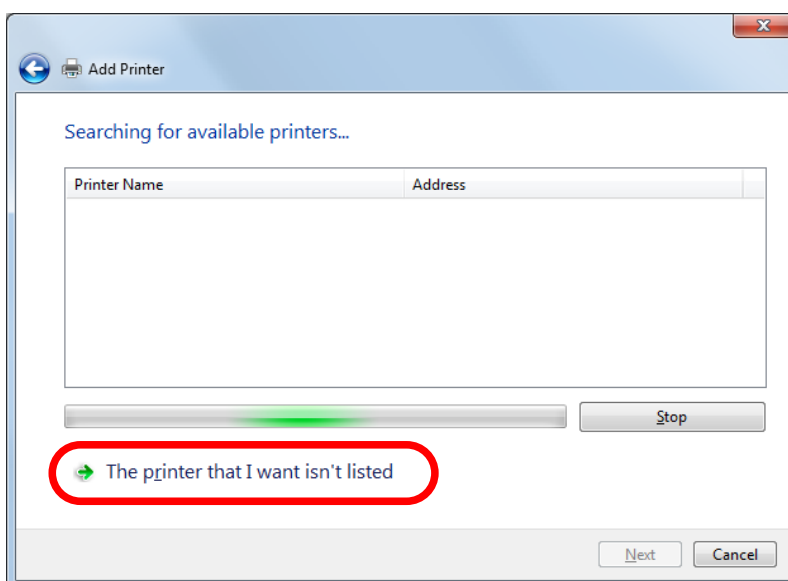
Printing Using the Standard TCP/IP Port on Windows 7 / Server 2008R2

This page explains how to configure the settings to print on Windows 7 / Server 2008R2 using the standard TCP/IP port.

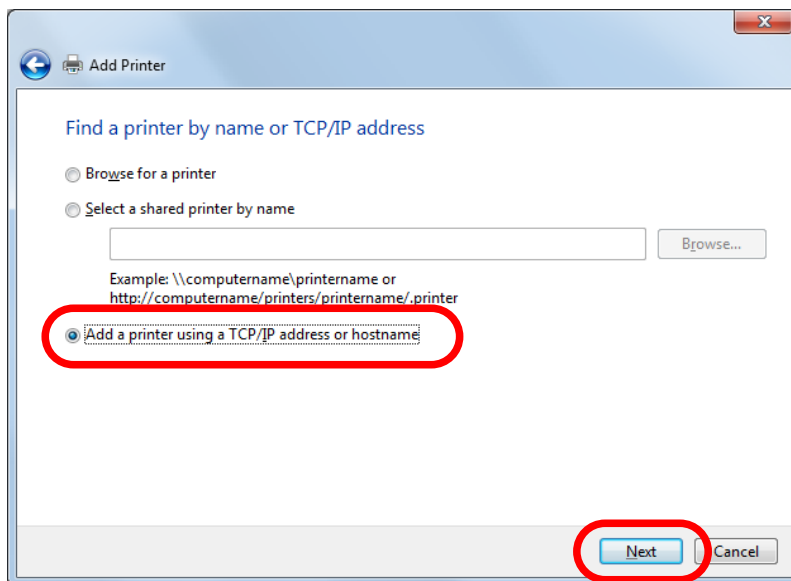
1. Click **Start - Control Panel - View devices and printers - Add a printer.**
2. The wizard for adding a printer appears. **Click Add a network, wireless or Bluetooth printer.**



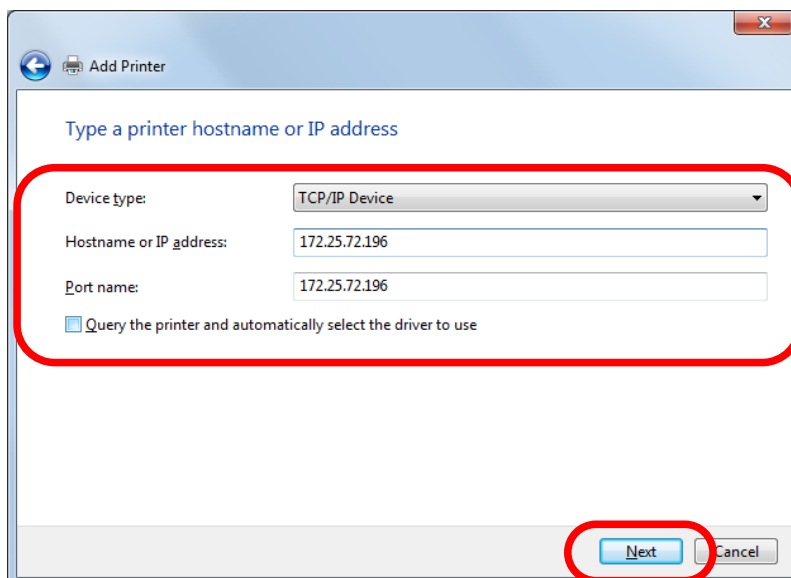
3. Click **The printer that I want isn't listed.**



4. Select the method to add a printer.
Select **Add a printer using a TCP/IP address or hostname** and click **Next**.



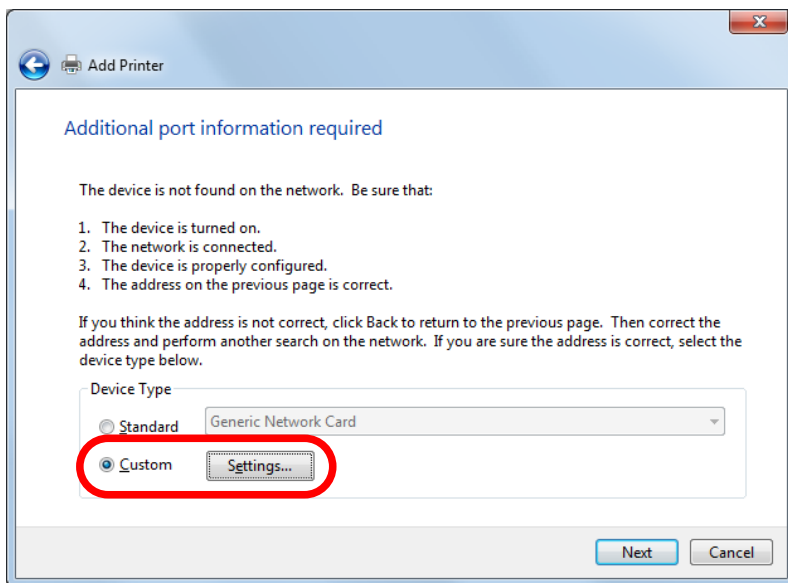
5. Select **TCP/IP Device** for Device type and enter the IP address assigned to SD-330AC for **Hostname or IP address**.
Clear **Query the printer and automatically select the driver to use** check box and click **Next**.



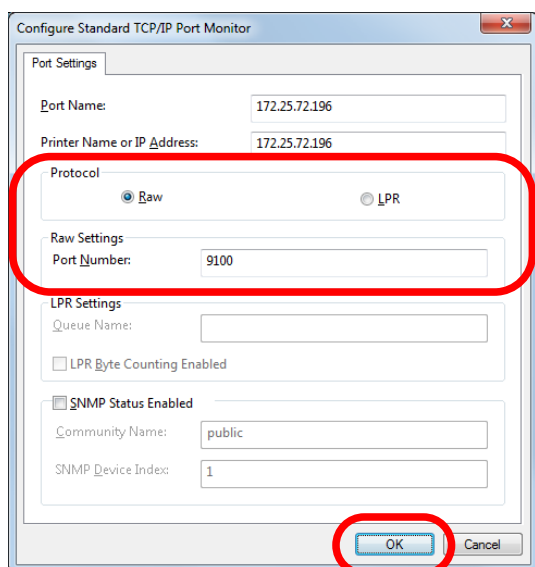
- In most cases, the default port name is used. If you wish to change the port name, enter a unique name that is not used for other ports.

Note

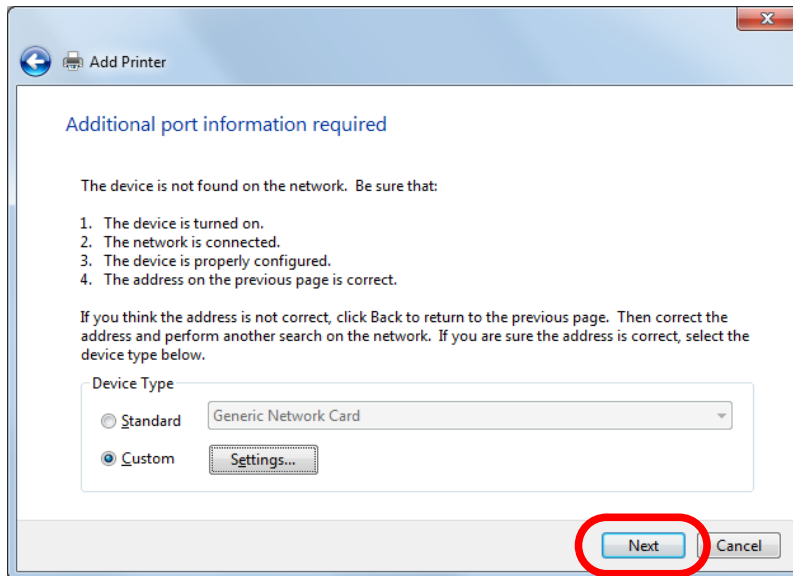
6. Select Custom and click Settings.



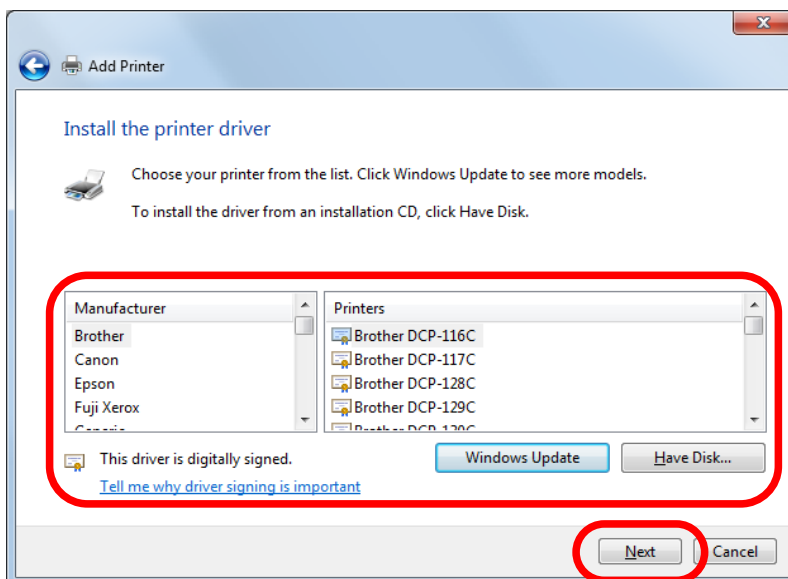
7. Configure the port settings. Select Raw.
Enter the RAW port number displayed on the Web page for **TCP Port Number**.
Click **OK**.



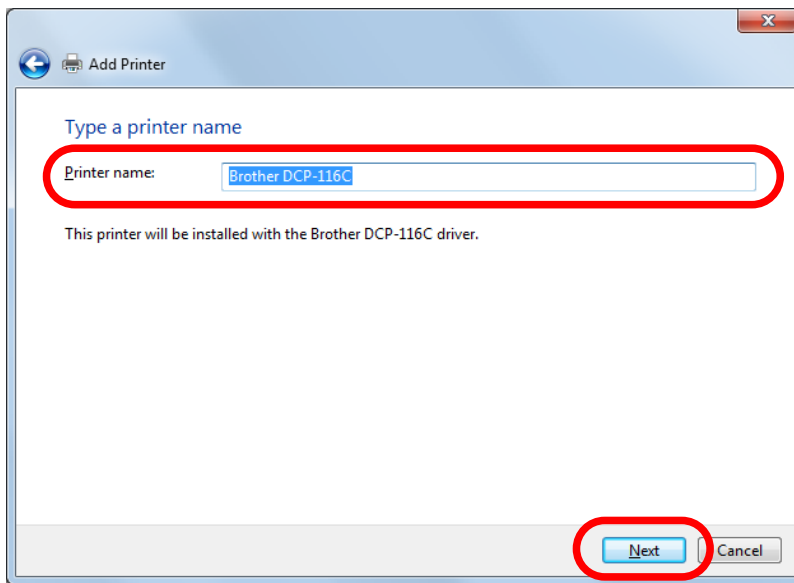
8. Click **Next**.



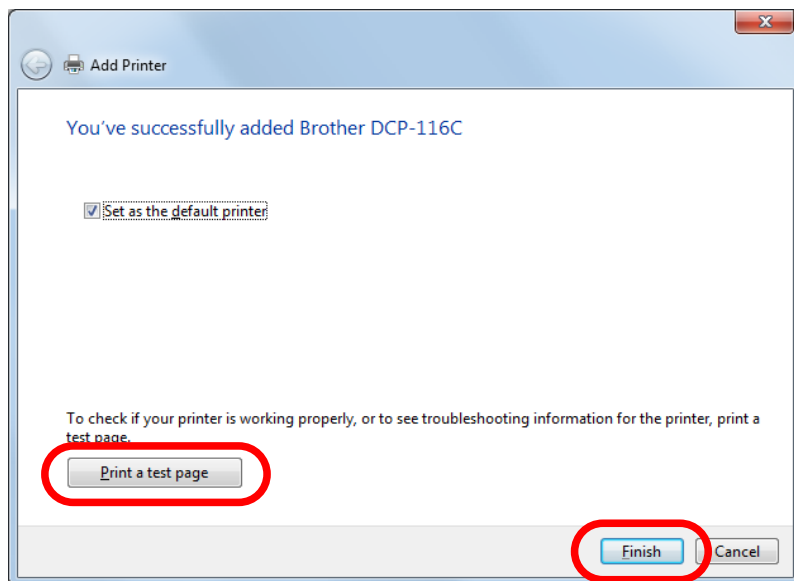
9. Select a printer driver. Select the printer driver you want to use and click **Next**.



10. Enter a printer name and click **Next**.



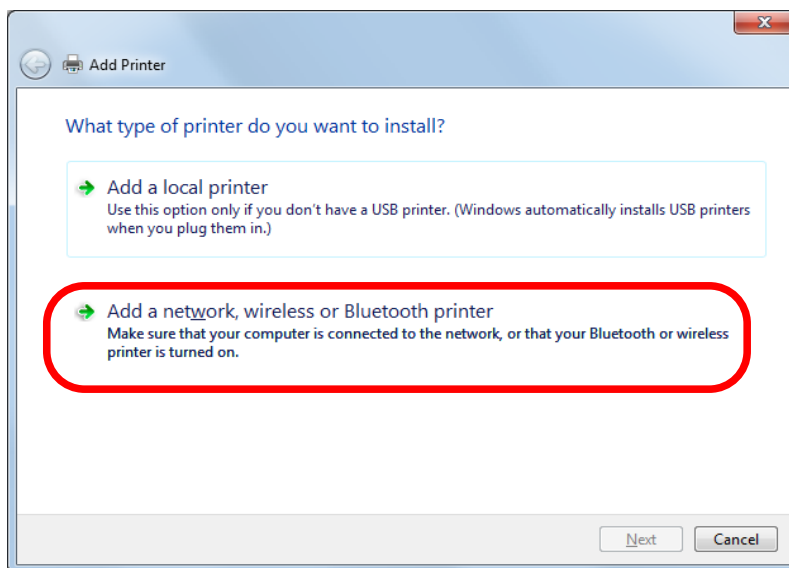
11. Click **Print a test page** and see the result of printing. If the print result is OK, click **Finish**. The print setting has been completed.



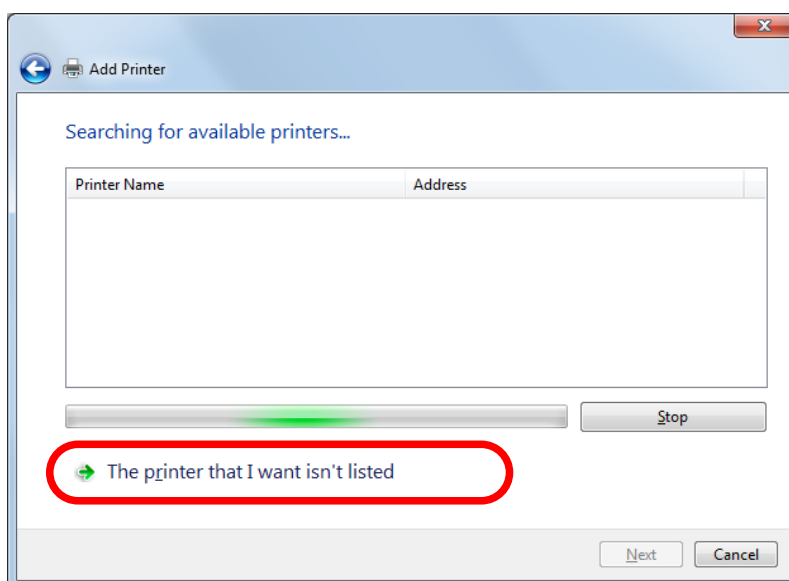
Printing Using the LPR Port on Windows 7 / Server 2008R2

This page explains how to configure the settings to print on Windows 7 / Server 2008R2 using the standard LPR port.

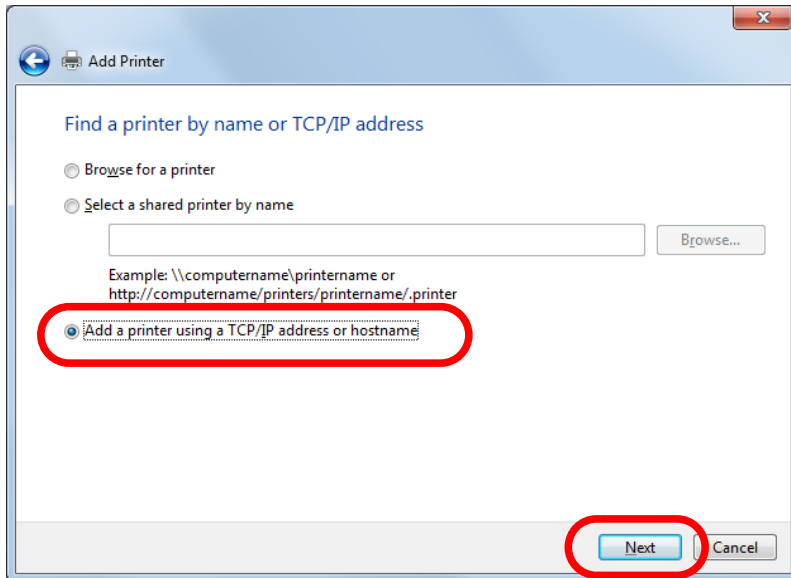
1. Click **Start - Control Panel - View devices and printers - Add a printer**.
2. The wizard for adding a printer appears. Click **Add a network, wireless or Bluetooth printer**.



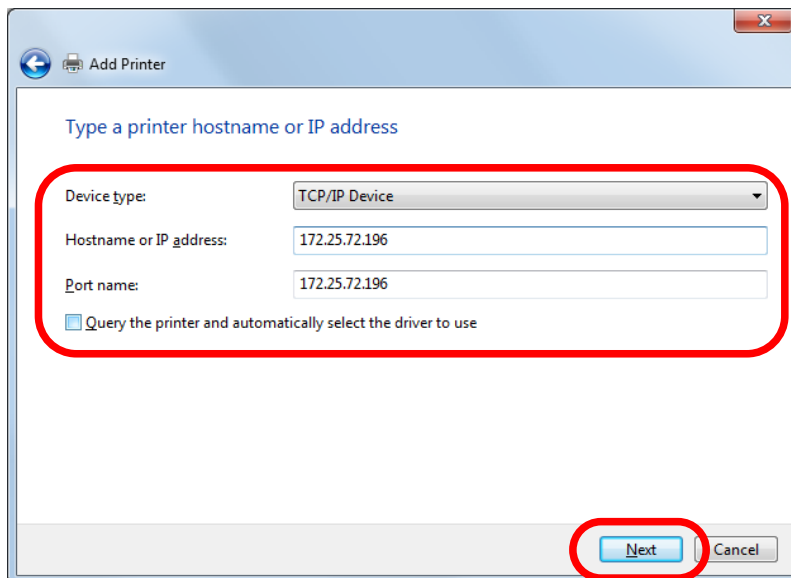
3. Click **The printer that I want isn't listed**.



4. Select the method to add a printer.
Select **Add a printer using a TCP/IP address or hostname** and click **Next**.



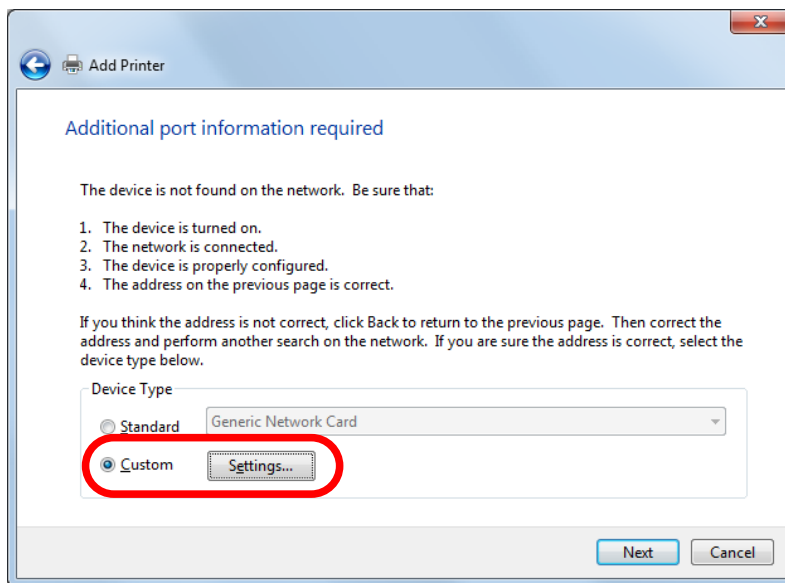
5. Select **TCP/IP Device** for Device type and enter the IP address assigned to SD-330AC for **Hostname or IP address**.
Clear **Query the printer and automatically select the driver to use** check box and click **Next**.



- In most cases, the default port name is used. If you wish to change the port name, enter a unique name that is not used for other ports.

Note

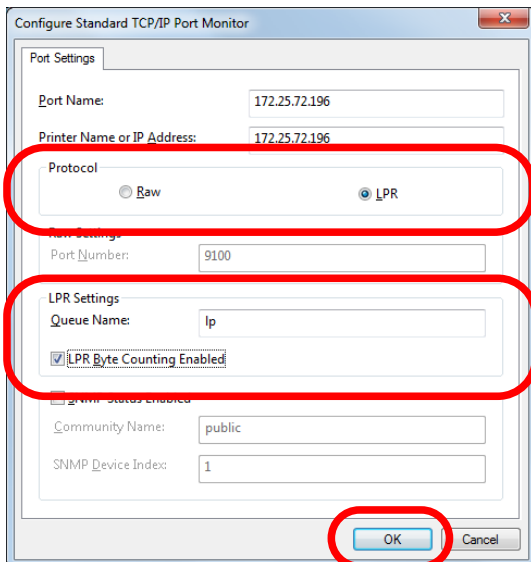
6. Select **Custom** and click **Settings**.



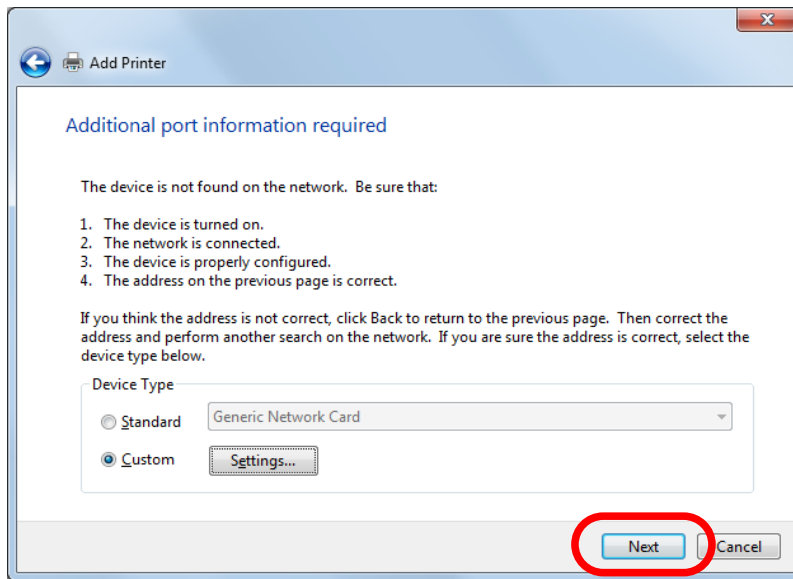
7. Configure the port settings. Select **LPR**.

Type the queue name displayed on the Web page for **Service name** and select the **LPR Byte Counting Enabled** check box.

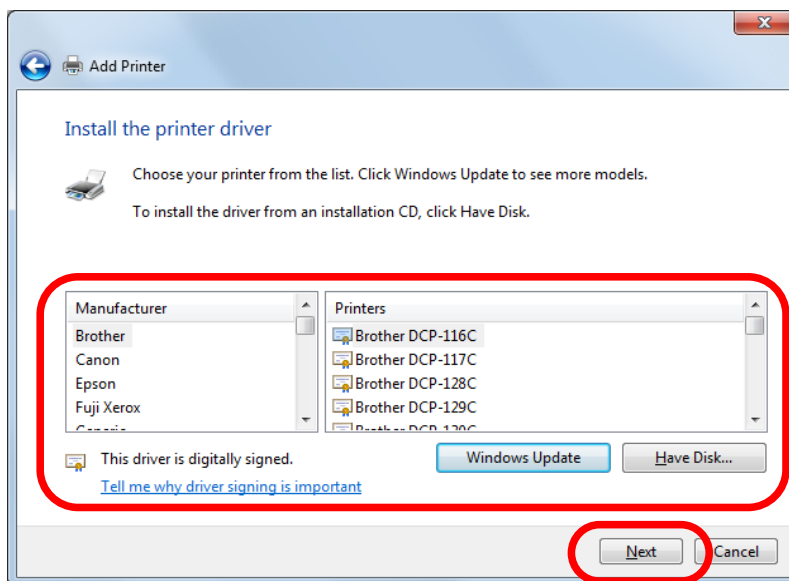
Click **OK**.



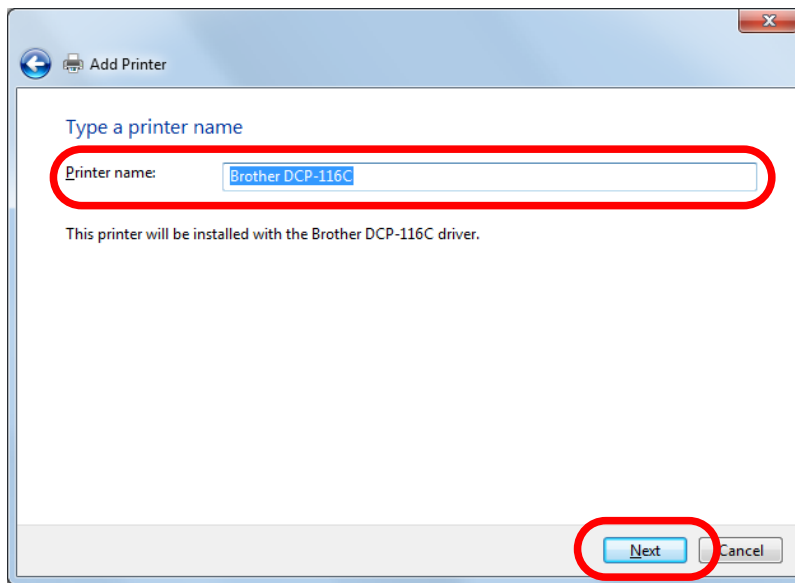
8. Click **Next**.



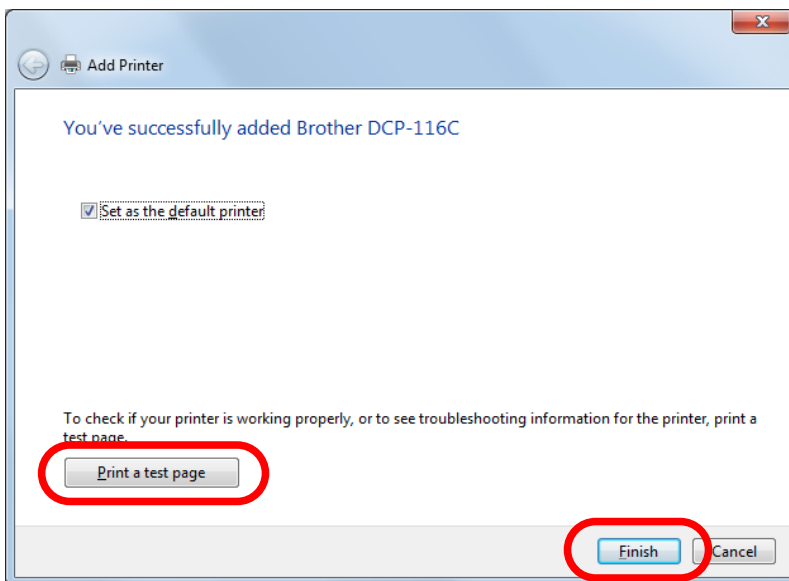
9. Select a printer driver. Select the printer driver you want to use and click **Next**.



10. Enter a printer name and click **Next**.



11. Click **Print a test page** and see the result of printing. If the print result is OK, click **Finish**. The print setting has been completed.



Printing Using the Standard TCP/IP Port on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016

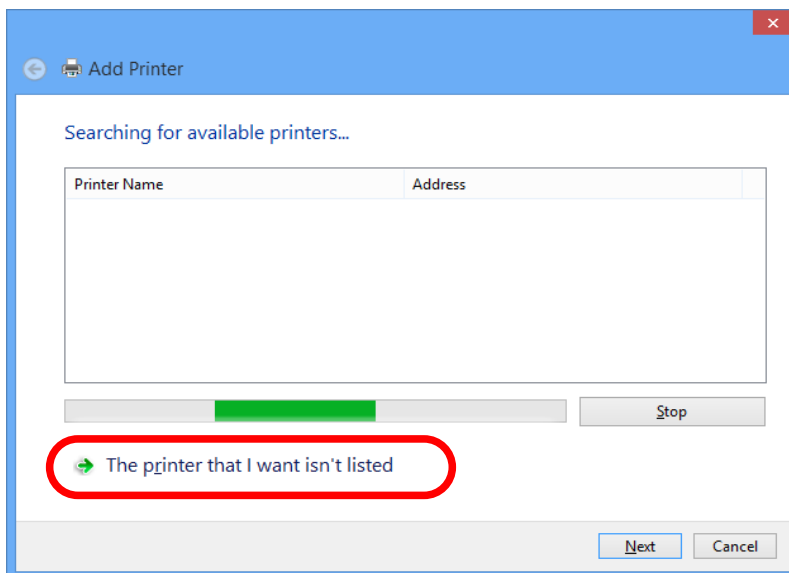
This page explains how to configure the settings to print on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016 using the standard TCP/IP port.



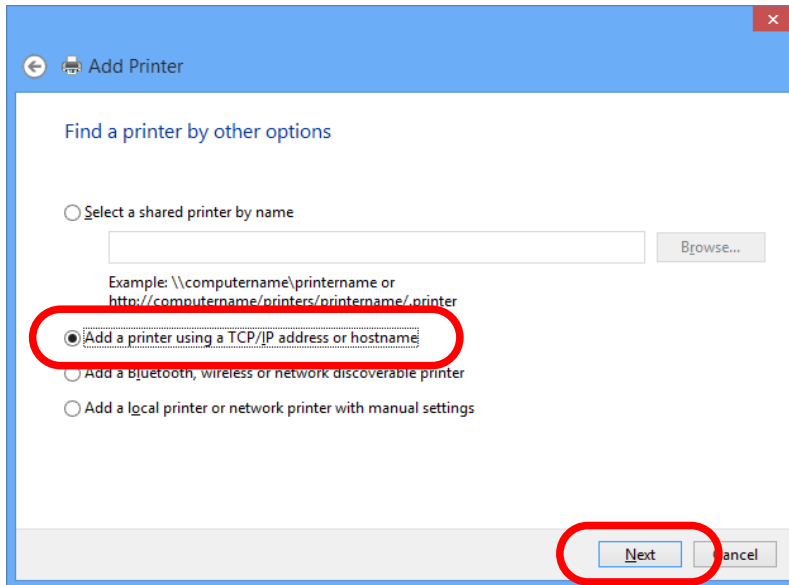
- In this page, sample screens captured from Windows 8.1 are used.

1. Click **Start - Control Panel - View devices and printers - Add a printer.**

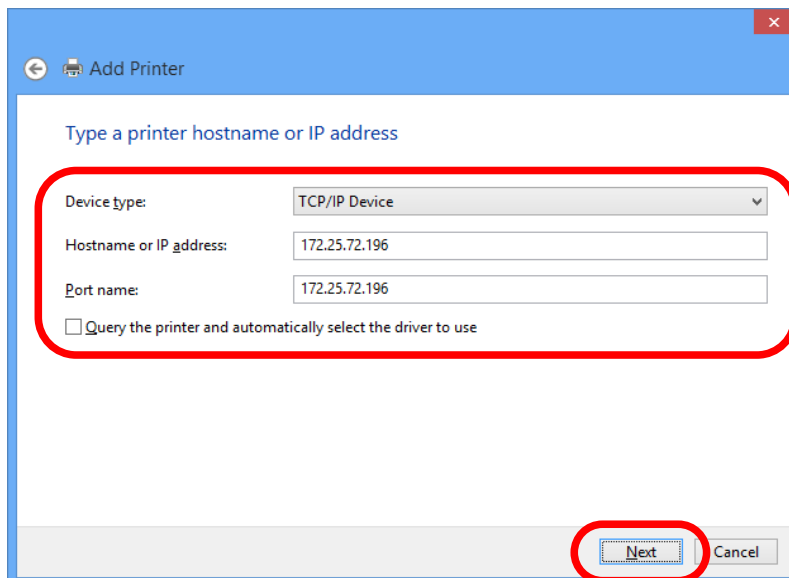
2. Click **The printer that I want isn't listed.**



3. Select the method to add a printer.
Select **Add a printer using a TCP/IP address or hostname** and click **Next**.



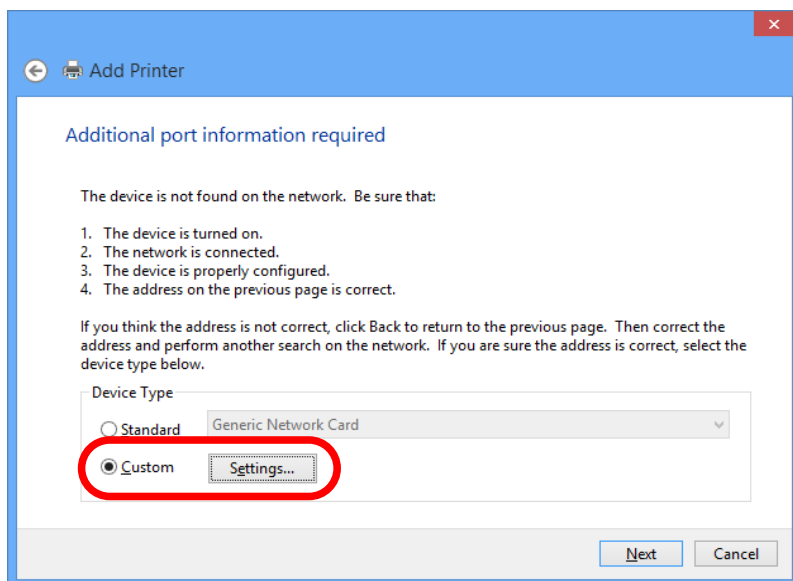
4. Select **TCP/IP Device** for Device type and enter the IP address assigned to SD-330AC for **Hostname or IP address**.
Clear **Query the printer and automatically select the driver to use** check box and click **Next**.



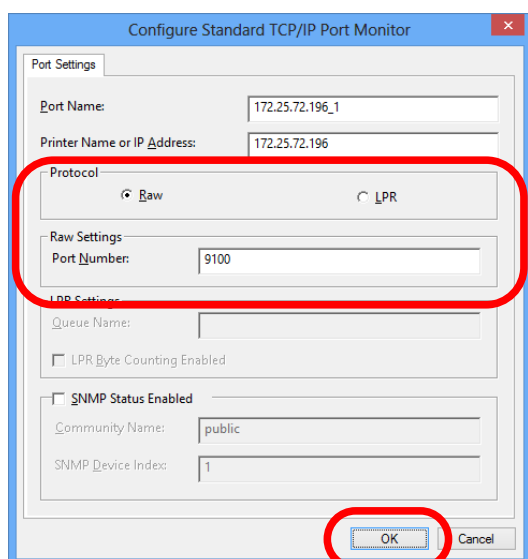
Note

- In most cases, the default port name is used. If you wish to change the port name, enter a unique name that is not used for other ports.

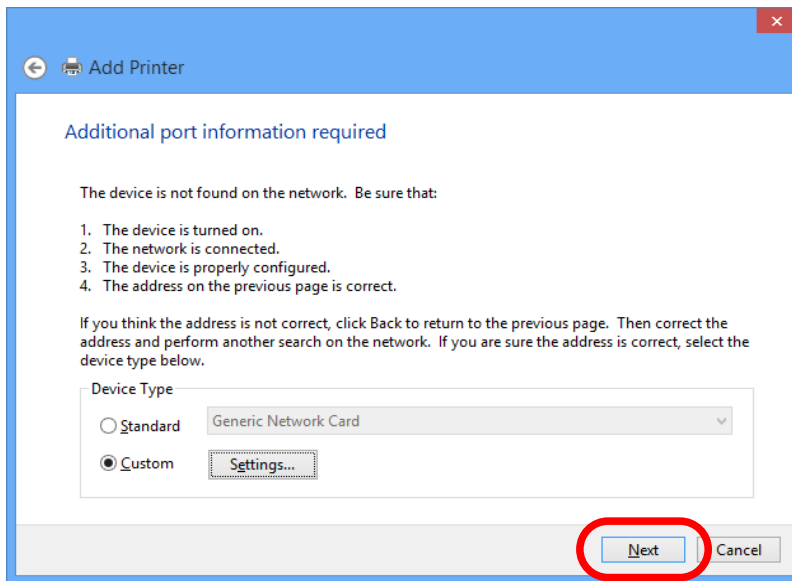
5. Select **Custom** and click **Settings**.



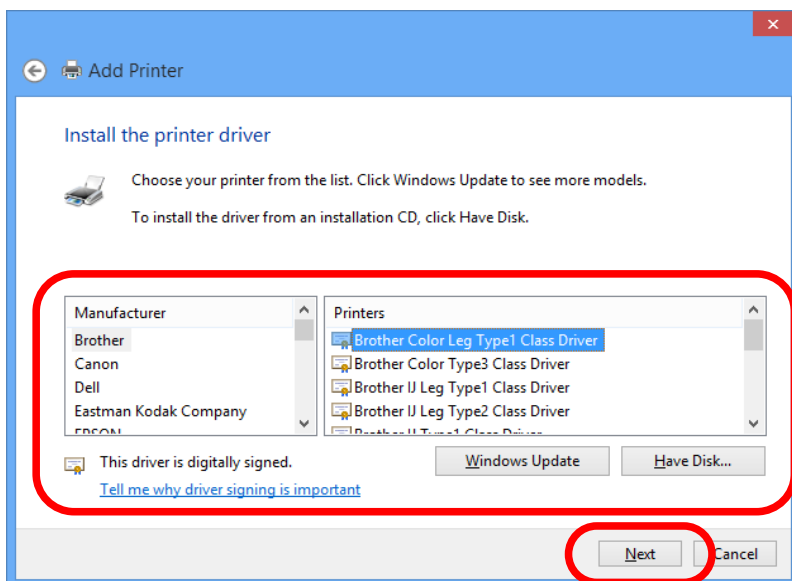
6. Configure the port settings. Select **Raw**.
Enter the RAW port number displayed on the Web page for **TCP Port Number**.
Click **OK**.



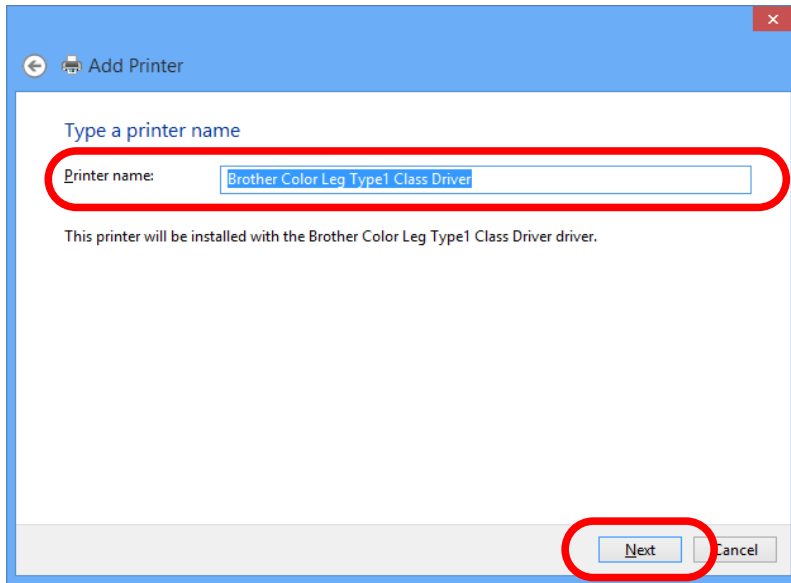
7. Click **Next**.



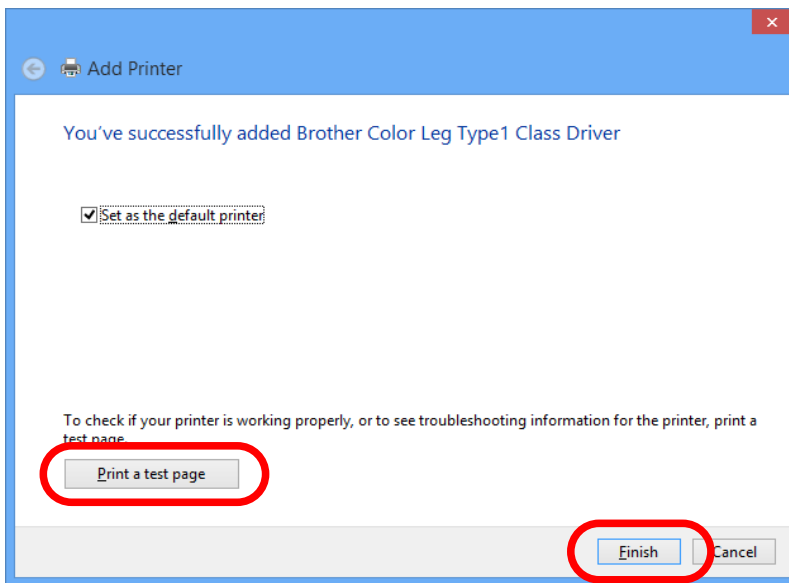
8. Select a printer driver. Select the printer driver you want to use and click **Next**.



9. Enter a printer name and click **Next**.



10. Click **Print a test page** and see the result of printing. If the print result is OK, click **Finish**. The print setting has been completed.



Printing Using the LPR Port on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016

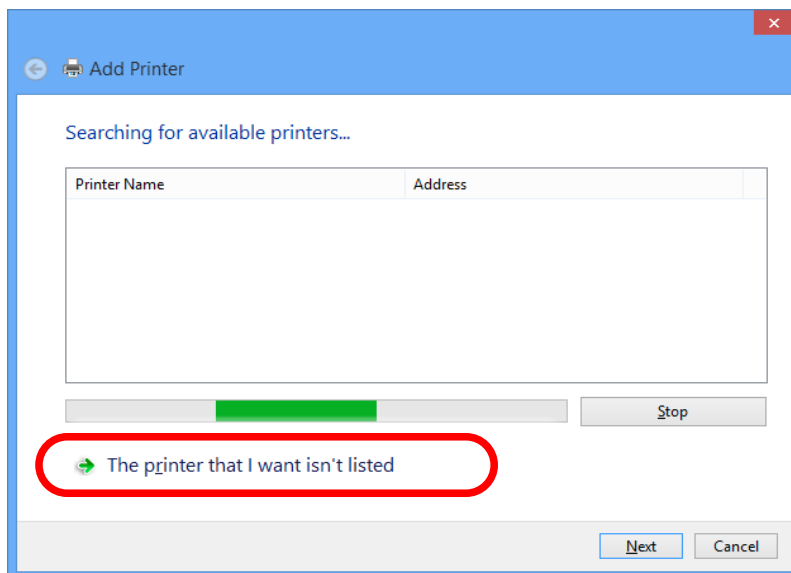
This page explains how to configure the settings to print on Windows 8.1 / 10 / Server 2012 / Server 2012R2 / Server 2016 using the standard LPR port.



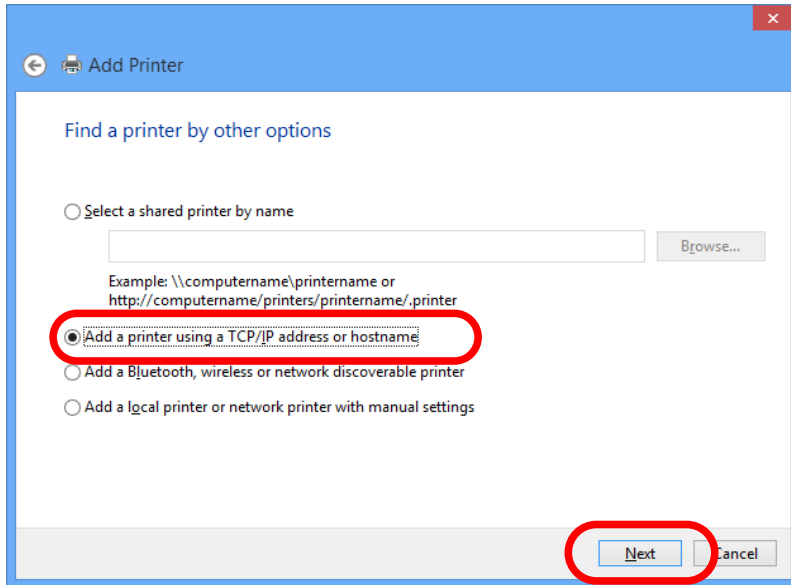
- In this page, sample screens captured from Windows 8.1 are used.

TIP

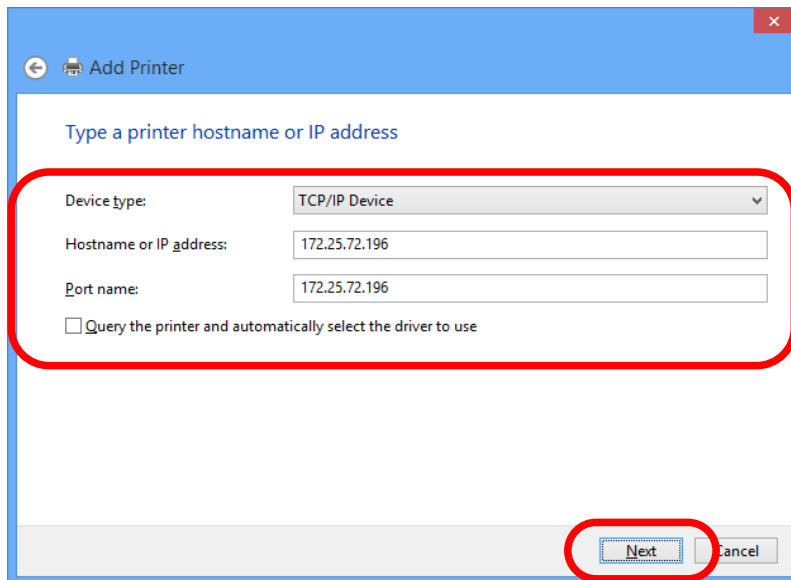
1. Click **Start - Control Panel - View devices and printers - Add a printer.**
2. Click **The printer that I want isn't listed.**



3. Select the method to add a printer.
Select **Add a printer using a TCP/IP address or hostname** and click **Next**.

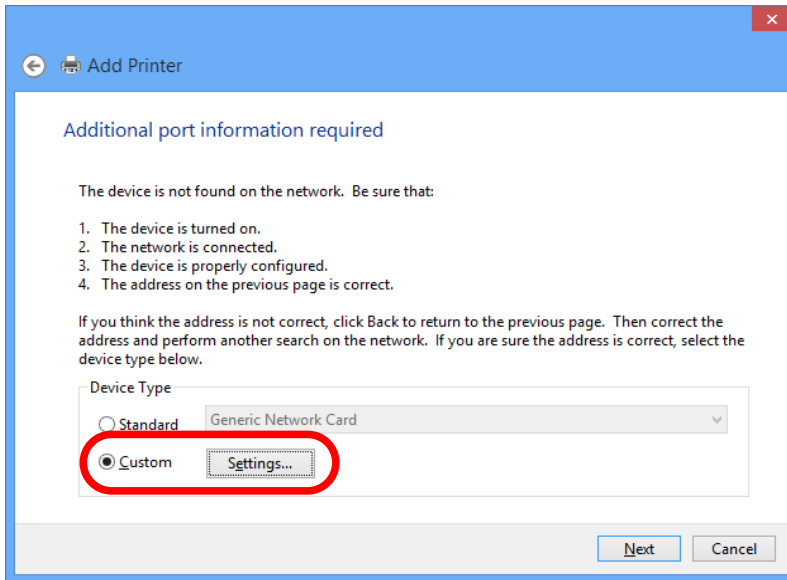


4. Select **TCP/IP Device** for Device type and enter the IP address assigned to SD-330AC for **Hostname or IP address**.
Clear **Query the printer and automatically select the driver to use** check box and click **Next**.

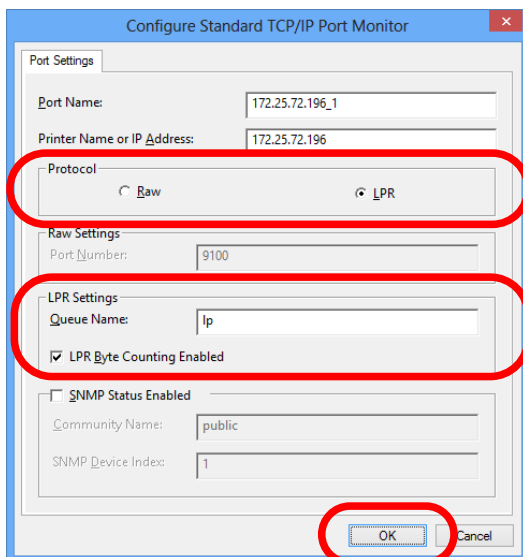


Note

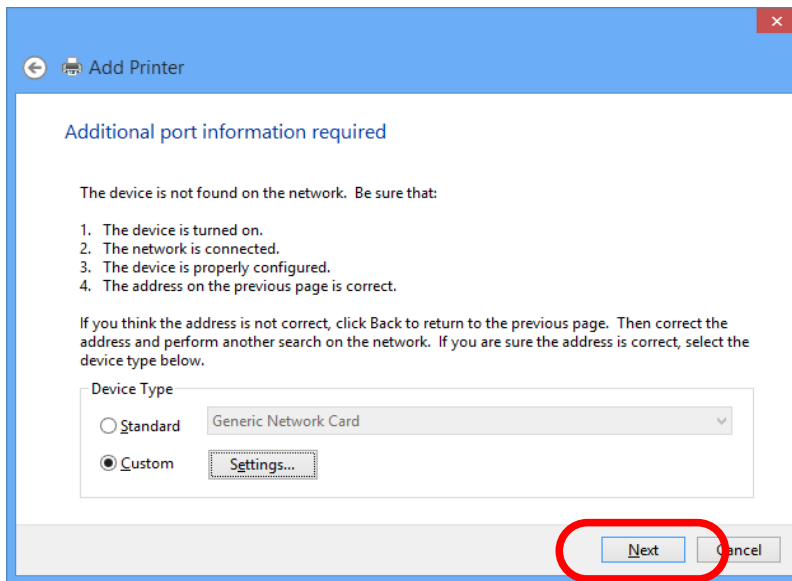
- In most cases, the default port name is used. If you wish to change the port name, enter a unique name that is not used for other ports.

5. Select Custom and click Settings.**6. Configure the port settings. Select LPR.**

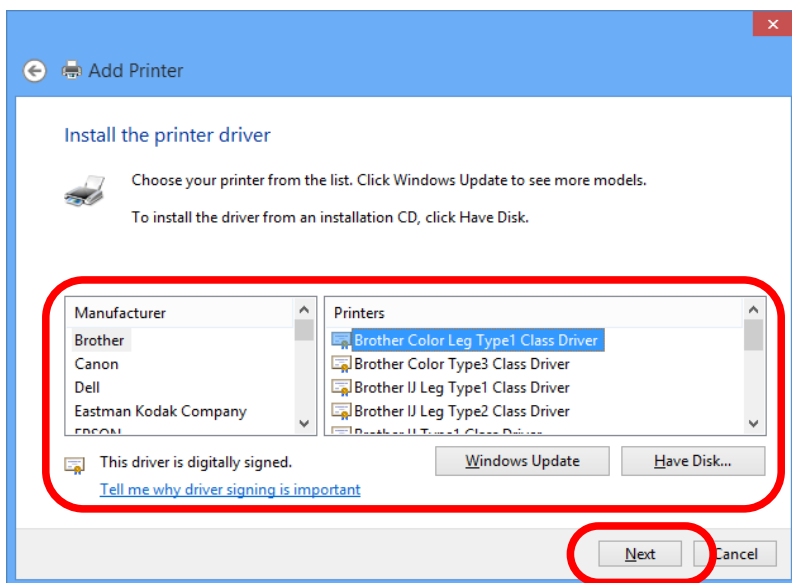
Type the queue name displayed on the Web page for **Service name** and select the **LPR Byte Counting Enabled** check box. Click **OK**.



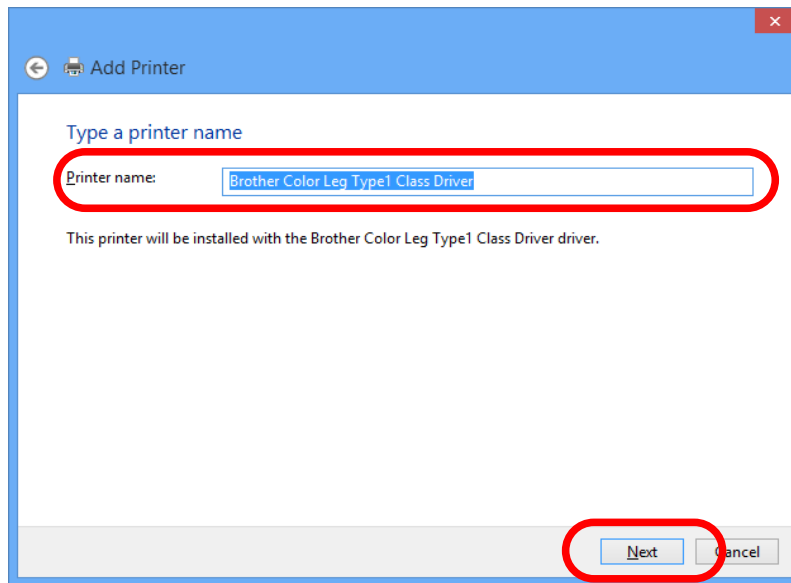
7. Click **Next**.



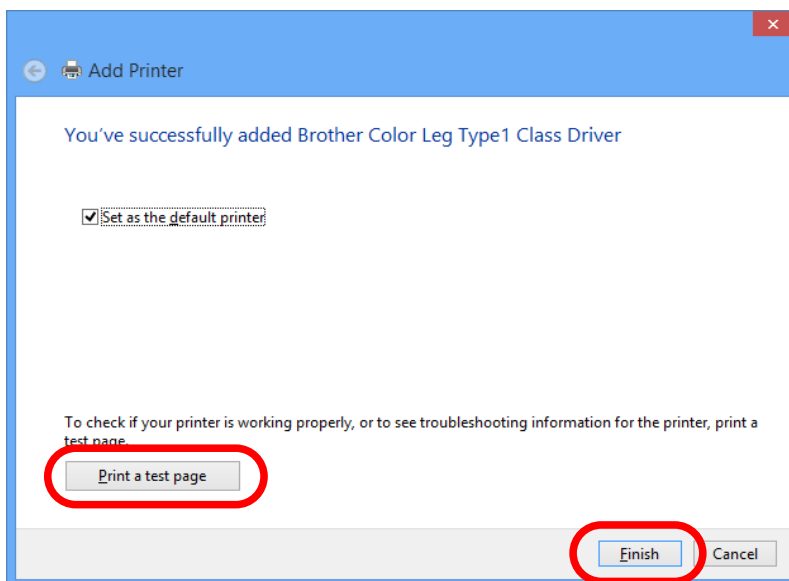
8. Select a printer driver. Select the printer driver you want to use and click **Next**.



9. Enter a printer name and click **Next**.



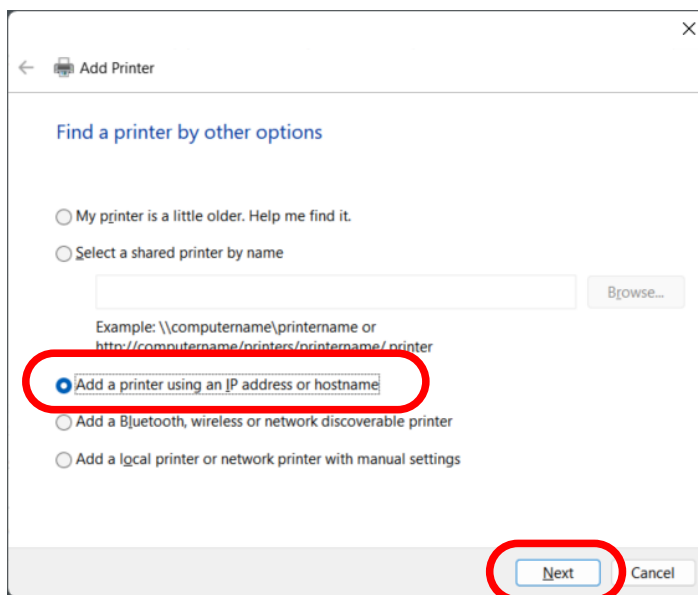
10. Click **Print a test page** and see the result of printing. If the print result is OK, click **Finish**. The print setting has been completed.



Printing Using the Standard TCP/IP Port on Windows 11

This page explains how to configure the settings to print on Windows 11 using the standard TCP/IP port.

1. Click **Start - Settings - Bluetooth & device - Printers & scanners** and click **Add device**.
2. When "**The printer that I want isn't listed**" is displayed, click **Add a new device manually**.
3. Select the method to add a printer.
Click **Add a printer using a IP address or hostname** and click **Next**.



4. Select TCP/IP Device for Device type and enter the IP address assigned to SD-330AC for Hostname or IP address.

Clear **Query the printer and automatically select the driver to use** check box and click **Next**.

The screenshot shows the 'Add Printer' dialog box with the following fields and options:

- Device type:** TCP/IP Device (dropdown menu)
- Hostname or IP address:** 172.25.72.196
- Port name:** 172.25.72.196
- Query the printer and automatically select the driver to use

Below the fields, there is a note: "Autodetect detects WSD and TCP/IP printers. To search for an IPP printer, IPP must be selected from the drop down menu." At the bottom right, the 'Next' button is circled in red.



- In most cases, the default port name is used. If you wish to change the port name, enter a unique name that is not used for other ports.

Note

5. Select Custom and click Settings.

The screenshot shows the 'Add Printer' dialog box with the following content:

Additional port information required

The device is not found on the network. Be sure that:

1. The device is turned on.
2. The network is connected.
3. The device is properly configured.
4. The address on the previous page is correct.

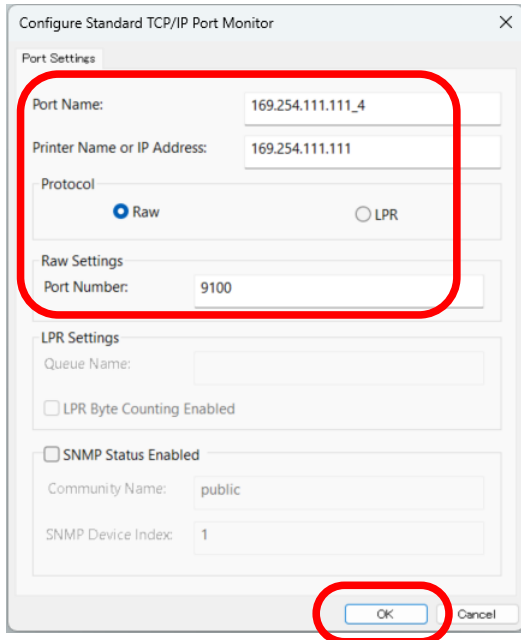
If you think the address is not correct, click Back to return to the previous page. Then correct the address and perform another search on the network. If you are sure the address is correct, select the device type below.

Device Type

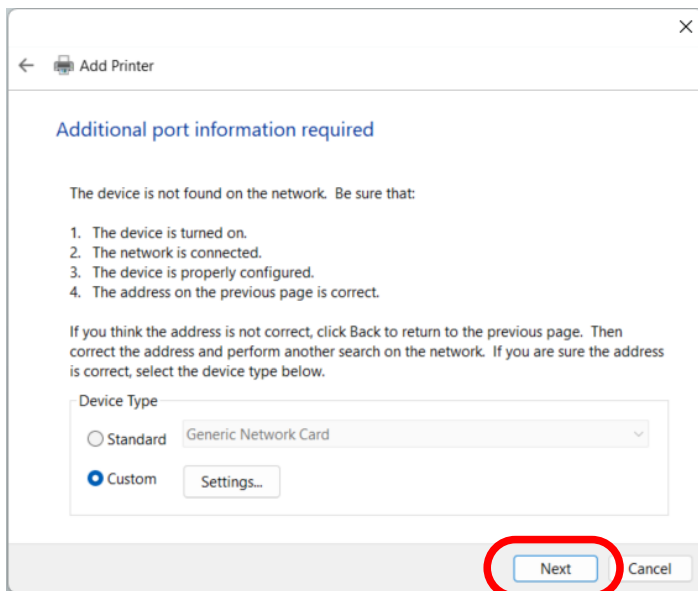
- Standard Generic Network Card
- Custom Settings...

At the bottom right, the 'Next' button is visible.

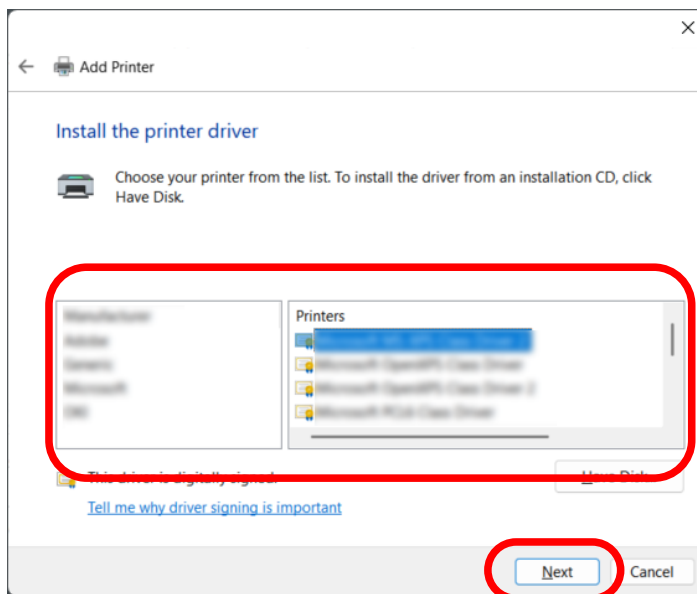
6. Configure the port settings. Select **Raw**.
Enter the RAW port number displayed on the Web page for Port Number.
Click **OK**.



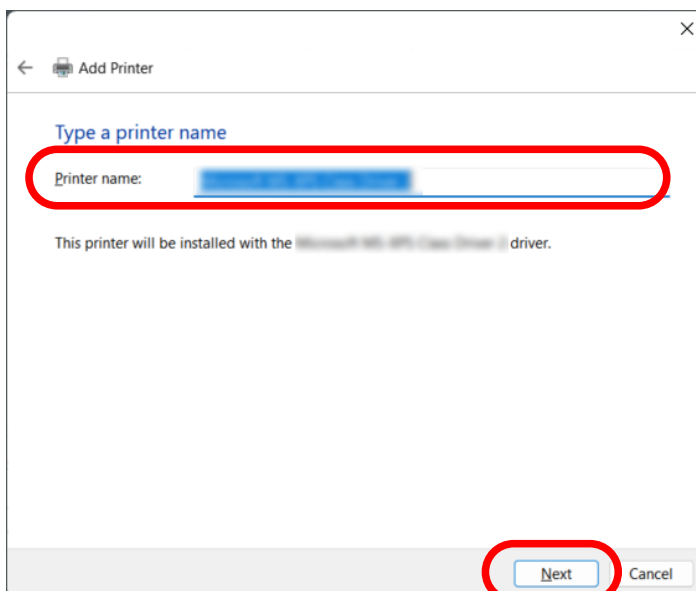
7. Click **Next**.



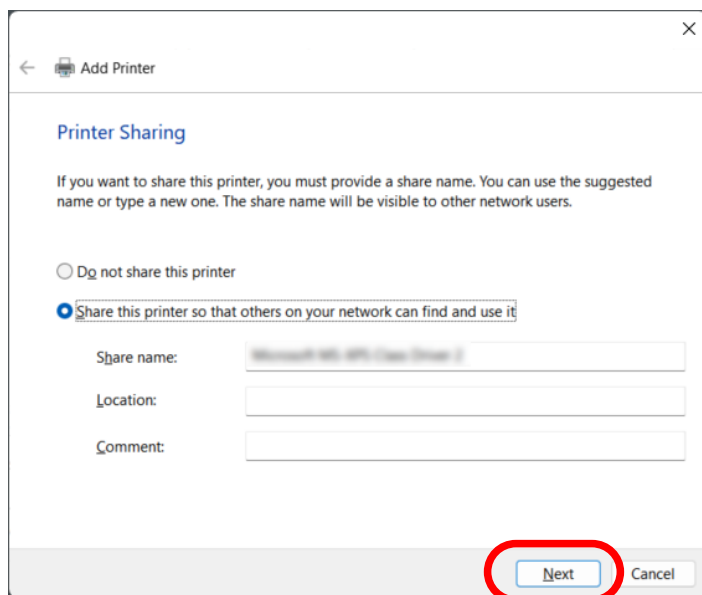
- 8.** Select a printer driver.
Select the printer driver you want to use and click **Next**.



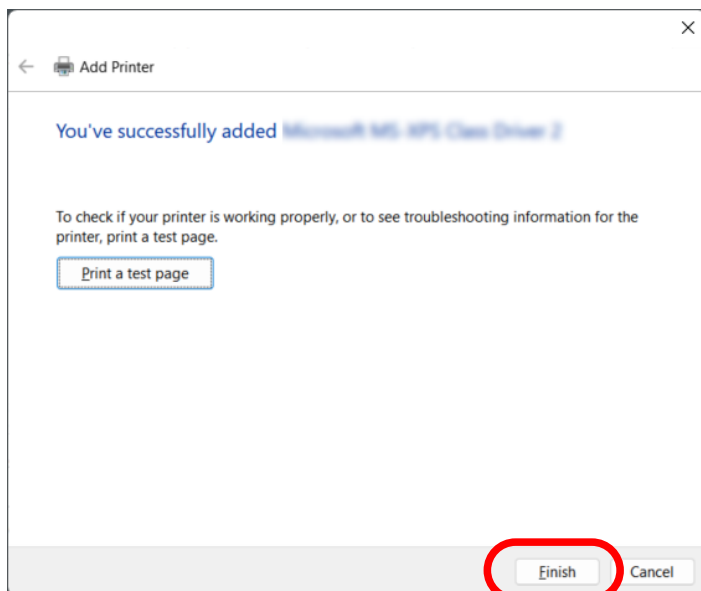
- 9.** Enter a printer name and click **Next**.



10. For **Printer Sharing**, select either **Do not share this printer** or **Share this printer so that others on your network can find and use it**. To share the printer, enter **Share name**, **Location**, **Comment** and click **Next**.



11. Click **Print a test page** and see the result of printing. If the print result is OK, click **Finish**.

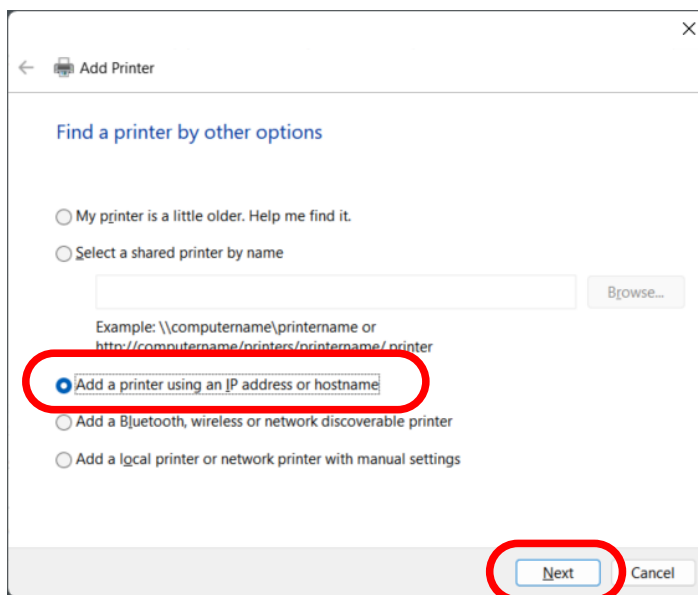


The print setting has been completed.

Printing Using the LPR Port on Windows 11

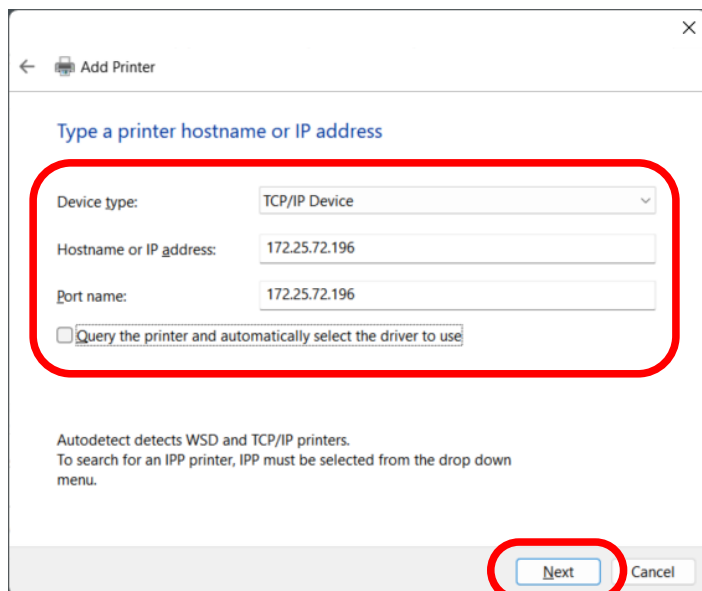
This page explains how to configure the settings to print on Windows 11 using the LPR port.

1. Click **Start - Settings - Bluetooth & device - Printers & scanners** and click **Add device**.
2. When "**The printer that I want isn't listed**" is displayed, click **Add a new device manually**.
3. Select the method to add a printer.
Click **Add a printer using a TCP/IP address or hostname** and click **Next**.



4. Select **TCP/IP Device** for **Device type** and enter the IP address assigned to SD-330AC for **Hostname or IP address**.

Clear **Query the printer and automatically select the driver to use** check box and click **Next**.



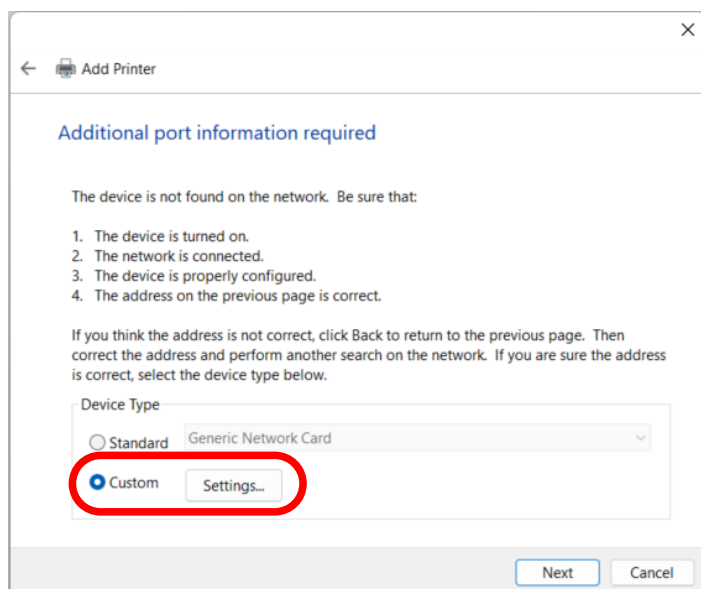
The screenshot shows the 'Add Printer' dialog box with the title 'Type a printer hostname or IP address'. The 'Device type' dropdown menu is set to 'TCP/IP Device'. The 'Hostname or IP address' field contains '172.25.72.196'. The 'Port name' field also contains '172.25.72.196'. Below these fields is a checkbox labeled 'Query the printer and automatically select the driver to use', which is currently unchecked. At the bottom right, the 'Next' button is highlighted with a red circle, and the 'Cancel' button is visible next to it.



- In most cases, the default port name is used. If you wish to change the port name, enter a unique name that is not used for other ports.

Note

5. Select **Custom** and click **Settings**.



The screenshot shows the 'Add Printer' dialog box with the title 'Additional port information required'. The text reads: 'The device is not found on the network. Be sure that:'. Below this is a numbered list: 1. The device is turned on. 2. The network is connected. 3. The device is properly configured. 4. The address on the previous page is correct. Further down, it says: 'If you think the address is not correct, click Back to return to the previous page. Then correct the address and perform another search on the network. If you are sure the address is correct, select the device type below.' The 'Device Type' section has two radio buttons: 'Standard' (selected) and 'Custom' (selected). The 'Standard' option is set to 'Generic Network Card'. The 'Custom' option has a 'Settings...' button next to it, which is highlighted with a red circle. At the bottom right, the 'Next' and 'Cancel' buttons are visible.

6. Configure the port settings. Select **LPR**.

Type the queue name displayed on the Web page for **Service name** and select the **LPR Byte Counting Enabled** check box.

Click **OK**.

Configure Standard TCP/IP Port Monitor

Port Settings

Port Name: 169.254.111.111_4

Printer Name or IP Address: 169.254.111.111

Protocol

Raw LPR

Raw Settings

Port Number: 9100

LPR Settings

Queue Name:

LPR Byte Counting Enabled

SNMP Status Enabled

Community Name: public

SNMP Device Index: 1

OK Cancel

7. Click **Next**.

Add Printer

Additional port information required

The device is not found on the network. Be sure that:

1. The device is turned on.
2. The network is connected.
3. The device is properly configured.
4. The address on the previous page is correct.

If you think the address is not correct, click Back to return to the previous page. Then correct the address and perform another search on the network. If you are sure the address is correct, select the device type below.

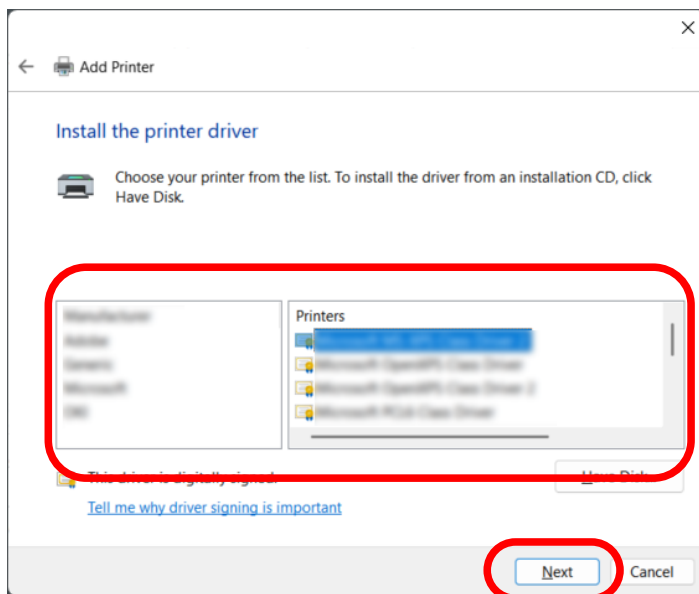
Device Type

Standard Generic Network Card

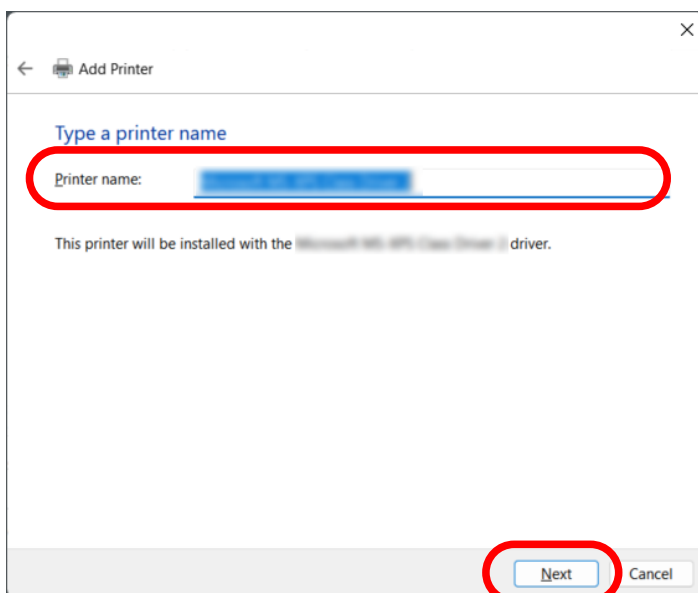
Custom Settings...

Next Cancel

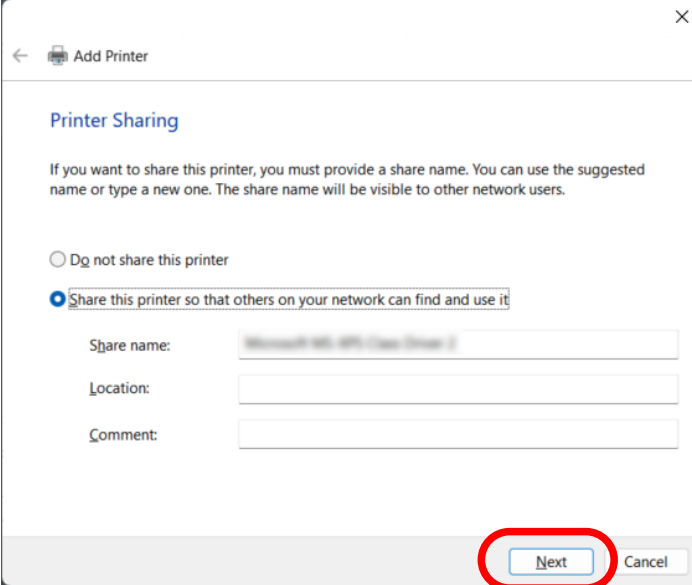
- 8.** Select a printer driver.
Select the printer driver you want to use and click **Next**.



- 9.** Enter a printer name and click **Next**.

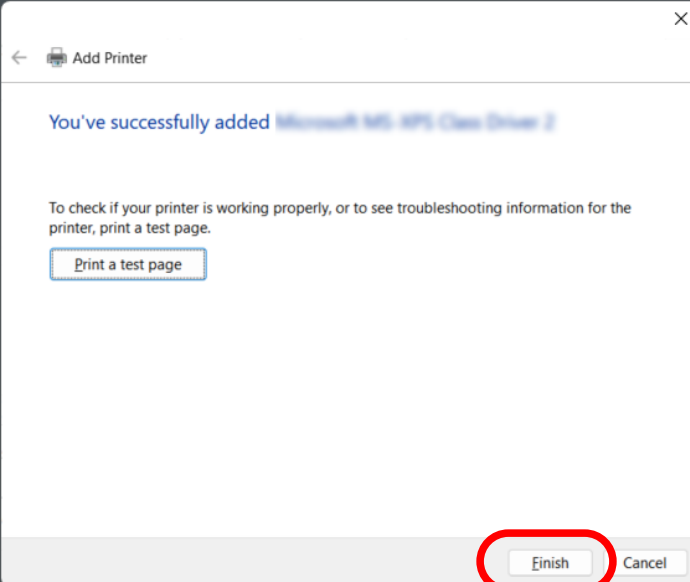


10. For **Printer Sharing**, select either **Do not share this printer** or **Share this printer so that others on your network can find and use it**. To share the printer, enter **Share name**, **Location**, **Comment** and click **Next**.



The screenshot shows the 'Add Printer' dialog box with the 'Printer Sharing' section. The 'Share this printer so that others on your network can find and use it' option is selected. The 'Share name' field contains 'Microsoft MS-WPS Class Driver 2'. The 'Location' and 'Comment' fields are empty. The 'Next' button is circled in red.

11. Click **Print a test page** and see the result of printing. If the print result is OK, click **Finish**.




The screenshot shows the 'Add Printer' dialog box with the 'Print a test page' button highlighted. The 'Finish' button is circled in red.

The print setting has been completed.

6-5. SX Virtual Link for Serial Device Server

6-5-1. Main Window and Menu

Main window and buttons

SX Virtual Link for Serial Device Server has 2 view modes as follows. To switch the view mode, click the  button on the main window.

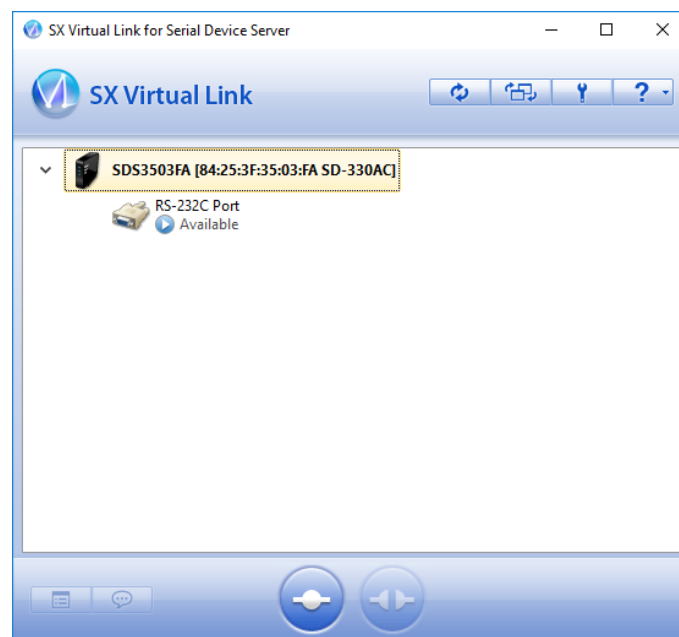


- The current view mode is saved when SX Virtual Link for Serial Device Server exits. The same view mode will be used the next time SX Virtual Link for Serial Device Server starts.

Note

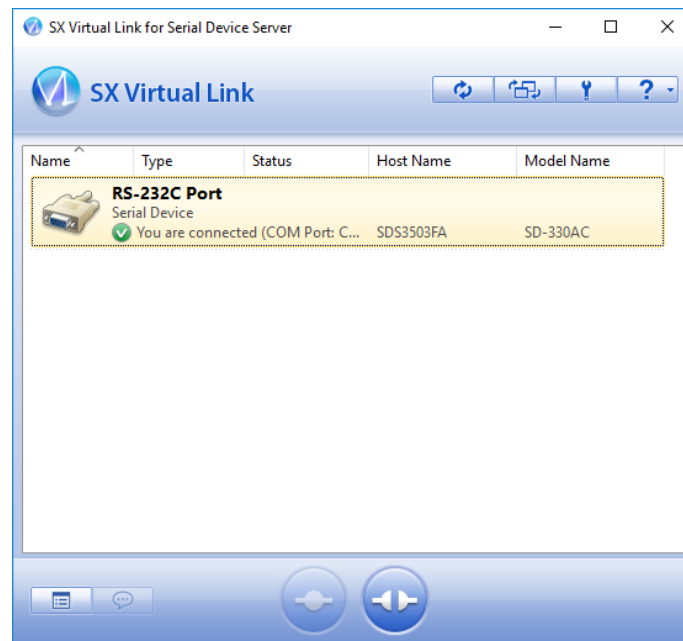
Device server view (default)

In device server view, the device servers running on the network and USB devices connected to them are displayed in a list.







USB device view

In USB device view, only the USB devices connected to a device server running on the network are displayed in a list.



The following buttons are used to control the USB devices.





| Buttons | Name | Details |
|---|--------------------|---|
|  | Properties button | Shows the properties of the USB device that you have selected in the USB device list. For details on USB device properties, refer to USB Device Operational Settings . |
|  | Request Use button | Requests to the user who is currently using the USB device that you have selected in the USB device list to disconnect from it by sending a remote message. For details on Request Use, refer to How to Request for Disconnect . |
|  | Connect button | Connects your PC to the USB device that you have selected in the USB device list. You can also connect to the USB device by double-clicking the USB device in the list. If the USB device is running as NAS, it can be mapped as a network drive. |
|  | Disconnect button | Disconnects your PC from the USB device that you have selected in the USB device list. You can also disconnect from the USB device by double-clicking the USB device in the list. |

In USB device view, the column headings at the top of the list can be changed via optional display settings. For details, refer to **SX Virtual Link for Serial Device Server Optional Settings**.

Also, if you click a column header, the order of USB devices will be sorted by the column you have clicked.

| Name ^ | Type | Status | Host Name | Model Name |
|--------|------|--------|-----------|------------|
|--------|------|--------|-----------|------------|

The following buttons are used to display the SX Virtual Link for Serial Device Server optional settings or general information windows.


| Buttons | Name | Details |
|--|--------------------|--|
|  | Refresh button | Refreshes the status of all devices in the USB device list. |
|  | Switch view button | Switches between USB device view and device server view. |
|  | Option button | Displays the SX Virtual Link for Serial Device Server optional settings window. For details on the optional settings window, refer to SX Virtual Link for Serial Device Server Optional Settings. |
|  | Help button | Displays the following windows or websites: SX Virtual Link for Serial Device Server Online Help Customer Support Website Company Website (top page) Version information |

Device server icons

SX Virtual Link for Serial Device Server uses a different icon for each device server (only when in device server view).

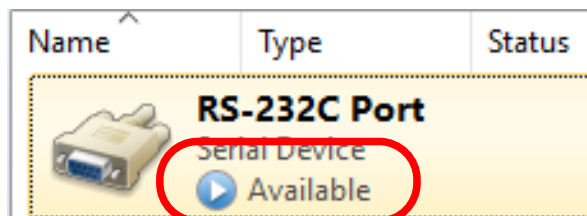
USB device icons







SX Virtual Link for Serial Device Server uses a different icon for each USB device as listed below:

| Icons | Details |
|---|---|
|  | Multifunction devices with printing capability |
|  | Single function printers |
|  | Imaging devices (scanners) |
|  | Storage devices (hard disks, USB memory, etc) |
|  | Audio devices |
|  | Interface class devices (mice, keyboards, etc) |
|  | Video devices (isochronous devices, Web cameras, etc) |
|  | Display devices |
|  | Serial Device |
|  | Other devices |

Status icons

SX Virtual Link for Serial Device Server uses the following icons to show the status of USB devices connected to a device server:

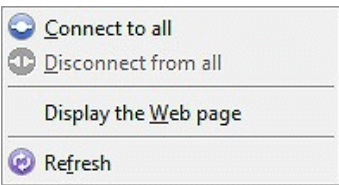


| icons | Details |
|---|---|
|  | USB device is available. |
|  | USB device is connected to your PC. |
|  | USB device is being used by someone else. |
|  | Updating the USB device status. |
|  | The USB device or USB device server is turned off, or the USB device is not connected to the device server. |
|  | The USB device server is not detected. |

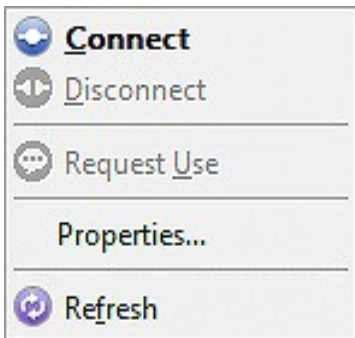
Right-click menu

The right-click menu is explained below:

When a device server in the list is right-clicked, the following menu is displayed:

| Right-click menu | Item | Details |
|---|----------------------|---|
|  | Connect to all | Connects to all USB devices plugged into the selected device server. |
| | Disconnect from all | Disconnects from all USB devices plugged into the selected device server. |
| | Display the Web page | Opens the Web page of the selected device server. |
| | Refresh | Refreshes the list of device servers in the main window. |

When a USB device in the list is right-clicked, the following menu is displayed:

| Right-click menu | Item | Details |
|---|-------------|--|
|  | Connect | Connects to the selected USB device. |
| | Disconnect | Disconnects from the selected USB device. |
| | Request Use | Requests to the user who is currently using the USB device that you have selected in the USB device list to disconnect from it. For details on Request Use, refer to How to Request for Disconnect . |
| | Properties | Displays the properties window of the selected USB device. For details on USB device properties, refer to USB Device Operational Settings . |
| | Refresh | Refreshes the list of USB devices in the main window. |

6-5-2. USB Device Operational Settings

Change the USB device name displayed in SX Virtual Link for Serial Device Server's main window

In SX Virtual Link for Serial Device Server's main window, the default name originally registered to the USB device is shown in the USB device list.

The USB device name can be changed from the **General** tab in the properties dialog. For details on the properties dialog, refer to **About the USB device properties dialog**.



- Even if the device name is changed, the default name originally registered to the device is not changed. Also, this change takes effect only for the PC from which you have changed the device name and not for other PCs.

Automatically connect to a USB device when it is detected

SX Virtual Link for Serial Device Server can automatically connect to a USB device when it is detected.

If you are the only person that will use a particular USB device, you can utilize the auto-connect function to automatically connect to the USB device without clicking the Connect button on SX Virtual Link for Serial Device Server's main window.

The auto-connect function can be enabled from the **Connect** tab in the properties dialog. For details on the properties dialog, refer to **About the USB device properties dialog**.



- If you wish to connect to all USB devices automatically, check the Automatically connect newly discovered USB devices check box on the SX Virtual Link for Serial Device Server option dialog. For details, refer to **SX Virtual Link for Serial Device Server Optional Settings**.

Automatically reconnect to a USB device when it is disconnected abnormally

SX Virtual Link for Serial Device Server can automatically reconnect to a USB device when the connection between the USB device and your PC is lost due to a communication error.

The auto-reconnect option for USB devices that have been abnormally disconnected can be enabled from the **Connect** tab in the properties dialog.

For details on the properties dialog, refer to **About the USB device properties dialog**.

The auto-reconnect setting will take effect the next time you connect to the USB device.



TIP

- The auto-reconnect feature may not work properly depending on the USB device or PC's status during the error. In such a case, reboot the PC, USB device and device server.
- This option is only for recovery purposes in case of an error. Please do not unplug the USB device intentionally while it is connected to your PC via SX Virtual Link for Serial Device Server.

Automatically start a designated application when a USB device is connected

SX Virtual Link for Serial Device Server can automatically start a designated application when a USB device is connected to your PC.

The auto-application startup feature can be enabled by registering the application that you wish to use with a particular USB device (e.g. image reading software for a scanner, music management software for a music player, backup software for storage media, etc) to SX Virtual Link for Serial Device Server. After an application is registered to SX Virtual Link for Serial Device Server, it will automatically start when the USB device is connected to your PC via SX Virtual Link for Serial Device Server. Thus, you will not have to manually start the application.

The auto-application startup feature can be enabled from the **Connect** tab in the properties dialog.


For details on the properties dialog, refer to **About the USB device properties dialog**.

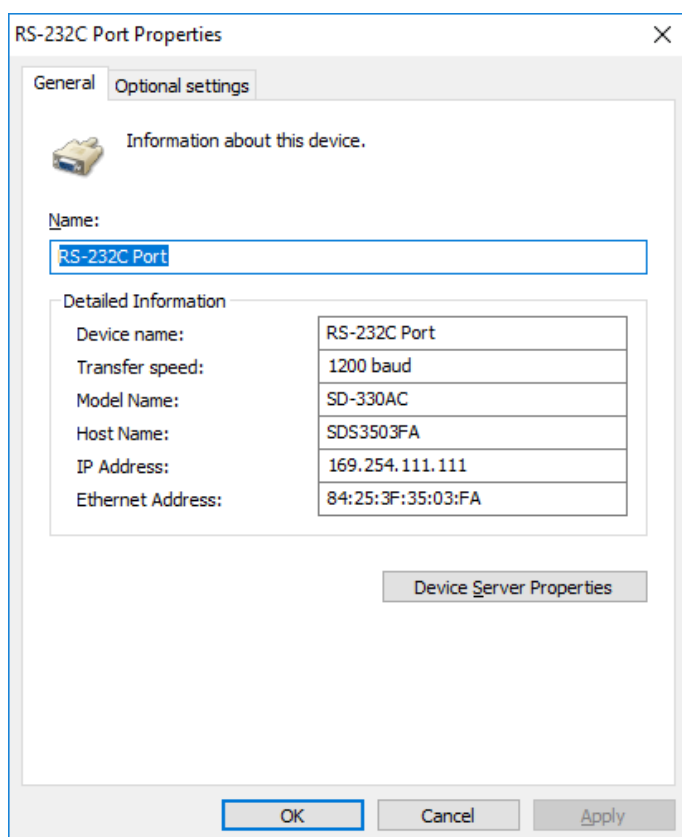
The auto-application startup feature will take effect the next time you connect to the USB device.

About the USB device properties dialog

The above operational settings are available from the properties dialog of each USB device.

How to open and use the properties dialog:

1. Select the USB device in SX Virtual Link for Serial Device Server's main window and click the **Properties** button  .
2. The **General** is displayed. In the General, you can change the USB device name to be displayed in SX Virtual Link for Serial Device Server's main window.



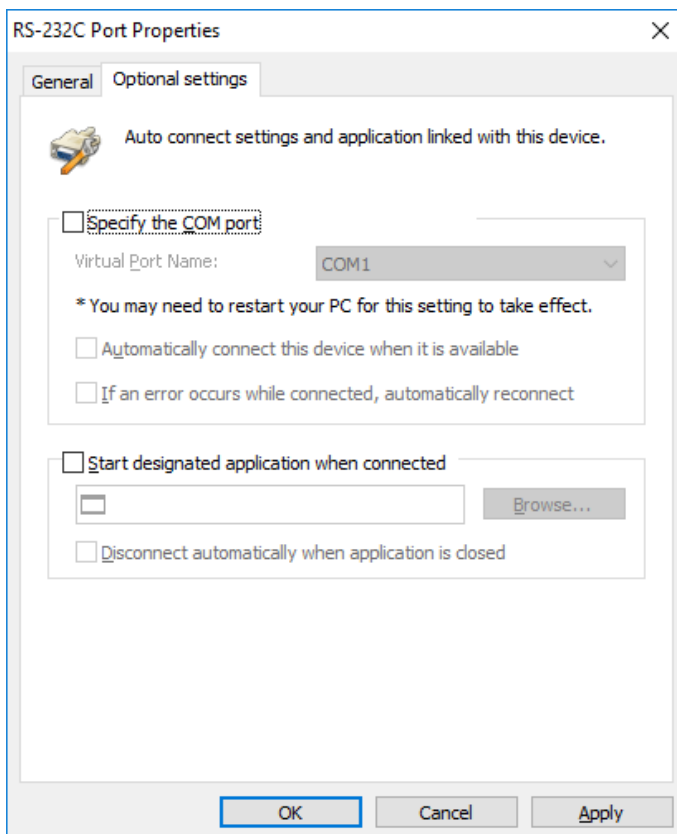
Configuration Items

| Item | Details |
|--------------------------|---|
| Name | Change the USB device name to be displayed in SX Virtual Link for Serial Device Server's main window. For details, refer to Change the USB device name displayed in SX Virtual Link for Serial Device Server's main window. |
| Device Server Properties | Opens the Web page of the device server. On the Web page, various settings are available. For details, please refer to the users manual. |

Detailed Information

| Item | Details |
|------------------|---|
| Device name | This is the device name recognized by the device server. |
| Transfer speed | This is the transfer speed. The transfer speed of serial device is displayed only when the serial device is connected. The transfer speed of USB device is always displayed. |
| Model Name | Model name of the device server |
| Host Name | Host name of the device server |
| IP Address | IP address of the device server |
| Ethernet Address | Ethernet Address of the device server |

3. If you click the **Optional settings** tab, you can configure the settings shown below.



COM Information

| Item | Details |
|---|---|
| Specify the COM port | <p>When this setting is OFF, the number of unused port is automatically assigned when connected. When this setting is ON, the COM port is automatically created. This COM port is not deleted even after SX Virtual Link for Serial Device Server is closed.</p> <p>* In case of the following, the settings cannot be changed. - Serial server is being connected. - The created COM port is used by another application.</p> |
| Virtual Port Name | Select the number of COM port to be used when connected. The port number is COM1 to COM255. |
| Automatically connect this device when it is available | Automatically connects the device when it is detected by SX Virtual Link for Serial Device Server. |
| If an error occurs while connected, automatically reconnect | Automatically reconnects the device when it is disconnected incorrectly but is detected again. |

Application Setting

| Item | Details |
|---|--|
| Start designated application when connected | Starts the designated application when the device is connected. |
| Disconnected automatically when application is closed | Automatically disconnects from the device when the designated application is closed. |
| Application item | Specify the application. The application can also be specified by drag & drop. |
| Browse button | Opens a folder to specify the application. |

6-5-3. How to Use a Printer

SX Virtual Link for Serial Device Server has a feature that detects print jobs and then automatically connects to, prints to and disconnects from the printer (or USB device with printing capability) if it is connected to a device server.


You will not have to click the Connect button  in the SX Virtual Link for Serial Device Server's main window before you print a job.



TIP

- To use the printer auto-connect function, the printer driver needs to be installed in advance.
 - The printer auto-connect function may not be available for some USB devices with printing capability. In such cases, please connect/disconnect to/from the USB device manually by clicking the Connect/Disconnect buttons in SX Virtual Link for Serial Device Server.
 - To use the printer auto-connect function, SX Virtual Link for Serial Device Server must be running. Please be sure to start SX Virtual Link for Serial Device Server before you print a job.
- For those who print frequently, it is recommended to set SX Virtual Link for Serial Device Server to automatically start at PC startup. For details, refer to **SX Virtual Link for Serial Device Server Optional Settings**.

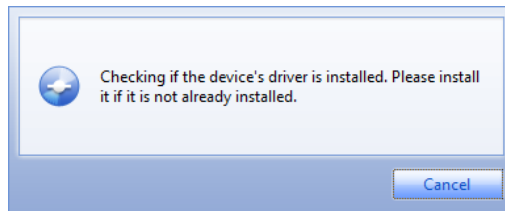
How to enable the printer auto-connect function:

1. Select a printer in SX Virtual Link for Serial Device Server's main window and click the **Properties** button . When the properties dialog is displayed, click the **Optional settings** tab.
2. Check **Enable auto connect**, select **Connect automatically only for printing** and click **OK**.

| Item | Details |
|---|---|
| Automatically connect this device when it is available | Automatically connects the device when it is detected by SX Virtual Link for Serial Device Server. |
| Connect automatically only for printing | Automatically connects the device when a print job is spooled on the monitored printer object, and disconnects it when the print job is finished. |
| Configure button | Connects the device and configures the initial settings to enable the auto-printing function. |
| Confirm button | Shows the printer object monitored by auto-printing function. |
| If an error occurs while connected, automatically reconnect | Automatically reconnects the device when it is disconnected incorrectly but is detected again. |

**Note**

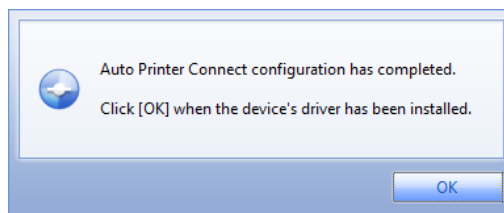
- If the USB device driver is not installed on your PC or the USB device has never been connected to your PC via SX Virtual Link for Serial Device Server, the following window is displayed.



To enable the Connect automatically only for printing setting, a printer driver needs to be associated with your printer. Check Enable auto connect, select Connect automatically only for printing and then click the Configure button to start the printer driver association. After the association is complete, the window will be displayed as in step 2.

If the printer driver association does not finish despite waiting for a while, you can manually associate the driver.

1. From the dialog window displayed, click the Configure button.
2. The Auto Printer Connect window will be displayed.



3. Check the Manually configure a printer to automatically connect check box, select the appropriate printer and click OK.

After the association is complete, the window will be displayed as in step 2.

- If the last part of a job is not printed completely while the printer auto-connect function is active, click the Confirm button to open the printer monitoring dialog. Extend the time period in Time before disconnecting after print job is sent field.

The printer auto-connect function has been enabled.


All the jobs output to the printer you have selected at step 1 will be printed automatically.

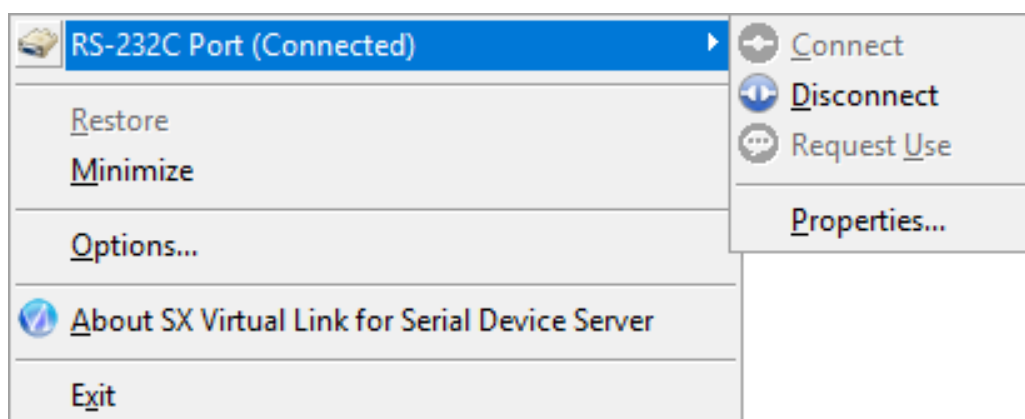
**TIP**

- Some printers may show an error message on their printer status monitor after a job is printed. In such cases, close the printer status monitor manually as it has no effect on printing.

6-5-4. SX Virtual Link for Serial Device Server and the Task Tray

Controlling SX Virtual Link for Serial Device Server from the task tray

Right-click  in the task tray to display the SX Virtual Link for Serial Device Server menu as shown below.



| Item | Details |
|--|--|
| Restore | Restores SX Virtual Link for Serial Device Server to its default size. |
| Minimize | Minimizes SX Virtual Link for Serial Device Server. |
| Options | Opens the options dialog. Each optional setting is available. |
| About SX Virtual Link for Serial Device Server | Displays the SX Virtual Link for Serial Device Server version. |
| Exit | Closes SX Virtual Link for Serial Device Server. |

| Item | Details |
|-------------|--|
| Connect | Connects to the selected USB device. |
| Disconnect | Disconnects from the selected USB device. |
| Request Use | Asks the user who is currently using the USB device that you wish to use to disconnect from it. For details on Request Use, refer to How to Request for Disconnect . |
| Properties | Shows the properties window of the selected USB device. For details on USB device properties, refer to USB Device Operational Settings . |

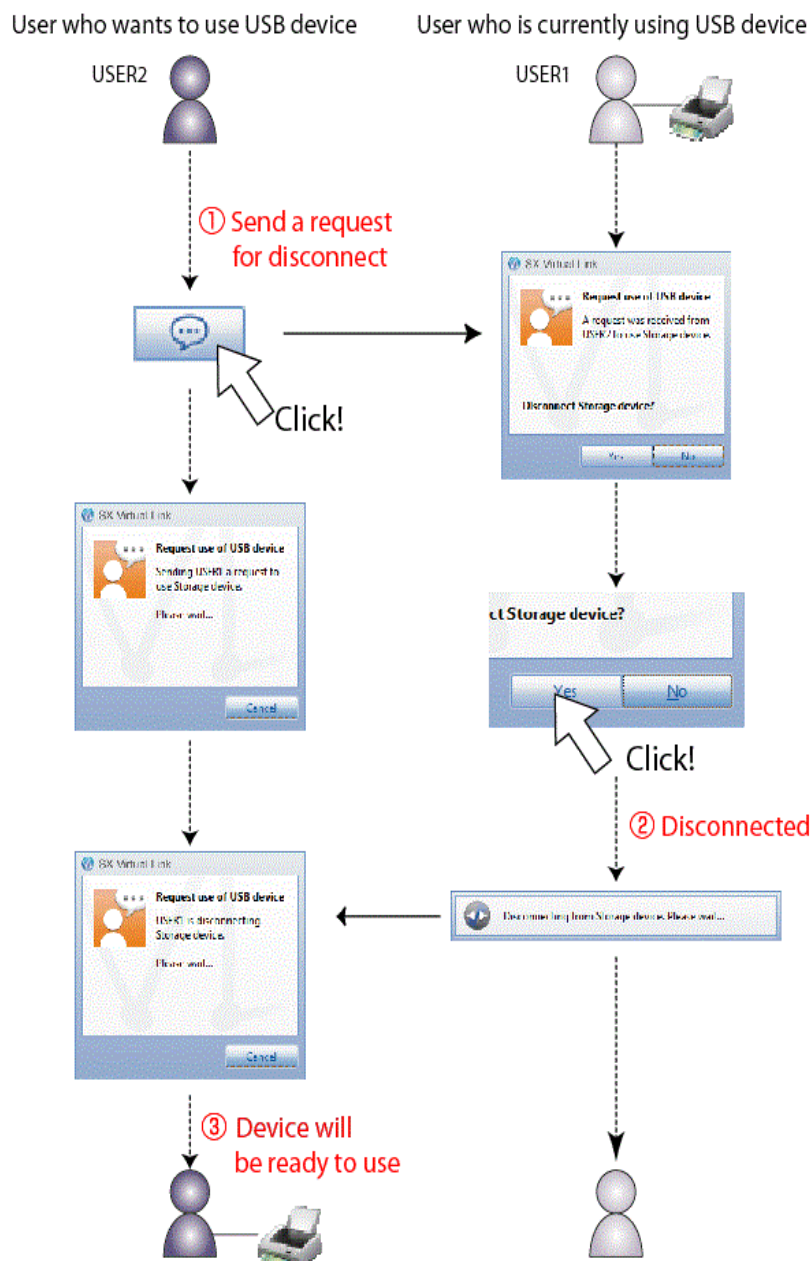
6-5-5. How to Request for Disconnect

SX Virtual Link for Serial Device Server has a feature allowing you to request to a user to disconnect from the USB device that you wish to connect to by sending a remote message so that the right of use is passed down to you. This function is called "Request Use".

Select the USB device that you wish to use on SX Virtual Link for Serial Device Server's main window and click the Request Use button .

A disconnect request message will be displayed on the PC of the user who is currently using the USB device that you have selected. If the user accepts the disconnect request, your PC will be connected to the USB device.

The Request Use process is as follows:

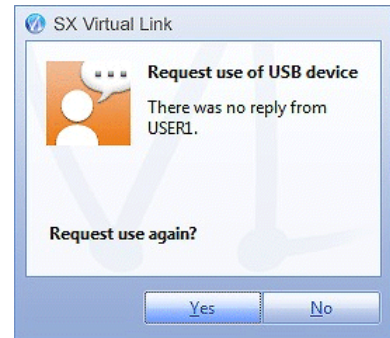




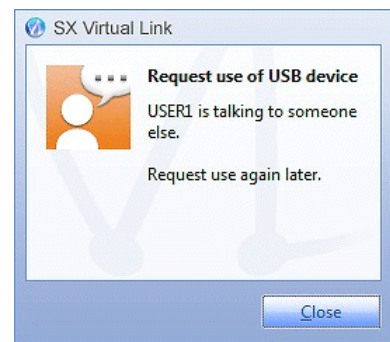
- The disconnect request could be denied. If the disconnect request is denied, the message on the right will be displayed on the PC from which the disconnect request was sent.



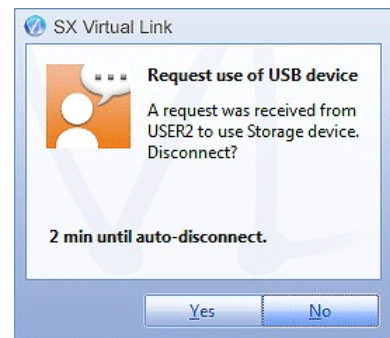
- If no response is returned, the message on the right will be displayed.



- Only one disconnect request can be sent at a time. If several users send disconnect requests, priority is given to the first user. For the other users, the message on the right will be displayed. In such a case, please try again a while later.




- Your PC can be set to automatically disconnect from a USB device when a disconnect request is received. For details on how to use this feature, refer to **USB Device Operational Settings**.



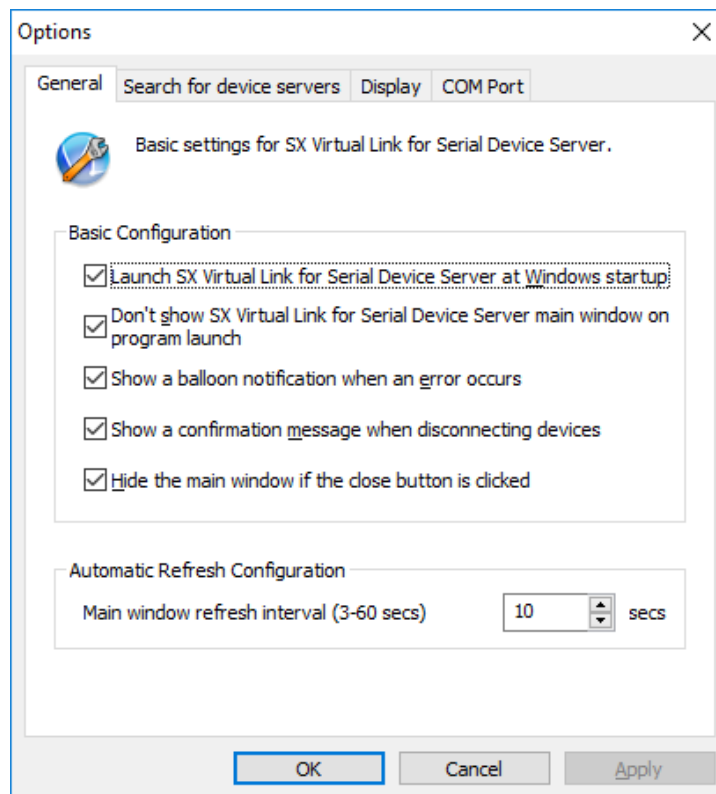
6-5-6. SX Virtual Link for Serial Device Server Optional Settings

This page explains the SX Virtual Link for Serial Device Server optional settings. SX Virtual Link general settings such as startup and communication settings can be configured.

Click the **Option** button () on SX Virtual Link for Serial Device Server's main window. The options dialog will be displayed. The options dialog provides the following settings. Click OK when you have finished configuring the settings.

General

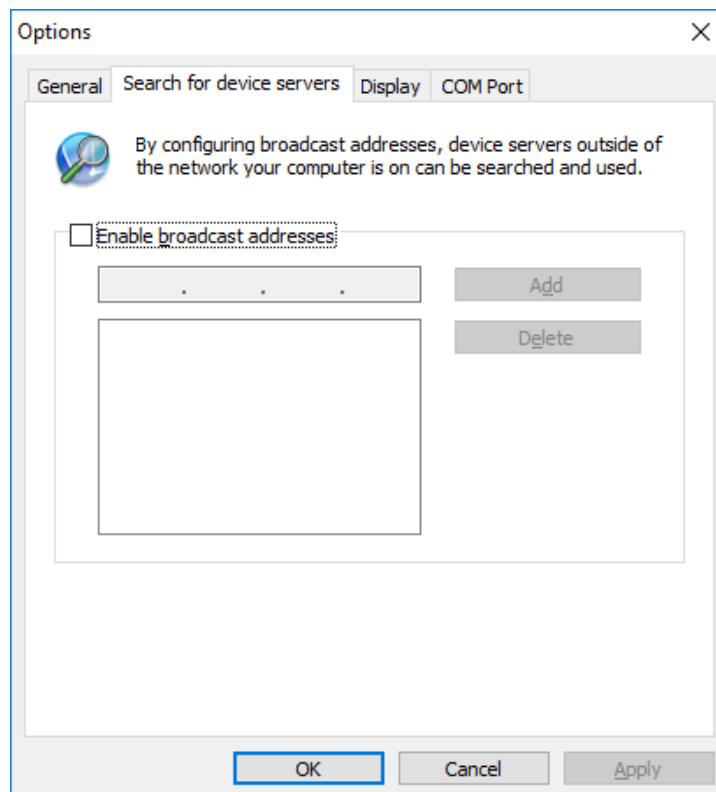
Basic operational settings can be configured.



| | |
|---|--|
| Launch SX Virtual Link for Serial Device Server at Windows startup | Adds SX Virtual Link for Serial Device Server to the Startup folder. When added to the Startup folder, SX Virtual Link for Serial Device Server will automatically start at Windows logon. (Default: On) |
| Don't show SX Virtual Link for Serial Device Server main window on program launch | Starts SX Virtual Link for Serial Device Server as a minimized icon. The minimized icon will be displayed in task tray. (Default: On) |
| Show a balloon notification when an error occurs | Notifies you of a device error by displaying a balloon message in the task tray. (Default: On) |
| Show a confirmation message when disconnecting devices | Displays a confirmation message before disconnecting a USB device via SX Virtual Link for Serial Device Server. (Default: On) |
| Hide the main window if the close button is clicked | Minimizes SX Virtual Link for Serial Device Server if the close button is clicked on the main window. (Default: Off) |
| Main window refresh interval | Sets the refresh interval for the connected device status. (Default: 10 seconds) |

Search for device servers

The broadcast address can be configured.



Enable broadcast addresses

Registers the broadcast addresses used to search for device servers over the network router.

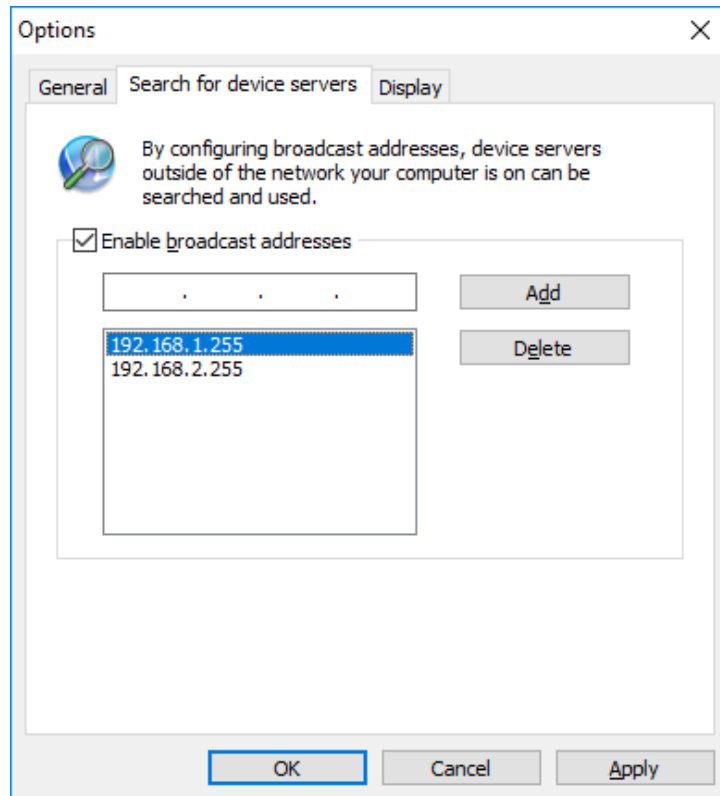
If no broadcast addresses are specified, only device servers in your local segment will be searched.

To register a broadcast address, check **Enable broadcast addresses**, enter the broadcast address into the address field and click the **Add** button. (Up to 16 addresses can be registered.)

To remove an address from the list, select it and click the **Delete** button.



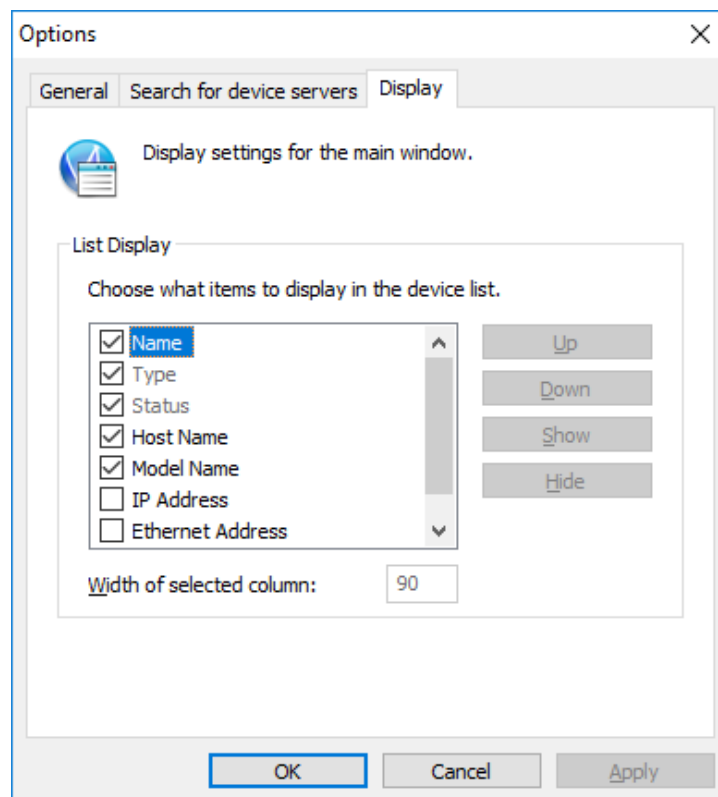
- For example, to register "192.168.1.xxx" (Subnet Mask:255.255.255.0), enter "192.168.1.255" into the address field. In the sample screen below, "192.168.1.255" and "192.168.2.255" are registered to include "192.168.1.xxx" and "192.168.2.xxx" (Subnet Mask:255.255.255.0) addresses for the device server search.



For which broadcast addresses to use for the device server search, please ask your network administrator.

Display

The SX Virtual Link display settings can be configured.



| | |
|------------------|--|
| Name | Displays the name of USB devices connected to the device server. The USB device name can be changed. For details, refer to USB Device Operational Settings. (Default: On) * This check box cannot be cleared. |
| Type | Displays the type of USB devices connected to the device server. (Default: On) * This check box cannot be cleared. |
| Status | Displays the status of USB devices connected to the device server. (Default: On) * This check box cannot be cleared. |
| Host Name | Display the host name of the device server. The host name can be changed from the device server settings. For details, refer to the users manual. (Default: On) |
| Model Name | Displays the model name of the device server. (Default: On) |
| IP Address | Displays the IP Address of the device server. (Default: Off) |
| Ethernet Address | Displays the Ethernet Address of the device server. The Ethernet Address is the 12-digit number found on the side or backside of the device server. (Default: Off) |

| | |
|--------------------------|---|
| Auto Connect | Displays the current status of the USB device's auto-connect settings. Either "Enabled" or "Disabled" is displayed. (Default: Off) |
| Width of selected column | Changes the width of each column heading at the top of the USB device list. * The widths of the Name and Type columns cannot be changed. |

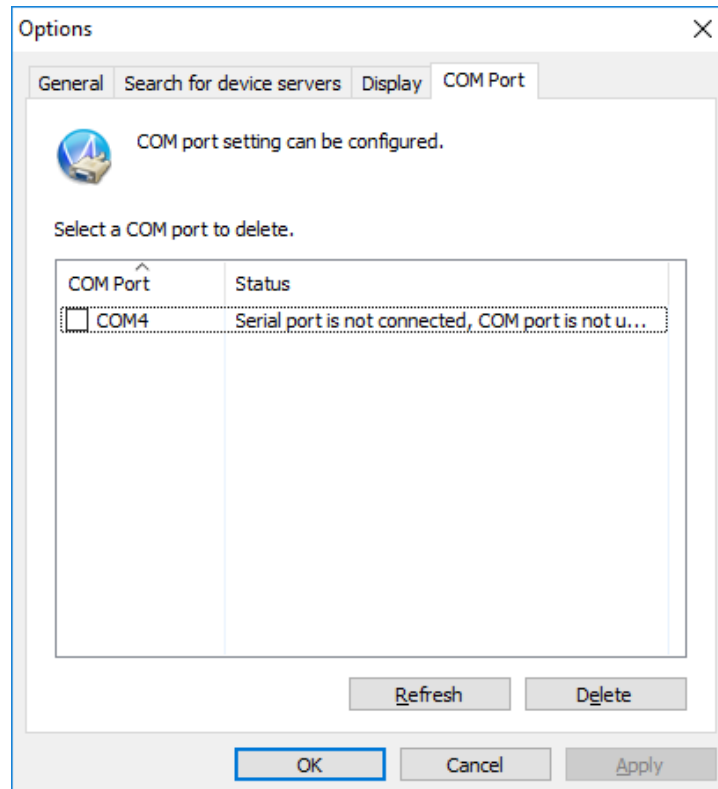


- It is impossible to hide or change the display order of Name, Type and Status.

TIP

COM Port

The COM port can be refreshed or deleted after it is added to SX Virtual Link for Serial Device Server.



| | |
|----------------|--|
| Refresh button | Refreshes the COM port status. |
| Delete button | Deletes the COM ports whose check boxes are checked. |

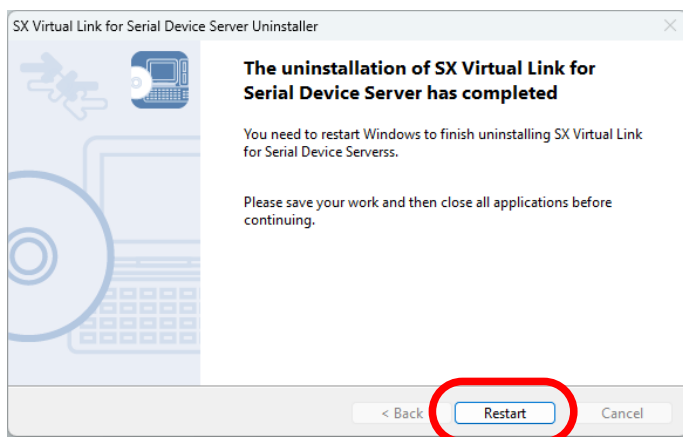
6-5-7. Uninstall

How to uninstall SX Virtual Link for Serial Device Server is explained. If SX Virtual Link for Serial Device Server is uninstalled, it will be removed from the PC.



- To uninstall SX Virtual Link for Serial Device Server, administrator privilege is required.
- In the following procedures, the screen shots captured from Windows 11 are used as examples. Please note that the actual screens or menus may vary depending on your OS.

1. Click **Start - All (Apps)**, and right-click on **SX Virtual Link for Serial Device Server** and click **Uninstall**.
2. When **Installed apps** is displayed, select **SX Virtual Link for Serial Device Server** from the list and click **Uninstall**.
3. A confirmation dialog is displayed. Click **Yes** to start the uninstallation.
4. When the below window is displayed, click **Restart**.



SX Virtual Link for Serial Device Server has been uninstalled.

7. Troubleshooting

7-1. Problems During the Setup

SD-330AC is not displayed in the search result of Serial Device Server Setup.

When SD-330AC is not displayed in the search result of Serial Device Server Setup, the cause need to be determined from the installation status, network environment, and status of PC used for the configuration of SD-330AC. When using a wireless LAN product, please also refer to the **Wireless LAN Problems** as described later.

SD-330AC or the Ethernet Hub SD-330AC is connected to may have a problem regarding connection, power transmission, or operation.

| | |
|----------|--|
| Solution | Please check the LED status of SD-330AC and the Ethernet Hub SD-330AC is connected to. If the LED indicates improper status, replace the AC plug and other cables, and reboot the connected devices. |
|----------|--|

The startup of SD-330AC may not have been completed.

| | |
|----------|--|
| Solution | It takes up to 30sec for SD-330AC to get ready after it is powered on. Please wait until SD-330AC becomes ready and then click the Search in the Serial Device Server Setup. |
|----------|--|

SD-330AC may not be in the same network segment (environment without a router) as your PC.

| | |
|----------|--|
| Solution | During the initial configuration, place SD-330AC and PC in the same network segment. |
|----------|--|

If SD-330AC has been used in another network, it may have the settings not allowing the communication with your PC.

| | |
|----------|---|
| Solution | Please reset SD-330AC to the factory default setting. Refer to Reset to Factory Default for details. |
|----------|---|

Security software such as firewall may be interrupting the communication with SD-330AC.

| | |
|----------|--|
| Solution | Please abort your security software. Refer to FAQ in our website (https://www.silextechnology.com/) for details on how to abort security software. |
|----------|--|

Communication error occurs when configuring with Serial Device Server Setup.

When a communication error occurs during Serial Device Server Setup, the cause needs to be determined from the settings of the PC used for the configuration.

SD-330AC may not be in the same network segment (environment without a router) as your PC.

| | |
|----------|--|
| Solution | During the initial configuration, place SD-330AC and PC in the same network segment. |
|----------|--|

In the environment where there is DHCP server, the DHCP server may have configured the IP address of the different segment to a PC.

| | |
|----------|--|
| Solution | Please select Obtain an IP address automatically at Internet Protocol (TCP/IP) Properties of the PC. Otherwise connect the PC and SD-330AC to the standalone Ethernet Hub and see how it works. |
|----------|--|

If SD-330AC has been used in another network, it may have the settings not allowing the communication with your PC.

| | |
|----------|---|
| Solution | Please reset SD-330AC to the factory default setting. Refer to Reset to Factory Default for details. |
|----------|---|

How should I determine the way to assign an IP address to SD-330AC?

There are two ways to assign an IP address to SD-330AC; one is to Get IP address automatically from DHCP server and the other is to Assign IP address manually. Choose the way to assign an IP address according to your environment.

When there is a DHCP server in the network environment:

| | |
|----------|--|
| Solution | You can use Get IP address automatically from DHCP server. As SD-330AC is set by default to Get IP address automatically, SD-330AC will obtain an IP address appropriate to your network environment from the DHCP server just by powering up SD-330AC. Refer to Reset to Factory Default for details on how to reset SD-330AC to the factory default settings. |
|----------|--|

When there is no DHCP server in the network environment, or when you do not prefer getting an IP address from DHCP server:

| Solution | <p>Please use Assign IP address manually. Keep in mind of the following points regarding the IP address to assign to SD-330AC.</p> <ul style="list-style-type: none"> * Assign an IP address unique in the network. * Assign an IP address that has the same address class as the PC that will use SD-330AC. e.g. When an IP address of the PC is "192.168.0.xx", assign an address such as "192.168.0.100" that is not used by other network devices. <p>(Tips about the IP address)</p> <ul style="list-style-type: none"> * An IP address is a unique number for identifying network devices. An IP address is indicated with four numbers divided by a period (.), for example "192.168.0.1". The integer from 0-255 is used for each number. * An IP address is, depending on the number assigned, categorized to 3 classes below. * Numbers making up the IP address are either network numbers indicating network, or host numbers indicating each network device; each number indicates the different meaning based on the IP address class. Each class is categorized as the following diagram which is indicating a network number as n, and a host number as u. An IP address with the same network number must be assigned to the network devices in the same network segment. * There is an address range in the IP address called the private address that could be used freely. In the LAN environment not directly connected to the internet, an IP address is assigned within the range of the private address. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">First 1 digits in IP address</th> <th style="width: 10%;">Class</th> <th style="width: 20%;">Definition of IP address n: network number u: host number</th> <th style="width: 20%;">Size of the network to be used</th> <th style="width: 30%;">Private address</th> </tr> </thead> <tbody> <tr> <td>0 - 127</td> <td>A</td> <td>n.u.u.u</td> <td>Large network</td> <td>10.0.0.0 - 10.255.255.255</td> </tr> <tr> <td>128 - 191</td> <td>B</td> <td>n.n.u.u</td> <td>Mid-size network</td> <td>172.16.0.0 - 172.31.255.255</td> </tr> <tr> <td>192 - 223</td> <td>C</td> <td>n.n.n.u</td> <td>Small network</td> <td>192.168.0.0 - 192.168.255.255</td> </tr> </tbody> </table> | First 1 digits in IP address | Class | Definition of IP address n: network number u: host number | Size of the network to be used | Private address | 0 - 127 | A | n.u.u.u | Large network | 10.0.0.0 - 10.255.255.255 | 128 - 191 | B | n.n.u.u | Mid-size network | 172.16.0.0 - 172.31.255.255 | 192 - 223 | C | n.n.n.u | Small network | 192.168.0.0 - 192.168.255.255 |
|------------------------------|---|---|--------------------------------|---|--------------------------------|-----------------|---------|---|---------|---------------|---------------------------|-----------|---|---------|------------------|-----------------------------|-----------|---|---------|---------------|-------------------------------|
| First 1 digits in IP address | Class | Definition of IP address n: network number u: host number | Size of the network to be used | Private address | | | | | | | | | | | | | | | | | |
| 0 - 127 | A | n.u.u.u | Large network | 10.0.0.0 - 10.255.255.255 | | | | | | | | | | | | | | | | | |
| 128 - 191 | B | n.n.u.u | Mid-size network | 172.16.0.0 - 172.31.255.255 | | | | | | | | | | | | | | | | | |
| 192 - 223 | C | n.n.n.u | Small network | 192.168.0.0 - 192.168.255.255 | | | | | | | | | | | | | | | | | |

An error message is displayed when installing SX Virtual Link for Serial Device Server.

An older version of SX Virtual Link for Serial Device Server may already be installed on the PC.

| | |
|----------|---|
| Solution | If SX Virtual Link for Serial Device Server Ver.3.3.0 is installed on your PC, you cannot install the newer version of SX Virtual Link for Serial Device Server. Remove the older version first and try installing the newer version again. |
|----------|---|

Is it possible to install "SX Virtual Link" (USB device management utility) and "SX Virtual Link for Serial Device Server" (serial device management utility) on the same PC?

It is possible to install "SX Virtual Link" and "SX Virtual Link for Serial Device Server" on the same PC. However, please note that "SX Virtual Link for Serial Device Server" can replace "SX Virtual Link". You can manage both USB devices and serial devices, including discovering, linking to and unlinking from them using "SX Virtual Link for Serial Device Server".

| | |
|----------|---|
| Solution | You can install "SX Virtual Link for Serial Device Server" on a PC which has "SX Virtual Link" already installed. However, if "SX Virtual Link" is installed on a PC which has "SX Virtual Link for Serial Device Server" already installed, you will not be able to link to serial devices. Remember that "SX Virtual Link for Serial Device Server" can be used to discover, link to and unlink from both USB devices and serial devices. If "SX Virtual Link for Serial Device Server" is installed on your PC, do not install "SX Virtual Link". |
|----------|---|

7-2. Problems While Using SD-330AC


Serial devices are not displayed or temporarily displayed in SX Virtual Link for Serial Device Server.

If serial devices are not displayed in SX Virtual Link for Serial Device Server, you need to check the cable connection as well as the network settings between SD-330AC and your PC.

SD-330AC or the Ethernet Hub SD-330AC is connected to may have a problem regarding connection, power transmission or operation.

| | |
|----------|--|
| Solution | Please check the LED status of SD-330AC and the Ethernet Hub SD-330AC is connected to. If the LED indicates improper status, replace the AC plug and other cables, and reboot the connected devices. |
|----------|--|

The startup of SD-330AC may not have been completed.

| | |
|----------|---|
| Solution | It takes up to 30sec for SD-330AC to get ready after it is powered on. Please wait until SD-330AC becomes ready, and then click the Refresh button  in SX Virtual Link for Serial Device Server again. |
|----------|---|

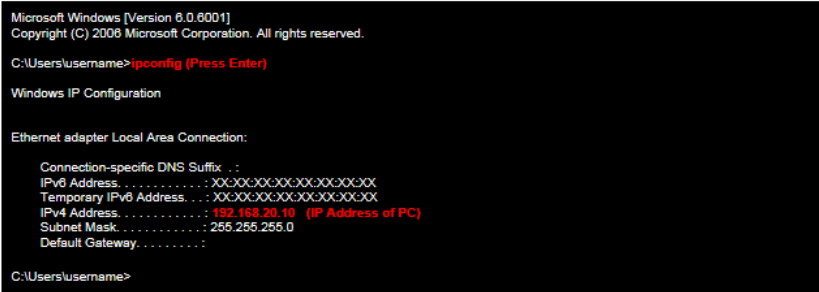
Security software such as firewall may be interrupting the communication with SD-330AC.

| | |
|----------|---|
| Solution | Please add SX Virtual Link for Serial Device Server to the exception list in your security software. Please refer to the FAQ on our website (https://www.silextechnology.com/) for details on adding an application to the exception list. |
|----------|---|

An IP address unable to communicate with your PC may be assigned to SD-330AC.

| | |
|----------|---|
| Solution | <p>First, check the IP Address of your PC. To check the IP Address, use the Windows Command Prompt.</p> <ol style="list-style-type: none"> 1. Select Start - All Programs - Accessories - Command Prompt. 2. When the Command Prompt is started, execute the ipconfig command. |
|----------|---|

Example of executing the **ipconfig** command



```

Microsoft Windows [Version 6.0.6001]
Copyright (C) 2006 Microsoft Corporation. All rights reserved.

C:\Users\username>ipconfig (Press Enter)

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . :
    IPv6 Address. . . . . : :::::
    Temporary IPv6 Address. . . . . : :::::
    IPv4 Address. . . . . : 192.168.20.10 (IP Address of PC)
    Subnet Mask. . . . . : 255.255.255.0
    Default Gateway. . . . . :


C:\Users\username>

```

Check that the IP Address of the PC is a proper address for communicating with the IP Address of SD-330AC.

If the PC and SD-330AC are in the same network segment but use a different network number in their addresses, you need to change either the address of the PC or SD-330AC. Also, if there is a router between the PC and SD-330AC, check that the default gateway address is properly configured.

The IP address assigned to SD-330AC may be in use by another network device.

| | |
|----------|---|
| Solution | <p>First, turn off SD-330AC and open the Windows Command Prompt. Ping the IP address of SD-330AC.</p> <ol style="list-style-type: none"> 1. Select Start - All Programs - Accessories - Command Prompt. 2. When the Command Prompt appears, execute the ping command. <p>Example of executing the ping command when the IP address of SD-330AC is 192.168.20.20</p>  <p>If there is a reply while SD-330AC is turned off, it means there is another network device using the same IP address as SD-330AC. In such a case, change the IP address of either SD-330AC or the other network device.</p> |
|----------|---|

A serial cable used to connect SD-330AC and a serial device may not be plugged in correctly.

| | |
|----------|--|
| Solution | Please check that the serial cable is properly plugged into SD-330AC and the serial device. If you have a spare serial cable, replace the cable. |
|----------|--|

I cannot communicate with a serial device.

If you cannot communicate with the serial device connected to SD-330AC, you need to check the communication settings on SD-330AC and the serial communication software.

A serial cable used to connect SD-330AC and a serial device may not be plugged in correctly.

| | |
|----------|--|
| Solution | Please check that the serial cable is properly plugged into SD-330AC and the serial device. If you have a spare serial cable, replace the cable. |
|----------|--|

Serial communication settings may differ between the serial device and serial communication software.

| | |
|----------|---|
| Solution | When you are using SX Virtual Link for Serial Device Server to communicate with a serial device, the serial communication settings may differ between the serial device and serial communication software. If the serial communication settings are different between them, you may not be able to communicate with the serial device. Also, output serial data may not be transferred correctly. Check the settings on the serial communication software and match it with those used in the serial device. For details on how to change the settings on your serial communication software, refer to the operation manual that came with it. |
|----------|---|

Serial communication settings may differ between SD-330AC and the serial device.

| | |
|----------|---|
| Solution | If you are using Ecable Mode or Raw TCP Connection Mode to communicate with a serial device, the serial communication settings may differ between SD-330AC and the serial device. If the serial communication settings are different between them, you may not be able to communicate with the serial device. Also, output serial data may not be transferred correctly. You can change the serial communication settings of SD-330AC from the Web page. For details on how to change the settings on the Web page, refer to Configure Serial Port Settings or Configuration Item List - Serial Port Configuration . |
|----------|---|

When using SD-330AC in Ecable Mode, the destination IP address or TCP port number settings may be incorrect.

| | |
|----------|--|
| Solution | In Ecable Mode, two SD-330AC's must be configured with the proper IP addresses to communicate with each other, and the same TCP port number should be used for both. If these settings are different between them, serial communication may fail due to a network connection not being established. For detailed settings to use SD-330AC in Ecable Mode , refer to Ecable Mode (Link to the Registered Device) - 2. Before You Begin . |
|----------|--|

When using SD-330AC in Raw TCP Connection Mode, the TCP port number may be different between SD-330AC and the application program.

| | |
|----------|--|
| Solution | In Raw TCP Connection Mode, SD-330AC and the application program should be configured with the same TCP port number. If this setting is different between them, serial communication may fail due to a network connection not being established. For detailed settings to use SD-330AC in Raw TCP Connection Mode , refer to Raw TCP Connection Mode (Link to Serial Device Using TCP Raw Port) - 2. Before You Begin . |
|----------|--|

SD-330AC turns on in a wireless LAN mode although it is connected to a wired LAN using a network cable.

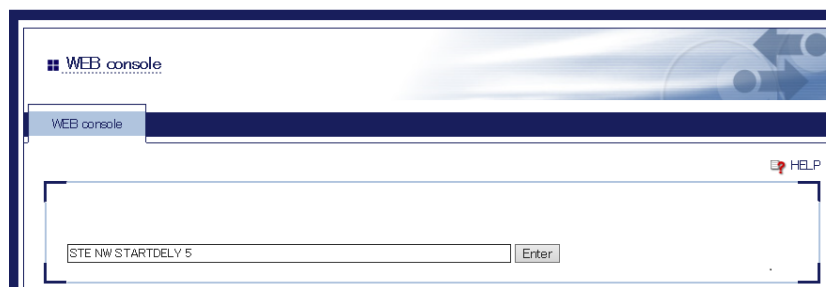
If SD-330AC is powered on while it is connected to a 10BASE-T Ethernet HUB using a network cable, SD-330AC could turn on in a wireless LAN mode.

Solution

Extend the amount of time to recognize a wired LAN so that SD-330AC can turn on in wired LAN mode.

The instructions below provide an example of how to set "5 sec" for the amount of time to recognize a wired LAN.

1. Access the SD-330AC Web page and click **WEB console** from the left menu. Enter the **SET NW STARTDELAY 5** to the field and click **Enter**.



2. Enter **SAVE** to the field and click **Enter**. To check the setting, enter **SHOW NW STARTDELAY** to the field and click **Enter**. The current setting is displayed.
3. When the configuration is completed, click **Restart** under **Maintenance** to restart SD-330AC.

7-3. Wireless LAN Problems

Is there any information I should check before configuring SD-330AC?

To connect SD-330AC in Infrastructure mode, please check the following configuration information of the Access Point.

| | |
|-------------------------|---|
| SSID (ESSID) | ID to identify the Access Point. |
| Encryption requirements | Whether encrypted communication with the Access Point is required or not. |
| Encryption mode | Encryption type (WEP, WPA, WPA2 and etc.) in case it is required. |
| Encryption key | Key necessary for encryption. WEP key, when using WEP encryption. Pre-Shared Key, when using WPA/WPA2 encryption. |
| Key index | Which key from 1 to 4 is enabled, when using a WEP key. |
| Other security function | Information for a security function configured to an Access Point. e.g. MAC address filter if a security function is configured to the Access Point, configuration of the Access Point needs to be changed to allow the communication with SD-330AC. |

Does SD-330AC support the auto-connection function of the Access Point?

- * **SD-330AC does not support proprietary auto-connection function of the Access Point implemented by each manufacturer.**

If the environment setting of an Access Point has been set using the auto-connection function of the Access Point, please check the configuration information listed in the previous section. If there is any unclear information, configuration of the Access Point needs to be changed manually.

SD-330AC can be used and connected via wired LAN, but cannot be communicated via wireless LAN.

Please check the operation status and configuration of SD-330AC.

SD-330AC may have been started with wired LAN mode.

| | |
|----------|---|
| Solution | When the network cable is connected to SD-330AC, it starts with wired LAN mode. If an Ethernet cable is connected to SD-330AC, unplug the network cable and restart SD-330AC. |
|----------|---|

Wireless LAN configuration of SD-330AC may not be suitable to your environment.

| | |
|----------|--|
| Solution | Connect a network cable to SD-330AC and check the wireless LAN settings. |
|----------|--|

Connection is interrupted and disconnected.

If your wireless LAN is interrupted and disconnected, SD-330AC may be installed at a location subject to weaker radio wave signals.

| | |
|----------|--|
| Solution | Please reconsider the location of installation and condition of use. |
|----------|--|

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