

Projection Assistant Software for Education Market

SX Virtual Link Display for Education

User's Manual



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1. Introduction

This manual provides information on how to use the SX Virtual Link Display for Education.

1-1. Introduction

About the notation

This manual uses the following symbols to indicate specific information for operating SX Virtual Link Display for Education. Please read the following carefully before using SX Virtual Link Display for Education.



Note

This symbol indicates information that is useful when using SX Virtual Link Display for Education.



TIP

This symbol indicates important information that needs to be observed when operating SX Virtual Link Display for Education.

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.
- Although every effort was made to prepare this manual with the utmost accuracy, Silex Technology will not be held liable for any damages as a result of errors, setting examples, or other content.

Trademarks

- Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Other company names and product names contained in this manual are trademarks or registered trademarks of their respective companies.

2.

About SX Virtual Link Display for Education

2-1. Operating Environment

Operating Environment

Supported OS

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



- SX Virtual Link Display for Education runs as a desktop application on Windows 8 or newer.
- Windows RT is not supported.
- Fast User Switching Function is not supported.

Target Products

Wireless LAN Access Point for interactive image transfer (hereinafter "classroom AP")

Compatible classroom AP: SX-ND-4350WAN Plus



- Target product is the Silex Technology's Access Point with an interactive image transfer feature.
- SKY-AP-300AN and SKY-AP-301AN are not supported.

Supported Devices

- The screen can be projected onto electronic blackboards, projectors, monitors or digital terrestrial broadcasting TVs by connecting them to HDMI interface of the classroom AP.
- The classroom AP can be used as Access Point that can connect wireless station devices (e.g. tablet devices).
- USB devices can be connected to USB ports of the classroom AP.



Note

- For further information on compatible products, please visit our homepage.

URL	
USA	http://www.silexamerica.com/
Europe	http://www.silexeurope.com/

2-2. Software Features

SX Virtual Link Display for Education is the projection assistant utility that is used at education field with Silex Technology's classroom APs. It has features to ease use of classroom APs at classroom of schools. There are two types of utility as follows.

SX Virtual Link Display for Education (for Teachers)

This program is to be installed to PC or tablet device of the teacher to control following operations in a class.

- Starting/Finishing the class
- Starting/Finishing projection of the teacher's PC on electronic blackboard
- Showing the student's PC screens in an enlarged/split view
- Disallowing control of the student's PC

SX Virtual Link Display for Education(for Students)

This program is to be installed to PC or tablet device of the student. The student can select the teacher to take a class of and such class can be joined by one-click.

SX Virtual Link Display for Education (for Teachers) Features

SX Virtual Link Display for Education (for Teachers) has following features.

Control of classroom AP

- Classroom APs are detected over network and are shown as a list.
- Request of switching between the PC's screen and standby screen can be sent to the classroom AP.
- Name of classroom AP is displayed. (* The name can be changed on classroom AP's setting.)
- Teacher's PC can automatically be linked to the classroom AP when it is discovered.
- A list of devices connected to the classroom AP is displayed.
- Web page of classroom AP can be displayed.

Making a group of classroom APs

- When there are two or more classroom APs, they can be managed in the specified group.
- It is possible to specify a name to each group.

Option setting

- SX Virtual Link Display for Education (for Teachers) can be started automatically when the operating system is started.
- The main window can be minimized after the teacher's PC is connected to classroom AP.
- The time interval can be specified to refresh the classroom AP status.
- It is possible to specify the search address to discover the classroom AP.

Class mode

- Desktop screens of the student's PC can be shown in a thumbnail view.
- Desktop screen of student's PC can be displayed in a full screen on teacher's PC.
- Multiple desktop screens of student's PC can be displayed in a split view on teacher's PC.
- The teacher can show the specified message onto desktop of student's PC in a full screen to make them pay attention to what the teacher says.
- When desktop screen of the student's PC is shown in an enlarged view or split view, the teacher can draw a line on it with a pen tool as well as save it as a file.

Screen sharing feature

- It is possible to see the screenshots of the screen that is projected by the classroom AP on the student's PC.



- To use the screen sharing feature, the setting needs to be changed on the classroom AP.

SX Virtual Link Display for Education (for Students) Features

SX Virtual Link Display for Education (for Students) has following features.

Joining the class

- Teacher's PCs are detected over a network and shown as a list.
- The students can join the selected class with one click.

2-3. Installing SX Virtual Link Display for Education (for Teachers)

This section explains how to install SX Virtual Link Display for Education (for Teachers) to the teacher's PC.

Installation Flow

Install the following programs to the teacher's PC using the installer of SX Virtual Link Display for Education (for Teachers).

Software programs to install :

- SX Virtual Link Display for Education (for Teachers)
- SXUPTP Driver
- DisplayLink Core Software



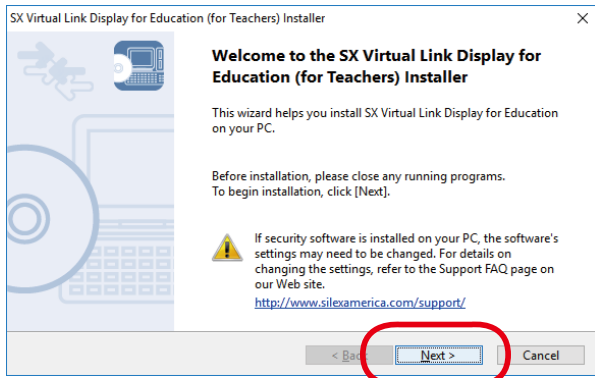
- For installation, you must login to the PC with administrative privileges.

1. Double-click **Cosetup.exe** in the folder of SX Virtual Link Display for Education (for Teachers) that you have downloaded to start the installer.

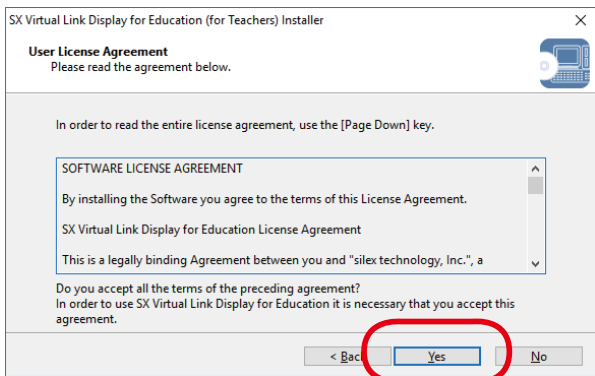


- If SX Virtual Link Display for Education (for Teachers) is already installed and running, installation will stop. Be sure to close SX Virtual Link Display for Education (for Teachers) before you begin.
- The **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

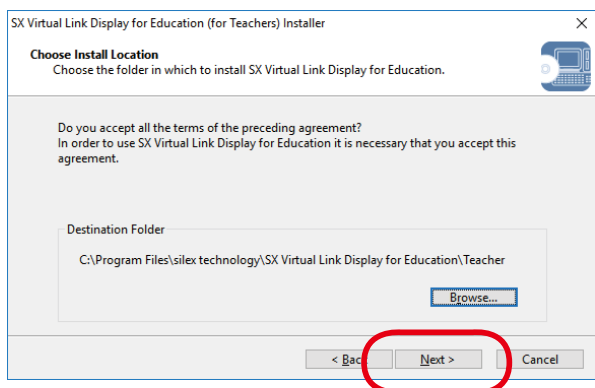
2. When the installation wizard is displayed, click **Next**.



3. Read the software license notes and click **Yes** when you agree with the terms and conditions.



4. Select a folder to install the SX Virtual Link Display for Education into and click **Next**.



Note

- By defaults, the SX Virtual Link Display for Education is installed to **(C:\Program Files) \silex technology\ SX Virtual Link Display for Education\Teacher** on the PC.

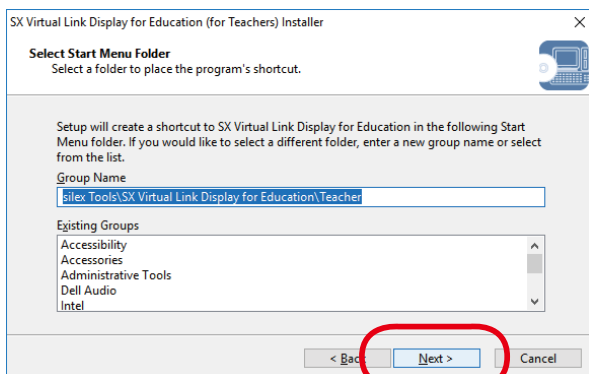
- By clicking **Browse**, you can change the folder to install the SX Virtual Link Display for Education into.



- Use of following characters is prohibited. It causes an error.

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

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



Note

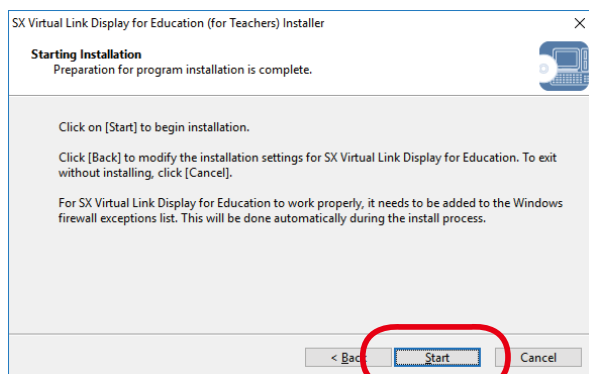
- By defaults, the group name is set as **silex Tools\SX Virtual Link Display for Education\Teacher**.



- Use of following characters is prohibited. It causes an error.

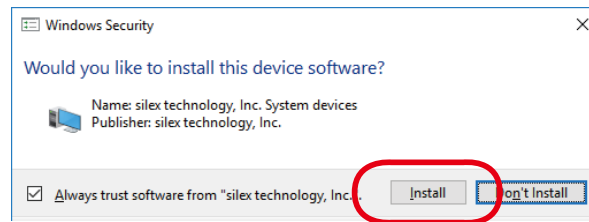
- (1) Marks or symbols such as [/] [:] [*] [?] ["] [<] [>] [[]]
- (2) ¥¥ (two consecutive yen marks)
- (3) .. (two consecutive periods)
- (4) ' ' (there is a blank on the last)

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

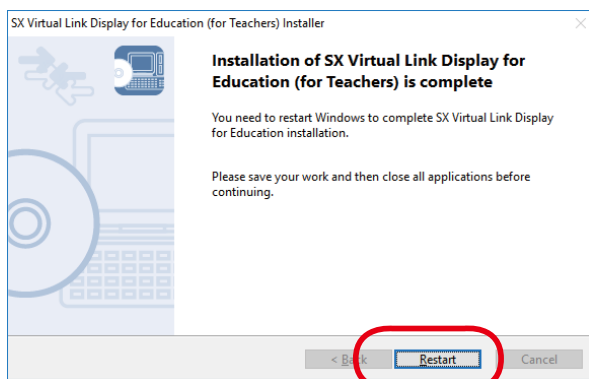




- If the Windows security message below is displayed, click **Install**.



7. When installation is completed, click **Restart**.



- Be sure to restart the PC before using SX Virtual Link Display for Education (for Teachers).

2-4. Installing SX Virtual Link Display for Education (for Students)

This section explains how to install SX Virtual Link Display for Education (for Students) to the student's PC.

Installation Flow



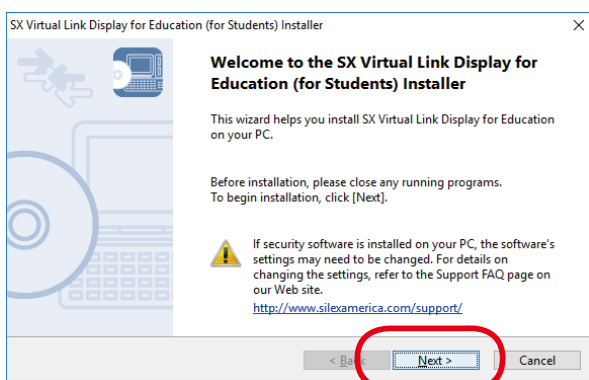
- For installation, you must login to the PC with administrative privileges.

1. Double-click **Cosetup.exe** in the folder of SX Virtual Link Display for Education (for Students) that you have downloaded to start the installer.

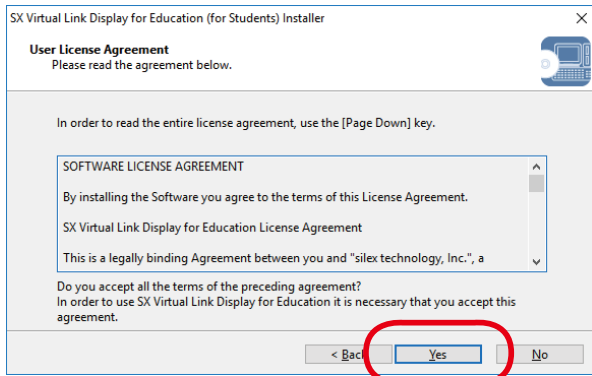


- If SX Virtual Link Display for Education (for Students) is already installed and running, installation will stop. Be sure to close SX Virtual Link Display for Education (for Teachers) before you begin.
- The **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

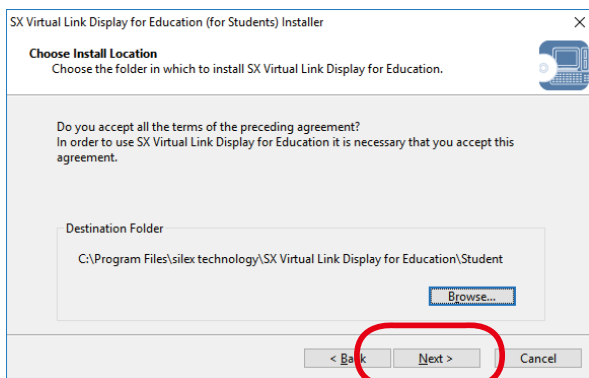
2. When the installation wizard is displayed, click **Next**.



3. Read the software license notes and click **Yes** when you agree with the terms and conditions.



4. Select a folder to install the SX Virtual Link Display for Education into and click **Next**.



Note

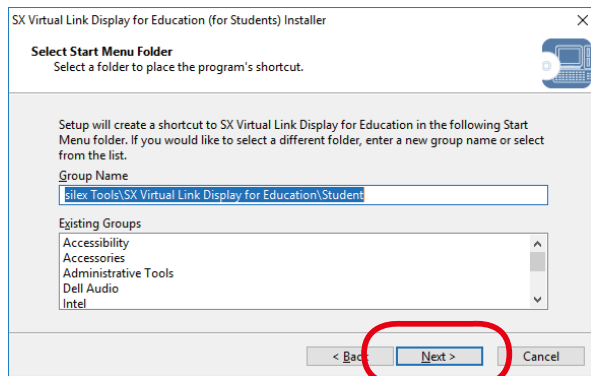
- By default, the SX Virtual Link Display for Education is installed to **(C:\Program Files) \silex technology\ SX Virtual Link Display for Education\Student** on your PC.
- By clicking **Browse**, you can change the folder to install the SX Virtual Link Display for Education into.



TIP

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

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



Note

- By defaults, the group name is set as **silex Tools\SX Virtual Link Display for Education\Student**.

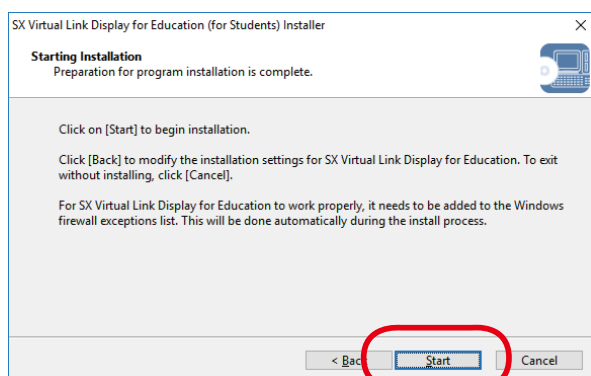


TIP

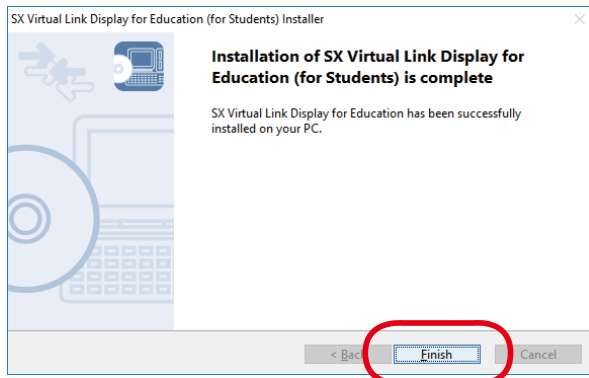
- Use of following characters is prohibited. It causes an error.

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

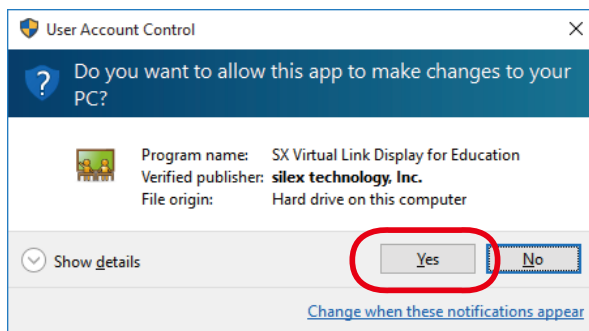
6. Click **Start** to start the installation.



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



8. If the dialog below is displayed, click **Yes**.



- When the dialog is not displayed, click  on the taskbar.

9. SX Virtual Link Display for Education (for Students) is displayed.





3. Using SX Virtual Link Display for Education (for Teachers)

3-1. Starting/Finishing SX Virtual Link Display for Education (for Teachers)

This section explains how to start/finish SX Virtual Link Display for Education (for Teachers).

Starting SX Virtual Link Display for Education (for Teachers)

1. Click the SX Virtual Link Display for Education (for Teachers)'s icon on the desktop  or on the taskbar .



- If SX Virtual Link Display for Education (for Teachers) is not started, start it by following methods.

Note

<Windows 10>

Click **Start - All apps - silex Tools - SX Virtual Link Display for Education - SX Virtual Link Display for Education**.

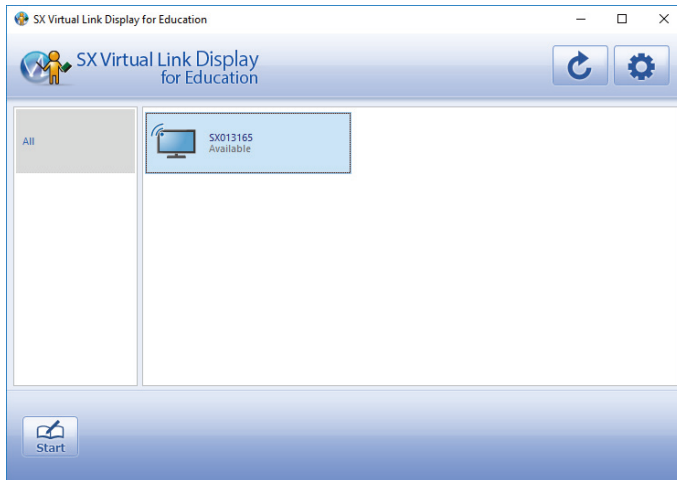
<Windows 8.1 / 8>

Show the **Apps** view from the start screen and click **SX Virtual Link Display for Education**.

<Windows 7>

Click **Start - (All) Programs - silex Tools - SX Virtual Link Display for Education - Teacher - SX Virtual Link Display for Education**.

2. In the SX Virtual Link Display for Education (for Teachers)'s main window, classroom APs are detected and shown in a list.



- If a wireless connection is not established between the teacher's PC and classroom AP, the classroom AP is not displayed on SX Virtual Link Display for Education (for Teachers).

Finishing SX Virtual Link Display for Education (for Teachers)

SX Virtual Link Display for Education (for Teachers) can be finished by following methods.

Main window

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

(1) Clicking the **[X]** button on top right of the window

(2) Pressing **[Alt] + [F4]** keys

* The main window will be minimized depending on the option setting.

Tasktray menu

Clicking **Exit** from the tasktray menu

Standard menu of operating system

Logging out, shutting down or restarting the PC



Note

- If SX Virtual Link Display for Education (for Teachers) is finished using a method other than "**Standard menu of operating system**", the message "**Make sure the USB device is not currently being used before finishing SX Virtual Link Display for Education. If [Yes] is clicked, the USB device will be disconnected.**" is displayed.

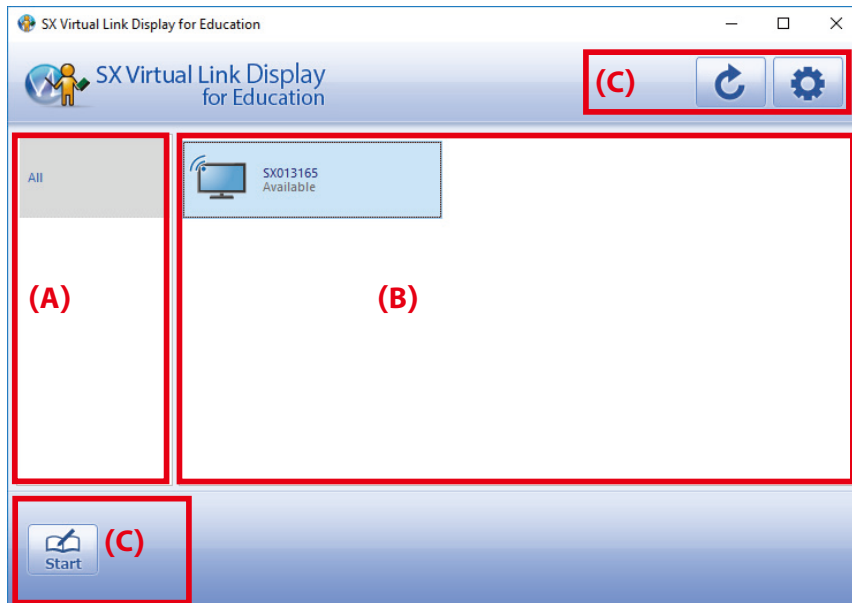
Click **Yes** to finish the utility by disconnecting the USB device.

Click **No** to continue to use the utility.

3-2. Window and Menu

Main Window

In the main window, classroom APs are found and displayed as a list based on the group information that is previously registered. The class can be started using the selected classroom AP.



(A) Group list

Registered groups are displayed as a list.

By default, only **All** is displayed.

- **All** is always displayed as a list of groups.
- **All** shows all detected classroom APs on a list.
- Groups are displayed in an alphabetical order. (**All** is always displayed on bottom of the list.)
- By configuring the **Group setting** at the **Options** window, group can be added or deleted, group name can be changed and classroom AP can be added or deleted to/from the specified group.

(B) Classroom AP list

Classroom APs of the selected group are displayed as a list.

When **All** is selected, all detected classroom APs are displayed.


In the classroom AP list, name and status of each classroom AP is displayed.

- Classroom APs are sorted by the name.
- The name can be changed from the Web page of classroom AP.






If following actions are taken, the message is displayed on a list of classroom APs.

Conditions	Message
When All is selected on the list of groups but no classroom APs are found on network.	No NetDA units are found on network. Please check that NetDA units are powered on and connected properly.
When a group other than All is selected on the list of groups but no classroom APs are registered to that group.	Register NetDA to the XXX group.

Following icons are displayed depending on network mode of classroom AP.

Icon	Meaning
	Shows the classroom APs running on wireless LAN.

Following icons are displayed depending on status of classroom AP.

Icon	Meaning	
	Refreshing status	Refreshing the status of classroom AP.
	Not connected	Classroom AP can be selected and the class can be started.
	Connected by others	Other user is using the classroom AP.
	Overcurrent	Power supply to the USB device is not enough. Unplug the device from classroom AP and restart the classroom AP. * To show this status icon, classroom AP must support overcurrent notification.
	Display is not found	A display (NetDA Video) is not included to classroom AP.
	Network error	No classroom AP are found on network.

(C) Buttons



Start (Alt + L)

Connects to the selected classroom AP. When connection is completed, class mode screen will begin.



Refresh (F5)

Searches for the classroom APs again and refreshes the status.



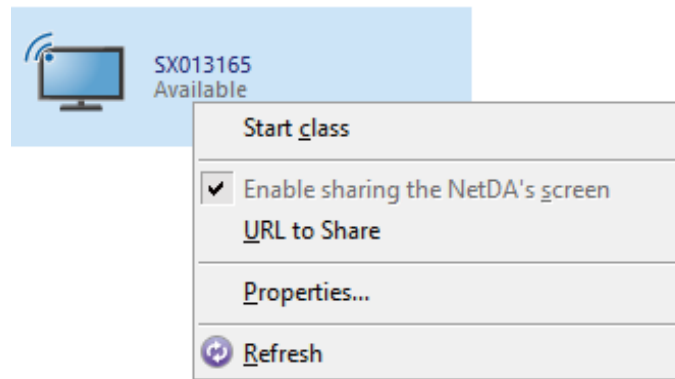
Options (Alt + O)

Opens the option window of SX Virtual Link Display for Education (for Teachers).

In the option window, SX Virtual Link Display for Education (for Teachers) setting can be configured.

Main Window (Right-click Menu)

If the classroom AP is right-clicked, the menu is displayed.



Item	Details
Start class	Starts the class using the selected classroom AP.
Enable sharing the NetDA's screen	Select whether to use the screen sharing feature. * This setting is disabled when it is disabled on classroom AP.
URL to Share	Shows the URL to see the shared screen. * This setting is disabled when it is disabled on classroom AP.
Properties	Shows the properties window of classroom AP.
Refresh	Refreshes the status of each classroom AP. (Pressing F5 key also refreshes the status).



Note

- If you are using a tablet device, long tap the icon (tap and hold the icon) instead of right-click.

Class Mode Window

After the class is started using the selected classroom AP, the class mode window is displayed. In the class mode window, thumbnails of student's PC screens are displayed as a list.



(A) Student's PC screen list

Shows thumbnails of the student's PC screens as a list when the students have joined the class. The thumbnail size can be changed at **Class mode** tab of the **Options** window.

(B) Buttons



Finish class (Alt + L)

Finishes the class. Main window is displayed after the class is finished.



Show PC screen (Alt + C)

Shows the desktop screen.



Show standby screen (Alt + D)

Shows the standby screen.



Enlarge screen (Alt + E)

Enlarges the desktop screen of student's PC selected from a list.



Split screen (Alt + R)

Shows the desktop screens of multiple student's PCs in a split view. Up to 16 desktop screens of student's PCs can be displayed.



Clear all (Alt + S)

Removes a check from all student's PCs.

**Focus mode (Alt + A)**

Notifies of the focus mode to student's PC.

**Use extended/duplicate mode (Alt + M)**

Switches between mirroring mode and extended mode when the screen is projected.

**Refresh (F5)**

Refreshes a list of student's PC screens.

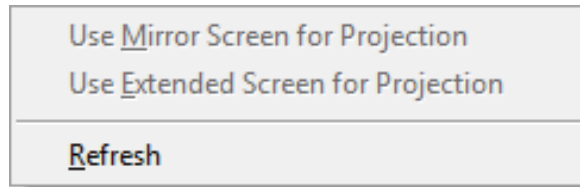
**Options (Alt + C)**

Shows the option setting window of SX Virtual Link Display for Education (for Teachers).

Class Mode Window (Right-click Menu)

Menu on student's PC screen list

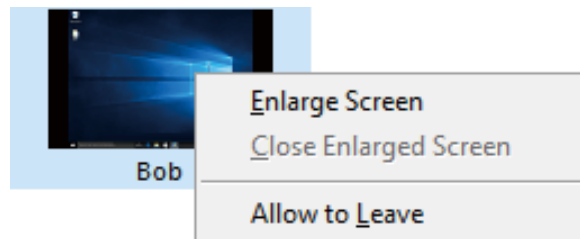
If any blank space is right-clicked on the student's PC screen list (not on the student's PC), menu below is displayed.



Item	Details
Use Mirror Screen for Projection	Starts the mirror screen (duplicate screen) for projection to the connected display.
Use Extended Screen for Projection	Starts the extended screen for projection to the connected display.
Refresh	Refreshes the student's PC screen list.

Right-click menu of student's PC

If the student's PC is right-clicked, menu below is displayed.



Item	Details
Enlarge Screen	Enlarges desktop screen of the selected student's PC.
Close Enlarged Screen	Closes the enlarged screen.
Allow to Leave	Allows the selected students to leave the class.



- If you are using a tablet device, long tap the icon (tap and hold the icon) instead of right-click.

Note

Properties Window

If **Properties** is selected from the right-click menu of classroom AP in the main window or from the taskbar menu, the **Properties** window is displayed.

In the **Properties** window, operating setting of classroom AP can be configured. When configuration is finished, click **OK**.

SX013165 Properties

Settings

NetDA Name: SX013165

☐ Enable auto-connection when new devices are discovered on the NetDA

Detailed Information

Model Name: SX-ND-4350WAN+

Host Name: SX013165

IP Address: 172.25.73.201

Ethernet Address: 00:80:92:01:31:65

List of devices:

Name	Type	Transfer sp...	Status
NetDA Audio	Audio	Full Speed	Available
NetDA Video	Display	Hi Speed	Available

Display the Web page

OK Cancel

(A) NetDA Settings

Operating setting of classroom AP can be configured.

(1) NetDA Name

This is a name configured on the classroom AP and is displayed on the main window.

* This name can be changed via Web page of classroom AP only. It cannot be changed by SX Virtual Link Display for Education (for Teachers).

(2) Enable auto-connection when new devices are discovered on the NetDA

If the check box is checked, classroom APs are automatically connected when they are discovered by SX Virtual Link Display for Education (for Teachers). (Default: OFF)



Note

- If **Enable auto-connection when new devices are discovered on the NetDA** is checked, the class is automatically started when the classroom AP is discovered.

(B) Detailed Information

Network information of classroom AP is displayed.










Item	Details
Model Name	Displays the model name of classroom AP.
Host Name	Displays the host name of classroom AP.
IP Address	Displays the IP Address of classroom AP.
Ethernet Address	Displays the Ethernet Address of classroom AP.

(C) List of devices

Information of USB device connected to classroom AP is displayed.

Item	Details
Name	Displays the type (icon) and name of USB device.
Type	Displays the type of USB device.
Transfer speed	Displays the transfer speed of USB device.
Status	Displays the status of USB device.

USB device icon and type

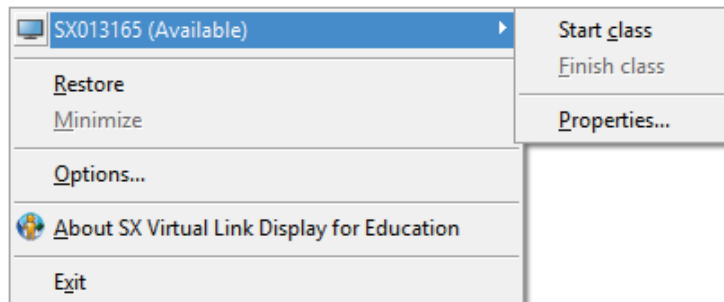
Icon	Type	Details
	Display device	USB devices including "DisplayLink" as the device name
	Audio device	Audio devices such as speakers, etc.
	Multifunction device	Multifunction devices including printers
	Printer	Single function printers
	Imaging device	Imaging devices (scanners)
	Storage device	Storage devices (hard disks, USB thumb drives, etc)
	Mouse / Keyboard	Interface class devices (mice, keyboards, etc)
	Video	Isochronous devices, Web cameras, etc
	Other USB devices	Other devices

(D) [Display the Web page] Button

If this button is clicked, the Web page of classroom AP is displayed.

Tasktray Menu

The tasktray menu provides following controls.

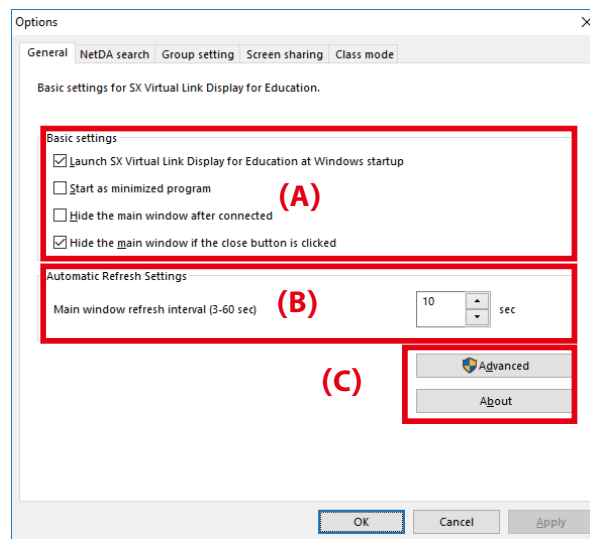


Item	Details	
List of classroom APs	Shows a list of classroom APs that belong to the group selected in the main window. Classroom AP can be connected/disconnected respectively and the properties window of classroom AP can be displayed. Following menu items are displayed for each classroom AP.	
	Start class	Starts the class using the selected classroom AP.
	Finish class	Finishes the class using the selected classroom AP.
	Properties	Shows a properties window of the selected classroom AP.
Restore	Restores the minimized window to original size.	
Minimize	Minimizes the main window. When the display setting of NetDA Video is set to extended mode, it is impossible to minimize the window.	
Options	Shows the option setting (basic setting) window.	
About SX Virtual Link Display for Education	Shows the SX Virtual Link Display for Education (for Teachers) version.	
Exit	Finishes SX Virtual Link Display for Education (for Teachers).	

3-3. Configuring SX Virtual Link Display for Education (for Teachers)

SX Virtual Link Display for Education (for Teachers) Basic Settings

Basic setting of SX Virtual Link Display for Education (for Teachers) can be configured.



(A) Basic settings

Item	Details
Launch SX Virtual Link Display for Education at Windows startup	Adds SX Virtual Link Display for Education (for Teachers) to the Startup folder. When added to the Startup folder, SX Virtual Link Display for Education (for Teachers) will automatically start at Windows logon. (Default: On)
Start as minimized program	Starts SX Virtual Link Display for Education (for Teachers) as a minimized program. (Default: Off) * This setting does not function on a tablet mode of Windows 10.
Hide the main window after connected	Hides the main window when the classroom AP is connected by following methods. (Default: Off) * Following actions will minimize the main window: (1) Clicking the Start button in the main window (2) Double-clicking the classroom AP in the main window (3) Connecting the classroom AP from the tasktray menu
Hide the main window if the close button is clicked	Hides SX Virtual Link Display for Education (for Teachers) when the close button is clicked on the main window. (Default: On)

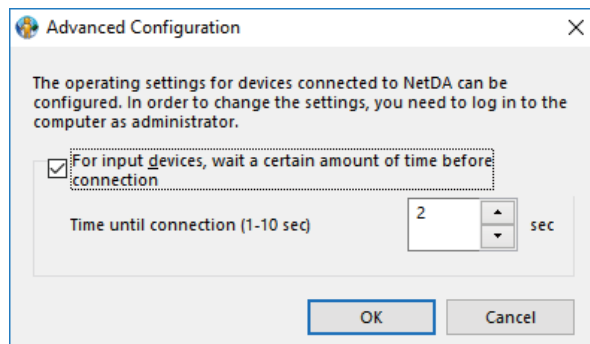
(B) Automatic Refresh Settings

Item	Details
Main window refresh interval	Sets the time interval to refresh status of classroom APs connected to network. The interval setting must be 3-60 sec. (Default: 10 seconds)

(C) Button

(1) Advanced button

If the **Advanced** button is clicked, operating settings for input device and extended display can be configured.



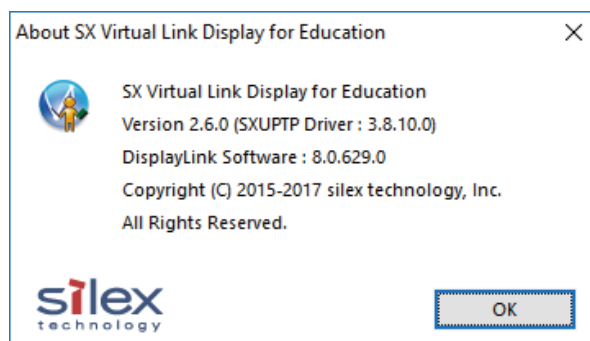
Item	Details
For input devices, wait a certain amount of time before connection	If this setting is enabled, SX Virtual Link Display for Education (for Teachers) waits the specified period of time before it connects to the input device (HID device) attached to the classroom AP. (If this setting is disabled, touch-panel monitors and/or interactive pen displays may become uncontrollable.) (Default: On)
Time until connection (1-10 sec)	When above setting is enabled, the period of time before connection can be configured. (Usually, the default value is recommended to use. When touch-panel monitors and/or interactive pen displays cannot be controlled properly, set this period longer.) (Default: 2 sec)



- When the User Account Control message appears, click **Yes** or **Continue**.

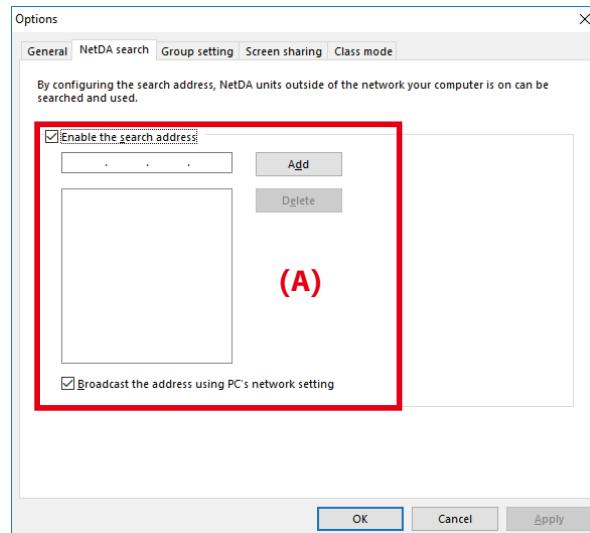
(2) About button

If the **About** button is clicked, the version information of SX Virtual Link Display for Education (for Teachers) is displayed.



Search Address Setting

In the **NetDA search** tab of option setting window, the search address can be configured on SX Virtual Link Display for Education (for Teachers).



(A) Search Address Setting

(1) Enable the search address

Check the checkbox to enable the search address setting. (Default: On)

(2) List of search address

Enter the IP address to search for classroom APs on a different network beyond the router.

How to register the IP address to search:

Check the checkbox at **Enable the search address**, enter an IP address to the address field and click the **Add** button. Up to 64 addresses can be registered.

How to delete the registered IP address:

Select an IP address from the list and click the **Delete** button.

Warning messages

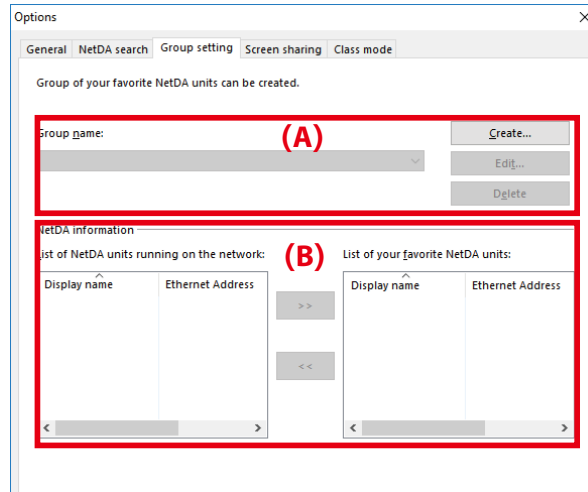
Message	Meanings
The IP address you entered is invalid.	0.0.0.0 was entered to the address field.
IP address 255.255.255.255 cannot be registered.	255.255.255.255 was entered to the address field.
The IP address you entered already exists.	The registered address was entered to the address field.
No more items can be registered.	65th address was entered (up to 64 addresses can be registered).

(3) Broadcast the address using PC's network setting

When plural network interface cards are installed to the PC which SX Virtual Link Display for Education (for Teachers) is installed, broadcast appropriate for the IP address is sent via each network interface card. (Default: On)

Making Group of Classroom APs to Show in the Main Window

In the **Group setting** tab of option setting window, group setting can be configured to divide classroom APs into specified groups when they are shown in the main window.



(A) Group name

(1) Group name

A list of registered groups is displayed.

* The group "All" is not displayed.

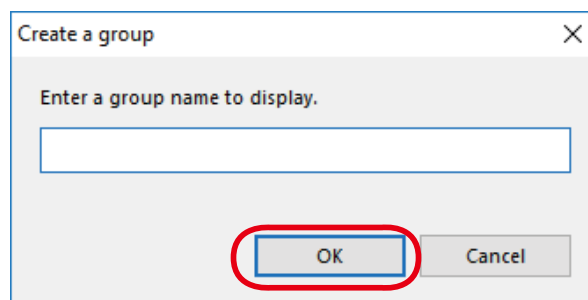
(2) Create button

A new group can be created.

Clicking this button opens a window to create a new group.

How to create a new group:

Click the **Create** button, enter a group name and click **OK**.



Note

- Up to 16 characters can be used.
- There are no restricted characters to use for group name.
- Up to 32 groups can be created.

(3) Edit button

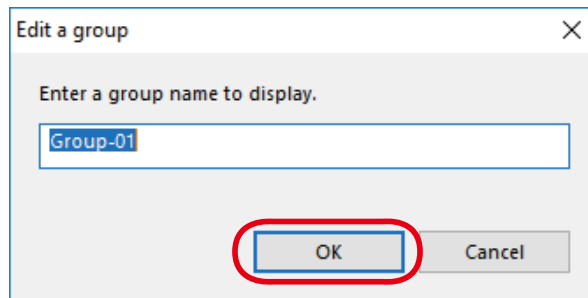
A name of the selected group can be edited.

Clicking this button opens a window to edit a group.

How to change a group name:

Select a group name to change from the list of registered groups and click the **Edit** button.

Change the group name and click **OK**.



- Up to 16 characters can be used.
- There are no restricted characters to use for group name.

Note

(4) Delete button

The selected group can be deleted.

(B) NetDA information

(1) List of NetDA units running on the network:

Shows the classroom APs running on a network.

Display name, **Ethernet Address** and **IP Address** are displayed.

(2) List of your favorite NetDA units:

Shows the classroom APs to register to the group

Display name, **Ethernet Address** and **IP Address** are displayed.



- Be sure to click **OK** or **Apply** for changes to take effect when a new group is created, when group name is changed or when classroom AP registration is changed. When the group name edit is in progress, " *" is added to the group name.

Note

(3) [>>] button

Classroom APs selected on **List of NetDA units running on the network** are added to **List of your favorite NetDA units**.

Adding classroom AP

Select a group from **Group name**, select classroom APs from **List of NetDA units running on the network** and then click [>>] button.

(4) [<<] button

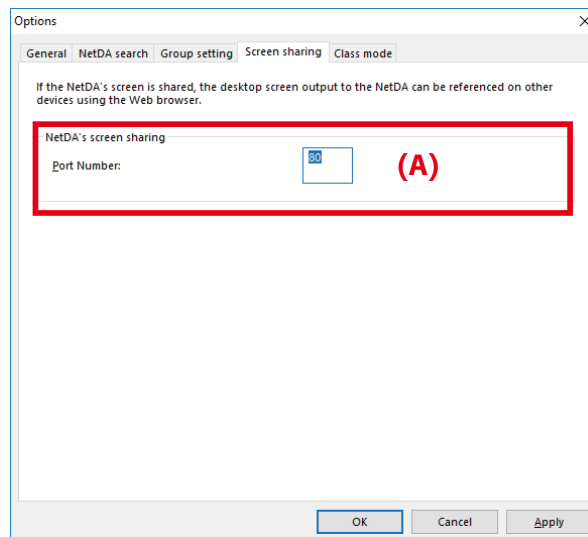
Classroom APs selected on **List of your favorite NetDA units** are removed from the list.

Removing classroom AP

Select a group from **Group name**, select classroom APs from **List of your favorite NetDA units** and then click [<<] button.

Configuring NetDA's Screen Sharing Feature

In the **Screen sharing** tab of option setting window, NetDA's screen sharing feature can be configured.



(A) NetDA's screen sharing

(1) Port Number

Enter the port number to use for NetDA's screen sharing feature.

The port number must be 1-65535.

(Default: 80)

Warning message is displayed in case of following.

Condition	Message
Incompatible port number is entered.	The port number must be between 1 and 65535.
Port number is changed when the classroom AP is connected.	If you change this setting, all NetDA connections will be lost.
Specified port number is already used by other user.	The port to share screen XX cannot be used. Please use the other port.

Class Mode Setting

In the **Class mode** tab of option setting window, class mode setting can be configured.

The screenshot shows the 'Options' dialog box with the 'Class mode' tab selected. The settings are as follows:

- (A) Teacher's name:** A text input field containing 'STUDENT'.
- (B) Handwriting toolbar position:** A dropdown menu set to 'Right end'.
- (C) Screen capture quality of student's PC:** A dropdown menu set to 'Normal'.
- (D) Thumbnail size of student's PC:** A dropdown menu set to 'Small'.
- (E) Message to display when the focus mode is on:** A text input field containing 'Pay attention to the blackboard.'
- (F) Specify where to save the handwritten image:** A checkbox that is checked, with a 'Save As...' button next to it.

At the bottom of the dialog are 'OK', 'Cancel', and 'Apply' buttons.

(A) Teacher's name

Enter a name of teacher. Up to 32 characters can be used.

The entered name will be displayed on SX Virtual Link Display for Education (for Students) that is installed to the student's PC. (Default: user name of the teacher's PC)

(B) Handwriting toolbar position

Specify the position of handwriting toolbar to display in enlarged/split view mode.

(Default: Right end)

Right end: Shows the handwriting toolbar on the right end.

Left end: Shows the handwriting toolbar on the left end.

(C) Display setting of student's PC

(1) Screen capture quality of student's PC

Select the resolution for desktop screen of student's PC to display in split view mode.

(Default: Normal)

High: Show the desktop screen at high resolution. Data size will be larger.

Normal: Show the desktop screen at normal resolution.

Low: Show the desktop screen at low resolution. Data size will be smaller.

(2) Thumbnail size of student's PC

Specify the thumbnail size for student's PC list.

(Default: Small)

Small: Default size. Thumbnail is displayed at 100×62px.

Middle: Middle size. Thumbnail is displayed at 150×93px.

Large: Large size. Thumbnail is displayed at 200×124px.

Extra Large: Largest size. Thumbnail is displayed at 275×170px.

(D) Automatic Refresh Configuration

(1) Time interval to refresh the student's PC list

Specify the interval to refresh thumbnails on student's PC list in 5-180 sec. (Default: 30 sec)

(2) Time interval to refresh the student's PC in full or split screen

Specify the interval to refresh the desktop screen in enlarged/split view mode in 1-60 sec.

(Default: 5 sec)

(E) Message to display when the focus mode is on

Set the message to display on the student's PC when the focus mode is on.

(Default: **Pay attention to the blackboard.**)

(F) Saving handwriting image

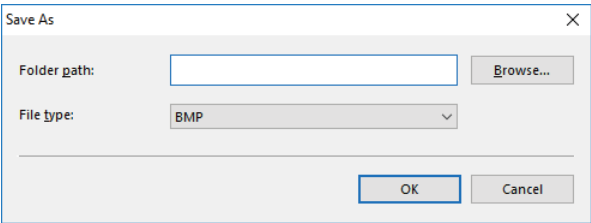
(1) Specify where to save the handwritten image

If checkbox is checked, the handwritten image can be saved to a location specified at **Save As**, when the **Save** button is clicked during a pen mode.

When checkbox is not checked and the **Save** button is clicked during a pen mode, a dialog will appear at which you can select a folder to save the handwritten image. (Default: On)

(2) Save As button

If the **Save As** button is clicked, destination folder and file format for saving can be specified.

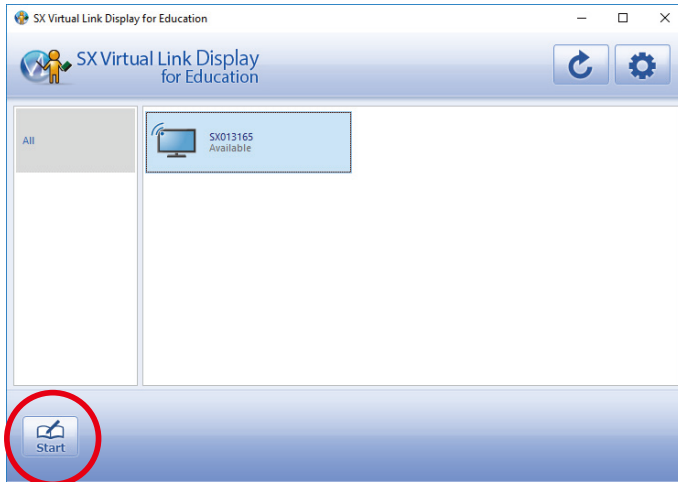


Item	Details
Folder path	Specify the folder to save the handwritten image when the Save button is clicked during a pen mode. The folder can be selected in the dialog displayed by clicking the Browse button. (Default: blank)
File type	Specify the file type to save the handwritten image by selecting from BMP, PNG, JPEG, GIF, TIFF. (Default: BMP)

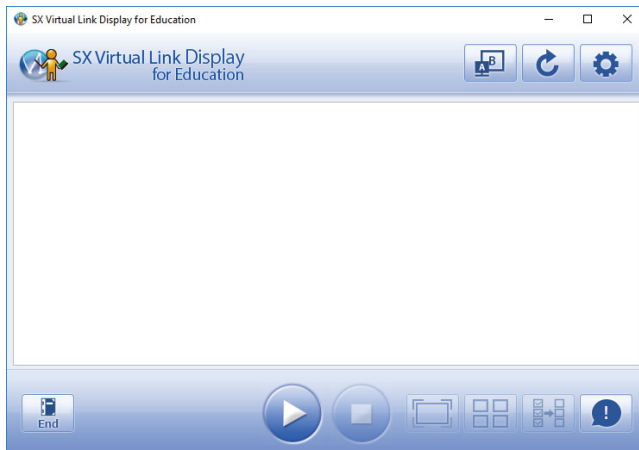
3-4. Starting/Finishing the Class

Starting the Class (Starting Class Mode)

1. Tap the classroom AP to connect from a list and tap the **Start** button.



2. Class mode screen is displayed.



- 3.** When the students have joined the class, the student's PC screens are displayed as a list in the class mode screen.

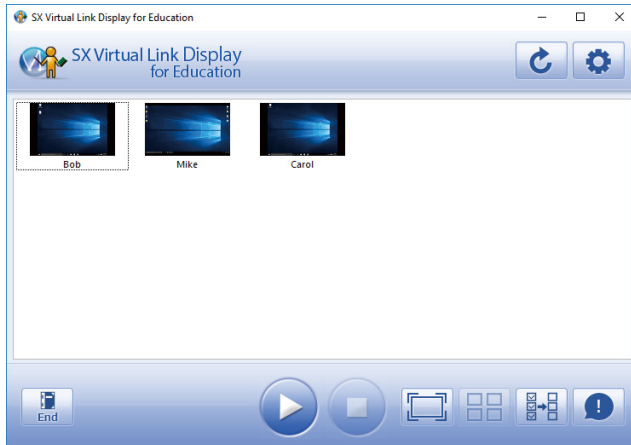


Showing Student's PC (Individual PC Screen)

Following explains how to show desktop screen of the selected student's PC.

How to show desktop screen of the student's PC (1)

1. Select the student's PC to show the desktop from a list and double-tap it.



2. The desktop screen of the selected student's PC is shown on teacher's PC.

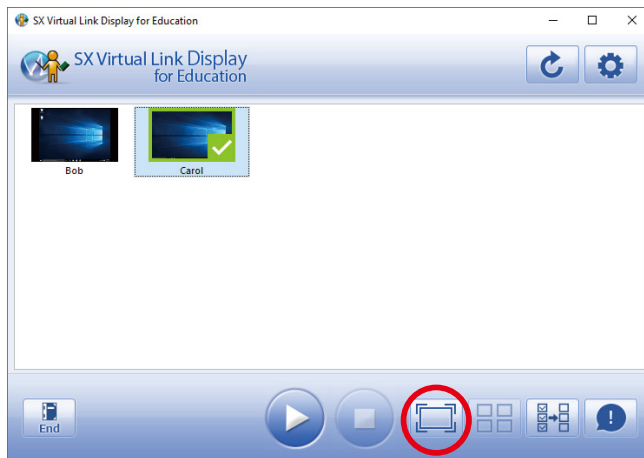


- Double-tap the screen to finish the enlarge view.

Note

How to show desktop screen of the student's PC (2)

1. Tap the student's PC to show the desktop from a list and tap the enlarge screen button.



2. The desktop screen of the selected student's PC is shown on teacher's PC.



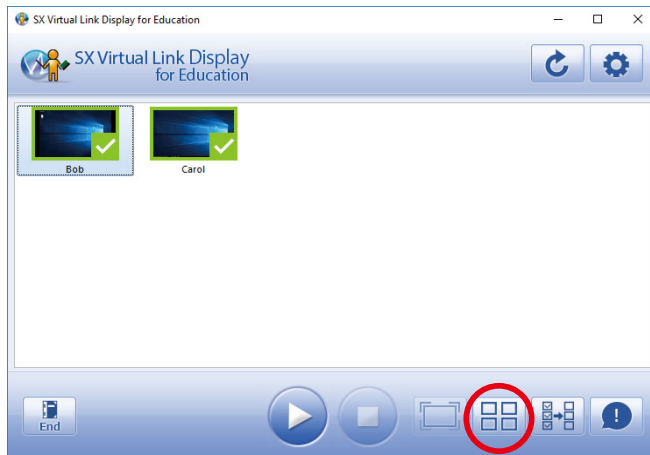
- Double-tap the screen to finish the enlarge view.

Note

Showing Student's PCs in Split View (Multiple PC Screens)

Following explains how to show desktop screens of several student's PCs in a full screen using a split view mode.

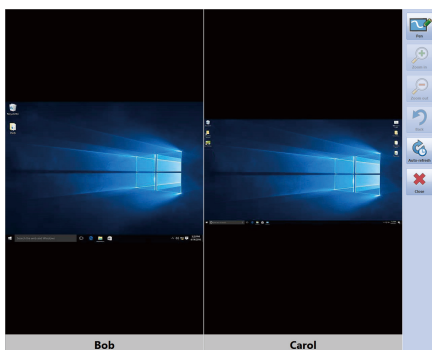
1. During the class mode, select the student's PCs to display from the thumbnail list by tapping them (up to 16 PCs can be selected). When finished, tap the split screen button.



TIP

- When only one student's PC is selected, the split screen button is disabled.

2. The desktop screens of the selected student's PCs are shown on teacher's PC.



Split into 2 screens



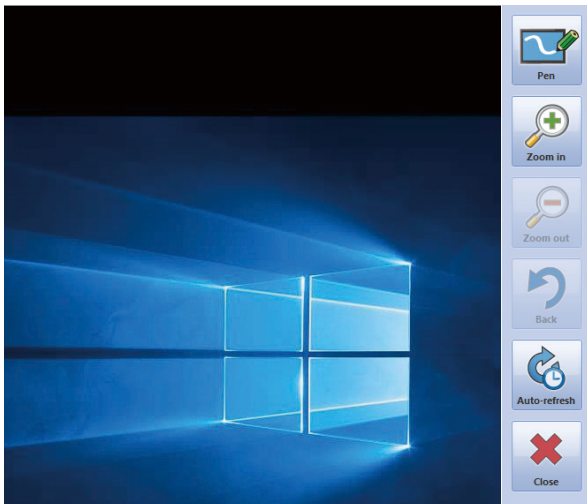
Note

- Double-tap the student's PC to display it in an enlarged view.

Menu Items to Control Student's PC

When the desktop screen of the student's PC is displayed, toolbar is displayed. By controlling the toolbar, it is possible to enlarge the screen as well as draw something on the screen using a pen tool.

Toolbar



Buttons



Pen

Starts the pen mode.



Zoom in

Zooms in the screen (100% - 500%).

This function is available only when the student's PC is displayed in enlarged view mode.



Zoom out

Zooms out the screen.

This function is available only when the student's PC is displayed in enlarged view mode.



Back

Resets to the split view mode when one student's PC is displayed in enlarged view mode.



Auto-refresh

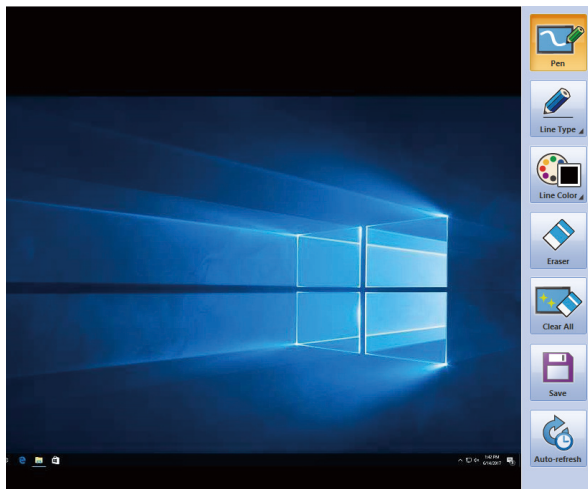
Stops/Starts the auto-refresh.



Close

Finishes the enlarged/split view modes.

Pen Tool



Buttons



Pen

Finishes the pen mode.



Line Type

Opens a dialog to select a pen type and width.

There are two pen types; normal pen (non-transparent) and marker pen (half-transparent), and three types of thickness. (Default: normal pen and thin)

Also, select this to return to the pen mode from the eraser mode.



Line Color

Opens a dialog to select a line color.

The color can be selected from white, red, green, blue, black, yellow, light blue and purple. (Default: black)



Eraser

Starts the eraser mode.

During the eraser mode, drawings described using a pen tool can be erased.



Clear All

Clears all drawings described using a pen tool.



Save

Saves the entire screen image including the drawings described by a pen tool. In the **Save Image** dialog, the screen image can be saved to any locations. If "**Specify where to save the handwritten image**" is enabled at the option setting, the screen image is saved to the specified location.



Auto-refresh

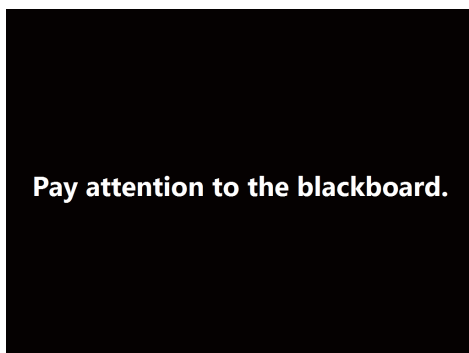
Stops/Starts the auto-refresh.

Focus Mode

1. During the class mode screen, tap the focus mode button.



2. On the student's PC, the desktop screen gets dark and the message below is displayed.



Note

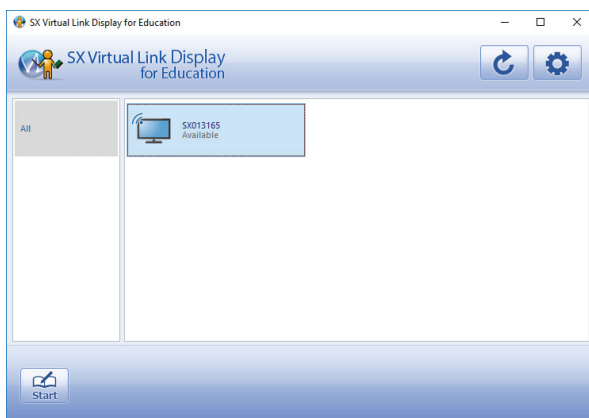
- The message to display can be changed at the **Class mode** tab of option setting window.
- The message is not displayed when the student's PC is in a sleep mode.
- On the student's PC, other programs become uncontrollable during the focus mode.
- When there is the program that is set to always run at the front, such program may be displayed at the front.

Finishing the Class (Back to Main Window)

1. Tab the **End** button to finish the class.



2. The main window is displayed.



Note

- The class can also be finished by selecting **Finish class** at the tasktray menu.

3-5. Other Functions

Using NetDA Screen Sharing Feature

When a display device is duplicated by DisplayLink, the screenshot of such display device can be seen on other devices (Windows, Mac, smart phone) using the NetDA screen sharing feature. The screenshot can be seen using the Web browser on each device.

To use the NetDA screen sharing feature, it needs to be enabled at the configuration page of classroom AP. When the feature is enabled and such classroom AP is connected, NetDA screen sharing feature will become active. The URL to share a screen can be found on SX Virtual Link Display for Education (for Teachers).

3-6. Uninstalling Software

Following explains how to uninstall (delete) SX Virtual Link Display for Education (for Teachers) and display driver.

Uninstalling SX Virtual Link Display for Education (for Teachers)

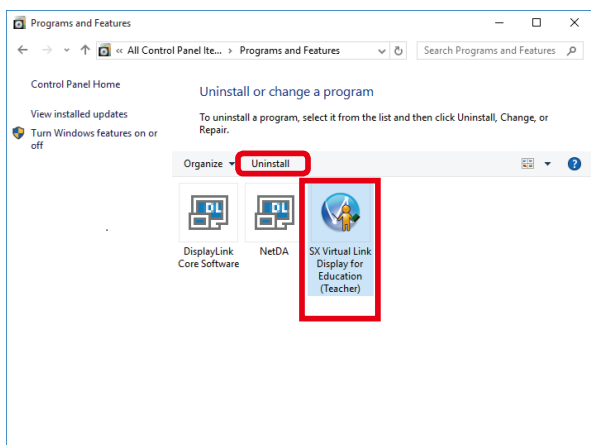
How to uninstall SX Virtual Link Display for Education (for Teachers) is explained.

SX Virtual Link Display for Education (for Teachers) can be uninstalled from **Control Panel** of Windows.



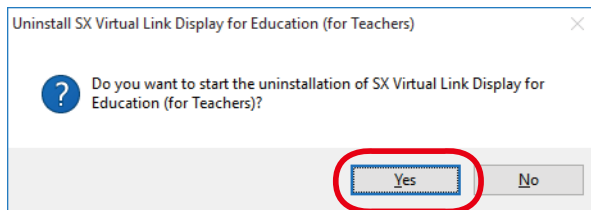
- For uninstallation, you must login to the PC with administrative privileges.

1. Go to **Control Panel** and click **Uninstall a program**.
2. Select **SX Virtual Link Display for Education (Teacher)** from a list and click **Uninstall**.

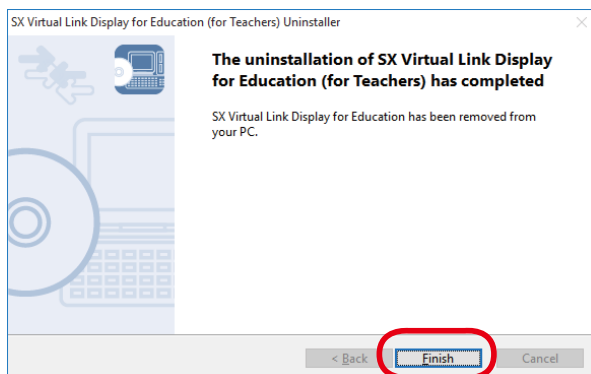


- After uninstaller is started, the **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

- 3.** Click **Yes** to the confirmation message to start uninstallation.



- 4.** When uninstallation is completed, click **Finish**.



SX Virtual Link Display for Education (for Teachers) has been uninstalled.

Uninstalling Display Driver

How to uninstall the display driver is explained.

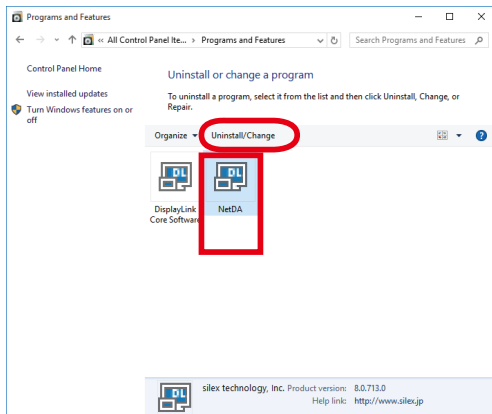
The display driver can be uninstalled from **Control Panel** of Windows.



- For uninstallation, you must login to the PC with administrative privileges.
- When uninstallation is finished, the PC will need to be restarted. Be sure to close all other programs before you start uninstallation.

1. Go to **Control Panel** and click **Uninstall a program**.

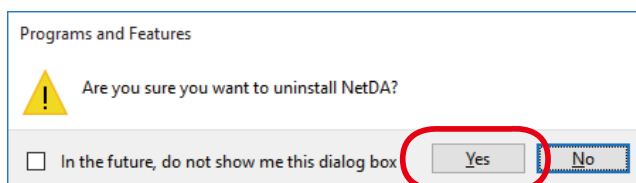
2. Select **NetDA** from a list and click **Uninstall**.



Note

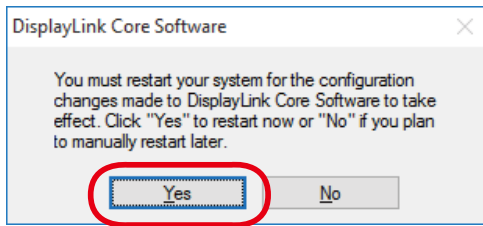
- If **NetDA** is not displayed, select **DisplayLink Core Software** from a list and click **Uninstall**.

3. Click **Yes** to the confirmation message to start uninstallation.



- After uninstaller is started, the **User Account Control** screen may be displayed. Click **Yes** or **Continue** if it is displayed.

4. When uninstallation is completed, click **Yes** to restart the PC.



Note

- After the PC is restarted, DisplayLink Core Software will also be uninstalled.



The display driver has been uninstalled.

4. Using SX Virtual Link Display for Education (for Students)

4-1. Starting/Finishing SX Virtual Link Display for Education (for Students)

This section explains how to start/finish SX Virtual Link Display for Education (for Students).

Starting SX Virtual Link Display for Education (for Students)

1. Click the SX Virtual Link Display for Education (for Students)'s icon on the desktop  or on the tasktray .



- If SX Virtual Link Display for Education (for Students) is not started, start it by following methods.

Note

<Windows 10>

Click **Start - All apps - silex Tools - SX Virtual Link Display for Education - SX Virtual Link Display for Education**.

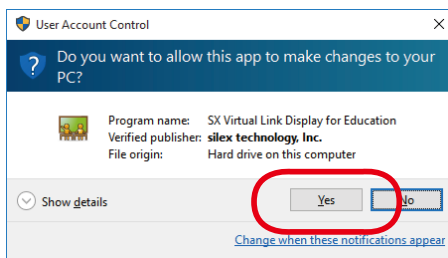
<Windows 8.1 / 8>

Show the **Apps** view from the start screen and click **SX Virtual Link Display for Education**.

<Windows 7>

Click **Start - (All) Programs - silex Tools - SX Virtual Link Display for Education - Student - SX Virtual Link Display for Education**.

2. If the dialog below is displayed, click **Yes**.



3. In the SX Virtual Link Display for Education (for Students)'s main window, the teacher's PCs are detected and shown in a list.



- If a wireless connection is not established between the student's PC and classroom AP, the teacher's PCs are not displayed on SX Virtual Link Display for Education (for Students).
- If a wireless connection is not established between the teacher's PC and classroom AP, the teacher's PCs are not displayed on SX Virtual Link Display for Education (for Students). Also, when SX Virtual Link Display for Education (for Teachers) is not running in the class mode, the teacher's PCs are not displayed.

Finishing SX Virtual Link Display for Education (for Students)

SX Virtual Link Display for Education (for Students) can be finished by following methods.

Tasktray menu

Clicking **Exit** from the tasktray menu

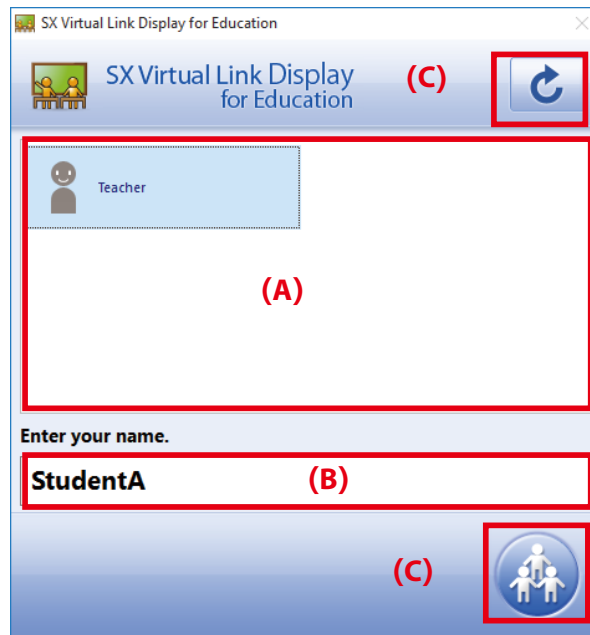
Standard menu of operating system

Logging out, shutting down or restarting the PC

4-2. Window and Menu

Main Window

In the main window, teacher's PCs are found and displayed as a list. The class can be joined by selecting the teacher's PC.



(A) Teacher's PC list

Detected teacher's PCs are displayed as a list.

(B) Name entry field

Enter the student name (up to 32 characters). The entered student name will be displayed on the teacher's PC. By defaults, user name of the student's PC is used as the student's name.

(C) Buttons



Join the class (Alt + L)

Joins the class.

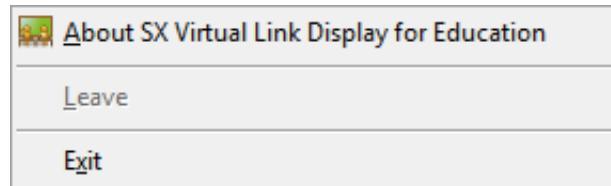


Refresh the teacher list (Alt + U)

Refreshes the teacher's PC list.

Tasktray Menu

The tasktray menu provides following controls.



Item	Details
About SX Virtual Link Display for Education	Shows the SX Virtual Link Display for Education (for Students) version.
Leave	Leaves the class.
Exit	Finishes SX Virtual Link Display for Education (for Students).

4-3. Joining/Leaving Class

Joining Class

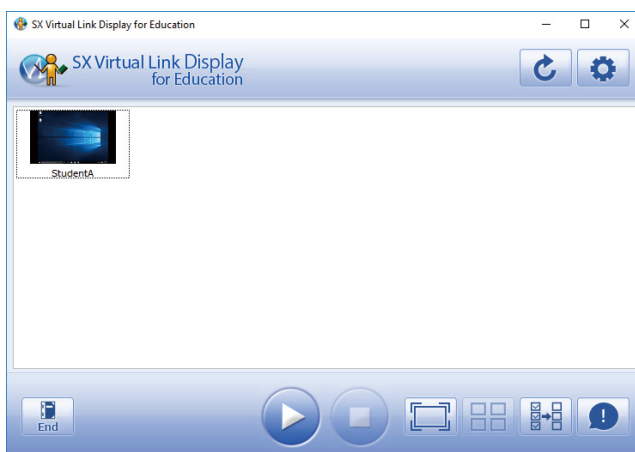
1. Tap the teacher's PC to connect from a list and tap the join button.



Note

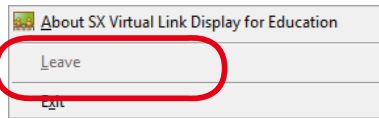
- The class can also be joined by double-tapping the teacher's PC in a list.
- After the class is joined, the main window will be minimized.

2. On the teacher's PC, the PC of student who has joined the class is displayed on the student's PC list.

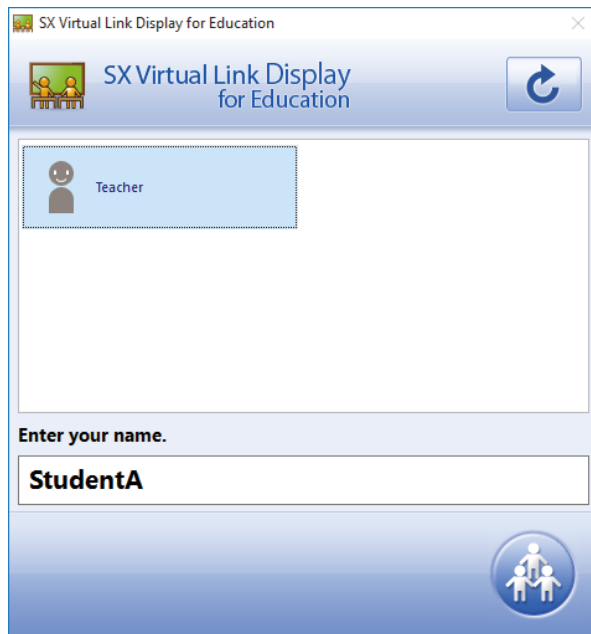


Leaving Class

1. From the tasktray menu, select **Leave**.



2. The main window is displayed.



4-4. Uninstalling Software

Following explains how to uninstall (delete) SX Virtual Link Display for Education (for Students).

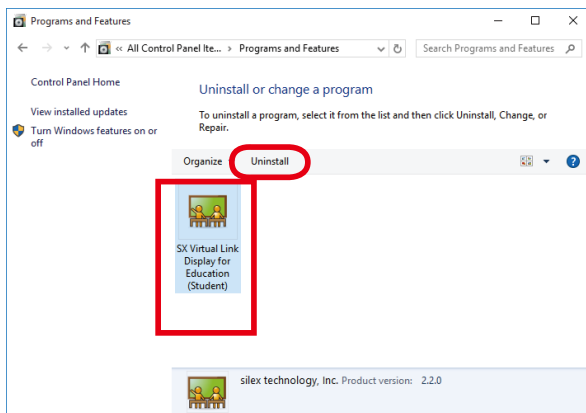
Uninstalling SX Virtual Link Display for Education (for Students)

SX Virtual Link Display for Education (for Students) can be uninstalled from **Control Panel** of Windows.



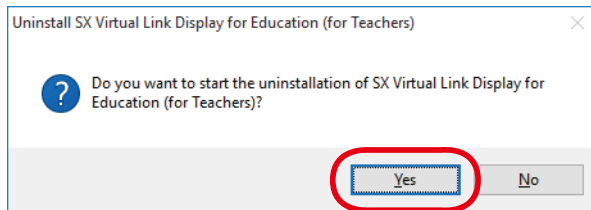
- For uninstallation, you must login to the PC with administrative privileges.

1. Go to **Control Panel** and click **Uninstall a program**.
2. Select **SX Virtual Link Display for Education (Student)** from a list and click **Uninstall**.

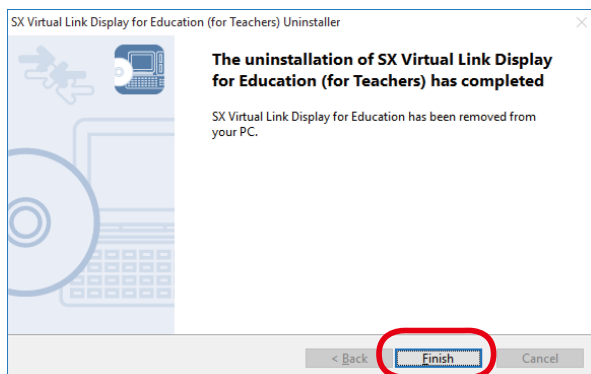


- When uninstaller is started, the **User Account Control** screen may be displayed.
Click **Yes** or **Continue** if it is displayed.

- 3.** Click **Yes** to the confirmation message to start uninstallation.



- 4.** When uninstallation is completed, click **Finish**.



SX Virtual Link Display for Education (for Students) has been uninstalled.