CT1820
Wireless Display Presentation & Conferencing System
User manual

V2.0

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Introduction to CT1820

Key features

- ✓ SynCast Wireless Technology – Effortlessly share your screen to any HDTV or projector
- ✓ Native Mirroring Compatibility – Works seamlessly with AirPlay, Miracast, and Google Cast
- ✓ Wireless Conferencing (BYOM) – Make your USB webcam and speakerphone completely wireless
- ✓ Cross-Platform Operation – Supports Windows, macOS, iOS, Android, and Chrome OS
- ✓ Moderator Control – Switch between Basic and Moderator modes for smarter meeting control
- ✓ AirView Remote Preview – View the presentation instantly via any web browser—no app required
- ✓ USB Backchannel Control – Enables mouse and single-touch interaction through HID devices
- ✓ Quad-Split Display – Mirror up to four devices simultaneously in Full HD
- ✓ 4K Mode for Dongles – Enjoy 4K display quality (supports dual-split mode only)
- ✓ Collaborative Annotation – Annotate and interact in real time during presentations
- ✓ Customizable Standby Screen – Personalize the standby image with your own branding
- ✓ Document Sharing – Instantly share files among users in the same session
- ✓ Multi-User Access – Connect up to 64 participants via a high-performance Wi-Fi router
- ✓ Flexible Transmitter Options – Supports both software-based and USB-C hardware transmitters
- ✓ OTA Firmware Updates – Maintain and upgrade easily via over-the-air updates

Package Content

- CT1820 Receiver
- 12V /1.5A adapter
- HDMI Cable
- User Manual (simple and one-page)

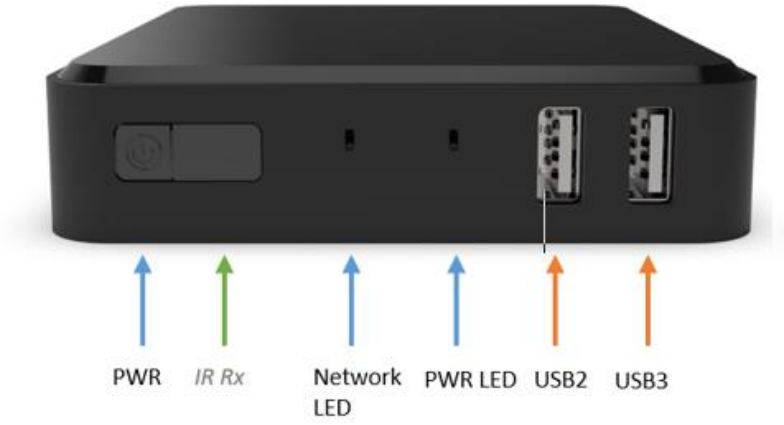
System Requirement

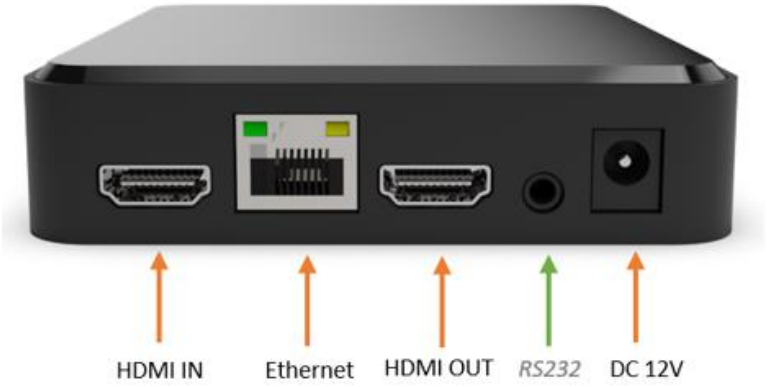
- ✓ ***SynCast tansmiter software for Windows /MacOS***
  - ■ **Windows desktop or laptop**
  - CPU: Core 2 Duo 2.0 GHz or better
  - Memory: 2.0 GB or better
  - Network: 802.11g/n Wi-Fi

  - ■ **Mac, iMac, MacBook**
  - Mac OSX 10.14 or later

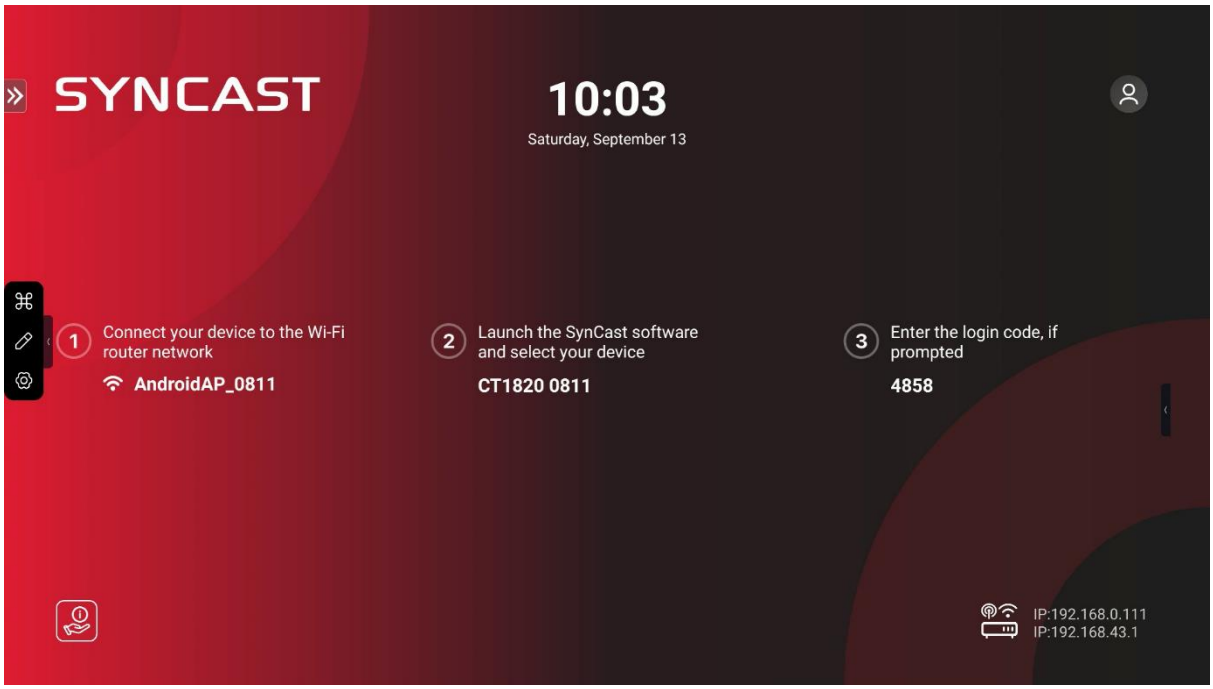
- ✓ ***SynCast Sender for Android***
  - ■ Android tablet or phone
  - Android 9.0 or later

I/O Configuration





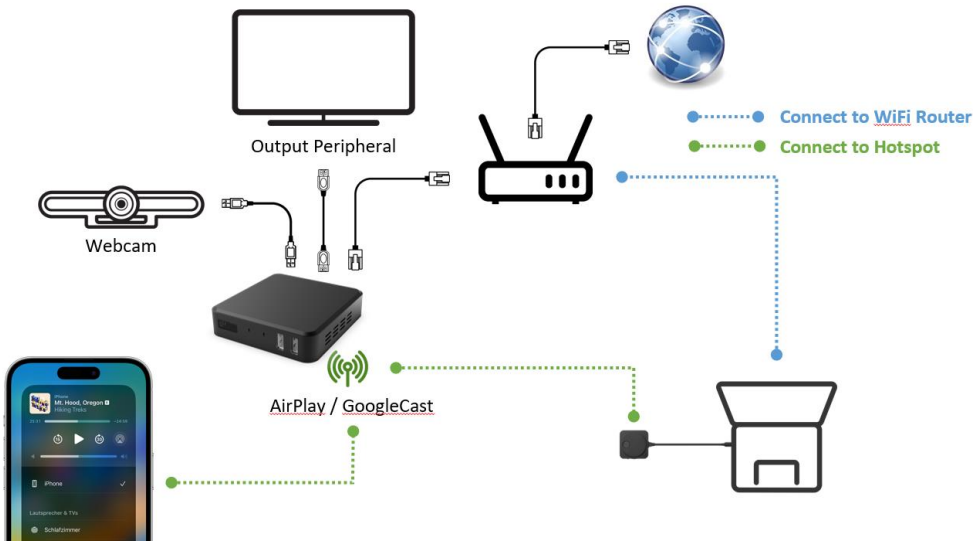
1. Connect the HDMI OUT to your TV or monitor (4K display is recommended).
2. Plug in the power adapter.
3. Once it reboots, you'll see the SynCast Standby screen appear.



Connection Scenarios

(1) HotSpot On / LAN to Station (WiFi Off) (Default)

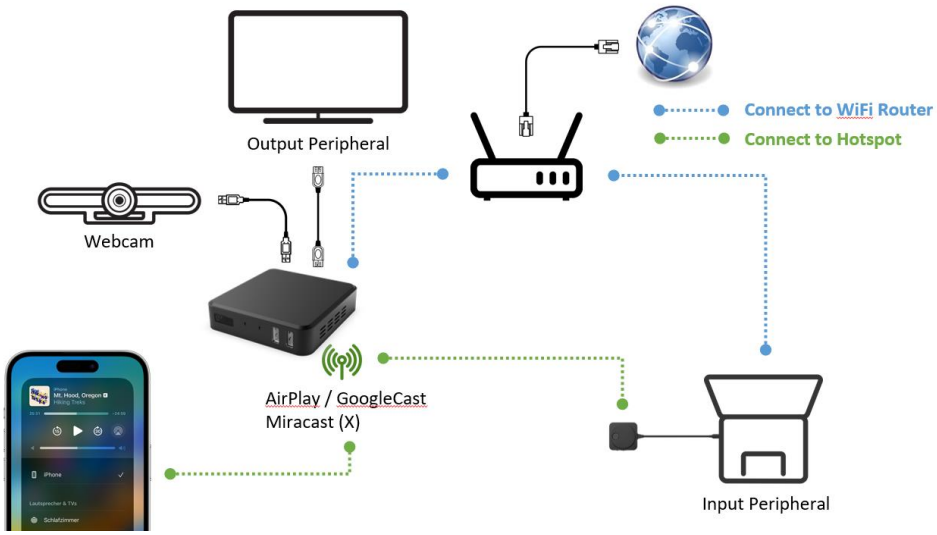
- ✓ CT1292 peer to peer CT1820
- ✓ AirPlay / Googlecast OK
- ✓ Miracast (doesn't work)



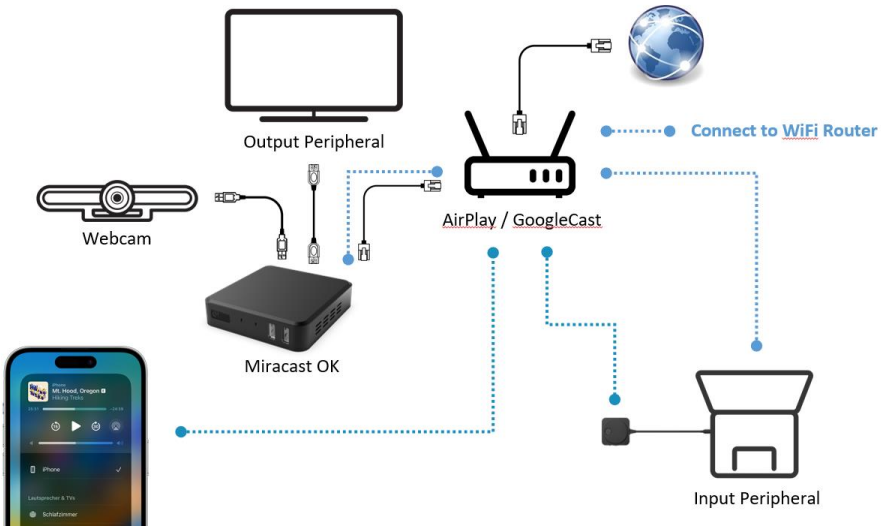
(2) HotSpot On / WiFi Station On / LAN Off

- ✓ CT1292 peer to peer CT1820

✓ AirPlay / Googlecast OK
✓ Miracast (doesn't work)

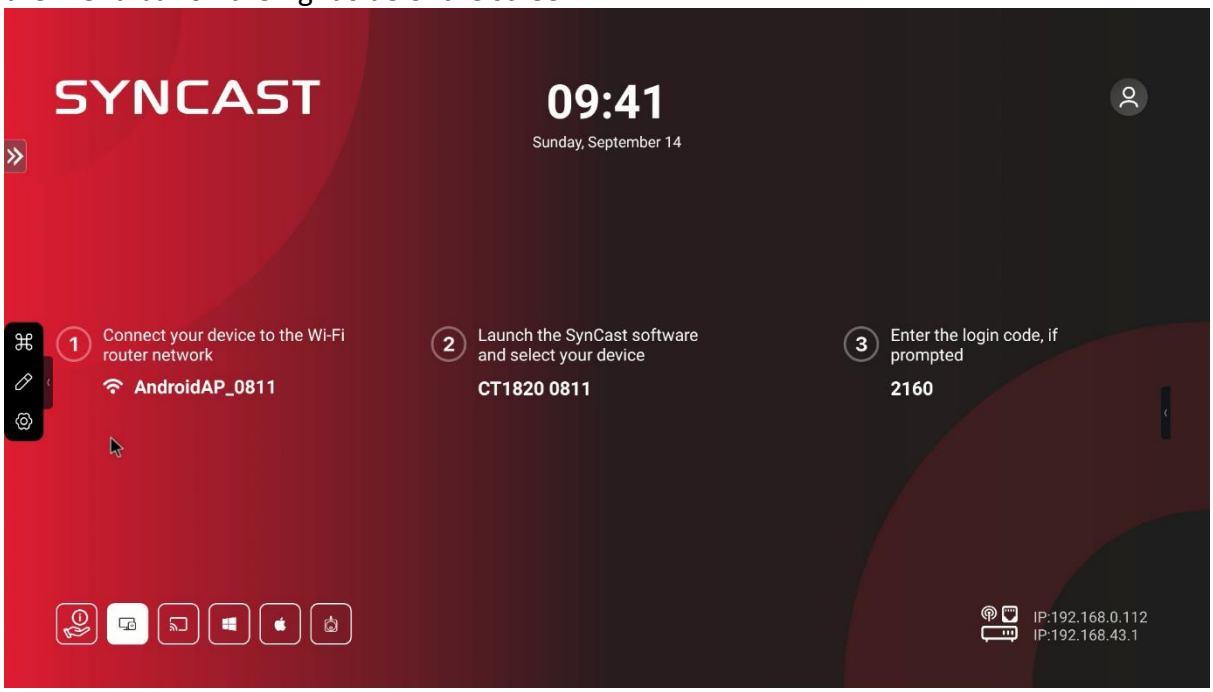


(3) HotSpot Off / WiFi Station On / LAN
✓ CT1292 connect to WiFi Router
✓ AirPlay / Googlecast OK
✓ Miracast OK



SynCast Display

The **SynCast Display** also functions as a system launcher, and the system menu will display the menu bar on the right side of the screen.

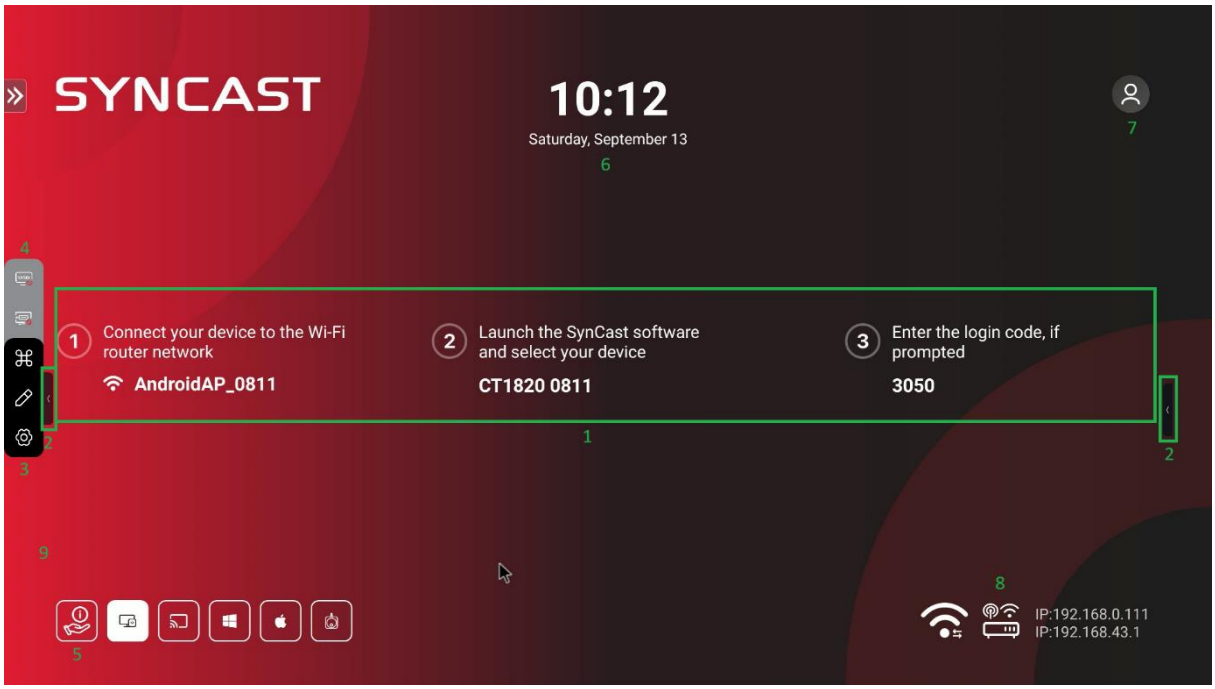


Device Floating Menu

Click to expand the function menu.

Icon	Function	Description
	Home	Return to the home screen (SynCast Display).
	Back	Go back to the previous screen.
	Snapshot	Take a snapshot of the current screen.
	All Apps	Open the application menu.
	System Settings	Access the device's system settings.

SynCast Display Launcher



No.	Function	Description
1	SynCast Rx Info	Shows how to connect to the SynCast Display: I. Wi-Fi router network II. SynCast device name III. Login code (if required)
2	Setting Bar	Click this icon to expand 3 commonly used functions.
3	Function #1	SynCast Settings SynNote More functions
4	Function #2	If additional functions are needed, click “More” to expand the menu.
5	Help	Click this icon to access “Help” for various Tx devices.
6	Date/Time	Displays the current date and time.

7	Mode	Displays the current mode: Basic Mode Moderator Mode
8	Network Info	Displays: (1) Current Wi-Fi / LAN status (2) IP information (3) Miracast status
9	UVC Webcam / UAC SpeakPhone	Indicates whether a UVC webcam or a UAC SpeakPhone is connected to the CT1820.

SynCast Display Settings

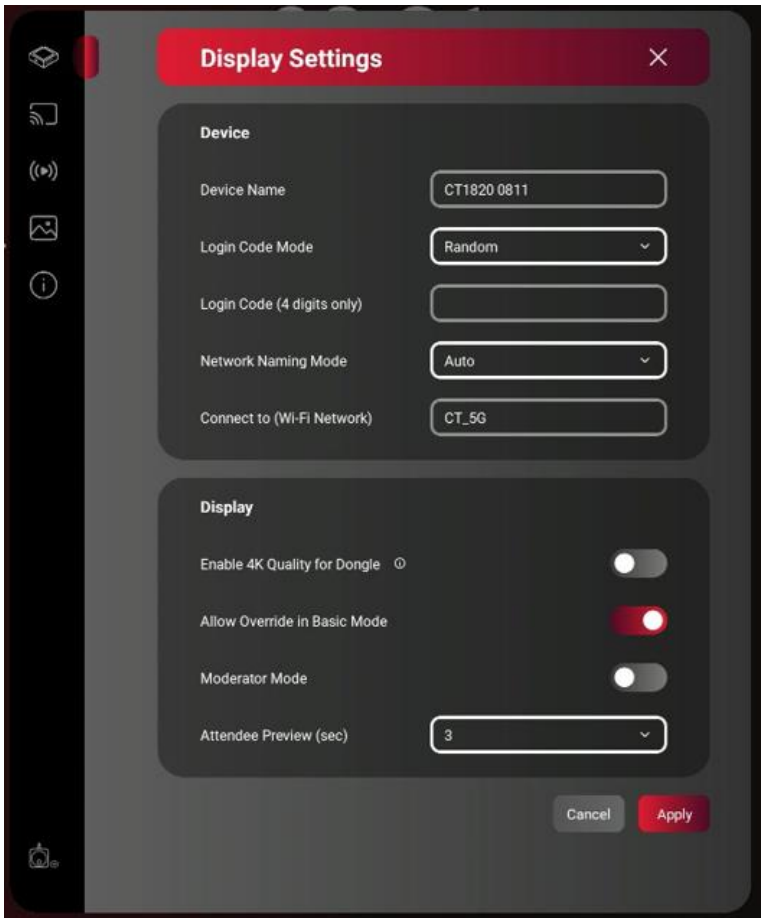
Click **Setting** to open the SynCast Display Settings menu. The settings are organized into several categories:

1. **SynCast Display Settings**
2. **Native Screencasting Settings**
3. **Recording & Streaming Settings**
4. **Theme Settings**
5. **Information**
6. **Advanced Debug Settings**

The descriptions of each setting are as follows.

After configuring the settings, please click **"Apply"** to take effect. (For certain options, the program must be restarted for the changes to apply.)

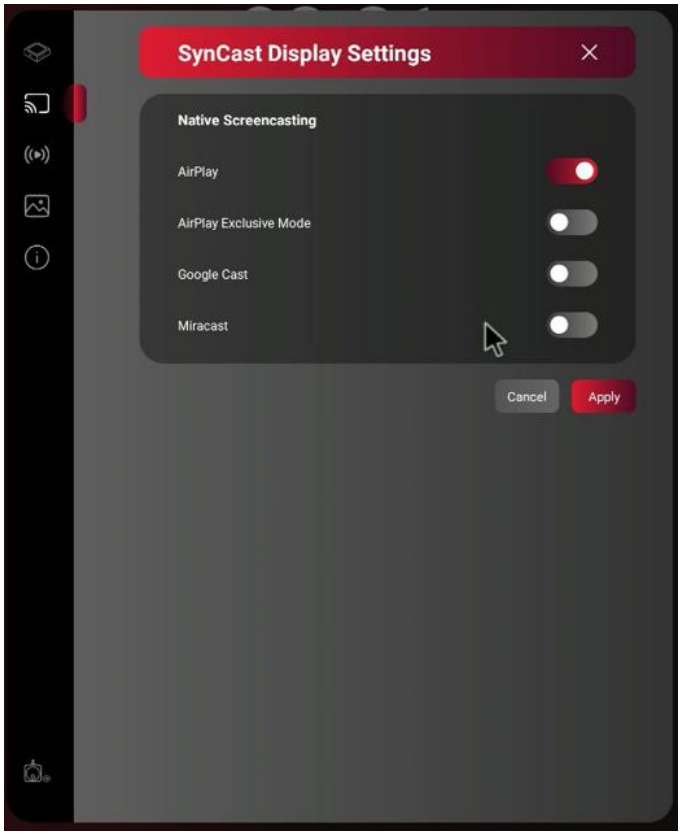
1. SynCast Display Settings



Item	Function
Device	
Device Names	The device name will automatically use the system's device name. To modify it, please go to the system settings.
Login Code Mode	˙**Random** (Default): A random login code will be generated each time SynCast Display starts. ˙**Enabled**: You can set a fixed 4-digit login code in the field below. ˙**Disabled**: No login code is required.
Login Code	If"Login Code Mode"is enabled, please enter a 4-digit number only.
Network Naming Mode	˙**Auto**: Use this mode when connected via Hotspot or Wi-Fi Station. ˙**Manual**: Manual: When connected via LAN instead of Wi-Fi, the system cannot detect the router name. Please enter it manually.
Connect to (Wi-Fi Network)	If "Manual" is selected above, please enter your Wi-Fi router name.
Display	
Enable 4K Quality for Dongle	This option enables supported 4K Dongles to mirror at 4K High Quality. Click the "i" icon to view details.

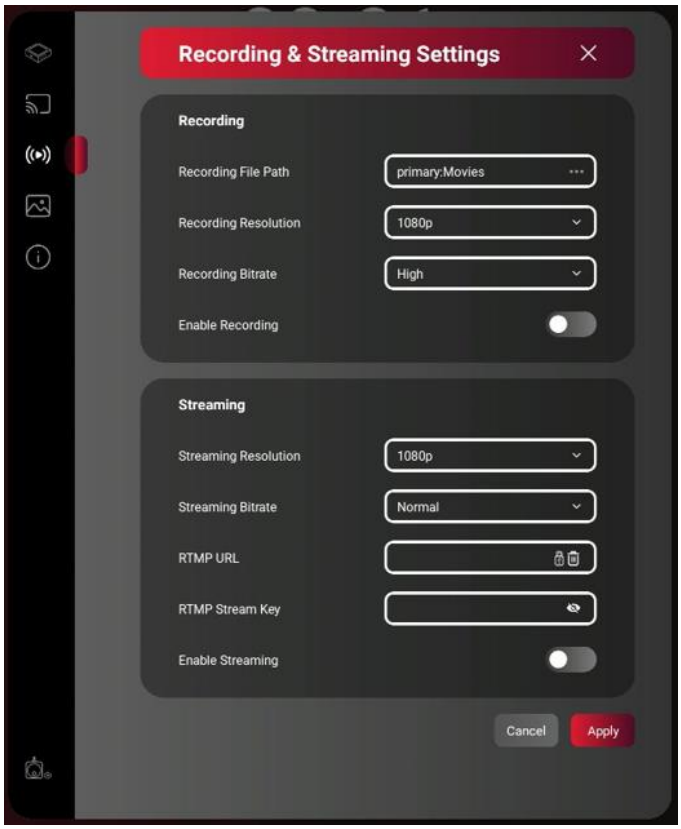
Allow Override in Basic Mode	˙**On**: If the screen is already full, a newly connected transmitter (Tx) will override the first one. ˙**Off**: If the screen is full, a newly connected transmitter (Tx) will not override the existing ones.
Moderator Mode	Switch between Basic Mode (users connect freely) and Moderator Mode (admin controls screen sharing).
Attendee Preview (sec)	Set the preview refresh interval (in seconds) from attendee Tx screens.

2. Native Screencasting Settings



Item	Function
AirPlay	Enable or disable the AirPlay function.
AirPlay Exclusive	When enabled, only one AirPlay mirroring session is supported, with Full HD quality.
Google Cast	Enable or disable the Google Cast function.
Miracast	• Enable or disable the Miracast function. • If Hotspot Mode is enabled, Miracast cannot be used simultaneously. • When Miracast is available, an indicator icon will be displayed on the standby screen.

3. Recording & Streaming Settings



Item	Function
Recording	
Recording File Path	Enter the file path where recordings will be saved.
Recording Resolution	Select the recording resolution: • **1080p**: up to 1920×1080@30fps • **720p**: up to 1280x720@30fps
Recording Bitrate	Select the recording bitrate: • **High**: up to 6 Mbps • **Medium**: up to 4.5 Mbps • **Low**: up to 3 Mbps
Enable Recording	When enabled, a “Record” icon will appear in the More function bar. You can click this icon to start or stop recording.
Streaming	
Streaming Resolution	Select the streaming resolution: • **1080p:** up to 1920x1080@30fps • **720p**: up to 1280x720@30fps
Streaming Bitrate	Select the streaming bitrate: • **High**: up to 6 Mbps • **Medium**: up to 4.5 Mbps • **Low**: up to 3 Mbps

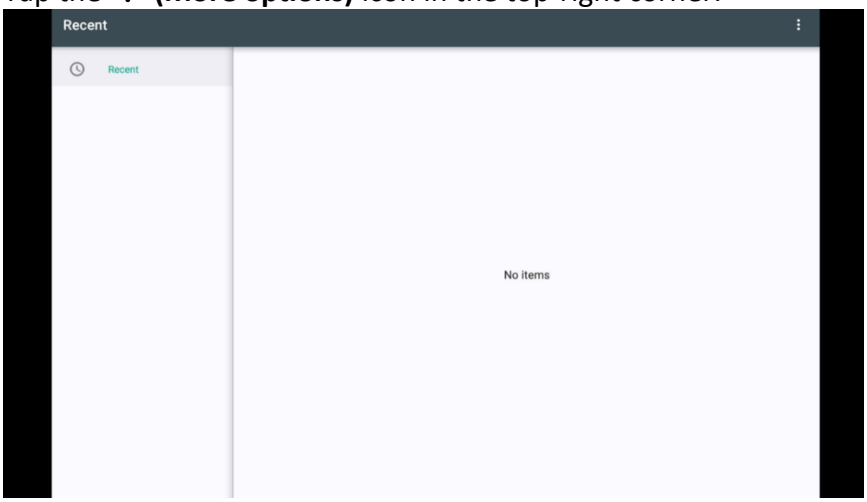
RTMP URL	Enter your RTMP URL. ***Note:*** *It is recommended to use a USB storage device with a pre-edited rtmp.txt file.*
RTMP Stream Key	Enter your RTMP Stream Key. ***Note:*** *It is recommended to use a USB storage device with a pre-edited rtmp.txt file.*
Enable Streaming	When enabled, a "Stream" icon will appear in the More function bar. You can click this icon to start or stop streaming.
Note: Recording and streaming cannot be enabled simultaneously.	

	Record Ready – Click to START recording.
	Recording – Click to STOP recording.
	Stream Ready – Click to START streaming.
	Streaming – Click to STOP streaming.

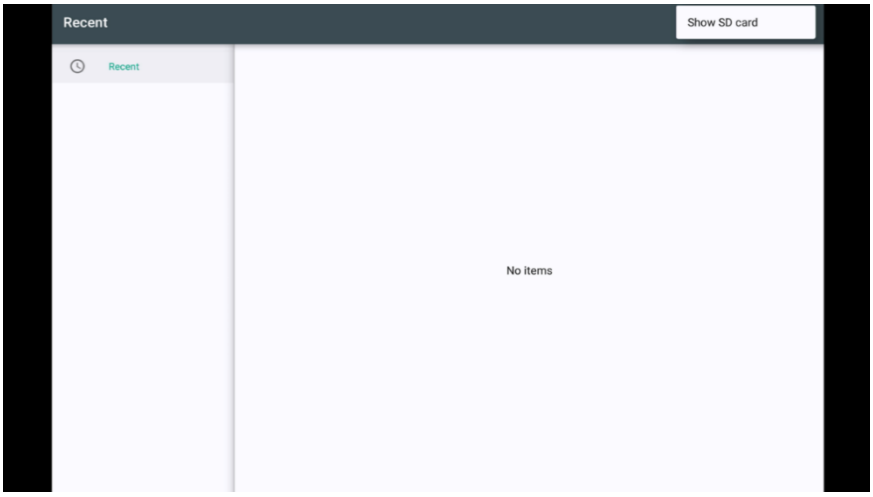
A. **How to Set the "Recording File Path" ?**

1.) Click **(Browse)** button to select a directory.

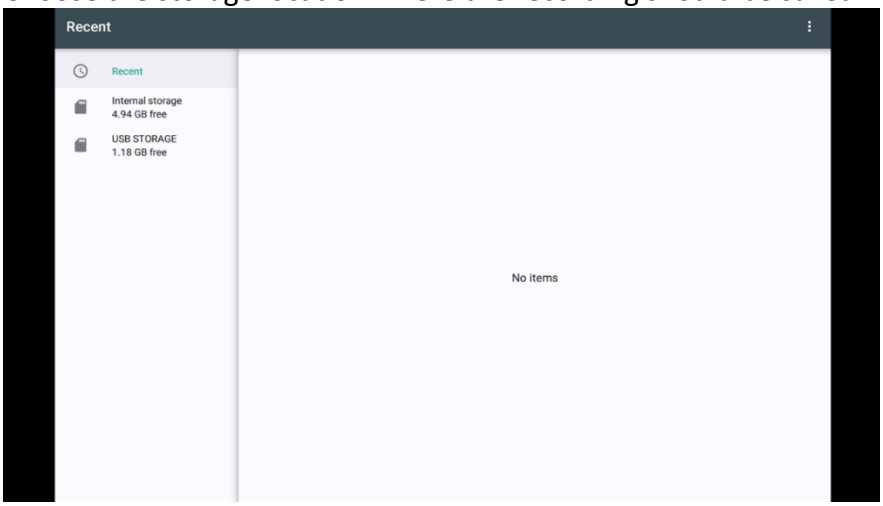
2.) Tap the **"⋮" (More options)** icon in the top-right corner.



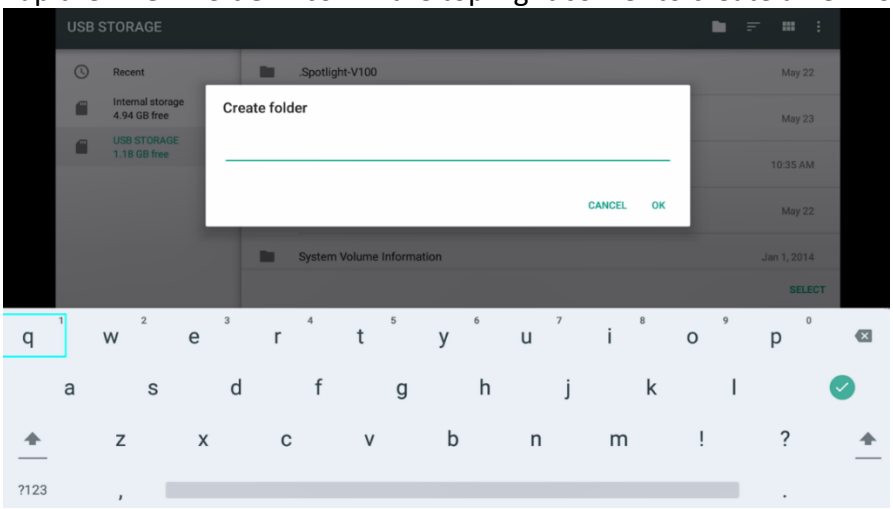
3.) Select **"Show SD card"**.



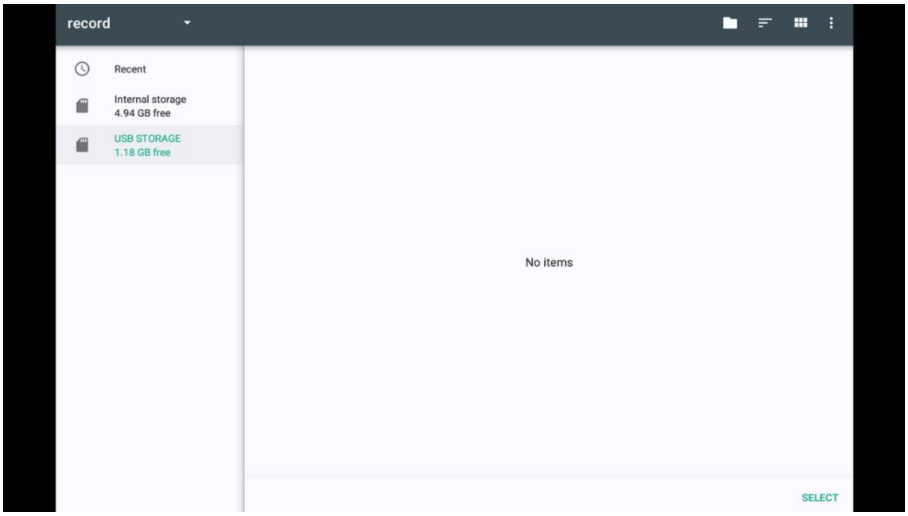
4.) Choose the storage location where the recording should be saved.



5.) Tap the **“New Folder”** icon in the top-right corner to create a new folder, if needed.



6.) Click **“Select”** — the recording will now be saved to the directory you selected.



7.) The **Recording File Path** field will display the selected directory.

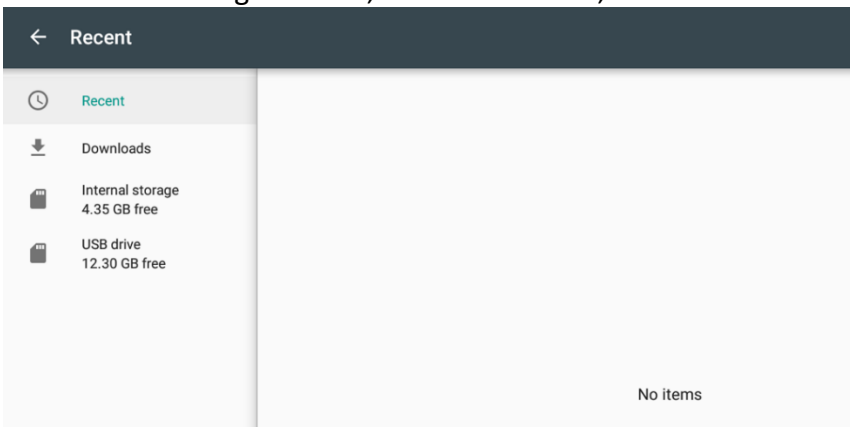
B. **How to Create and Load an rtmp.txt File from USB Storage**

1.) On your computer, create a text file named **rtmp.txt**, and enter the **RTMP URL** and **Stream Key** provided by your live streaming platform.

2.) Save the **rtmp.txt** file to the **root directory** of a USB storage device, and insert the USB storage into the **USB port of the CT1820**.

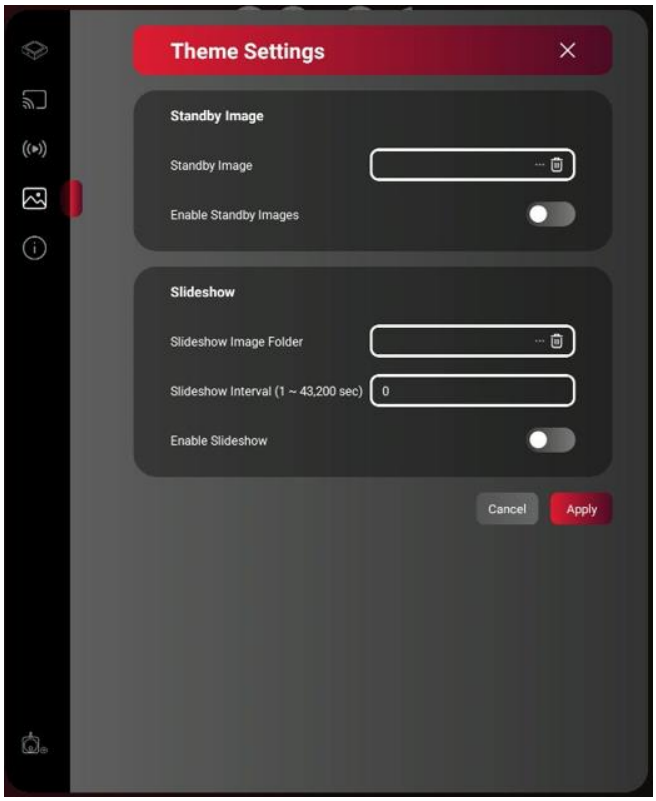
3.) Click the button to load the **RTMP URL** and **Stream Key** from the USB storage.

4.) From the left navigation bar, select **USB Drive**, and then choose the **rtmp.txt** file.



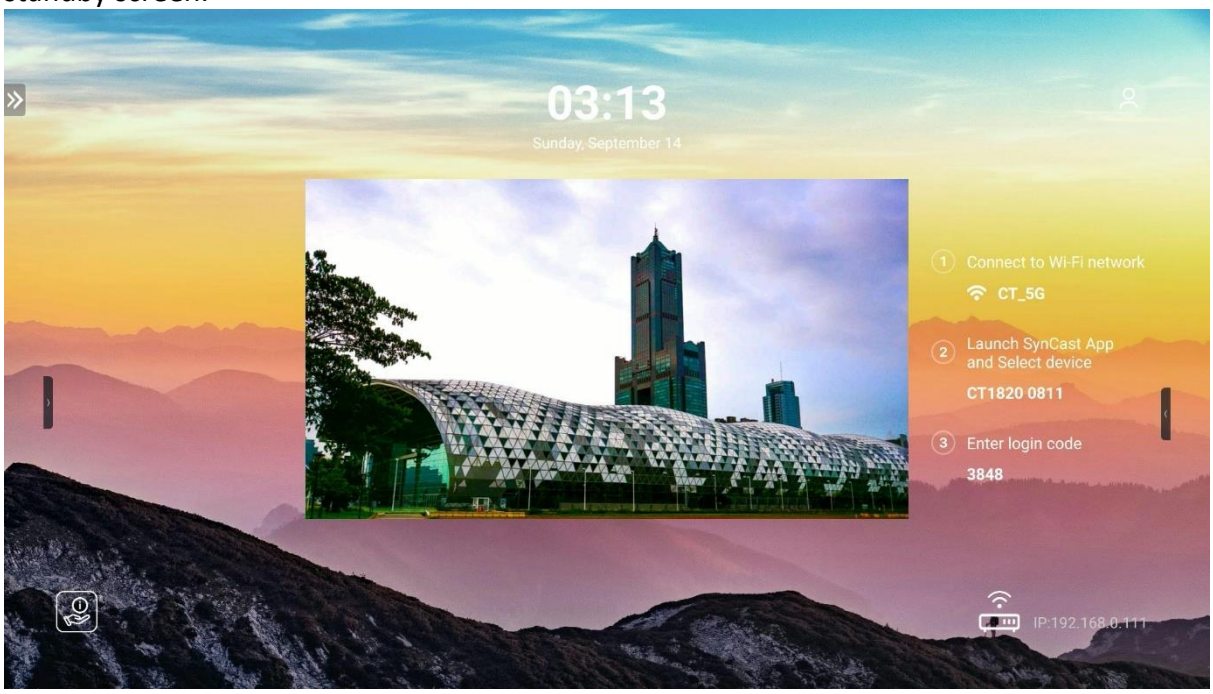
5.) The corresponding **RTMP URL** and **Stream Key** will be displayed.

4. Theme Settings

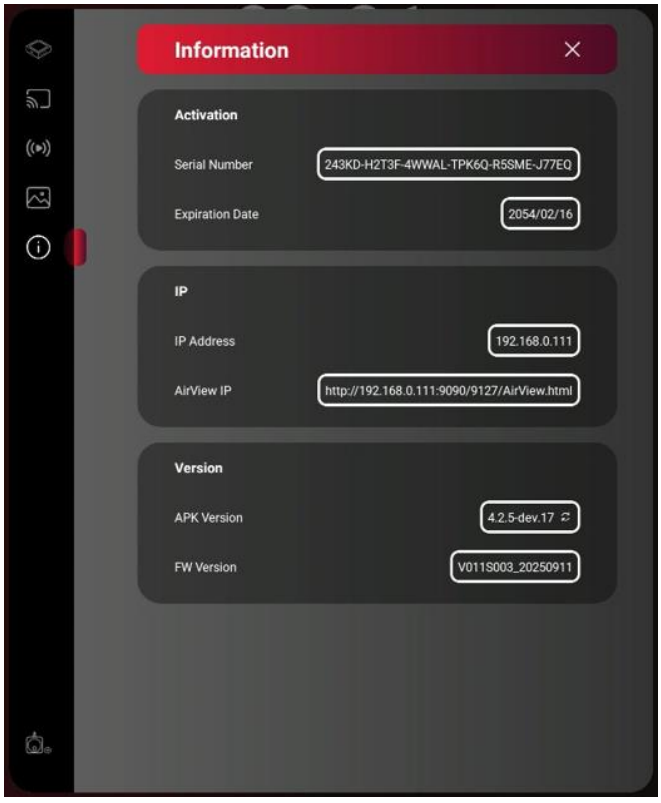


Item	Function
Standby Image	
Standby Image	Enter the file path of the standby image to be displayed.
Enable Standby Image	When enabled, the standby image will replace the default standby screen. ***Note:*** *The SynCast logo will be hidden.*
Slideshow	
Slideshow Image Folder	Select a folder containing slideshow images.
Slideshow Interval (1 ~432,000 sec)	Set the slideshow interval in seconds. Valid range: 1 to 432,000.
Enable Slideshow	When enabled, the slideshow will play at the center of the standby screen.

If both **Standby Image** and **Slideshow** are enabled, the slideshow will be displayed on the standby screen.



5. Information

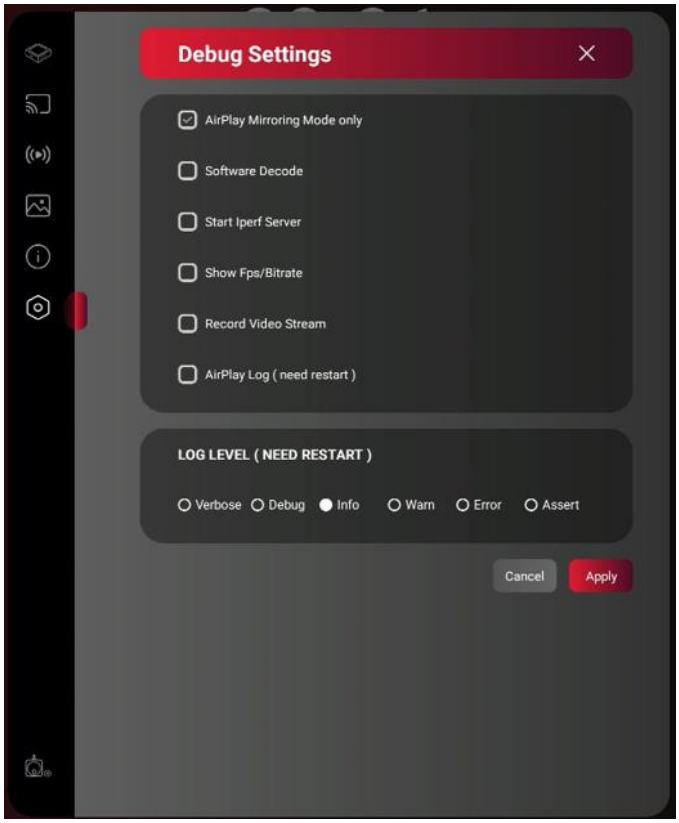


Item	Function
Activation	

Serial Number	Displays the device's valid serial number if the device is authorized.
Expiration Date	If the device is authorized with a valid serial number, support will be available until the expiration date.
IP	
IP Address	Displays the valid IP address. Automatically detects Hotspot, Wi-Fi, or Ethernet connections to display a valid IP address.
AirView IP	Displays the AirView IP address.
Version	
APK Version	Displays the current APK version. Click "Update" to check for and install the latest APK version if available. **Note**: *If you tap "APK Version" repeatedly, it will open the advanced debug settings.*
FW Version	Displays the current firmware (image) version. Click "Update" to check for and install the latest firmware (image) version if available.

6. Advanced Debug Settings

Tap "APK Version" repeatedly to open the advanced debug settings.



Item	Function
AirPlay Mirroring Mode Only	When enabled (default), only the AirPlay Mirroring function is supported.
Software Decode	Enable software decoding to compare performance when hardware decoding is not functioning correctly.
Start Iperf Server	Start the iperf server to test Wi-Fi/Ethernet throughput.
Show Fps/Bitrare	Displays the FPS and bitrate. The information will be shown at the top-left corner of the screen.
Record Video Stream	Records a video stream for analysis.
AirPlay Log (need restart)	Collects AirPlay logs. A restart is required for this function to take effect.
LOG LEVEL	Options: Verbose / Debug / Info / Warn / Error / Assert. Enable the log levels you need.

Basic Mode and Moderator Mode

Basic Mode

All clients using the SynCast transmitter software or app can share their screens once connected to the SynCast Display receiver. Screen sharing can take place sequentially in full-screen mode, or simultaneously in split-screen mode.

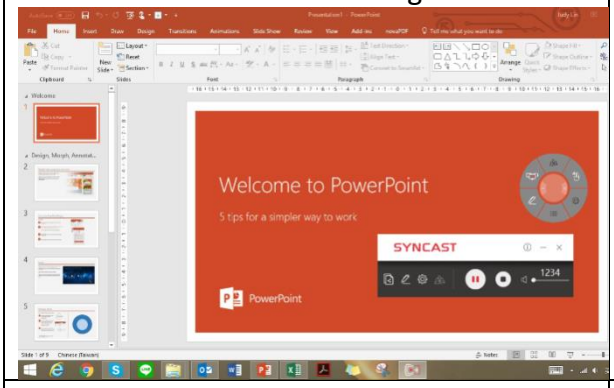
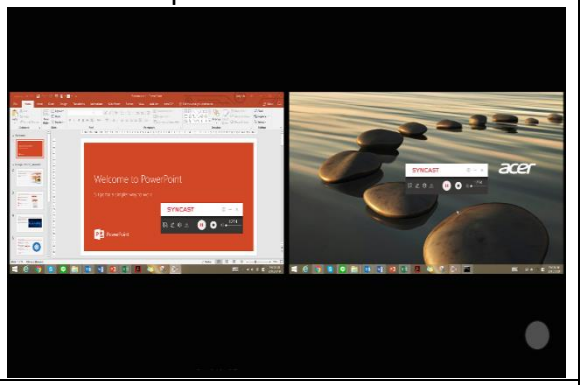
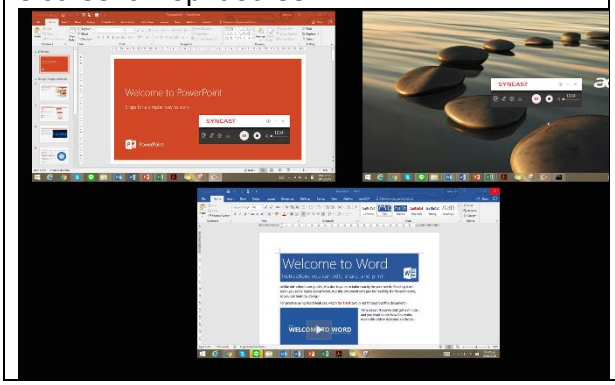
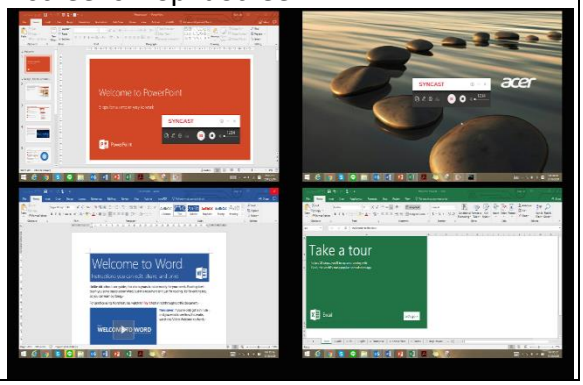
Moderator Mode

Meeting control mode that allows the host (administrator) to manage all connected devices. The administrator can choose to display or stop any client's screen, and clients must obtain approval before sharing. This mode gives the host full control over all screen-sharing activities.

***Note**: AirPlay, Google Cast, and Miracast are not supported in Moderator Mode.*

Multi-screens

For instructions on how to connect a client transmitter to the SynCast Display receiver, please refer to Chapter 3 of this manual.
SynCast Display supports multi-screen sharing, allowing multiple users to cast their screens simultaneously. The following section introduces the operation of Basic Mode and Moderator Mode under split-screen sharing.

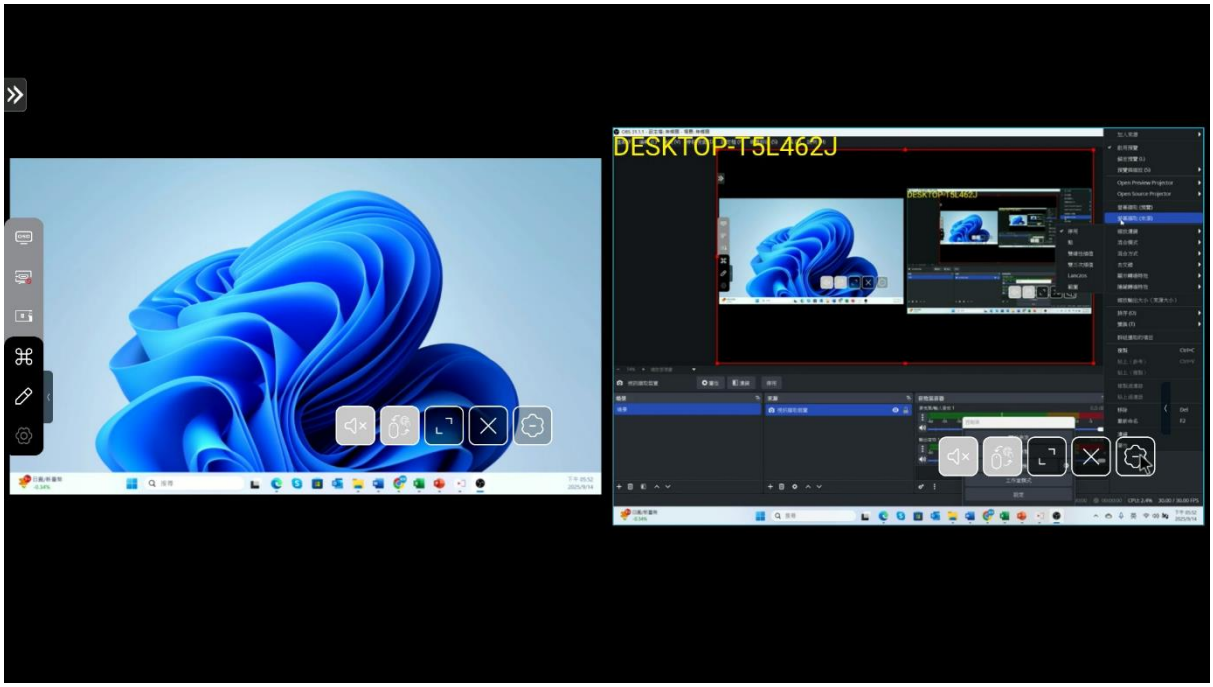
1 screen – full screen mirroring	2 screens – Split Screen
	
3 screens – Split Screen	**4 screens – Split Screen**
	

In split-screen mode, when multiple screens are being shared, pressing the **Expand** button will display two categories of icons:

1. **Status Icons**: Indicate the current status. Clicking the icon toggles the status (e.g., Back-Control on/off, Audio on/off).
2. **Function Icons**: Provide specific operations. Clicking the icon executes the function immediately (e.g., Close window, Switch full-screen/window mode, Enable or mute audio).

Icon	Status	Action after clicking this icon
	Back-Control disabled	Enable Back-Control
	Back-Control enabled	Disable Back-Control
	Audio enabled	Mute audio
	Audio muted	Enable audio
	—	Close the windows
	—	Enter full-screen mode
	—	Return to windowed mode

	—	Expand additional functions
	—	Collapse additional functions



Multi-screens in Basic Mode:

In Basic Mode, users can share their screens in split-screen mode, supporting up to four Tx screens simultaneously.

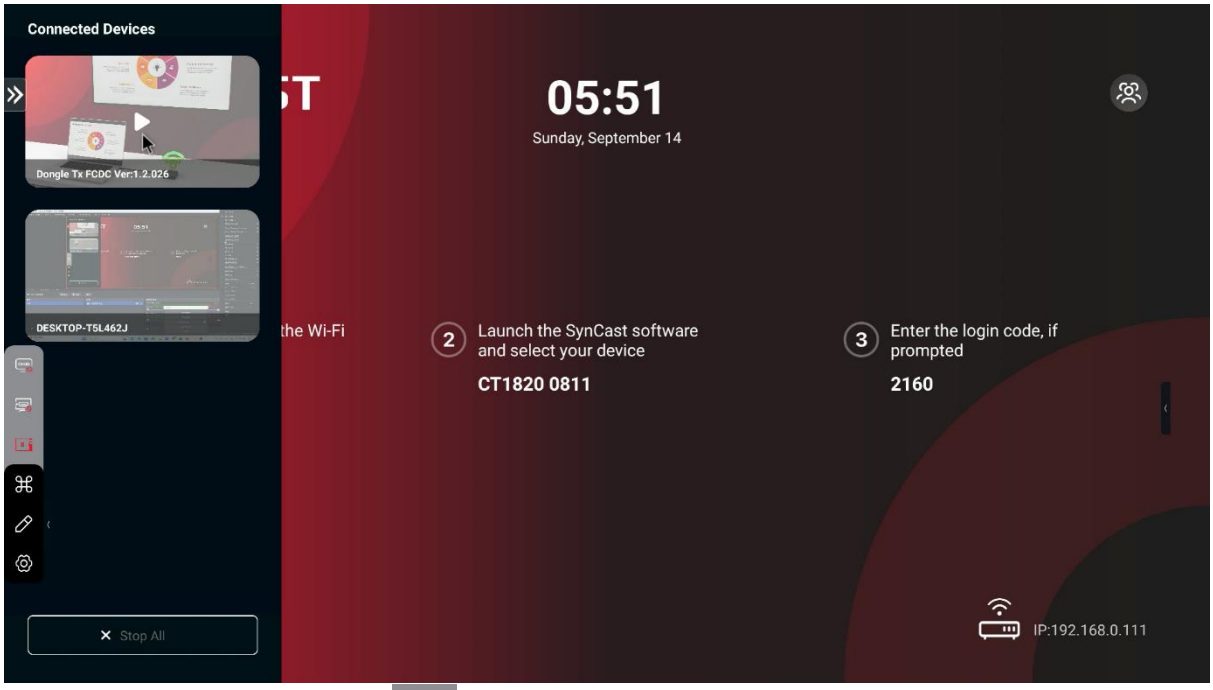
- When **Basic Mode Override** is enabled, the fifth screen will automatically replace the earliest shared screen.
- When **Basic Mode Override** is disabled, the fifth screen will not appear until one of the current screens stops sharing.

Multi-screens in Moderator Mode:

In Moderator Mode, the meeting host (administrator) can select which client screens to display and include in the split-screen view:

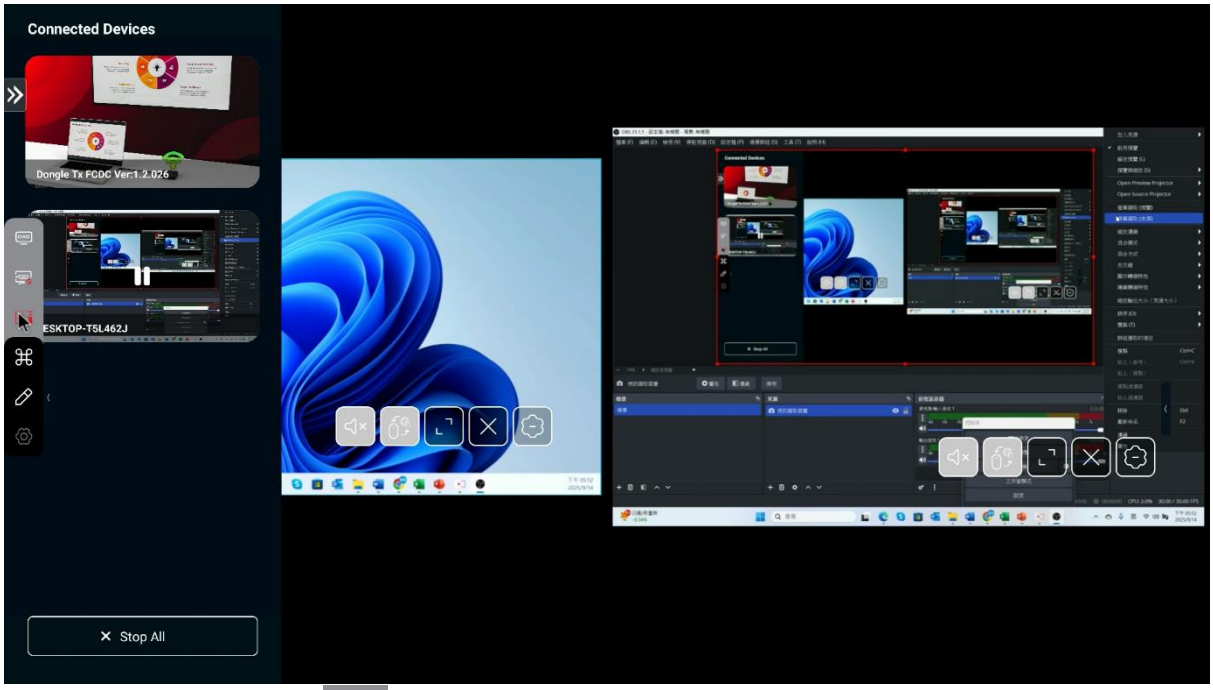
Click the **Preview Bar icon** to open the Tx preview.

1.) In the preview, click **Play** or **Stop** to control each Tx screen sharing.
2.) Within the split-screen layout, use the icons on each window for operations (e.g., Back-Control, Audio, Close, Full-screen/Windowed mode).
3.) Use the **Stop All** button at the bottom of the Attendee List to quickly stop all Tx screen sharing.



⇨ In standby mode, click the **Attendee List icon** to open the list.

- If a Tx screen has not been shared, its preview will appear greyed out.
- If a Tx screen is being shared, its preview will appear normally.



⇨ In casting mode, the **Attendee List icon** can also be used to open the list.

Back Channel Control

The **Back Channel Control** feature allows the **SynCast Display** receiver to directly interact with the **SynCast** transmitter device.
When a USB mouse or touch input is used on the receiver, the action is instantly mirrored and executed on the client's **Windows** or **Mac** device.

On the projection window, the current Back Channel status is displayed. Click the Back Channel icon to enable or disable the function.

⚠ **Note**: This feature is supported only when the **Windows or Mac client is in full-screen mirroring mode**. It is not available in extended display mode.

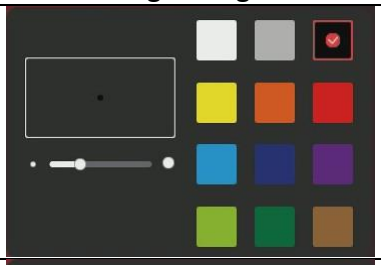
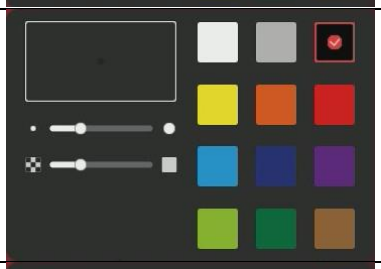
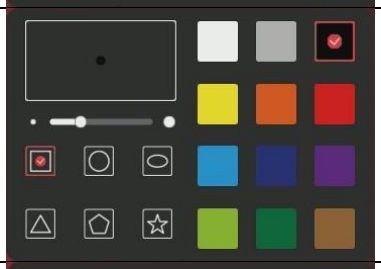
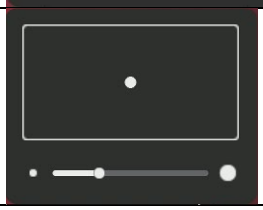
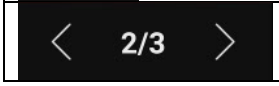
SynCast Display OSD

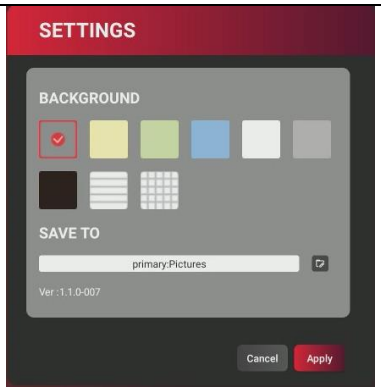
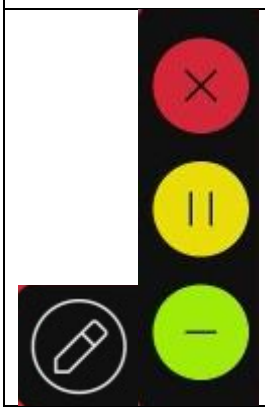
In screen casting mode, if you need to check the **IP and Login Code**, you can select the **OSD icon** from the function bar located on either side of the screen.

- Click the OSD icon → Display the OSD information.
- Click the OSD icon again → Hide the OSD.

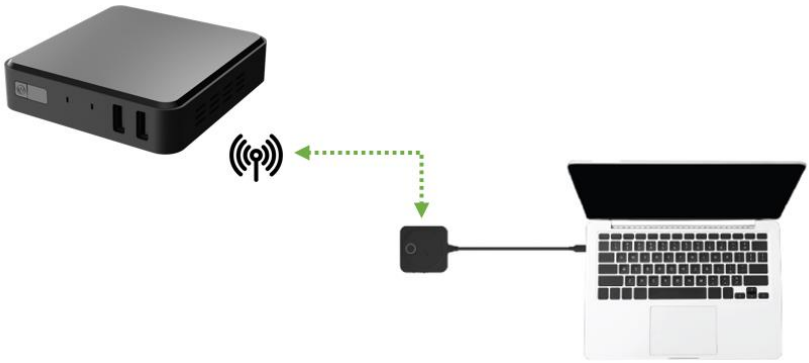
When the OSD is enabled, the system will show the **IP and Login Code** at the upper-left corner of the screen, as illustrated below.

SynNote (Annotator)

Icon	Item	Tool Setting Dialog	Description
	Pen Tool		Adjust the pen size and color from the toolbar.
	Highlight Tool		Adjust the size, transparency, color, or highlight effect in the toolbar.
	Shape Tool		Adjust the size, shape, color, and transparency of the brush from the toolbar.
	Text Tool		Adjust the font size, color, and type from the text settings.
	Eraser		Adjust the size of the eraser from the toolbar.
	Delete Page		Delete the current page (this action cannot be undone).
	Redo		Select **Redo** to restore the last undone action.
	Undo		Select **Undo** to cancel the last action.
	**Page Selection**		Select a specific page to view or edit.

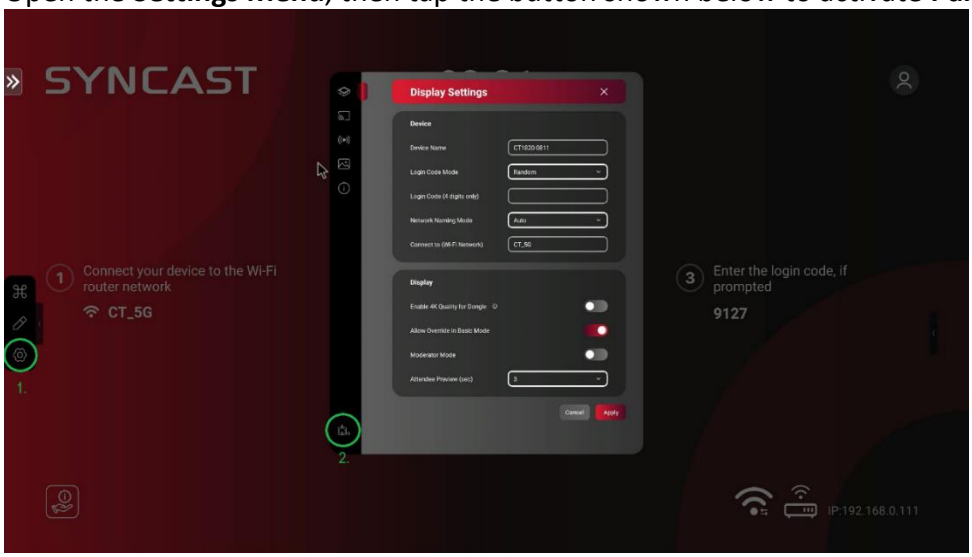
	New Page		Select **New Page** to add a blank page.
	Save		Select **Save** to store the current content.
	Setting		- Adjust the background color as desired. - Select the **"…"** icon to choose the save directory. - The current version is displayed in the **Version** section. - Select **Cancel** to return to the Annotator. - Select **Apply** to confirm and save the changes.
	**Exit** **Pause** **Minimize**	In "Pause" Status. In "Minimize" Status.	Click this button to expand the following three functions: - Select **Exit** to close the Annotator. - Select **Pause** to pause the Annotator. - Select **Minimize** to temporarily hide the toolbar from view.

Hardware Transmitter



Dongle Pairing

Open the **Settings Menu**, then tap the button shown below to activate **Pairing Mode**.



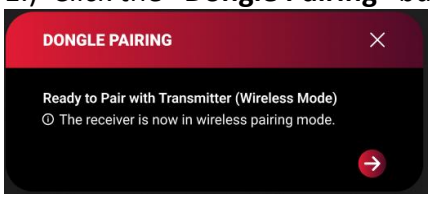
1. USB Pairing

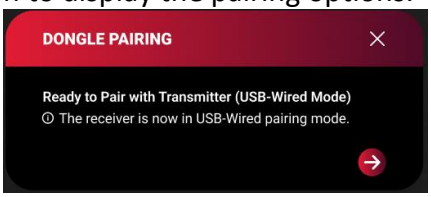
Insert the Hardware Transmitter dongle into the **front USB port of the CT1820** (see image below).

⚠ **Note**: Since the CT1820 does not have a Type-C interface, a **USB-A to Type-C adapter** is required when connecting Type-C devices.
For a more convenient experience, it is recommended to use the **Wireless Pairing** function instead.

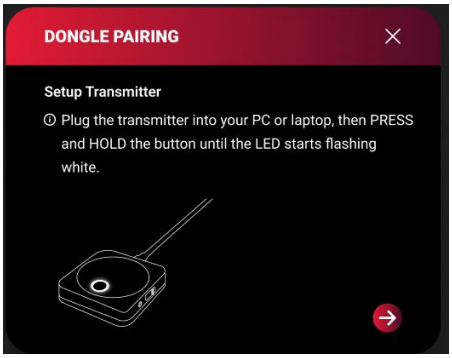
2. Wireless Pairing

1.) Click the **"Dongle Pairing"** button to display the pairing options.

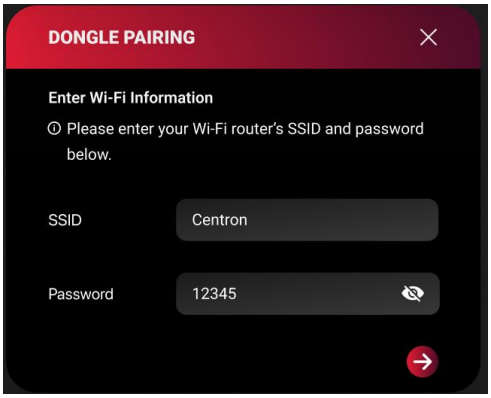


or


2.) Set up the transmitter: Insert the transmitter into your PC or laptop, then **press and hold** the button until the LED starts flashing **white**.

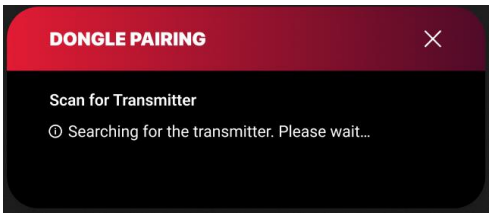


3.) Enter the Wi-Fi information.



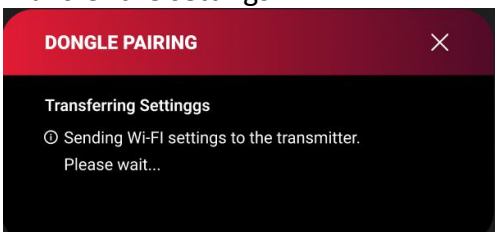
- ⚠ **Note**: When using Hotspot Mode or Wi-Fi Station Mode, the SSID and password are usually retrieved automatically.

4.) Scan for the transmitter.

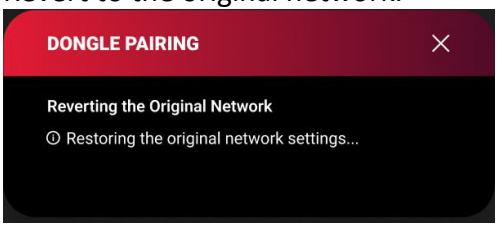


5.) Connect to the transmitter.

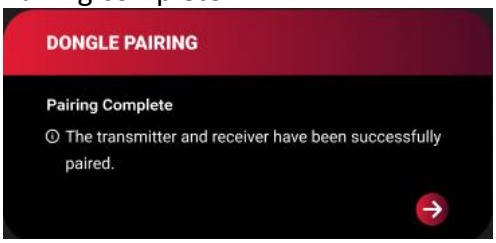
6.) Transfer the settings.



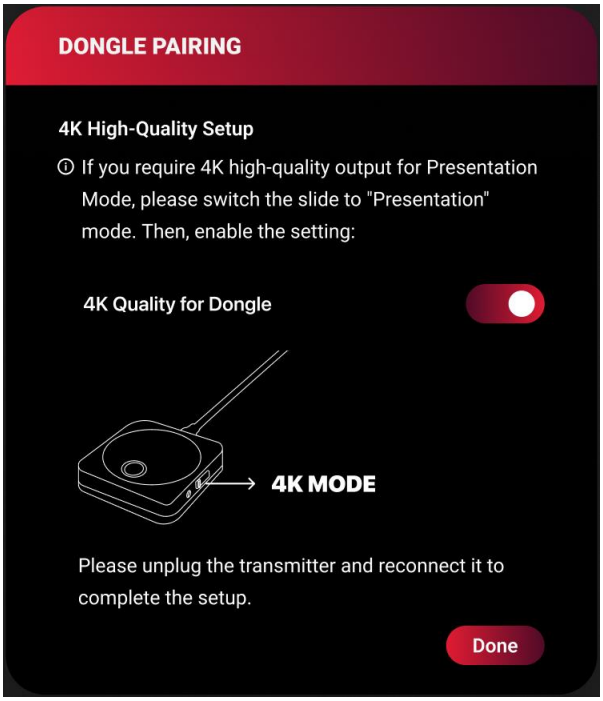
7.) Revert to the original network.



8.) Pairing complete.



9.) After pairing is complete, the system will ask whether you want to enable **4K Quality for Dongle**.



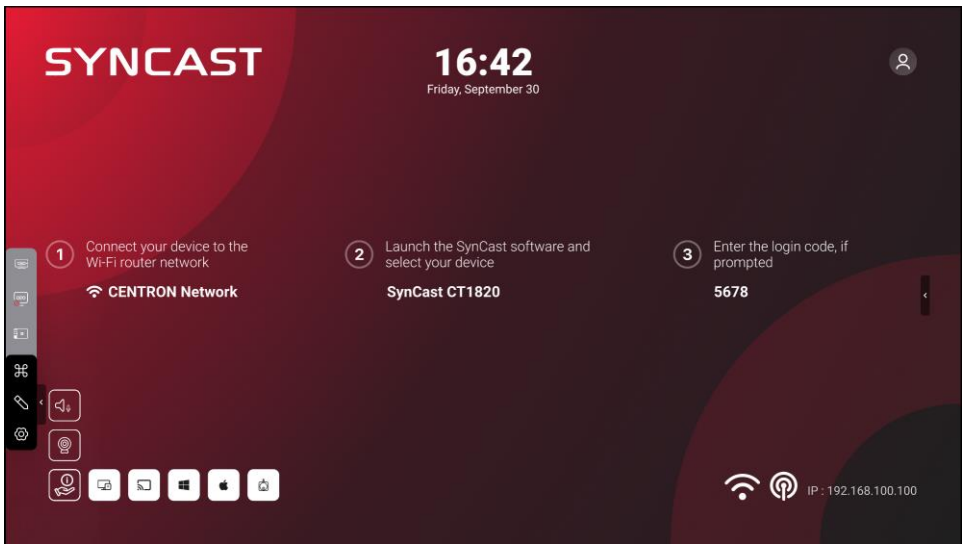
- If yes, switch to **Presentation Mode**, and enable the setting **“4K Quality for Dongle.”**
- When the LED turns **green**, press the button to start screen casting.

Wireless Conference Mode (BYOM)

Wireless Conference Mode, also known as BYOM (Bring Your Own Meeting), allows clients to remotely use the USB Camera and/or USB Speakerphone connected to the SynCast Display CT1820 as if the devices were directly connected to their own computer.
In addition, the shared screen on the CT1820 can also be transmitted in real time to other participants in the conference.

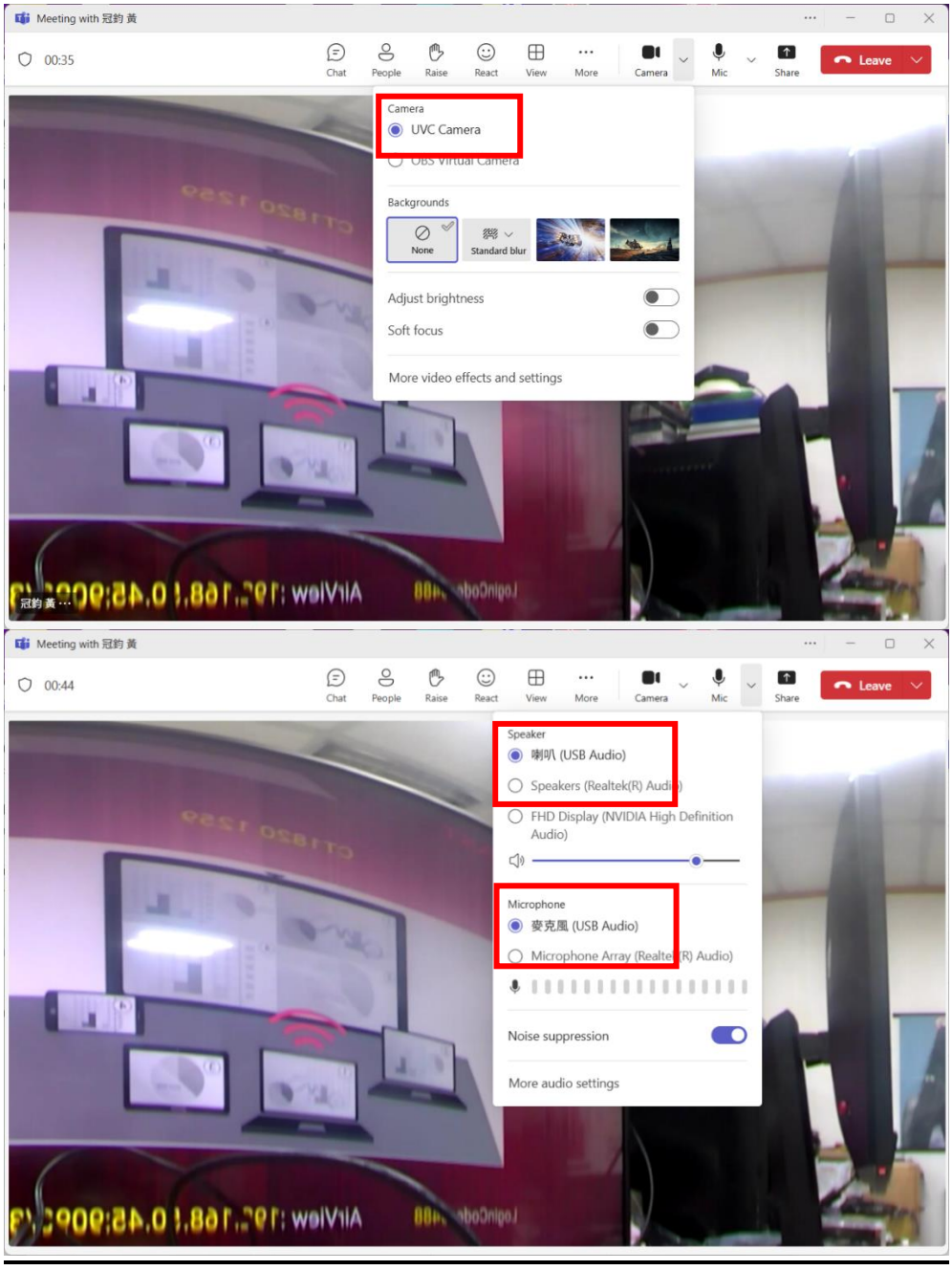
Step :

(1) Connect a **USB Camera (with MJPEG support)** and/or a **USB Speakerphone** to the USB port of the CT1820.
Once recognized, icons will appear indicating that the camera and speakerphone have been successfully detected.



(2) **Press** the **small button** located on the side of the **Hardware Transmitter**.
The status icon next to the CT1820 will update (as shown below), indicating that the speakerphone is now active.

(3) In your conferencing software (e.g., Zoom, Teams, Google Meet), select **"UVC Camera"** and **"USB Audio"** as your video and audio sources.
Refer to the diagram below for visual guidance.


Meeting with 冠鈞 黃
00:35
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
Camera
UVC Camera
Backgrounds
None
Standard blur
Adjust brightness
Soft focus
More video effects and settings
Meeting with 冠鈞 黃
00:44
Speaker
喇叭 (USB Audio)
FHD Display (NVIDIA High Definition Audio)
Microphone
麥克風 (USB Audio)
Noise suppression
More audio settings