

S311&

*3 Input 1 Output
Video Conferencing Switch*



USER MANUAL

Table of Contents

1	PRECAUTIONS.....	7
1. 1	<i>Important Remark</i>	7
1. 3	<i>Cleaning</i>	8
3.	Description and Features	9
3. 1	<i>Main Features</i>	9
3. 2	<i>Optional Accessories</i>	10
3. 3	<i>Mechanical Diagram</i>	11
4	Install & Connect	11
4. 1	<i>Wall Mount Install</i>	11
4. 2	<i>Front Panel</i>	12
4. 3	<i>Rear Panel</i>	13
4. 4	<i>Power Connection</i>	14
4. 5	<i>Video Connection</i>	14
4. 6	<i>Audio Connection</i>	15
4. 7	<i>LAN Connection</i>	16
4. 8	<i>USB Control Devices Connection</i>	16
4. 9	<i>USB Conferencing Devices Connection</i>	17
5	Start-up and Operation.....	18
5. 1	<i>Video Source Switching</i>	18
5. 1. 1	<i>Automatic Switching</i>	18
5. 1. 2	<i>Manual Switching</i>	18
5. 2	<i>Video Conference and Screen Sharing via type C</i>	19
5. 3	<i>Video Conference and Screen Sharing via HDMI</i>	22
5. 4	<i>Wireless Presentation Mode and Video Conference</i>	24
5. 4. 1	<i>Screen Sharing Using WirelessMedia App</i>	24

5. 4. 2 Video Conference using WirelessMedia APP.....	25
5. 4. 3 Screen Sharing using DG-H28 and DG-C28.....	28
5. 4. 4 Video Conference using Dongle.....	29
5. 5 HDCP and EDID Management.....	30
5. 5. 1 HDCP.....	30
5. 5. 2 EDID.....	33
5. 6 Whiteboard and Annotation.....	35
5. 6. 1 Whiteboard.....	35
5. 6. 2 Annotation	36
5. 6. 3 Download Annotation to connected users.....	38
6 WebGUI Setting Management & Configuration.....	38
6. 1 Network Settings.....	40
6. 1. 1 Network Mode	40
1.1.1 Wired Network Configuration (Allows the user to configure wired LAN settings)	49
1.1.2 USB Network Port.....	49
1.2 Display and Sound.....	50
1.2.1 Sound	50
1.2.2 Native Protocols.....	51
1.3 Video Source Control.....	54
1.3.1 EDID	54
1.3.2 HDCP.....	55
1.3.3 Video Input.....	56
1.3.4 Video Output.....	57
1.4 Welcome Screen.....	62
1.4.1 Customize welcome Screen.....	62
1.4.2 Other Settings.....	63
1.5 Device Control.....	64
1.5.1 Key Function Definition	64
1. 5. 2 Remote Login (Telnet) Control	65

1. 5. 3	Serial Port Control	66
1. 5. 4	Trigger Commands	67
1.5.5	S311 Automatic Status Report.....	68
1.6	UCC Device Management	69
1.6.1	USB Port Settings.....	69
1. 6. 2	USB Camera.....	70
1.6.3	USB Audio.....	70
1.7	System Settings	71
1.7.1	Date & Time	71
1. 7. 2	Language	72
1. 7. 3	Configuration File.....	73
1. 7. 4	Auto Standby	74
1.7.5	Scheduled Reboot	74
1.7.6	Restore Factory Settings	75
1. 7. 7	Auto Change Password	76
1.8	Firmware Upgrade	76
1. 8. 1	Firmware Upgrade	76
1.9	Security Settings	77
1.9.1	Security Level.....	77
1.9.2	Login Password.....	78
1. 9. 3	Clear Records After Meeting Ends.....	79
1.9.4	Panel Button Lock.....	79
1.10	Other Settings	80
1. 10. 1	.....Auto Create Launcher	80
1.10.2	.....Developer Tools	81
1. 11	About Device	82
1. 11. 1	.....About Device	82
1. 12	Firmware Update	82
1. 12. 1	.....Upgrade S311 Firmware Version	82
1. 12. 2	.....Upgrade DG-H28 / DG-C28 Firmware Version	84

7. Technical Specification.....	86
----------------------------------------	-----------

1 PRECAUTIONS

1.1 Important Remark



WARNING: SHOCK HAZARD - DO NOT OPEN

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING (If applicable): The terminals marked with symbol of “” may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready-made leads or cords.

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

WARNING: A device with Class I construction shall be connected to a mains socket- outlet with a protective earthing connection.



WARNING: This product must not be discarded, under any circumstance, as unsorted urban waste. Take to the nearest electrical and electronic waste treatment centre.



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.2 Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the device.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the device during lightening sorts or when unused for long periods of time.
13. Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Disconnecting from mains: When switching off the POWER switch, all the functions and light indicators of the unit will be stopped, but fully disconnecting the device from mains is done by unplugging the power cable from the mains input socket. For this reason, it always shall remain easily accessible.
15. Equipment is connected to a socket-outlet with earthing connection by means of a power cord.
16. The marking information is located at the bottom of the unit.
17. The device shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on device

1.3 Cleaning



Clean the unit with a soft, dry clean cloth or slightly wet with water and neutral liquid soap only, then dry it with a clean cloth. Be careful that water never gets into the unit through any hole. Never use alcohol, benzine, solvents or abrasive substances to clean this unit.

Grastron Technology Co.,Ltd. accepts no liability for any damage that may be caused to people, animal, or objects due to failure to comply with the warnings above.

Thank you for choosing our device S311/DG-H28 /DG-C28
Wireless Conferencing and Presentation Switcher!
We appreciate your trust.

It is VERY IMPORTANT to carefully read this manual and to fully understand its contents before any connection in order to maximize your use and get the best performance from this equipment.

To ensure optimal operation of this device, we strongly recommend that its maintenance be carried out by our authorised Technical Services.

2. Packing Contents

- S311
- Antenna (3units). Not pre-mounted to avoid damages.
- Power Adaptor

3. Description and Features

The S311 is a high-performance 3x1 BYOM (Bring Your Own Meeting) Presentation Switcher designed to simplify and enhance your meeting or presentation experience. This device supports both HDMI and Type C wired inputs with resolutions up to 4K60 4:4:4, ensuring high-quality video output. It also features wireless presentation capabilities via Miracast, Airplay, Chrome Cast, and optional Wireless Dongles, making it suitable for various applications. The S311 provides dynamic or manual USB host switching, split screen presentation in wireless mode, extensive EDID and HDCP management, audio de-embedding, and a Web-UI for easy configuration and management. Additionally, it supports 1G Ethernet to USB Host, touch display, and reverse control of connected PCs, making it a versatile solution for modern presentation needs. Its fan-less design and easy installation options make it ideal for meeting rooms, educational settings, and collaborative areas.

3.1 Main Features

- 3x1 BYOM Presentation Switcher.
- HDMI and USB-C wired inputs up to 4K60 4:4:4 resolution
- Dynamic or manual USB host switching for wired sources in conferencing applications that utilize room USB peripherals
- Wireless presentation via Miracast, Airplay, Chrome Cast, App, and/or optional Dongles
- Enable wireless BYOM with both Windows PC and Macbook
- Supports split screen presentation in wireless mode
- Extensive EDID and HDCP management
- Secure AES-256Bit + RSA-1024Bit encrypted wireless transmission
- Audio de-embedding to balanced analog output
- Web-UI for configuration and management
- Open API for external control system
- Management and mass-deployment software
- 1G Ethernet to USB Host

- Touch display support
- Reverse control of connected PC via USB, Miracast, or Dongle from touch display or keyboard and mouse
- Built-in whiteboard and annotation for wireless presentation
- Easy installation beneath a table or desk with included mounting brackets
- User customizable welcome screen
- Fan-less design

3.2 Optional Accessories

Wireless Dongle: DG-H28 and DG-C28, used for plug & play wireless mirroring from personal PC or mac desktop to the main screen.

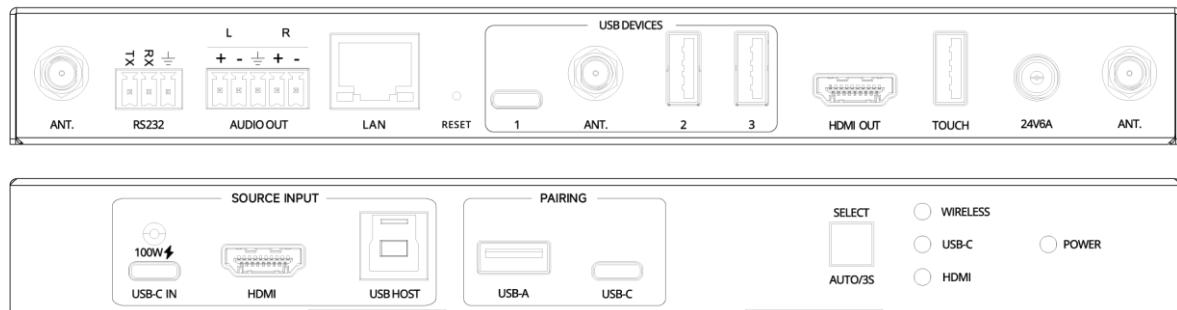
DG-H28 is a 4K HDMI wireless Dongle that allows participants to easily share content from a laptop or HDMI device to the S311 base unit. Power is supplied by an auxiliary USB Type A connector. It is designed as a cross platform and plug and play device with no additional driver installation needed. This technology allows you to start a transmission and begin sharing content by just connecting the wireless Dongle into the source and pushing the surface. An LED indicator allows the user to know the status of the wireless Dongle at any time.



DG-C28 is a 4K USB-C wireless Dongle that allows participants to easily share content from a laptop or USB-C video device to the S311 base unit. Power is supplied directly through the same connector. It is designed as a cross platform and plug and play device with no additional driver installation needed. This technology allows you to start a transmission and begin sharing content by just connecting the wireless Dongle into the source and pushing the surface. An LED indicator allows the user to know the status of the wireless Dongle at any time.



3.3 Mechanical Diagram



4 Install & Connect

4.1 Wall Mount Install

The S311 can be installed on the wall or flat surface. At the bottom of S311, there are two mounting holes that can be fixed to a surface using flat screws.

! Mounting screws are not included in the S311 box. The type of screws depends on the type of wall (stone, wood, plasterboard, ...) you are mounting the Base Unit S311 to. Make sure the head of the screw is not larger than the hole in the bottom of base unit S311.

! For optimal performance, install the S311 close to the display and avoid obstacles between the S311 and the Dongles.

! • Antenna Placement

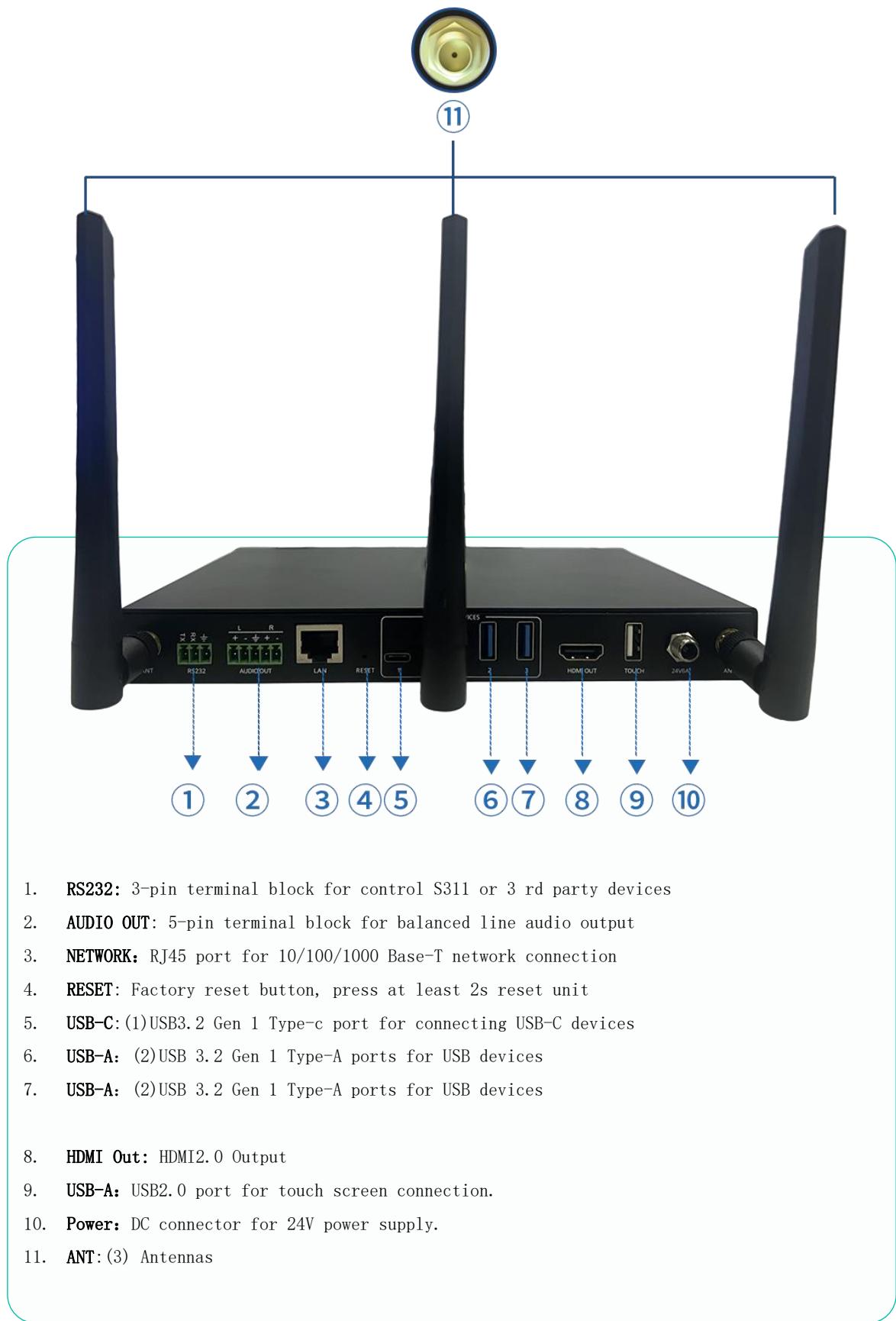
- The antennas should be oriented vertically, so perpendicular to the ceiling and parallel to the walls.
- The antennas should be installed far enough (at least 50cm/1.6ft) from metallic surfaces to avoid unwanted reflections and far enough (at least 1m/3.3ft) from other radio equipment that operates in the same frequency range, e.g. other WiFi access points, cordless telephone, microwave ovens, etc. It is also best to install antennas at least 15 cm (6 inches) from concrete walls.
- The most favourable situation is a direct line of sight between antennas and buttons. Any obstruction will cause the signal to follow a longer propagation path, which can result in performance degradation.
- Due to the particular radio pattern of the dipole antennas, the antennas should not be placed just above potential positions of S311 users. As a result, the advised position for the antennas is at the side of the meeting room.

4.2 Front Panel



1. **USB-C IN:** Connect a USB-C source device supporting DP Alt mode for video.
2. **HDMI In:** Connect an HDMI source device for video input.
3. **USB HOST:** USB3.2 Gen 1 Type-B port for USB data from the HDMI source
4. **USB-A:** For pairing DG-H28 and S311
5. **USB-C:** For pairing DG-C28 and S311
6. **Channel switch button:** Used to manually switch the video signal input source display (wireless, USB-C, HDMI), the switching interval is 3s.
7. **Source LEDs:** Indicates current source selection by illuminating green.
8. **Power LED:** Indicates standby mode, illuminates red when in standby mode.

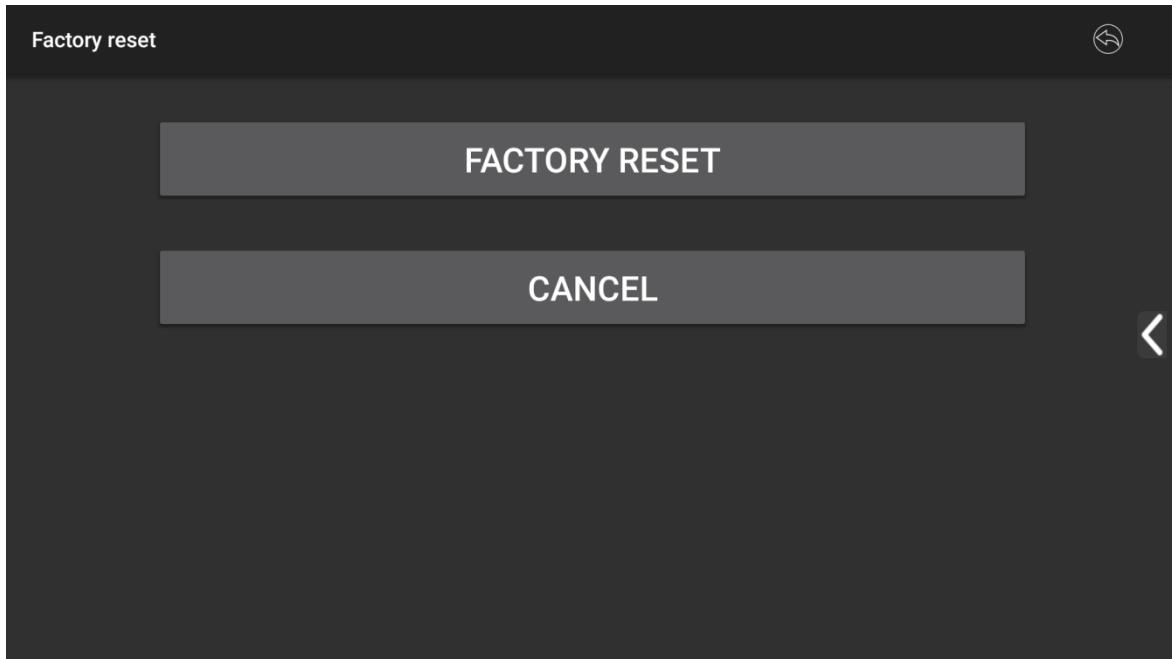
4.3 Rear Panel



Restoring factory settings using the rear panel buttons

By using this S311 function, all previous settings will be lost and you will need to set them up again.

When the S311 is powered on and the home screen is displayed, press the reset button on the rear panel of the S311. Use a pointed object (such as an unbent paper clip) to press this button for at least 2 seconds until the "Factory Reset" page is displayed, as shown below



S311 will reboot to default configuration after 3 seconds

 If the S311 HDMI output is not connected to a display and no image is available, press and hold the reset button until the red LED on the top surface of the S311 illuminates to perform the reset process.

4.4 Power Connection

- Local power supply

Plug the power connector to the power adapter to the power input connector of the Base Unit S311. Connect the power cable plug into the wall outlet.

4.5 Video Connection

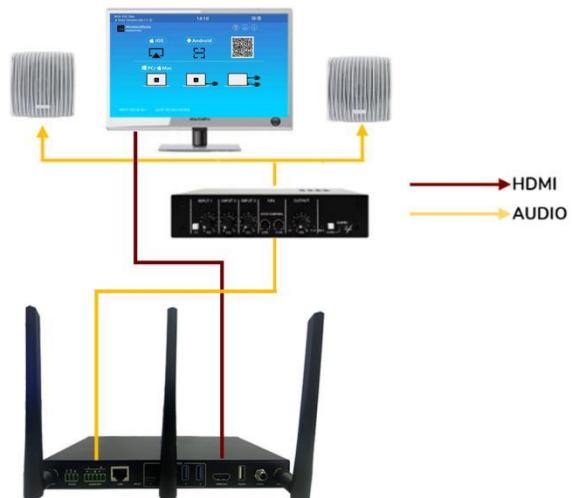
Connect the HDMI Output of S311 to a 4K or Full-HD display by a HDMI cable.

After starting up, the system displays the home page, as shown below



4.6 Audio Connection

Connect an audio cable with Phoenix Terminal connector into the audio of the VS311. Connect the other side to the meeting room's sound system.



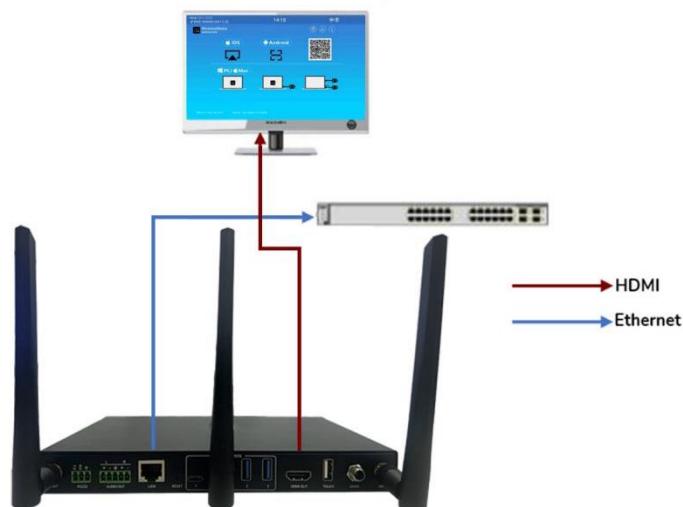
 DG-H28 and DG-C28 can transmit audio to the S311 base unit when the audio output of the source device is selected.

4.7 LAN Connection

Connect a network cable with RJ-45 connector into the LAN port of Base Unit S311. Connect the other side to LAN. DHCP on the S311 switch is enabled per default.

- a) If there's a DHCP server in the network, an IP address will be assigned automatically.
- b) If there is no DHCP server in the network, S311 will require to manually configure a static IP address. For further information, see chapter Ethernet Configuration.

⚠ Wireless Direct Mode is enabled by default. In this network mode, S311 generates its own wireless SSID with IP address 192.168.43.1. For further information on how to properly configure the network settings according to the needs of the application. Please refer to the chapter Network Mode .



The LAN connection can be used for:

- Network integration of S311 in guest or company network.
- TCP control the S311.
- Maintenance purpose.
- Over-The-Air -Update (OTA) of firmware of S311.

4.8 USB Control Devices Connection

If the user connects an USB Mouse or Touchscreen, the following features will be available:

- Moderator tab to manage the active users sharing content with the S311.
- Whiteboard or Annotation during a presentation.

- USB-HID function for laptop control and click function of a touchscreen:
 - **USB mouse:**
 - Single click to select.
 - Right-click to back to the Home Page.
 - **Touch screen:**
 - Click to select.
 - Long press to open the contextual menus, as double-click or click the right button of a USB mouse.



4.9 USB Conferencing Devices Connection

S311 supports USB Camera and USB speakerphone through USB-C, USB-B and wireless sharing to start meetings with conferencing software such as Skype, Zoom, Microsoft Teams, etc. For further information on how to properly configure the settings according to the needs of the application. see chapter Video Conferencing Mode Chapter.

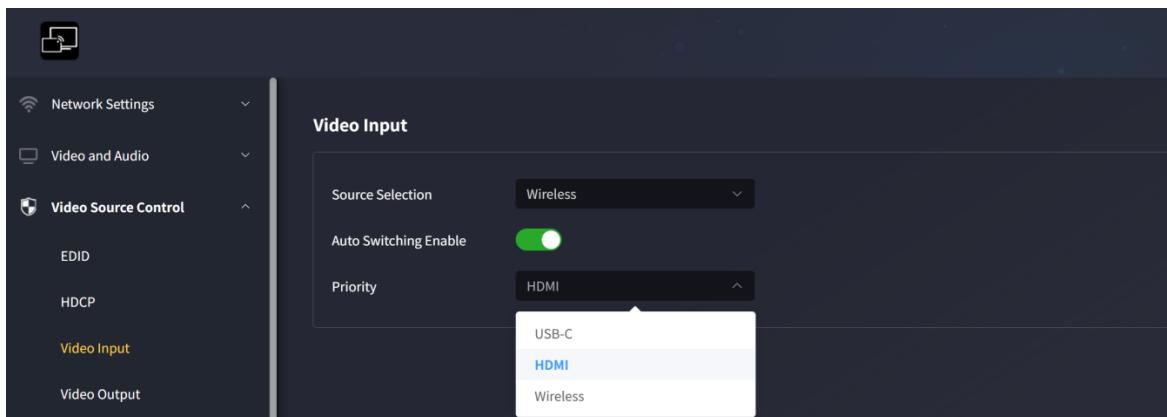


5 Start-up and Operation

5.1 Video Source Switching

5.1.1 Automatic Switching

Supports switching selection of video signal input sources, mainly including: USB-C, HDMI and Wireless



It is set to automatic mode by default, allowing automatic switching to the "on" state. The switch will perform switching according to the following rules:

Priority:

- When HDMI is selected as the default priority, the priority of HDMI is the highest. When there is HDMI signal, the priority of type C/wireless is lower and cannot be "taken over" for switching. Only the input source with higher priority is allowed to switch. The priority order is HDMI > USB-C > Wireless
- When USB-C is selected as the default priority, the priority order is USB-C > HDMI > Wireless
- When wireless is selected as the default priority, when connecting HDMI and Type-C at the same time, the "first detected access source first" logic is followed, and the priority order is wireless > USB-C > HDMI

New Source Input: When the S311 detects a new input, it will automatically select the new input based on priority.

Restart: If the S311 restarts, it will automatically reconnect the input, giving priority to the source with the highest priority.

Source Removed: When an input source is removed, the S311 will change the input source based on the priority order. If the corresponding source is active, it will be switched to the input source; otherwise, the S311 will automatically switch to the Wireless input source.

5.1.2 Manual Switching

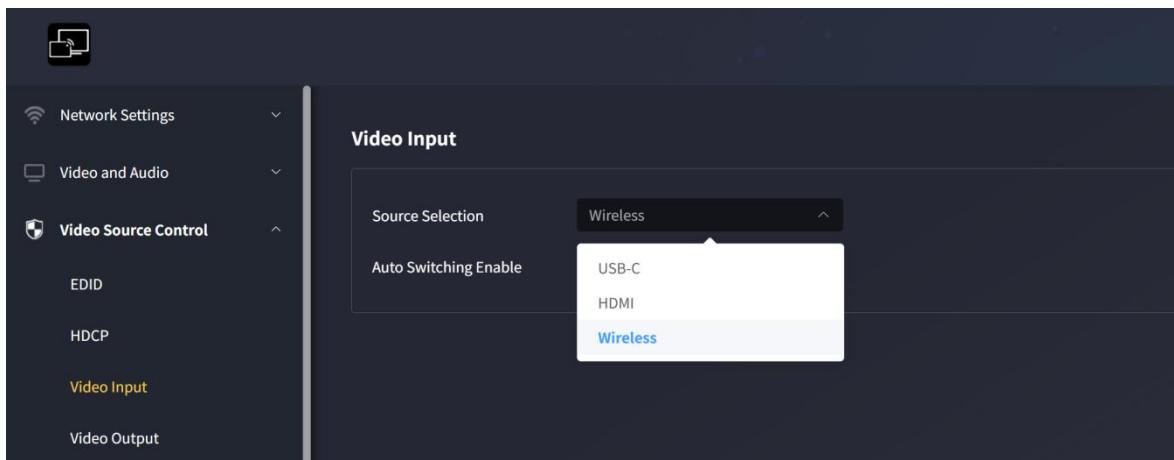
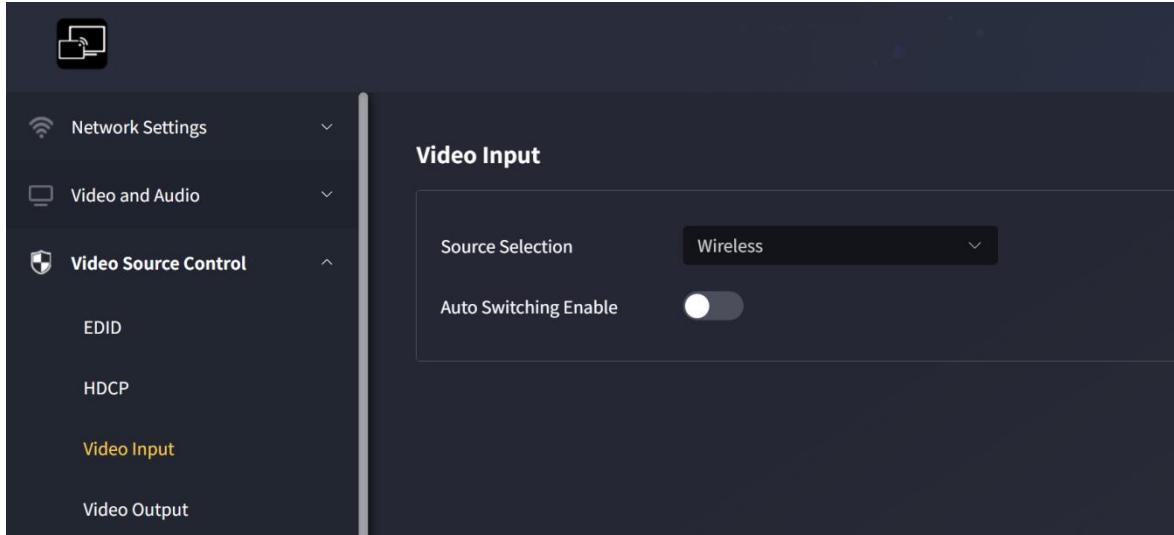
1. Front Panel

When the switch is in manual switching mode, if you need to change the input source, press the front panel key of the device directly. The corresponding LED light will flash for three seconds and then turn green.



2. Web setting

Automatic switching is disabled, and the switcher is in manual switching mode. Select the input source you need to change, and the manual switching will be successful, with simultaneous synchronization of the front panel button selection.

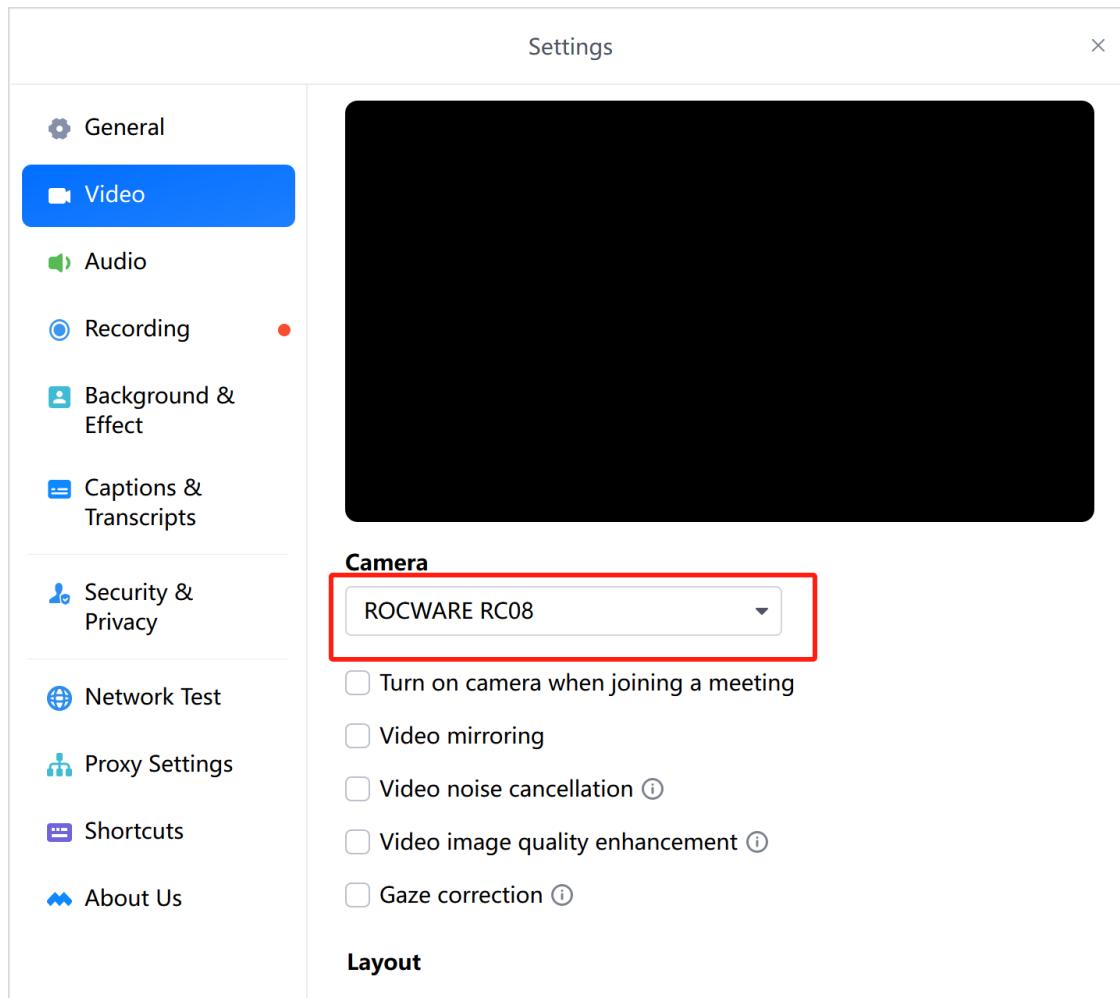


5.2 Video Conference and Screen Sharing via type C

S311 allows video conferencing using USB conferencing devices via wired type C. This can be done by following the steps below:

1. Connect a Type C conferencing device to the S311 USB port. The camera and microphone icons will appear in the status bar on the main screen.
2. Connect one end of the Type C cable to the S311 Type C port and the other end to the PC Type C port.
3. Switch the input source to Type C, project the desktop content to the monitor, and connect the USB TOUCH cable to project the screen for touch transmission
4. Launch the video conferencing application, using Tencent Meeting and ROCWARE camera as an example:

- After starting the meeting, enter the meeting settings, and on the video page, select the connected camera device name "ROCWARE RC08" as the video device



- On the audio page, select "ROCWARE RC08" for the speaker and "ROCWARE RC08" for the microphone.

Settings

- General
- Video
- Audio**
- Recording
- Background & Effect
- Captions & Transcripts
- Security & Privacy
- Network Test
- Proxy Settings
- Shortcuts
- About Us

Speaker

Output

Output volume

Mic

Input

Input volume

Turn on mic when join meetings
 Use PC audio when joining a meeting
 Play chime when mic is unmuted
 Auto-adjust microphone volume
 Press and hold space key to unmute yourself

Audio Driver

The audio driver is installed. To ensure that other attendees can hear the sound on [this device](#)

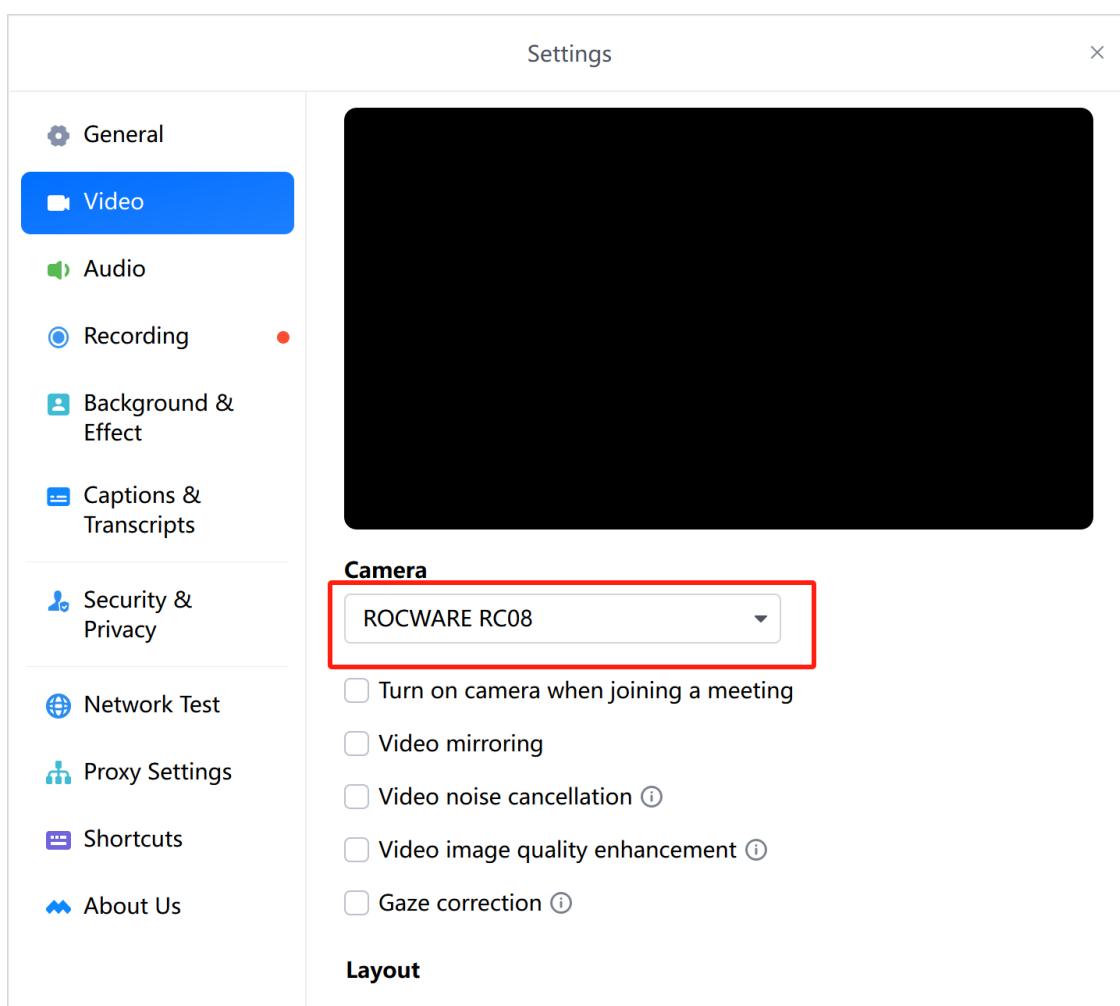
3. Turn on the camera and the video screen will appear. The camera and microphone icons in the status bar of the main screen will turn green (green icons indicate that the USB camera and speaker/microphone are connected and in use).



5.3 Video Conference and Screen Sharing via HDMI

S311 allows you to use USB conference devices for video conferencing via wired HDMI & USB HOST. You can do this by following the steps below:

1. Connect a USB conferencing device to the S311 USB port. The camera and microphone icons will appear on the status bar of the main screen.
2. Connect one end of the USB HOST cable to the S311 USB HOST port and the other end to the PC USB port. The USB HOST cable is used to detect the camera microphone. Connect one end of the HDMI cable to the S311 front panel HDMI port and the other end to the PC. It is mainly used for screen projection.
5. Switch the input source to HDMI, and the display is HDMI projection. Connect the USB TOUCH cable to the screen and transmit the touch screen back.
3. Launch the video conferencing application, using Tencent Meeting and ROCWARE camera as an example:
 - After starting the meeting, enter the meeting settings, and on the video page, select the connected camera device name "ROCWARE RC08" as the video device



- On the audio page, select "ROCWARE RC08" for the speaker and "ROCWARE RC08" for the microphone.

Settings

- General
- Video
- Audio**
- Recording
- Background & Effect
- Captions & Transcripts
- Security & Privacy
- Network Test
- Proxy Settings
- Shortcuts
- About Us

Speaker

Output

Output volume

Mic

Input

Input volume

Turn on mic when join meetings
 Use PC audio when joining a meeting
 Play chime when mic is unmuted
 Auto-adjust microphone volume
 Press and hold space key to unmute yourself

Audio Driver

The audio driver is installed. To ensure that other attendees can hear the sound on

4. Turn on the camera and the video screen will appear. The camera and microphone icons in the status bar of the main screen will turn green (green icons indicate that the USB camera and speaker/microphone are connected and in use).



5.4 Wireless Presentation Mode and Video Conference

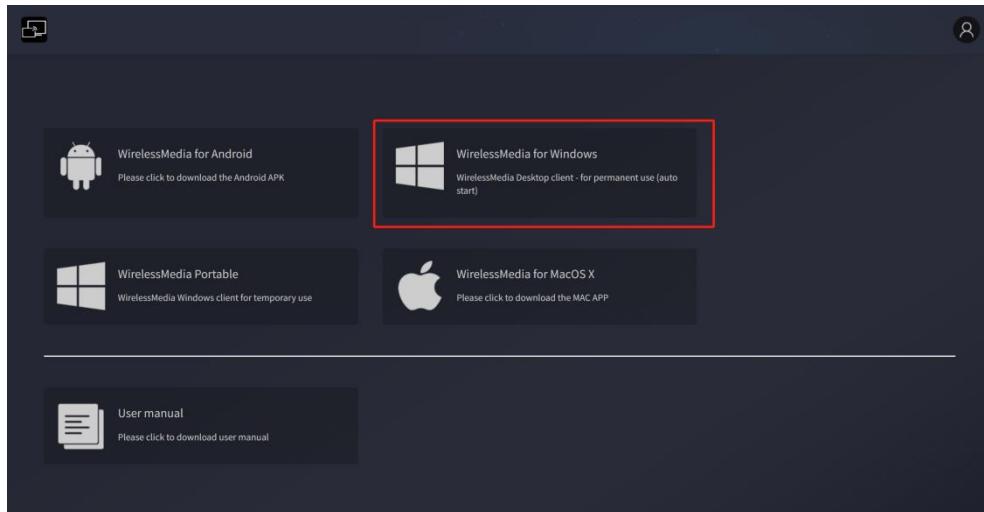
5.4.1 Screen Sharing Using WirelessMedia App

The WirelessMedia application is a launcher that users can run by simply copying the launcher to the internal storage of a Windows or Mac computer.

There are two ways to get the WirelessMedia desktop application:

1. Download from the Web

By connecting your computer device to the same network as the S311 host, you can download the application from the website.



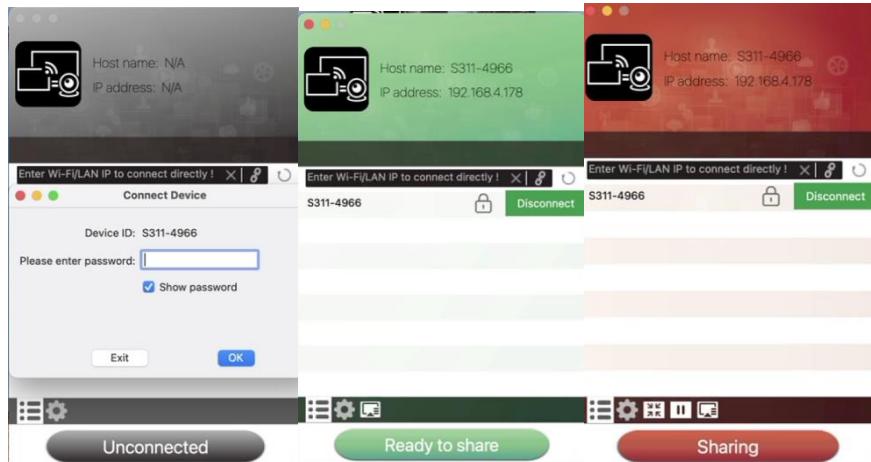
2. Automatically create startup programs

By connecting the U disk, click the download icon on the main page to download the application to the root directory of the U disk, and then copy the application to the computer.

- Launching and operating the WirelessMedia application

Once you have copied the WirelessMedia application to your laptop's local storage, it is ready to use.

1. Open the WirelessMedia app on the source device. The available S311 switch will show whether the source device and the switch are on the same network.



2. Connect your laptop to the WiFi network shown on the home screen (Guest, Staff), or to the LAN on your network using a network cable.
3. Double-click the WirelessMedia application. A list of all available S311 base units on the same network will be displayed. Select the device to connect to. The connection is password protected (lock icon).
4. Enter the S311 password and click "Connect" to start sharing the system.
 Note: If the S311 receiver is not displayed, you can also manually connect by entering the name (SSID) or IP address (click the icon ).
5. The WirelessMedia application layout will turn green. Clicking "Shareable" will start sharing content with the primary display connected to the S311's HDMI output. Connecting a USB TOUCH port allows for touch-screen playback. When the window is static red, the desktop is mirrored to the primary screen.
6. Clicking "Sharing" will stop sharing content. The window will turn to a static green color again.

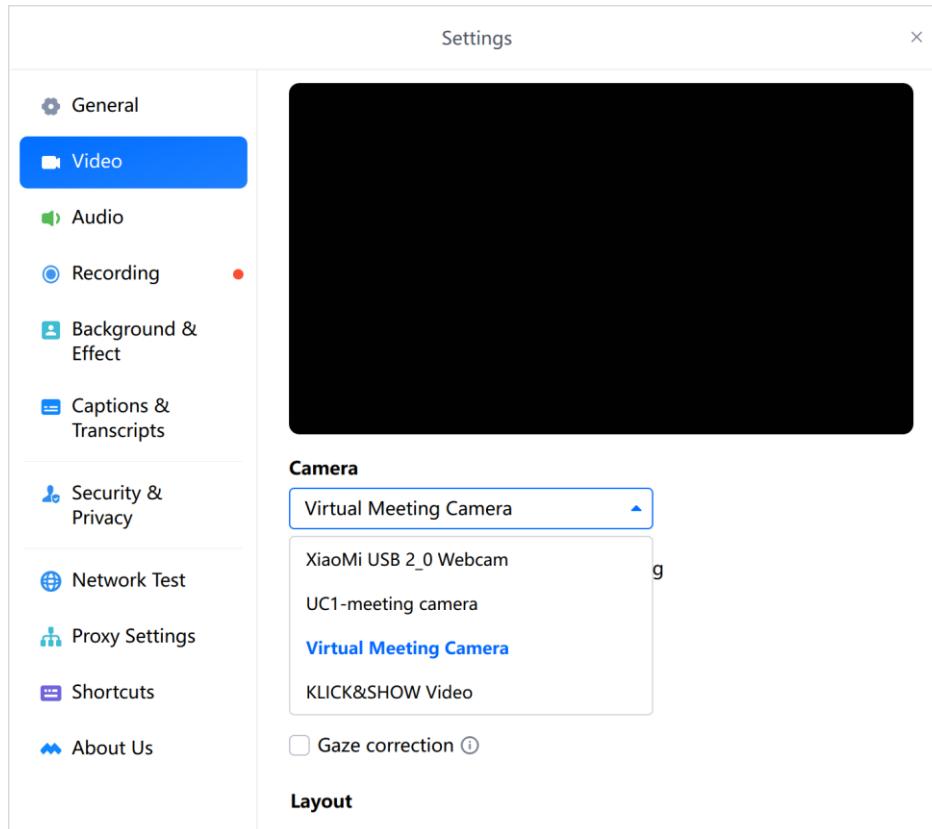
5.4.2 Video Conference using WirelessMedia APP

1. Connect a USB conferencing device to the S311 USB port. The camera and microphone icons will appear on the WirelessMedia control bar.
2. Run the WirelessMedia app
3. After the connection, the application will show the white icon of the camera and microphone, indicating that the USB camera and speaker/microphone are connected.

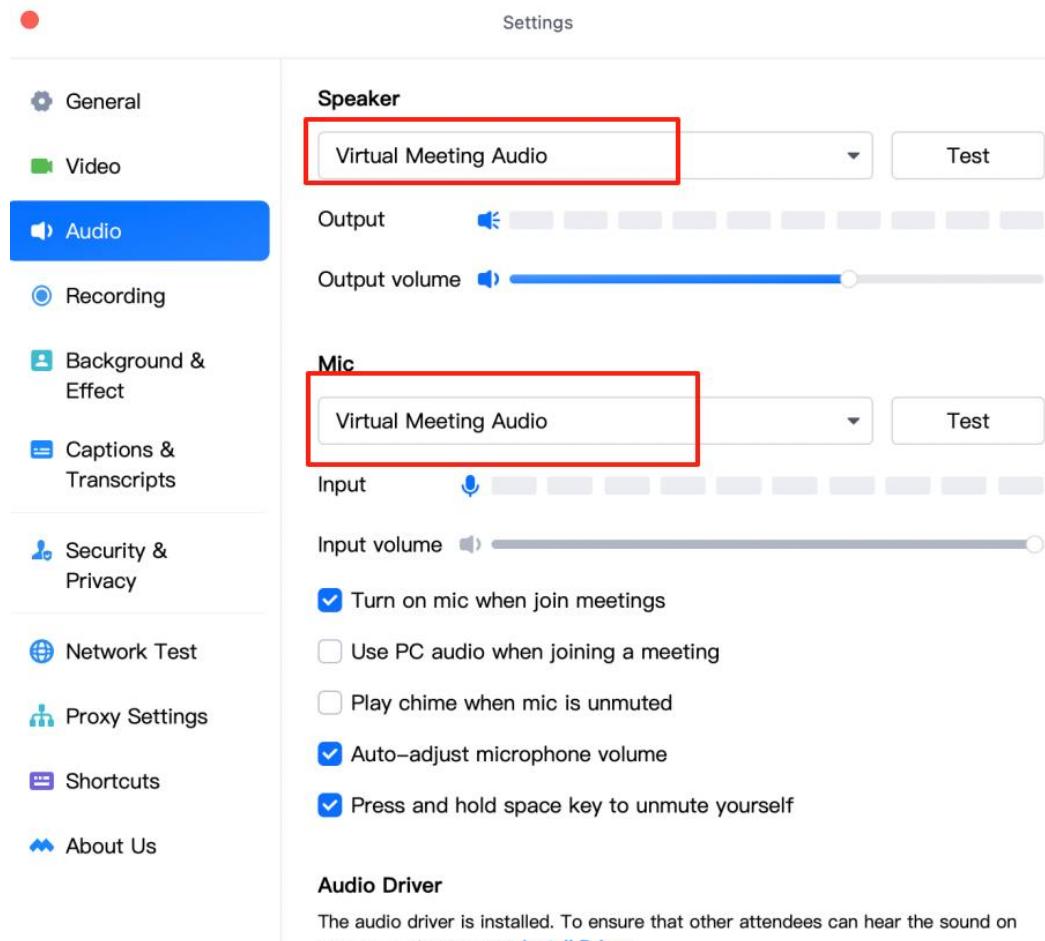


4. Start the video conferencing application, taking Tencent Meeting as an example:

- After starting the meeting, go to the meeting settings and select "Virtual Meeting Camera" as the video device on the video page.

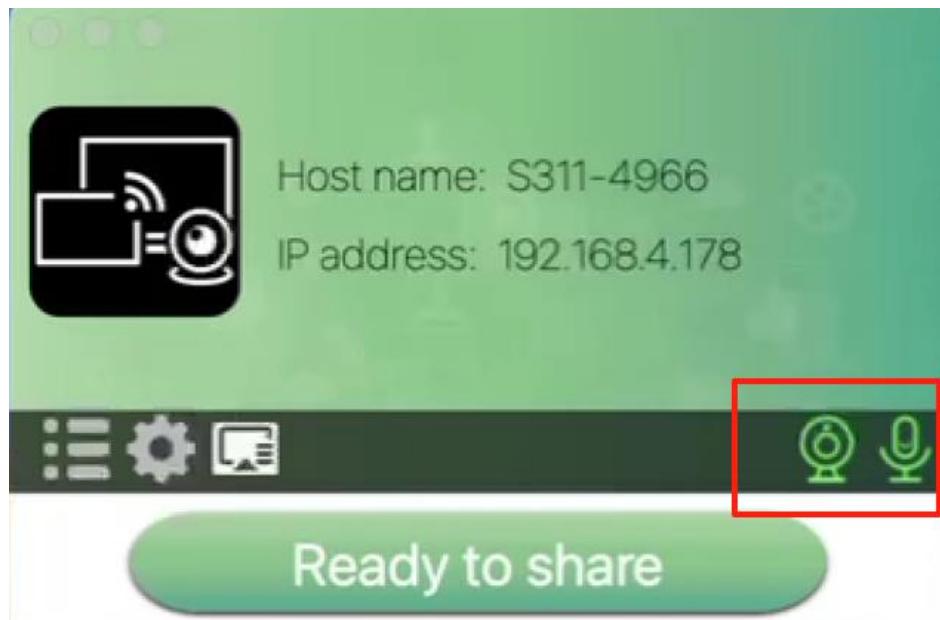


- On the audio page, select "Virtual Meeting Audio" for speakers and "Virtual Meeting Audio" for microphones.



- When you open the camera, the video screen will appear and the camera and microphone icons in the WirelessMedia application will turn green.

Green Icon: Indicates that a USB camera and speaker/microphone are connected and in use by any given application



5.4.3 Screen Sharing using DG-H28 and DG-C28

1. To pair the DG-H28 or DG-C28 with the S311, connect the DG-H28 (HDMI wireless Dongle) to the USB Type-A port or the DG-C28 to the USB-Type-C port. The pairing process will automatically begin. A message will appear while the Dongle is plugged in and pairing is in progress, indicating that the wireless Dongle is connecting. Once pairing is complete, the message sheet will display "Pairing Successful!" on the homepage. You can then unplug the Dongle and use it for screen sharing.



2. Plug the DG-H28 into the USB-A port and HDMI port, or the DG-C28 into the USB-C port, of the device whose content you want to share.
3. When ready, the LED indicator will turn solid green. Press the center button to start wireless presentation. The LED indicator will turn solid red. Connect the USB TOUCH cable to the screen and transmit the touch screen back.
4. Press the middle button again to stop the wireless display and the LED indicator will return to static green.



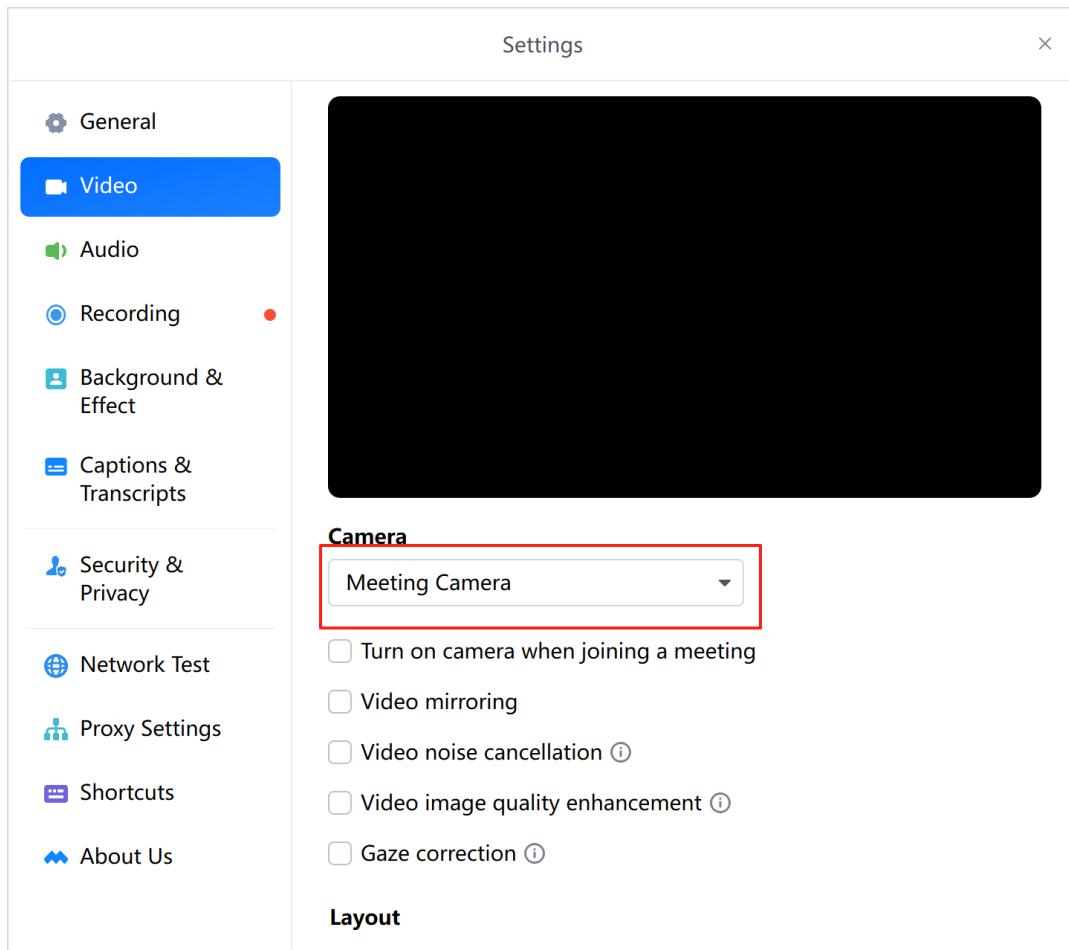
5. When the LED is static red, the content will be mirrored to the main screen connected to the S311 receiver



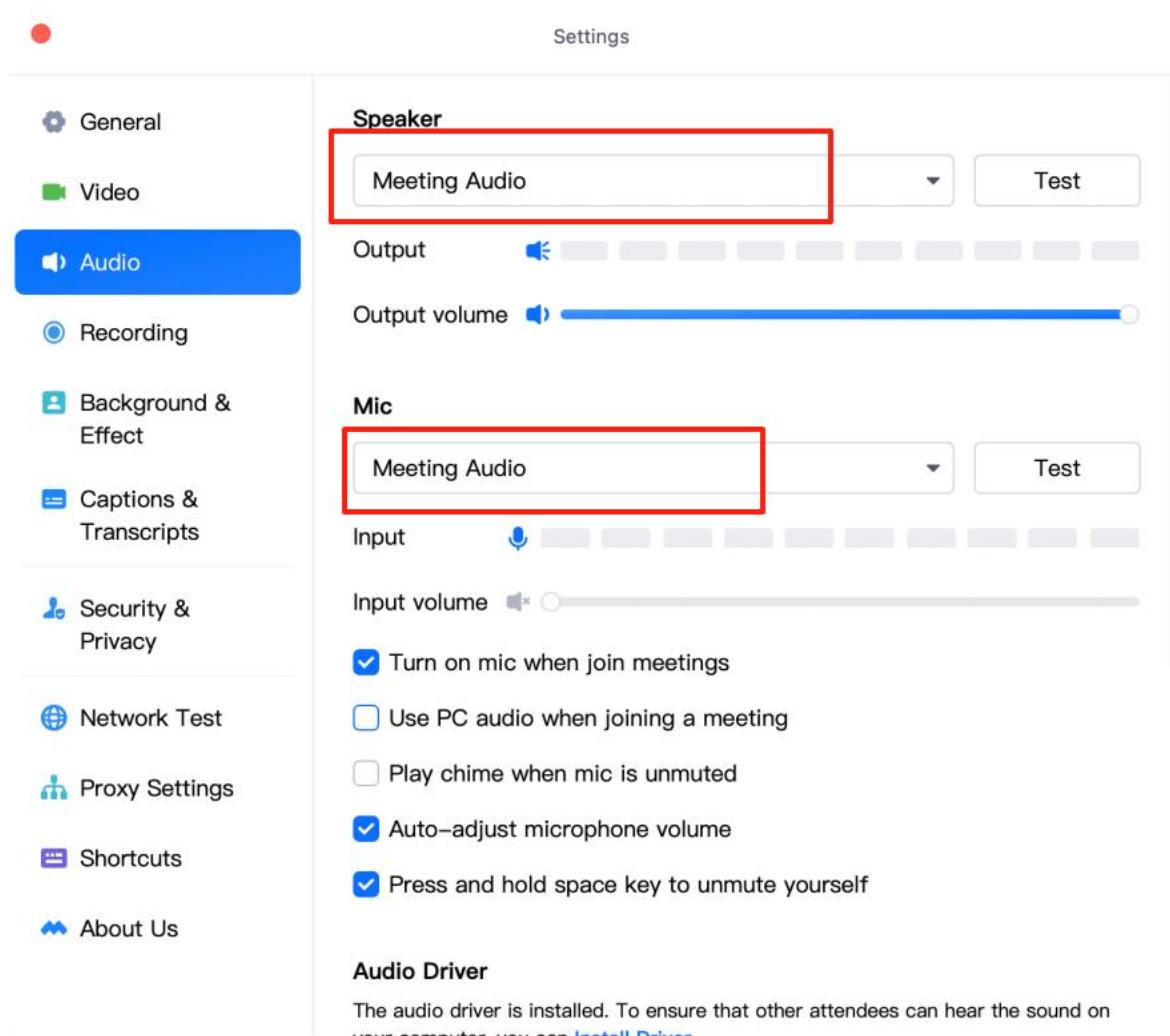
5.4.4 Video Conference using Dongle

S311 allows video conferencing using conference room USB conferencing devices over WiFi

1. Connecting a USB conferencing device to the S311 USB port
2. Connect the paired Dongle to the computer and run the conference APP for video conference after the connection is successful.
 - After starting the meeting, go to the meeting settings and select "Meeting Camera" as the video device on the video page.



- On the audio page, select "Meeting Audio" for speakers and "Meeting Audio" for microphones.



3. Turn on the camera and the video screen will appear. The camera and microphone icons in the status bar of the main screen will turn green (green icons indicate that the USB camera and speaker/microphone are connected and in use).

5.5 HDCP and EDID Management

5.5.1 HDCP

HDCP (High-bandwidth Digital Content Protection) prevents digital audio and video content from being illegally recorded or intercepted by encrypting the transmission link. It is applicable to high-definition digital interfaces such as HDMI and Display Port.

HDCP Input Setting: Whether the digital content input by the port is protected by HDCP encryption or not

HDCP Enable (default): Tells the source that the device supports HDCP

HDCPDisable: Tells the source that the device does not support HDCP

HDCP Output Settings: This setting allows the user to select whether HDCP protection follows the status of the input port or the output port.

Output (default): If the source carries encrypted HDCP, the output should adapt to the downstream unit's preferred HDCP version Input: If the source carries encrypted HDCP, the output follows the same version as the source.

HDCP Input Settings

USB-C
HDCP Support

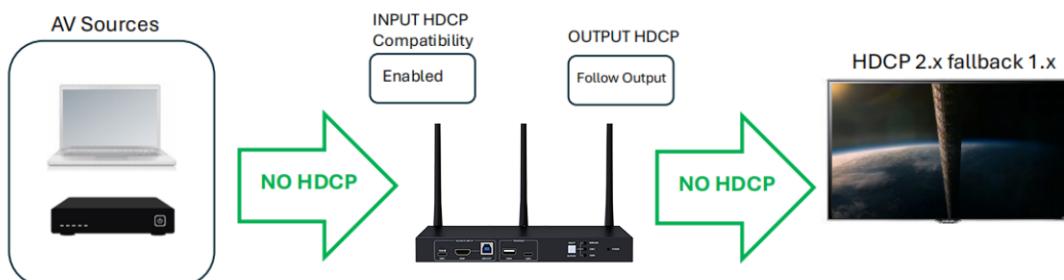
HDMI

HDCP Output Settings

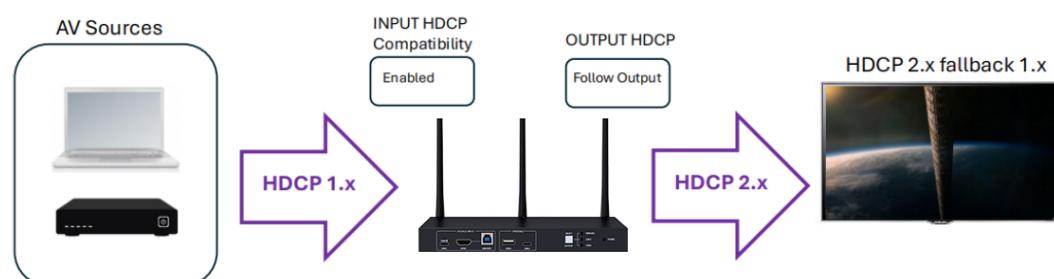
Output
HDCP Follow
 Input
 Output

If the HDCP input port is set to enabled and the HDCP output port is set to output, the output will be in accordance with the following rules:

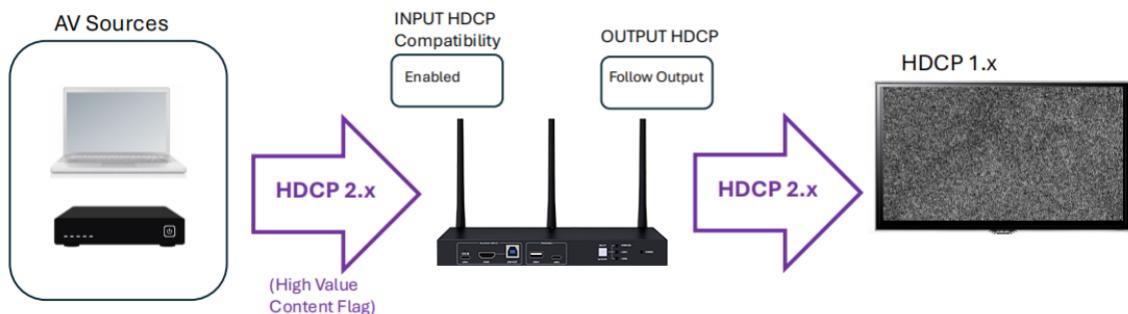
- Input source does not carry HDCP → Output carries HDCP2.X&1.X → No HDCP output, monitor output is normal



- HDCP2.X Input source carries HDCP1.X → Output carries HDCP2.X&1.X → Output HDCP2.X follows the output source

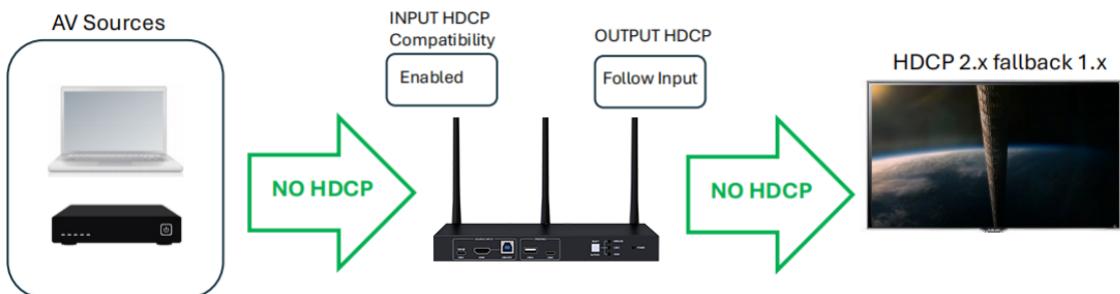


- The input source carries HDCP2.X → the output carries HDCP1.X → the display output is abnormal and does not display

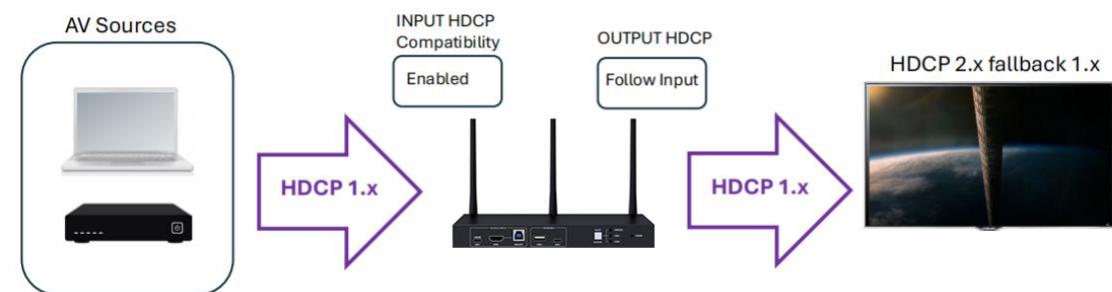


The input source carries HDCP2.X → the output carries HDCP1.X → the display output is abnormal and does not display

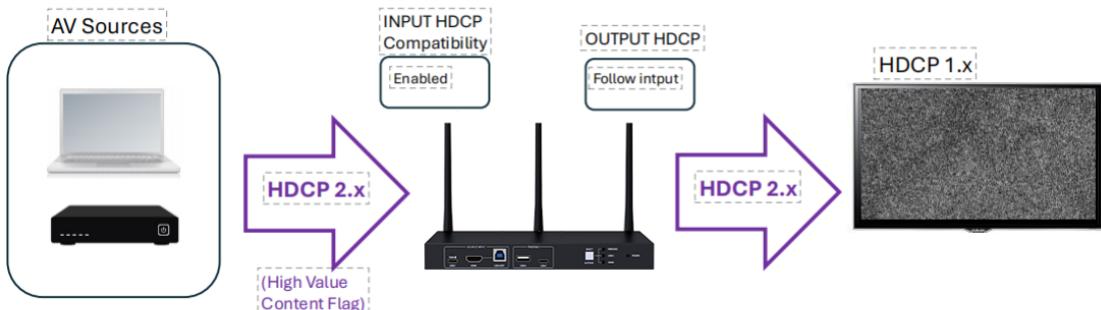
- Input source does not carry HDCP → Output carries HDCP2.X&1.X → Follow source does not output HDCP, and the display output is normal



- Input source carries HDCP1.X → Output carries HDCP2.X&1.X → Output follows input source HDCP1.X

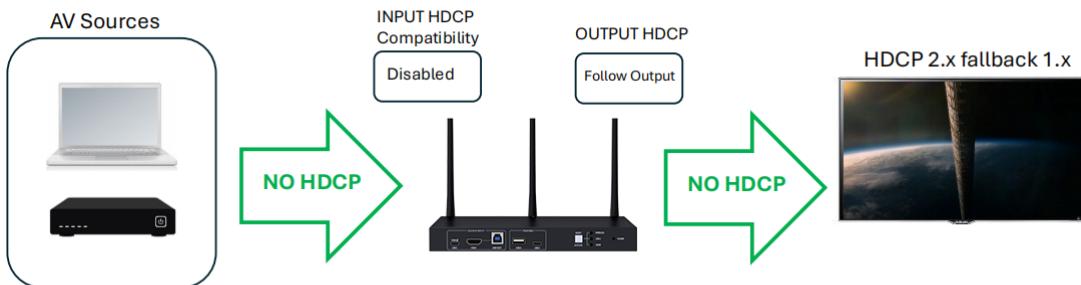


- The input source carries HDCP2.X → the output carries HDCP1.X → the display output is abnormal and does not display



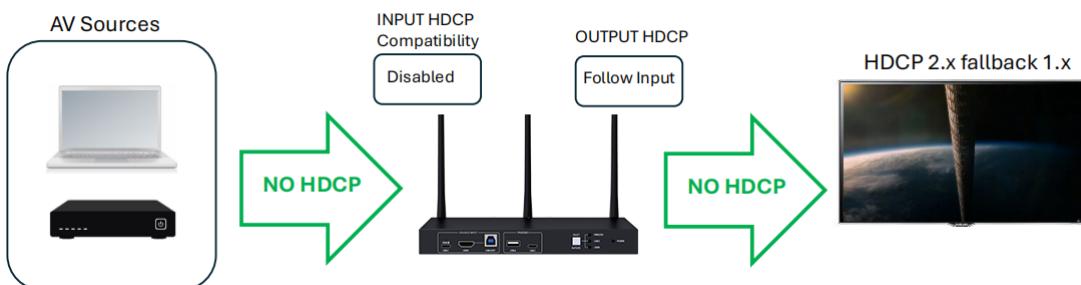
If the HDCP input port is set to off and the HDCP output port is set to output, the output will be in accordance with the following rules:

- Input source does not carry HDCP → Output carries HDCP2.X&1.X → Follow source does not output HDCP, and the display output is normal



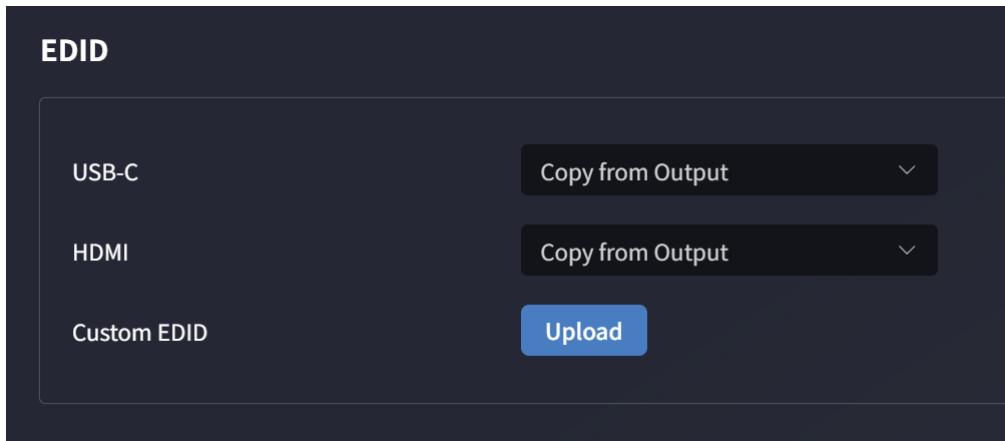
If the HDCP input port is set to off and the HDCP output port is set to input, the output will be in accordance with the following rules:

- Input source does not carry HDCP → Output carries HDCP2.X&1.X → Follow input does not output HDCP, and the display output is normal



5.5.2 EDID

EDID (Extended Display Identification Data) is used by the source device to match its video resolution to the connected display. By default, the source device obtains its EDID from the first connected display. As displays with different capabilities are connected to the switcher, the built-in fixed EDID value can be used.



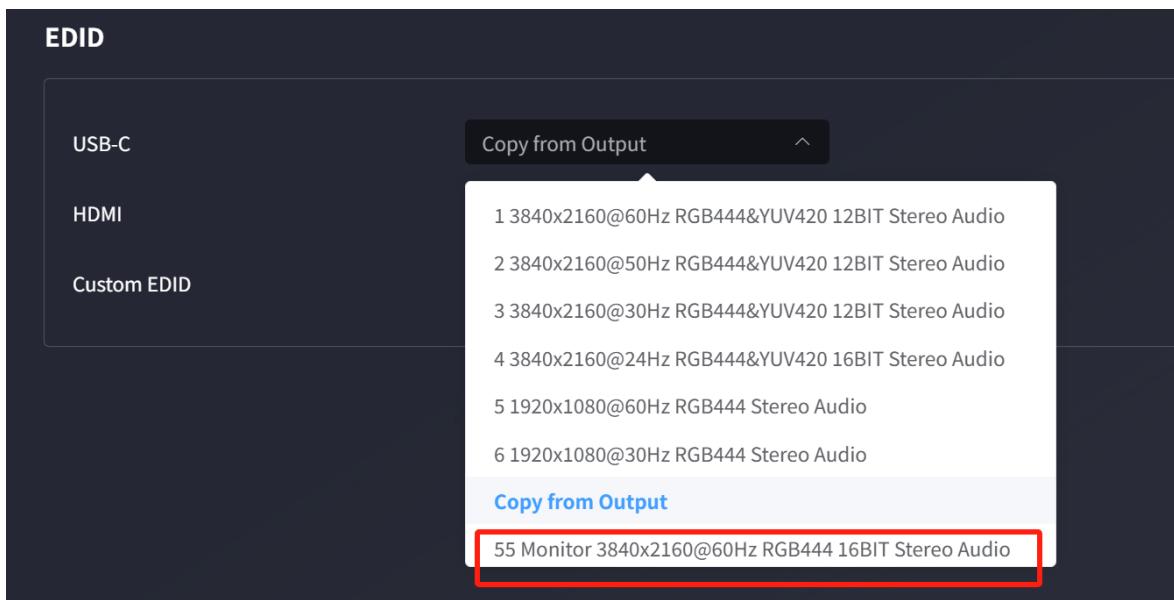
Built-in EDID: This tab allows you to select 7 built-in EDID values.

- Copy from output port
- 1 3840x2160@60Hz RGB444&YUV420 12BIT Stereo Audio
- 2 3840x2160@50HzRGB444&YUV420 12BIT Stereo Audio
- 3 3840x2160@30HzRGB444&YUV420 12BIT Stereo Audio
- 4 3840x2160@24Hz RGB444&YUV420 16BIT Stereo Audio
- 5 1920x1080@60Hz RGB444 Stereo Audio
- 6 1920x1080@30Hz RGB444 Stereo Audio

User-defined EDID: Only one EDID value is supported and can be customized in the following ways

Steps: Prepare EDID file (.bin) on PC --> Click Upload EDID --> Select EDID file (.bin) --> Success

You can view the custom uploaded EDID value in the EDID list

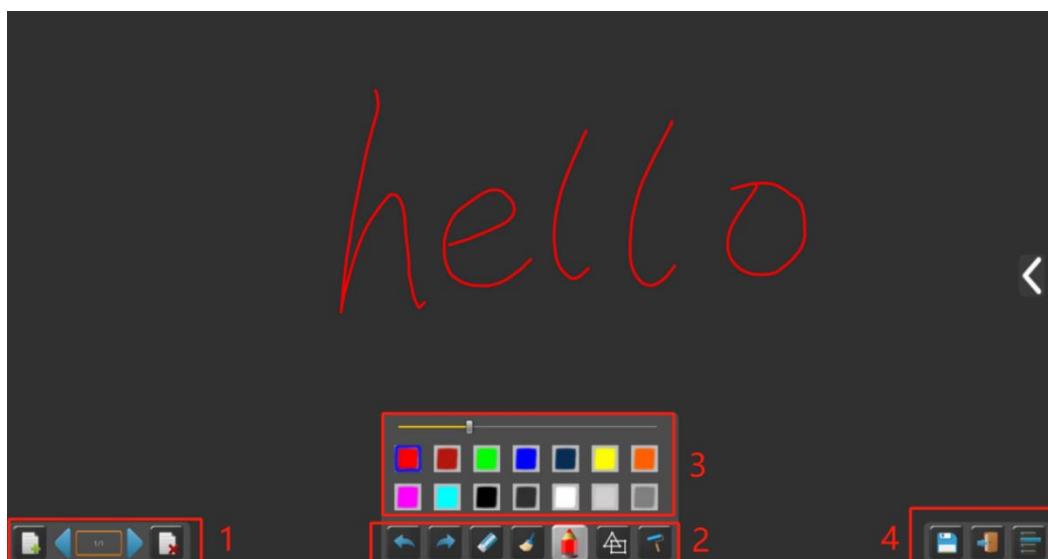


5.6 Whiteboard and Annotation

Whiteboard and Annotation requires an USB HID compatible device, such as interactive white board, touch screen or mouse. There are two different modes:

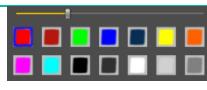
5.6.1 Whiteboard

A white board is brought up that will let the user to write notes, draw content. It allows different figures, colours and background. To start Whiteboard mode, click the whiteboard icon under the sidebar menu 



Use the toolbar to select one of the following functions.

ID	Icons	Function
Tool Bar 1		Add an empty page
		Delete current page
		Display previous or next page
Tool Bar 2		Undo: one step backward in changes
		Redo: one step forward in changes
		Erase part of drawings or annotation, change diameter by a longer tap

		Clear the entire drawing/writing on the screen
		Pen allows writing/drawing in different colors
		Draw basic geometric shapes
		Select color of board, the drawing will be kept.
Tool Bar 3		Will pop up, when "Pen" or Draw shape or Select colour of board is selected, for individual change of size of Pen, Shape or colour.
Tool Bar 4		Save the current screenshot on local storage (PNG+WMN).
		Close Whiteboard to go back to Home Screen
File options		<ul style="list-style-type: none"> Open WMN-file from local storage and continue/edit an older project. New project Save as WMN on local storage in unit, it will be erased after POWER-OFF. Import from U disk stored project (WMN). All pages are saved as PDF on local storage. Clear History, delete all files on local storage

5.6.2 Annotation

Allows the user to draw or write annotations in overlay within the presented content of the active sharing devices. It allows different figures, colors, and background. To start comment mode, click the Annotate icon under the sidebar menu. 



Use the toolbar to select one of the following functions.

ID	Icons	Function
Tool Bar 1		Undo:one step backward in changes
		Redo:one step forward in changes
		Erase part of drawings or annotation, change diameter by a longer tap
		Clear the entire drawing/writing on the screen
		Pen allows writing/drawing on the screen
		Draw basic geometric shapes
		Close whiteboard to go back to Home screen, actual project can be saved on local storage (WMN).
		Save the current screenshot on local storage (PNG).

5.6.3 Download Annotation to connected users

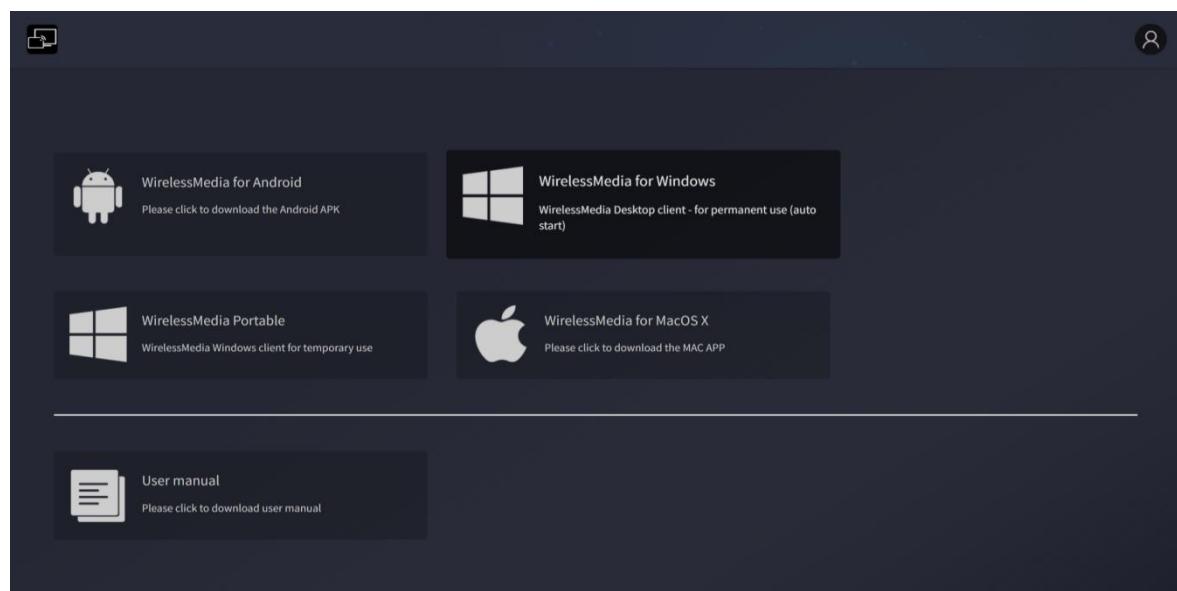
When saving a screen of Whiteboard or Annotation modes into internal storage of S311, scanning the QR code or entering the given IP address in a browser will allow the user to download the saved files.



 Data can be copied to a USB disk and after connecting it to the S311, it can be imported into the Whiteboard section with "Import from U disk".

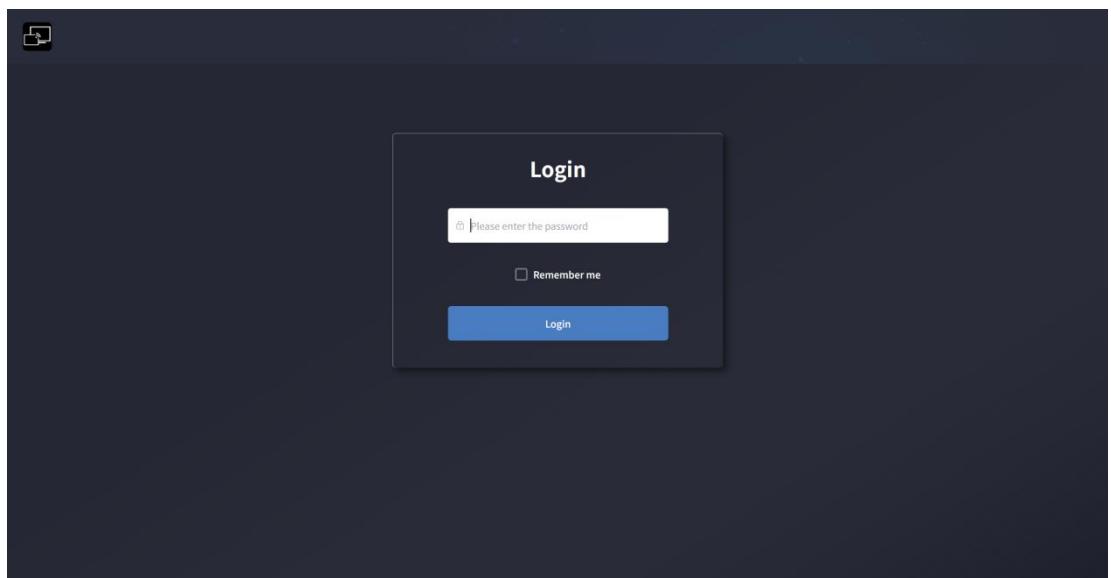
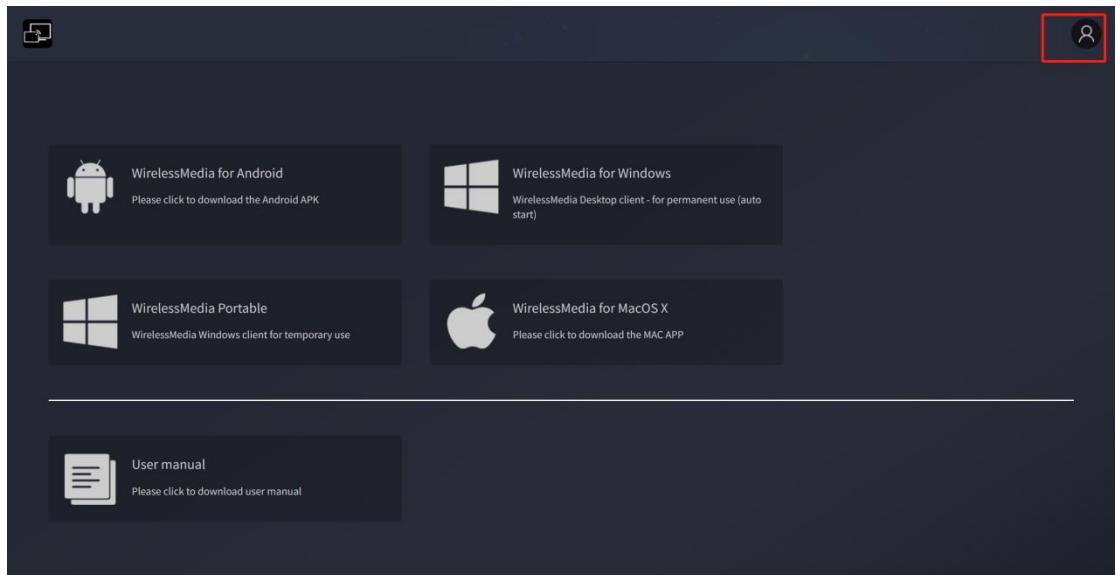
6 WebGUI Setting Management & Configuration

To access S311 WEB settings it is necessary to enter the base unit IP address in an internet browser. The first page displayed will let the user download WirelessMedia app for all platforms.



 If S311 is on "Wireless direct Mode", first access S311 SSID and enter current password on Home Screen page. IP address is 192.168.43.1. For further information on how to configure network, see chapter Network Settings.

Click on the top right corner to enter into WEB settings menu.



Login page will appear. Default password: admin

 Entering Login credentials will give access to the main WEB settings page where it will be able to configure Network settings, Display & Audio, Home screen, Device Control, UCC-Device Manager, System settings, Security settings, Firmware upgrade, Other settings, About device.

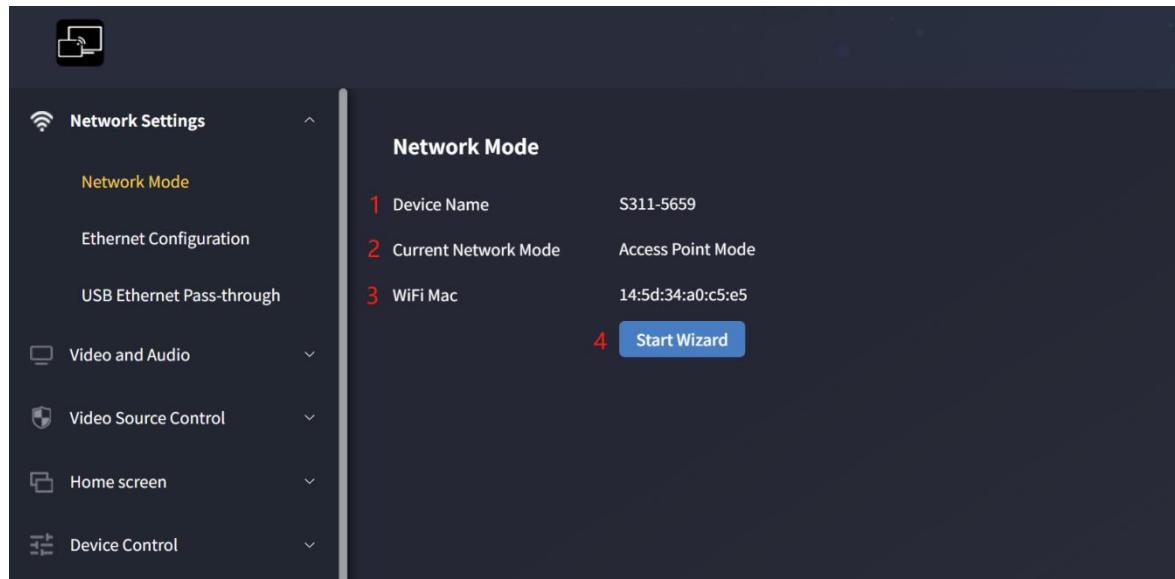
6.1 Network Settings

To take the full benefit of S311 features, it is important to configure and integrate the base unit network settings according to the needs of the application required. S311 includes two independent wired LAN and a WiFi network card.

The following sections can be accessed in Network Settings page:

6.1.1 Network Mode

This section allows the user to set the network working mode of S311.

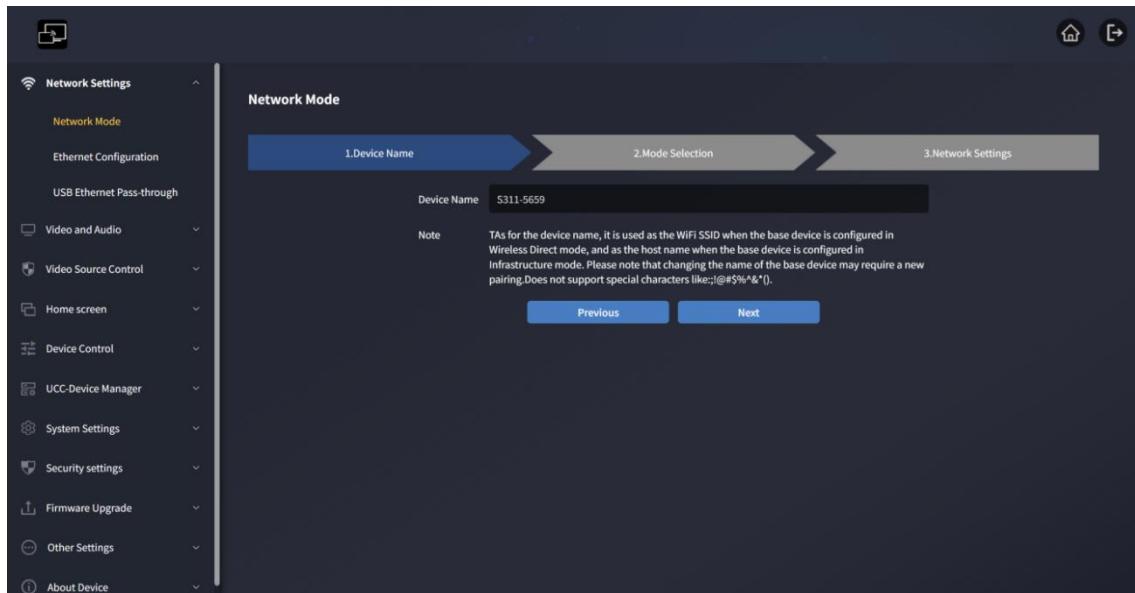


1. **Device Name:** This parameter indicates current name assigned to S311
2. **Network Mode:** this parameter tells the user which network working mode is currently configured.
3. **WiFi Mac :** this parameter shows the Mac address assigned to the S311 network card.
4. **Start Modifying:** Click to enter a network setup wizard is available to change network working mode to properly integrate S311 into an exciting wireless infrastructure.

⚠ Any change to Network mode will need DG-H28 and DG-C28 to be paired again with S311 base unit.

Network Mode Configuration

1. Device Name: This item will be used as the WiFi SSID when the host is configured in Wireless Direct mode, and as the host name when the host is configured in Bridge mode. Please note that changing the device name may require re-pairing the dongle. Please do not use special symbols, such as: ;! @#\$%^&*()



2. Mode Selection: "Select the desired network mode and click 'next step'"

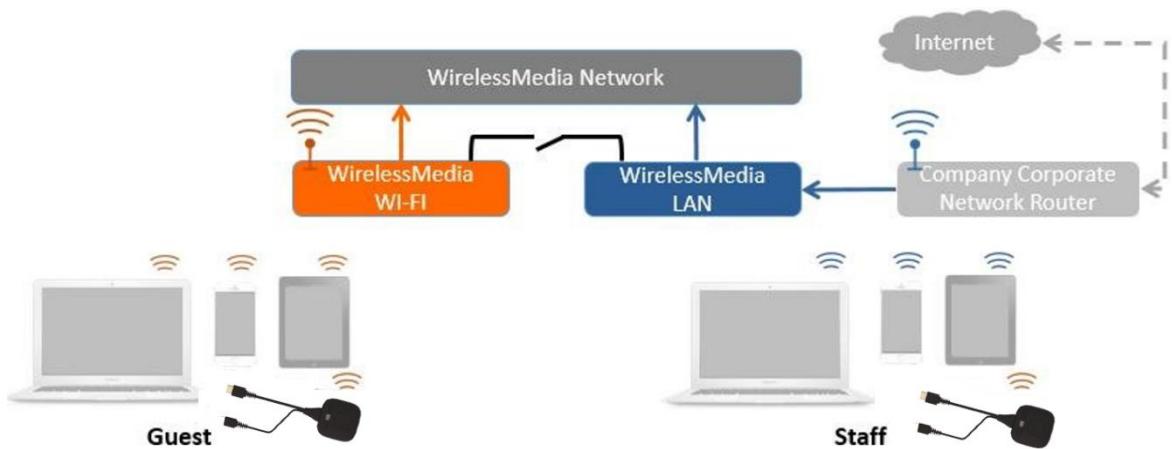


- **Wireless Direct Mode**

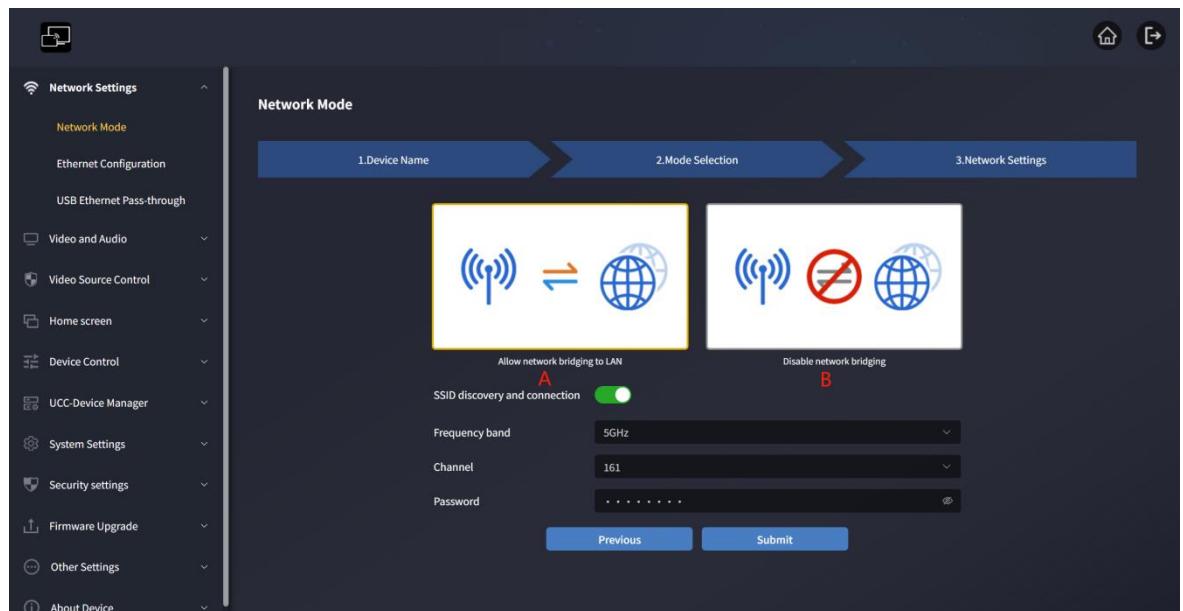
S311 unit starts up in the default standalone "Wireless direct mode" configuration after a factory reset or the first time it's being used. The base unit creates its own wireless access point, which all devices need to connect in order to share content with base unit.

This option is best for temporary operation, small installations, and rooms without network access or networks that do not allow network access for Guests, due to strict security concerns, and are completely separated from the corporate network.

Under this mode, S311 can work without any other wireless network configuration. Just pair DG-H28 / DG-C28 with S311 base unit, connect to S311 internal hotspot and open WirelessMedia app or use Airplay, Miracast or Chromecast wireless casting protocols.



1. Click "Next Step" to set up WiFi Access Point

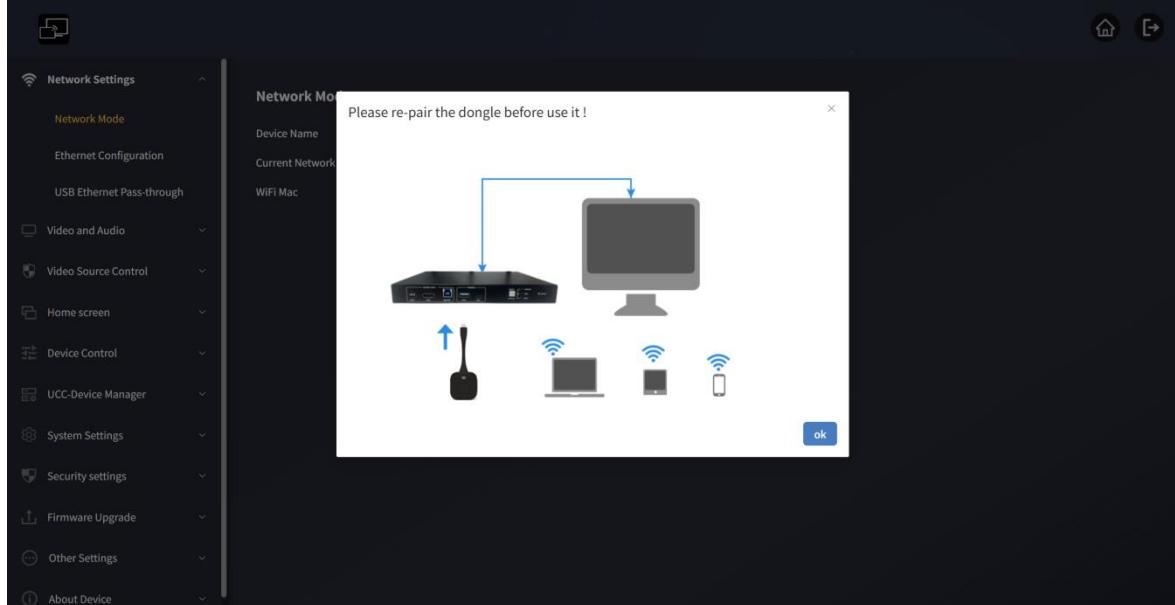


- There are two ways of connecting to Internet through S311 in “Wireless Direct Mode” :
 - a) **Allow Internet access (bridging) via LAN:** The source device is able to connect to internet if LAN1 port is available.
 - b) **Disable internet access:** the source device is not able to connect to internet if this mode is activated. Sometimes it is for safety requirements.

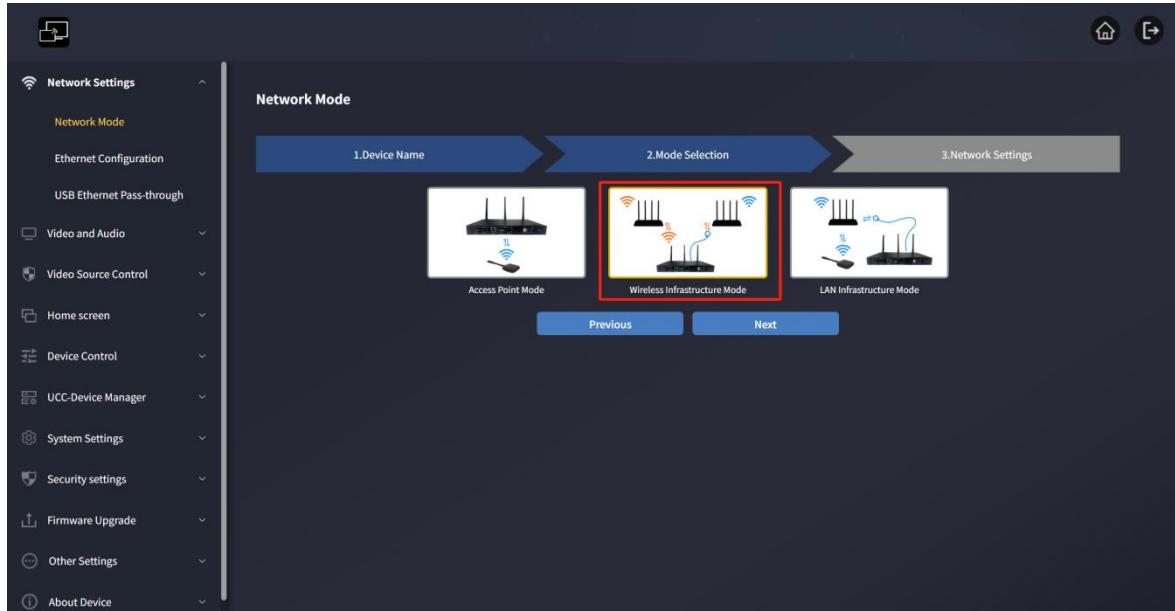
- **Allow S311 SSID to be discovered and connected:** Select "Yes" to allow the S311 SSID to be found normally, select "No" to hide it
- **Band:** Click to select 2.4 GHz or 5 GHz WiFi band. The default value is 5 GHz
- **Channel:** Click to select the WiFi channel. The default value is 5 GHz, channel 36. If you change the WiFi channel, re-pair the Dongle is not needed
 - **2.4 GHz :** Channels 1、2、3、4、5、6、7、8、9、10、11,
 - **5 GHz:** The default value is 5 GHz, 36 channel
- **Channels supported by different regions:**
 - Europe:** Only 36、40、44、48
 - USA and China:** 36、40、44、48、149、153、157、161

Since 36 channels are supported all over the world, the default channel is 36.
- **Password:** Click in the input field to fill in the appropriate password of 8 characters in length

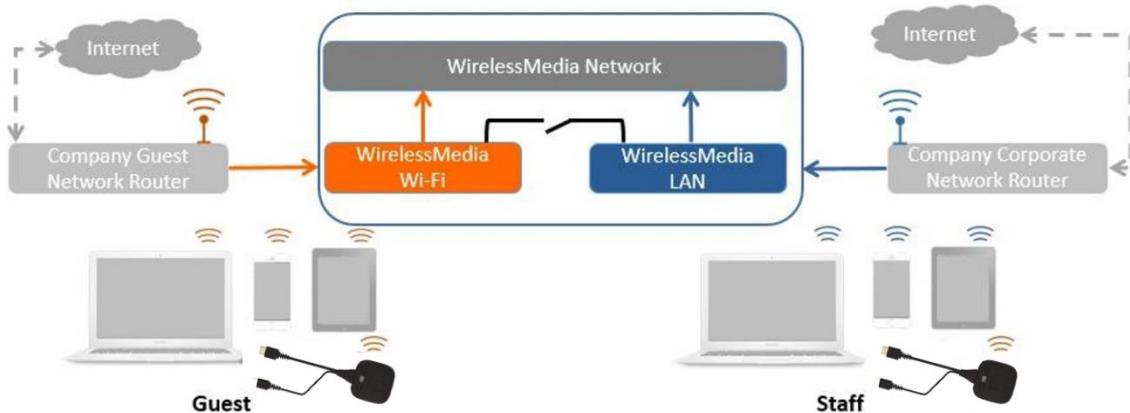
2. Click "Submit Settings" to complete the configuration. Then, pair the wireless Dongle with S311 again.



- **Network Mode**



The S311 can connect to both wired and wireless networks simultaneously. The receiving end remains firmly connected to the corporate network via the LAN. Guest users connect to the Wi-Fi "Guest Network" for access. Employees connect to the corporate network access point without having to change Wi-Fi. A wireless "Guest" network is provided for external visitors, while a wired "Employee" network is provided for employees. Guest users cannot access any resources on the internal corporate network.



The S311's wireless network is connected to the guest's Wi-Fi network (Guest Mode). The indicator icon shows the actual signal strength. The receiving end is still connected to the company's internal network via an Ethernet cable.

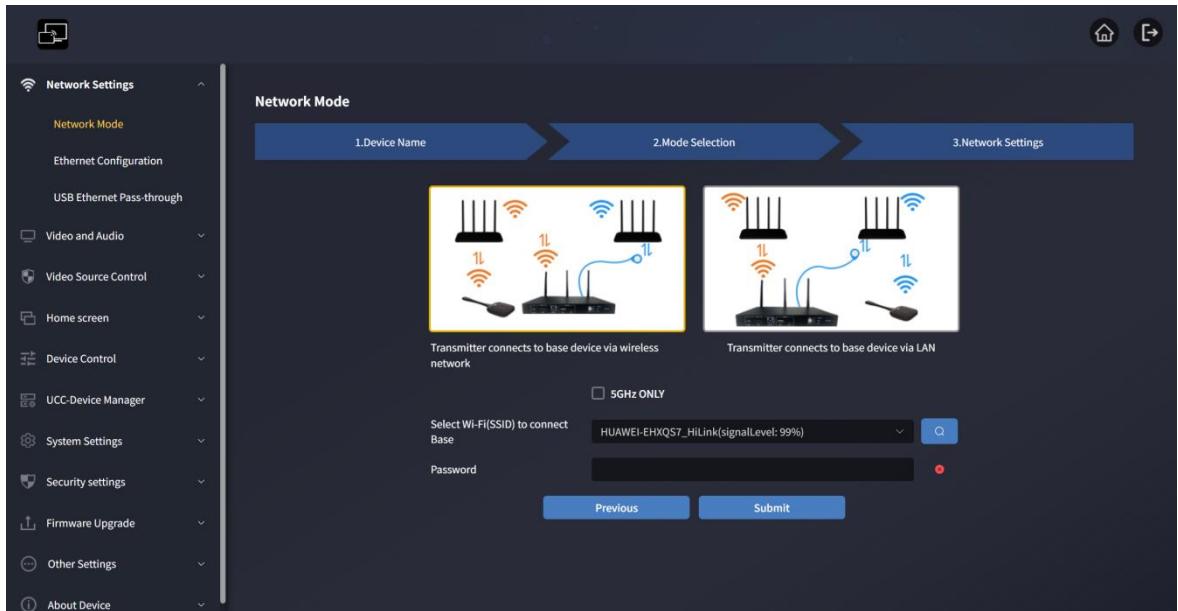
PC users can use the WirelessMedia PC program (Windows or MacOS) with or without a Dongle.

Android users can share their content by installing the apk, and IOS users can use AirPlay to share content (Apple only)

Click "Next" to enter the configuration of this network mode

1. Dongle connects to base unit via wireless network

Choose a wireless network separate from your company network for guest use

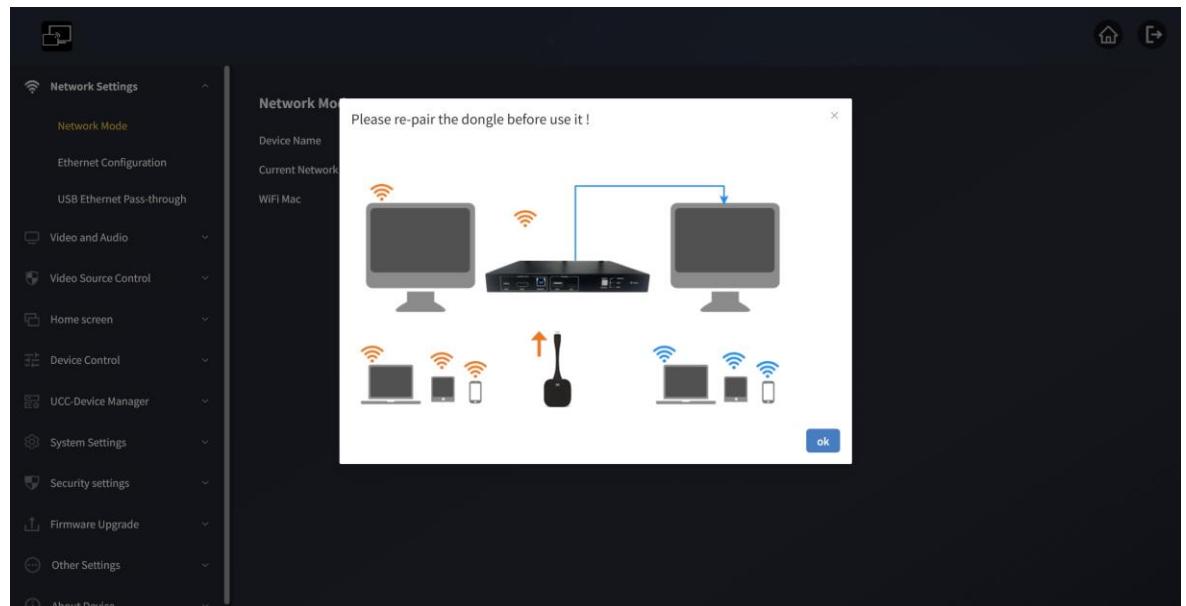


Only 5G channel: If you check this option, you can only search for 5G networks. If you do not check this option, you can search for all networks.

Select a router for the host to connect to: Select a guest network that needs to be connected to the receiving end.

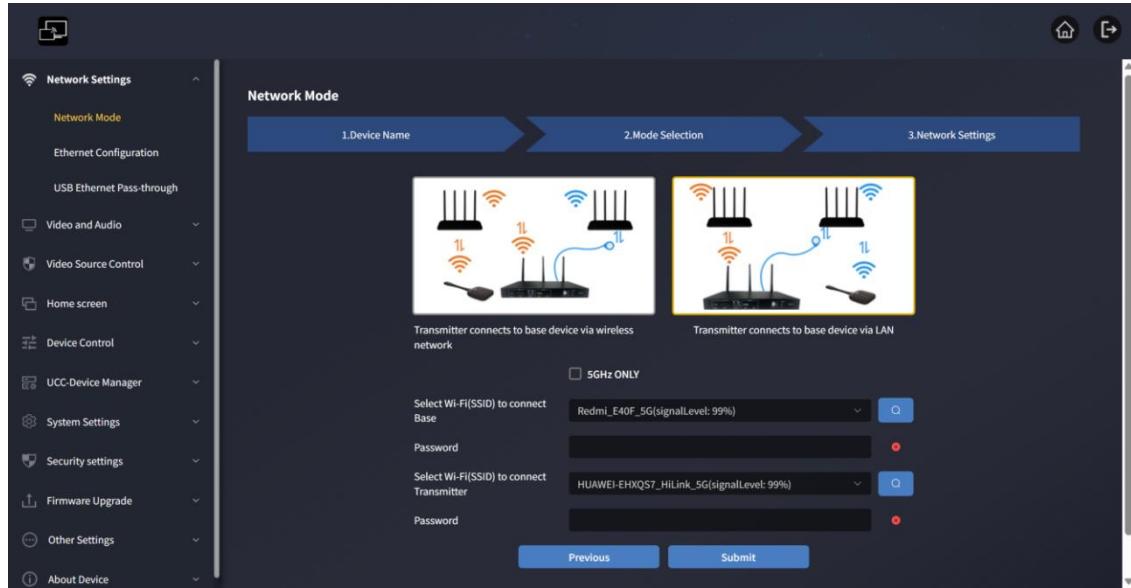
Password: Enter the connection password:

Click "Submit Settings" to complete the configuration. Then pair the wireless Dongle with S311 again.



2. Dongle connects to base device via LAN:

Select a wireless network for guests and a wired network for company employees.

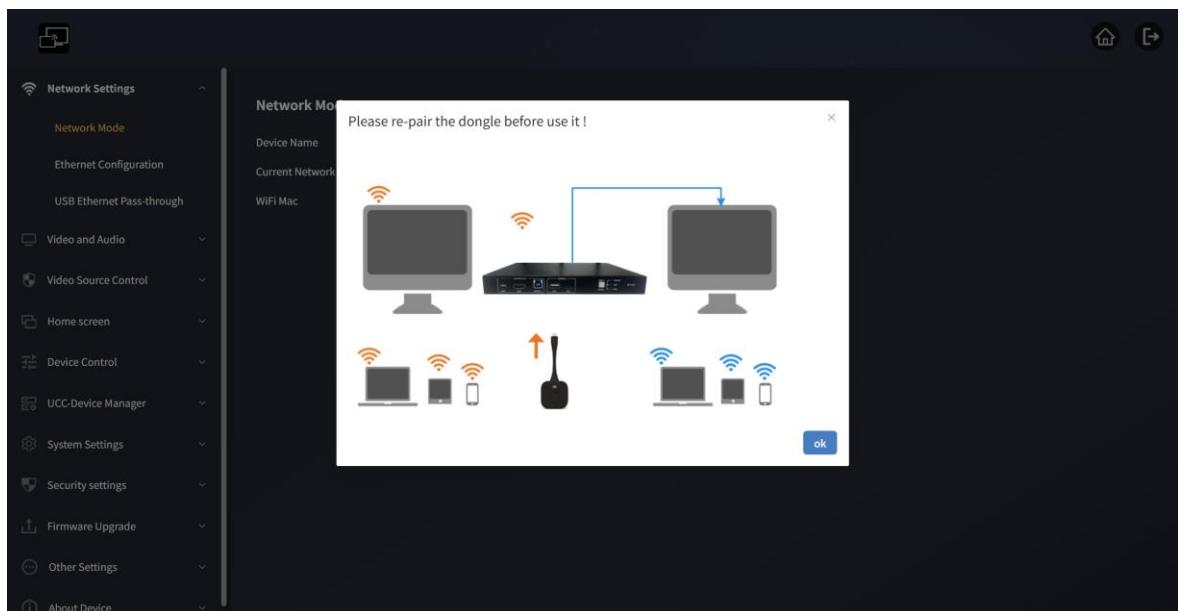


Only 5G channel: If you check this option, you can only search for 5G networks. If you do not check this option, you can search for all networks.

- Select a router for the host to connect to: Select a wireless network for the guest to connect to the S311 receiver:
- Password: Enter the connection password:
- Select a router for the Dongle to connect to: Select the company wired network that the S311 is connected to, and pair the Dongle with the receiver (note that the selected network must be consistent with the wired network connected to the network port, otherwise the paired dongle will not be able to connect and use).
- Password: Enter the connection password

Note: Usually in this mode, the sender is paired to the company network for employees to use, which will be more secure.

Click "Submit Settings" to complete the configuration. Then pair the wireless Dongle with S311 again.

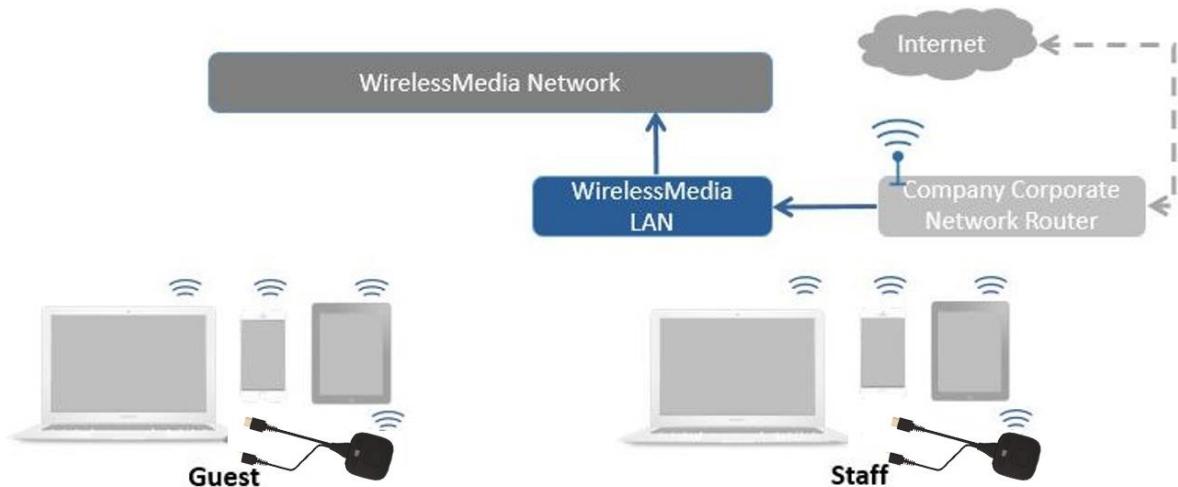


- LAN Infrastructure Mode



In this configuration, the S311's built-in WiFi access point is disabled.

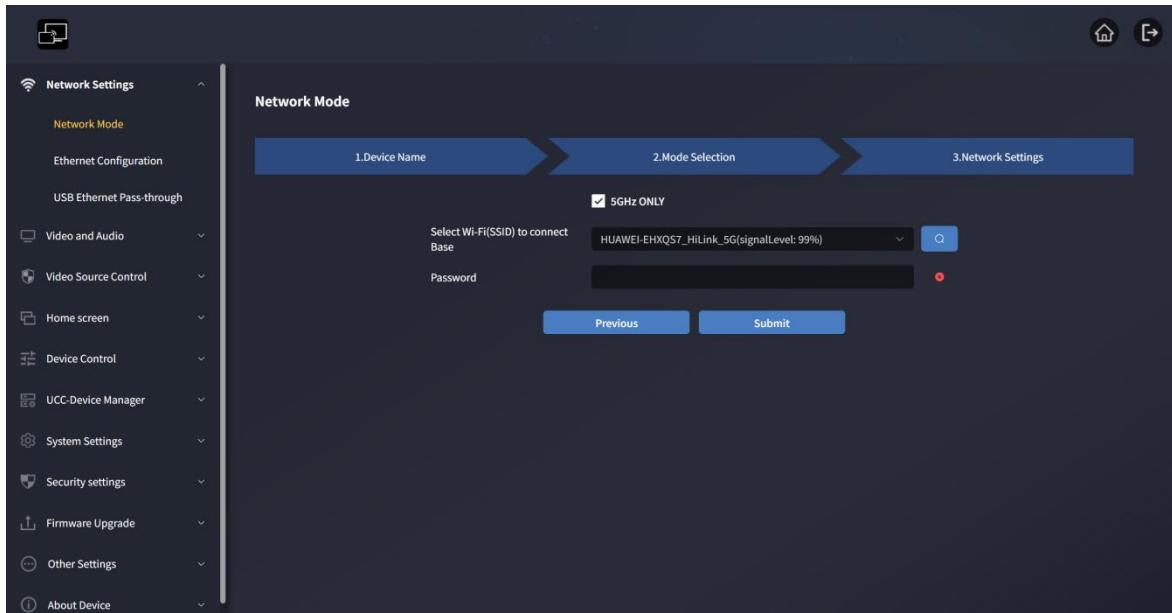
The Dongle and mobile devices can connect to the company network. The S311 receiver will be connected to the company's wired network via Ethernet cable. This mode is primarily used when the guest network is disabled and only the employee network is used.



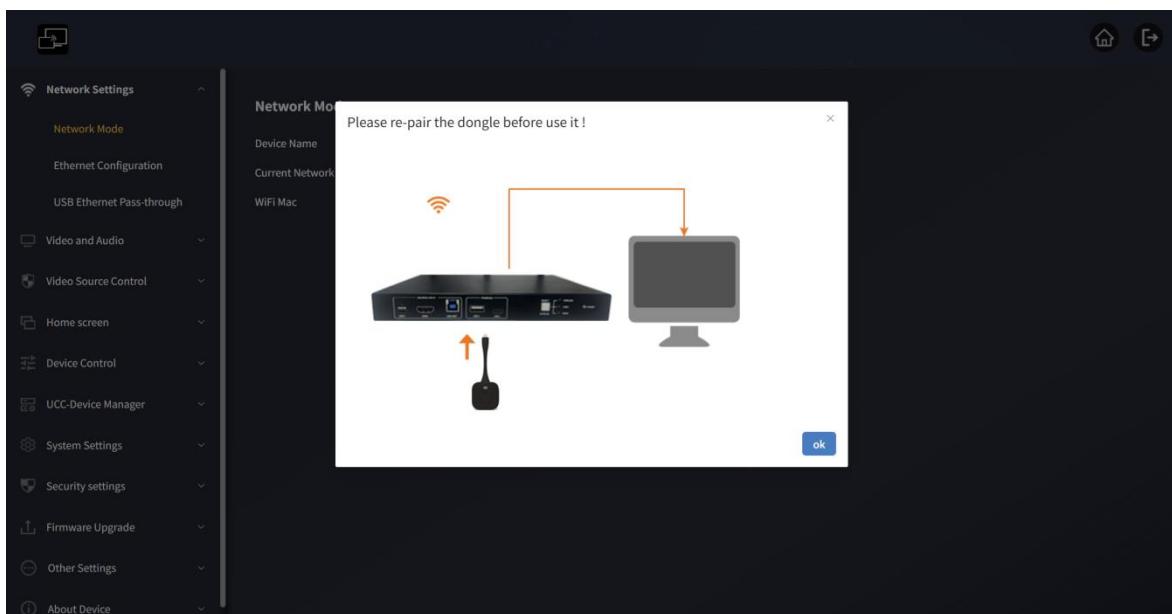
Click "Next" to select the LAN network for company employees and pair the wireless Dongle to the network again.

Select a router for the host to connect to: Select the wired network used by employees (the same as the wired network connected to the LAN port)

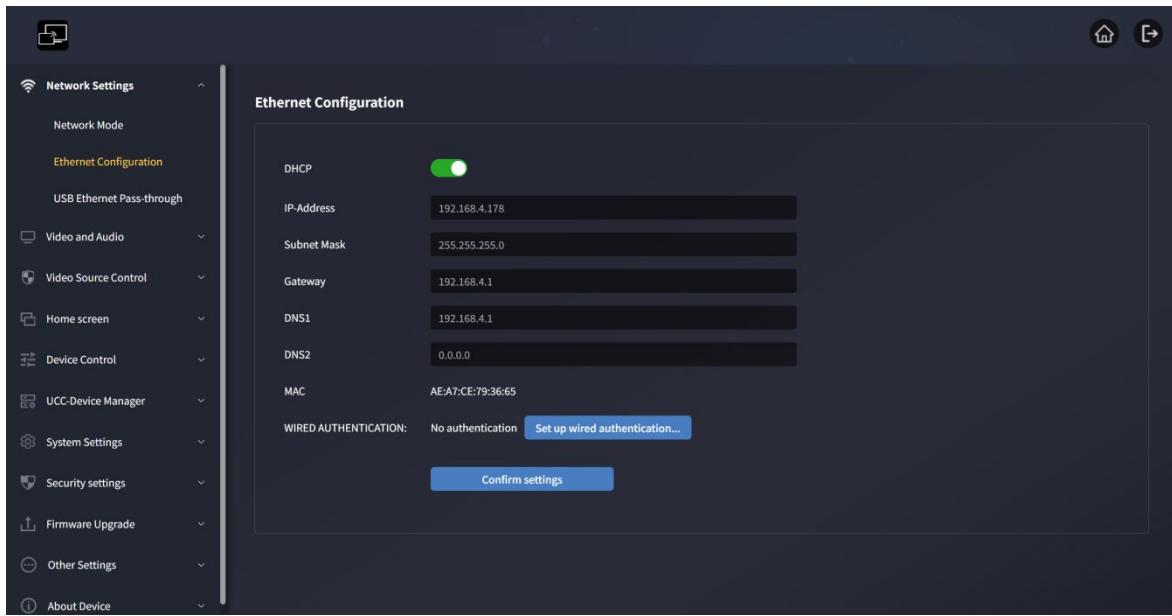
Password: Enter the connection password



- After successful submission, please pair the wireless dongle with S311 again.



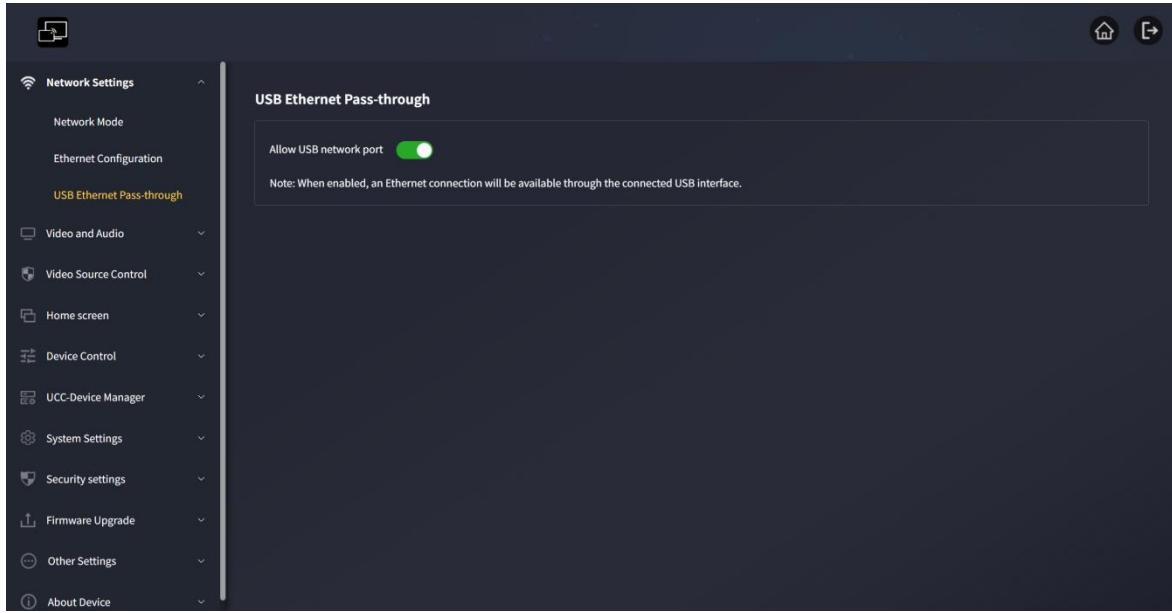
1.1.1 Wired Network Configuration (Allows the user to configure wired LAN settings)



- **DHCP:** If there is a DHCP server in the network, this parameter allows users to enable automatic IP address assignment. To configure a fixed IP address, this parameter should be disabled first.
- **Subnet Mask:** This parameter allows users to input the required network subnet mask.
- **Gateway:** This parameter allows users to input the required IP gateway.
- **Domain Name 1-2:** This parameter allows users to input the required DNS servers.
- **Wired Authentication Status:** Establish wired authentication (No Authentication, EAP-TLS, EAP-TTLS, PEAP)

1.1.2 USB Network Port

When this function is enabled, the USB port connected to the computer will simulate a network connection.

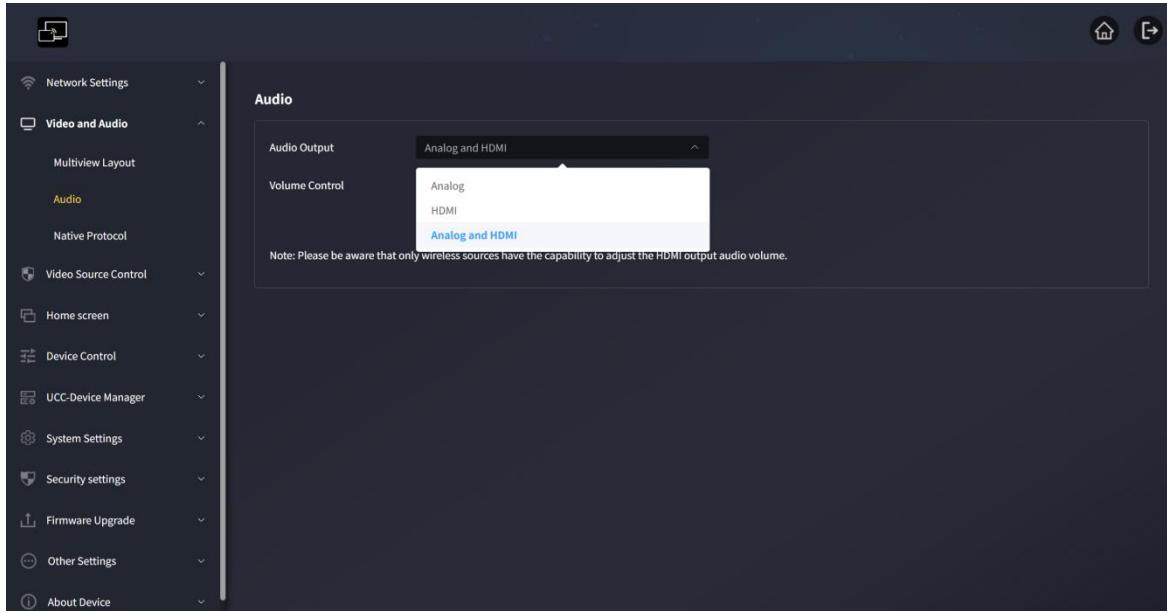


- Enable USB Simulated Network Connection: According to the previous USB port settings, the computer connected to the currently switched video signal input source will simulate a wired network connection (i.e., can access the Internet directly).
- Disable USB Simulated Network Connection: No simulated network connection will be provided for any video signal input source.

1.2 Display and Sound

1.2.1 Sound

Allows users to select the audio output source.

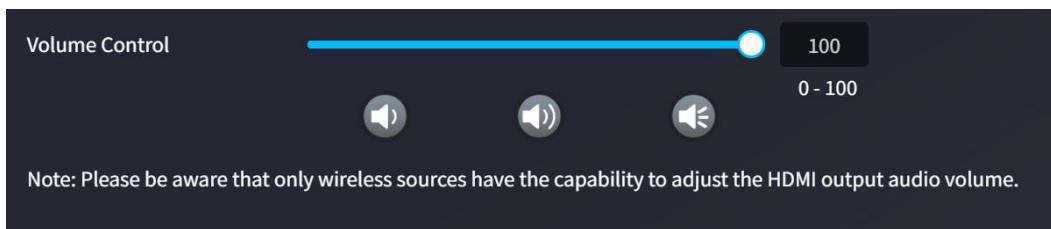


1. Audio Output:

- **Analog Audio Output:** Only outputs audio from the balanced audio output.
- **HDMI:** Only outputs HDMI audio.
- **Analog Audio Output & HDMI (Default):** Outputs audio from the jack and HDMI.

2. Volume Control: The volume can be adjusted between 0 and 100, with a default value of 100. There are 3 buttons for adjustment: decrease volume, increase volume, and volume switch.

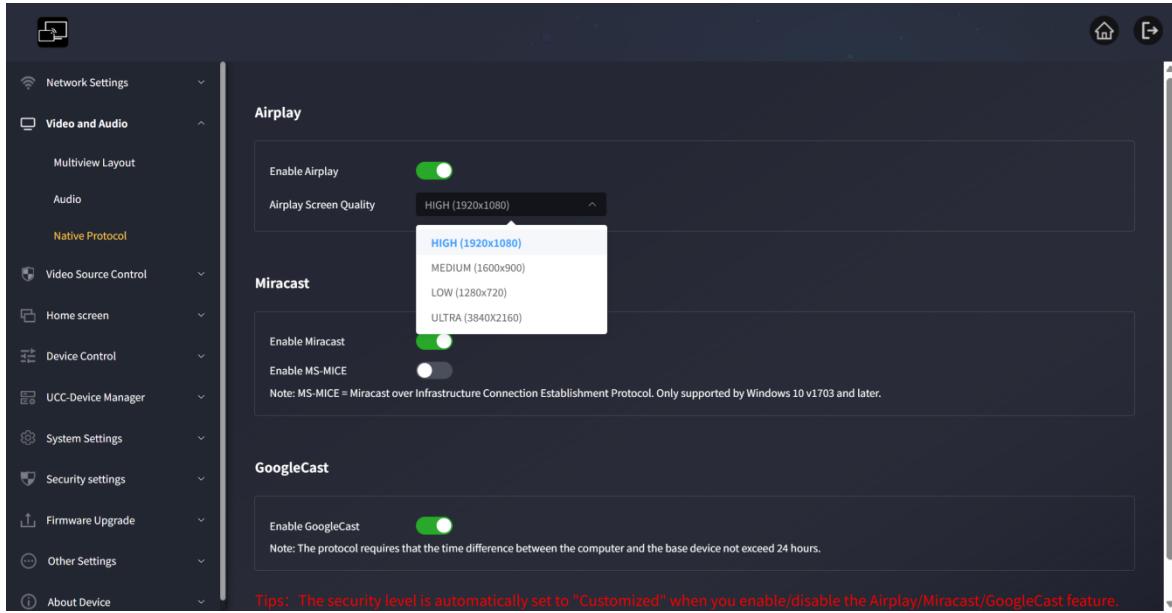
Note: Only wireless sources can adjust the HDMI output volume.



1.2.2 Native Protocols

6.2.2.1 Airplay

AirPlay allows screen mirroring via Mac computers, iPhones, and iPads. If the switch is turned off, AirPlay mirroring cannot be performed.



AirPlay Switch: Enabled by default.

Airplay Mirroring Resolution:

High (1920*1080)

Medium (1600*900)

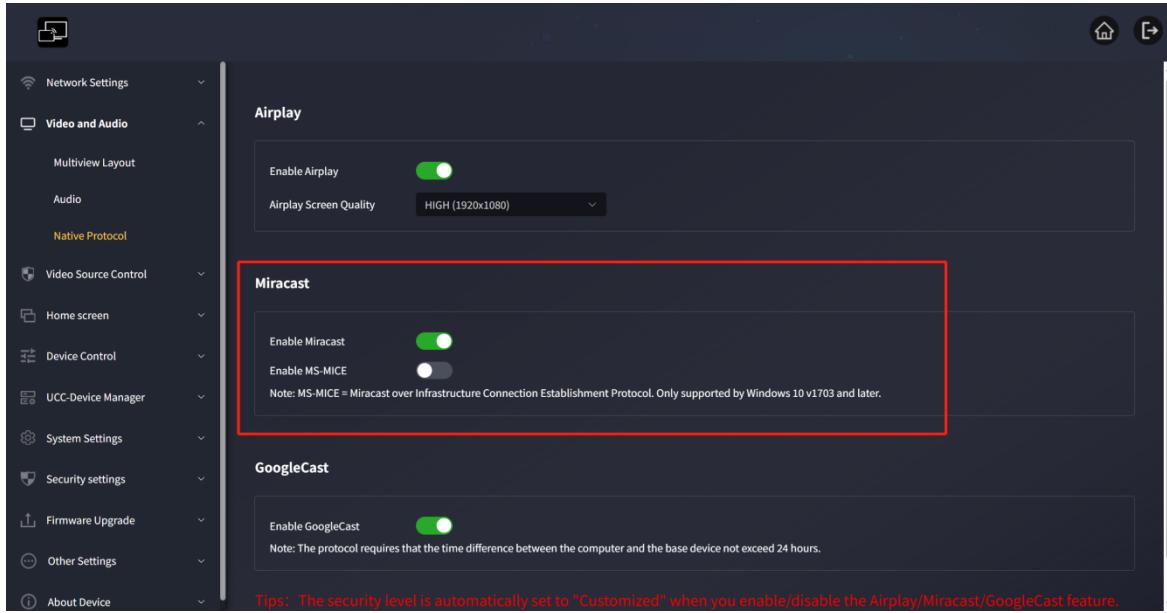
Low (1280*720)

4k (3840*2160)

Note: Higher resolution results in clearer images but also causes greater latency. This function requires the source device and this device to be on the same local area network.

6.2.2.2 Miracast

The device supports two Miracast protocols, enabling Miracast mirroring via computers and mobile phones.



- **Miracast Switch: Enabled by default.**

Miracast uses the P2P protocol by default, with a maximum supported resolution of 1080p. In this mode, the computer and the receiver base unit do not need to be on the same network. Simply press Windows+K to enable Miracast, find the S311 device in the searched Miracast devices, and click to connect to start mirroring.

- **Disable MS-MICE Switch: Default value.**

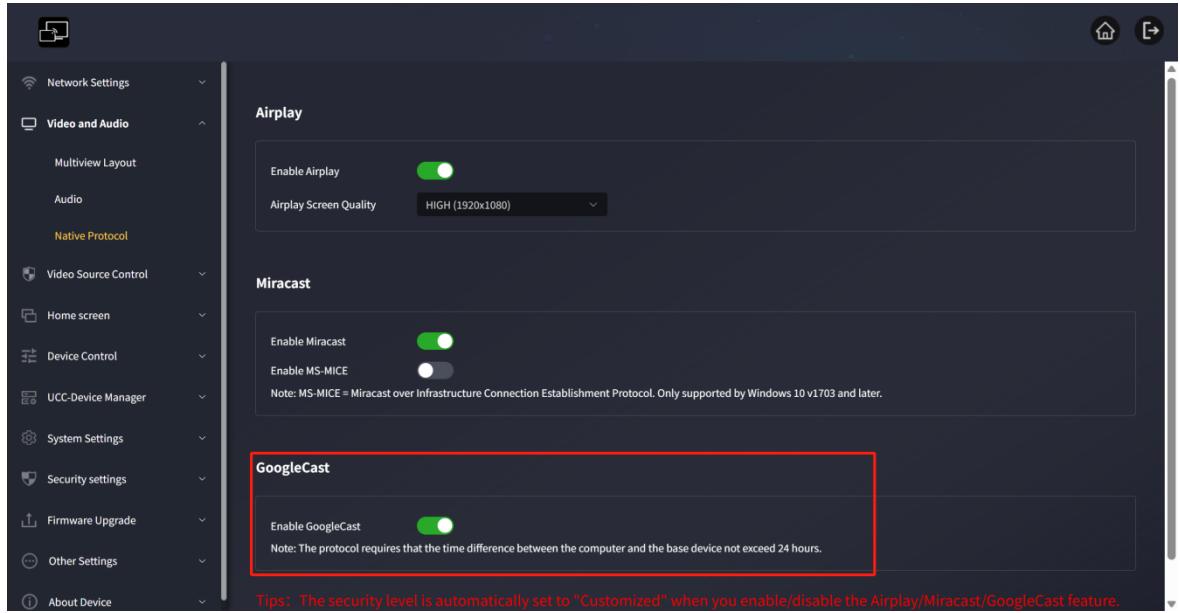
- **Enable MS-MICE Switch**

The MS-MICE protocol is an extension of the P2P protocol. Enabling this protocol requires the PC and S311 to be on the same local area network. Device search still uses the P2P protocol, but video streaming transmission uses the local area network. There is no difference in usage compared to when the MS-MICE protocol is not enabled.

Note: *The MS-MICE function requires the source device and this device to be on the same local area network.*

6.2.2.3 GoogleCast

Google Cast allows screen mirroring via the Chrome browser. If the switch is turned off, mirroring cannot be performed.



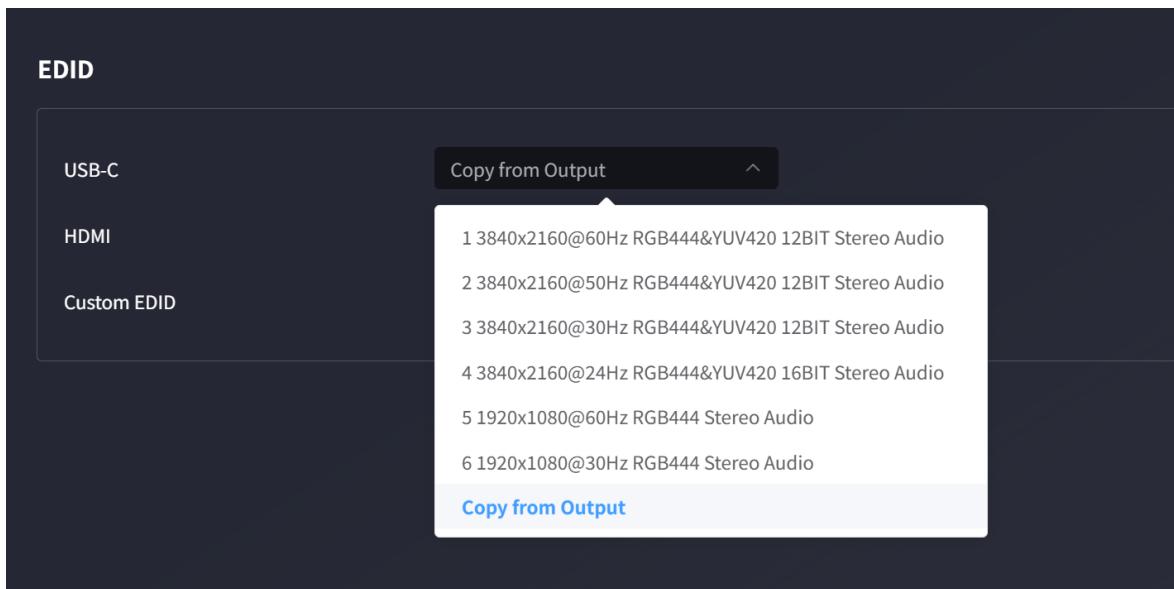
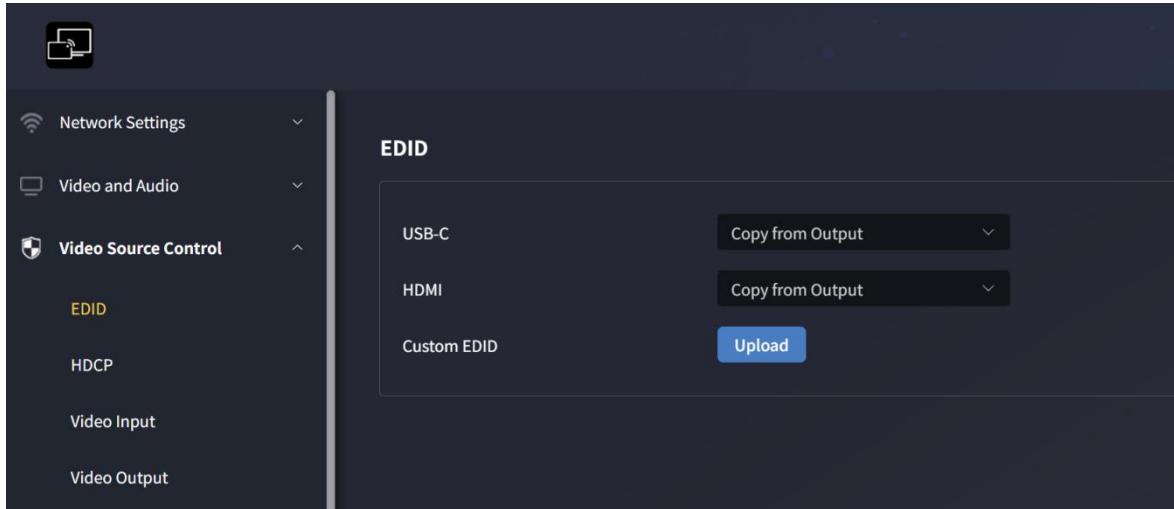
- **Google Cast Switch: Enabled by default.**

Note: This protocol requires the time difference between the computer and the base unit to be no more than 24 hours. The Google Cast function requires the source device and this device to be on the same local area network.

1.3 Video Source Control

1.3.1 EDID

By storing key parameters of the display such as resolution, refresh rate, and color space, it ensures that output devices (such as computers and set-top boxes) automatically adapt to the optimal display mode, avoiding display abnormalities caused by signal incompatibility.

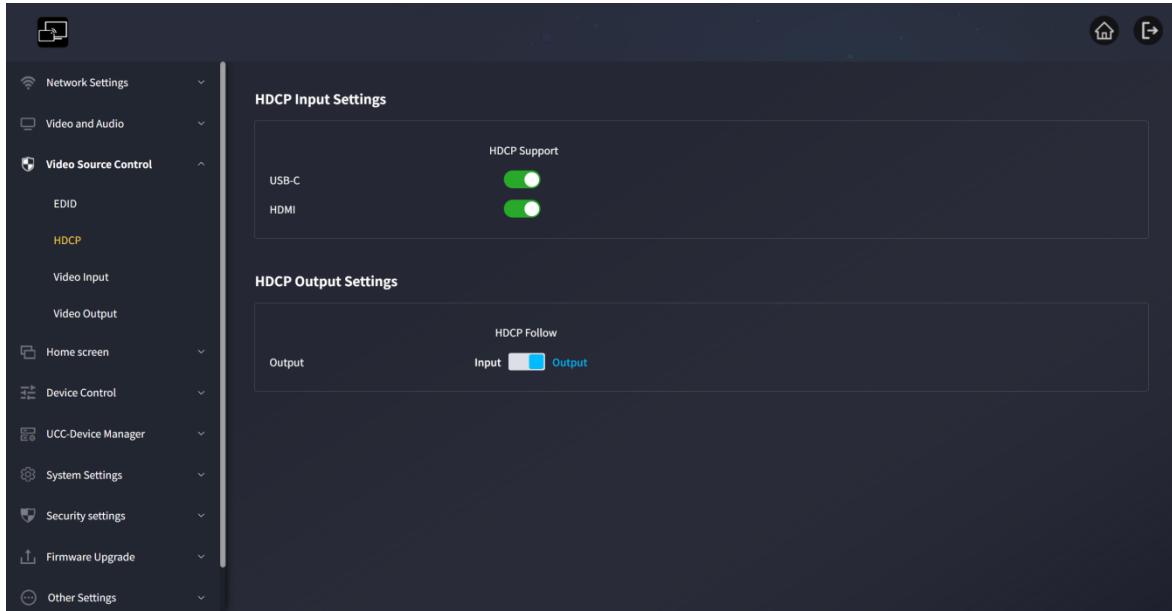


- USB-C and HDMI ports are default slave input ports, which automatically copy the EDID information of the source device and force the output signal to be completely synchronized with the input source (including resolution and color depth).
- 6 sets of EDID are preset, supporting copying from HDMI out to any input port.
- Click the "Upload EDID" button to support custom EDID upload.

(For details, refer to 5.6.2)

1.3.2 HDCP

HDCP (High-bandwidth Digital Content Protection) encrypts the transmission link to prevent illegal recording or interception of digital audio and video content, applicable to high-definition digital interfaces such as HDMI and Display Port.



- **HDCP Input Port Settings:**

Enabled (Default): Informs the source that the device supports HDCP.

Disabled: Informs the source that the device does not support HDCP.

- **HDCP Output Port Settings:**

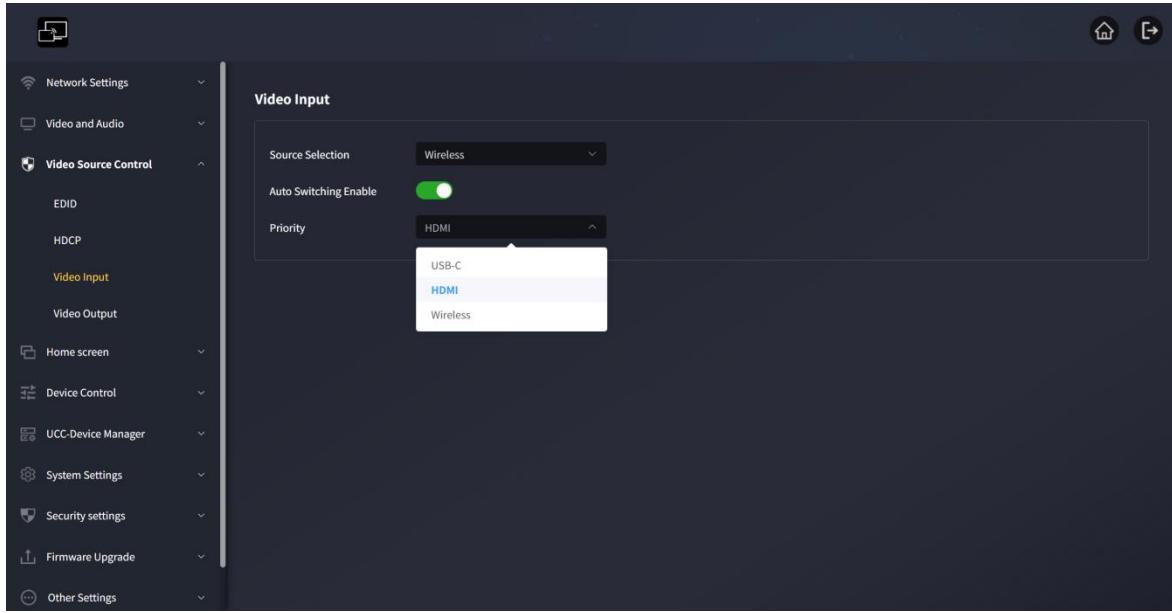
Output (Default): If the source carries encrypted HDCP, the output should adapt to the preferred HDCP version of the downstream unit.

Input: If the source carries encrypted HDCP, the output follows the same version as the source.

(For details, refer to 5.6.1)

1.3.3 Video Input

Supports switching of video signal input sources, mainly including: USB-C, HDMI, and Wireless.

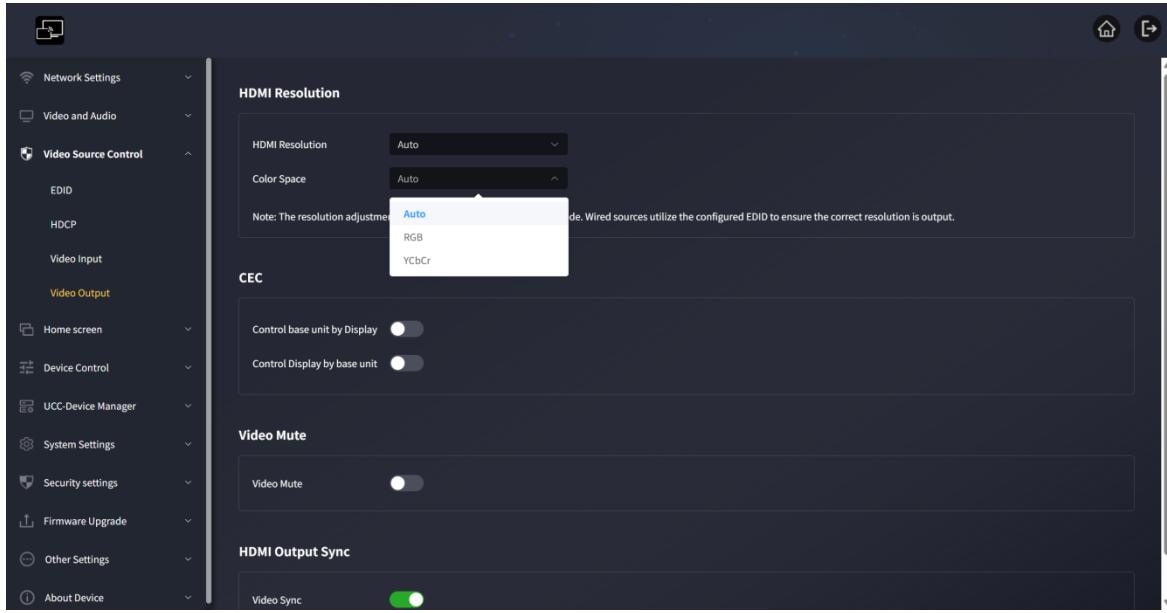


- **Input Source Selection:** This is for manual switching of input signal sources, including USB-C, HDMI, and Wireless options, synchronized with the front panel button selection, with the highest priority.
- **Allow Auto Switching:** Enable to automatically switch input signal sources, combined with priority options. The trigger condition is when 2 or more input signal sources are connected simultaneously (including power-on and plugging/unplugging actions).
- **Priority:** Priority setting for auto switching, including USB-C, HDMI, and Wireless options.

1.3.4 Video Output

1.3.4.1 HDMI Resolution Settings

Sets the color space and output resolution of the HDMI display.



1. Color Space

- **Auto:** The system dynamically selects the optimal color space (such as automatically adapting to RGB/YCbCr) according to the input signal type or display device characteristics.
- **RGB:** Generates colors by mixing the three primary colors of Red, Green, and Blue, directly corresponding to the physical light-emitting units of the display device. Each color channel ranges from 0-255 (8-bit encoding), and the combination can present approximately 16.77 million colors.
- **YCbCr:** Decomposes colors into luminance (Y) and chrominance (Cb/Cr) components:

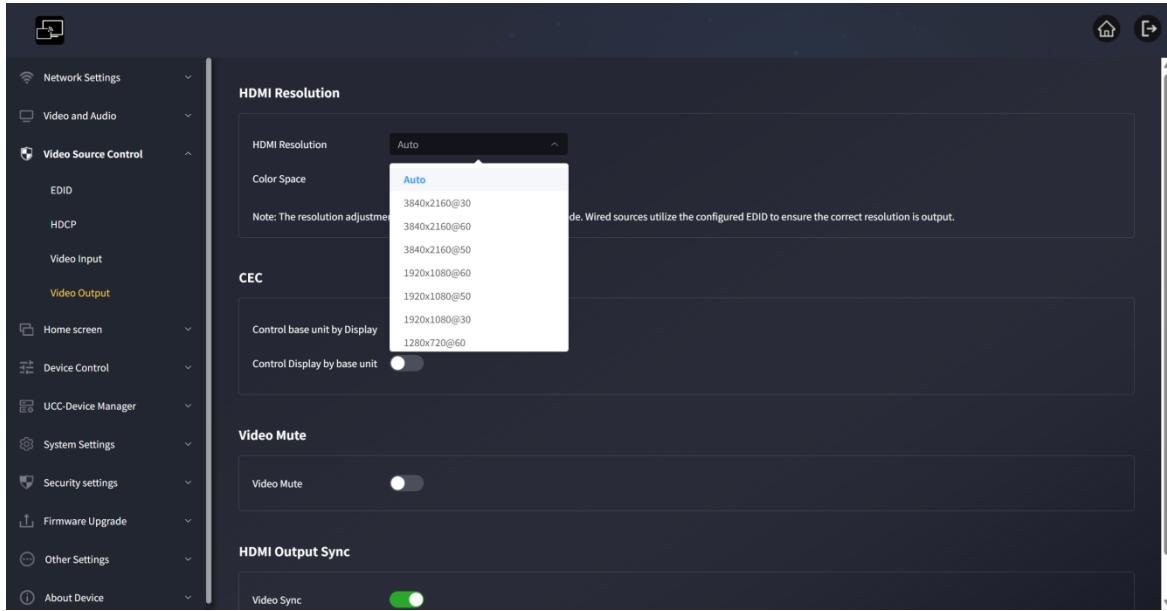
Y: Grayscale information, dominating the brightness levels of the image.

Cb: Blue chrominance offset.

Cr: Red chrominance offset.

Reduces data volume and improves transmission efficiency by reducing chrominance resolution (such as 4:2:0 sampling).

2. Select the HDMI output resolution of the receiver, which automatically obtains the resolutions supported by the display, for example:



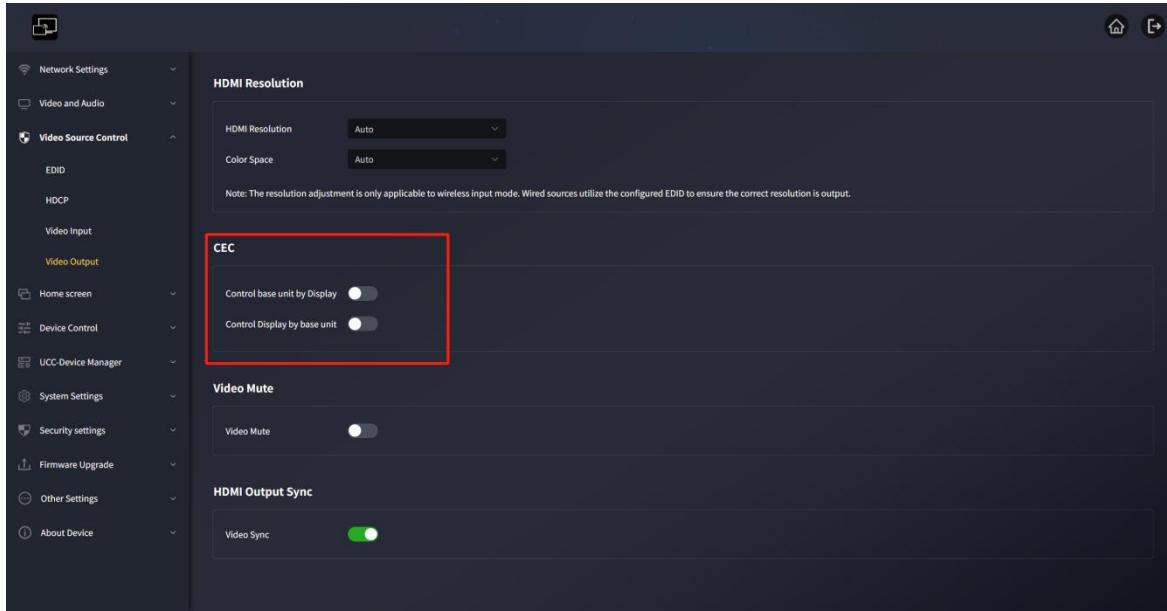
- Auto
- 3840x2160@60Hz
- 3840x2160@50Hz
- 3840x2160@30Hz
- 1920x1080@60Hz
- 1920x1080@50Hz
- 1920x1080@30Hz
- 1280x720@60Hz
- 1280x720@50Hz



If the display only supports FULL HD, 4K resolutions will not be displayed in the resolution list..

1.3.4.2 HDMI CEC Settings

If the connected display supports CEC function, S311 supports CEC function.



- **Allow Display to Control Base Unit**

With this option, you can choose whether the connected S311 receiver automatically enters standby mode immediately after the display is turned off.

On: Once the display is turned off, the S311 receiver will also turn off automatically.

Off (Default): The display is turned off, but S311 will not turn off automatically.

- **Allow Base Unit to Control Display**

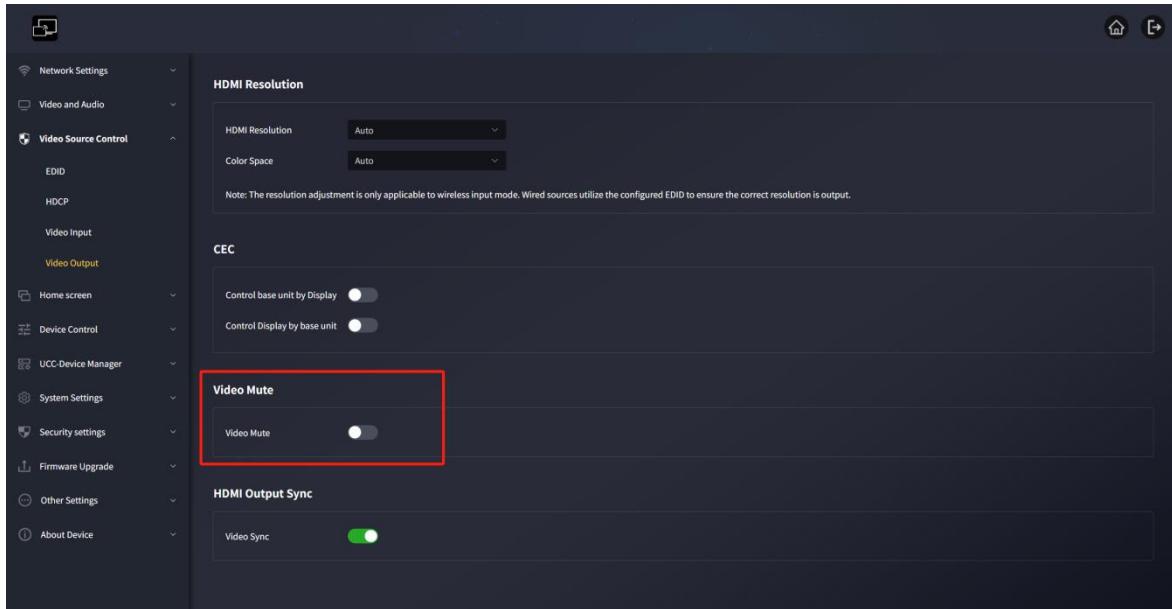
With this option, you can choose whether the connected display automatically enters standby mode immediately after the S311 receiver is turned off.

On: Once S311 is turned off, the connected display will also turn off automatically.

Off (Default): When S311 is turned off, the display will not turn off automatically.

1.3.4.3 Disable Video Output

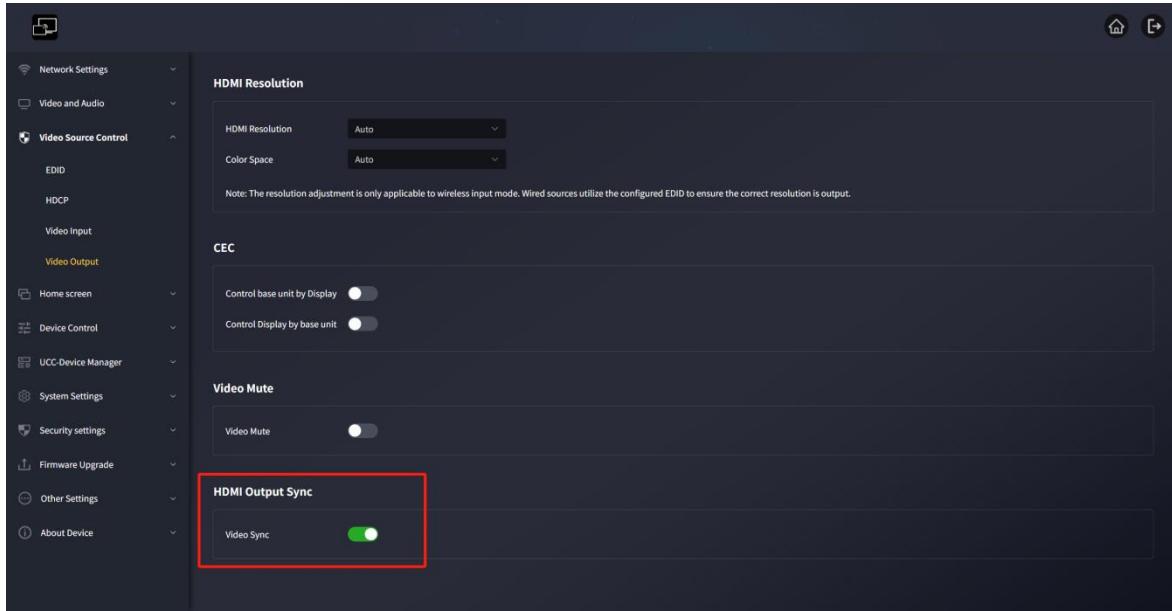
Supports enabling and disabling video display output.



- Enable Disable Video Output: Turns off the display output (shows a black screen).
- Disable Disable Video Output: Turns on normal display output.

1.3.4.4 HDMI Output Signal Synchronization

Video Synchronization = Hot Plug Detection Control



Many Pro AV devices use HPD for automatic switching or standby, etc.

- Enable Video Signal Synchronization:

-HPD (5V) is always sent from the output end, even if no source is connected to the selected input end.

-Keeps downstream devices in working state or standby state.

- Disable Video Signal Synchronization:

-When no source is connected to the selected input end, the output end does not send HPD.

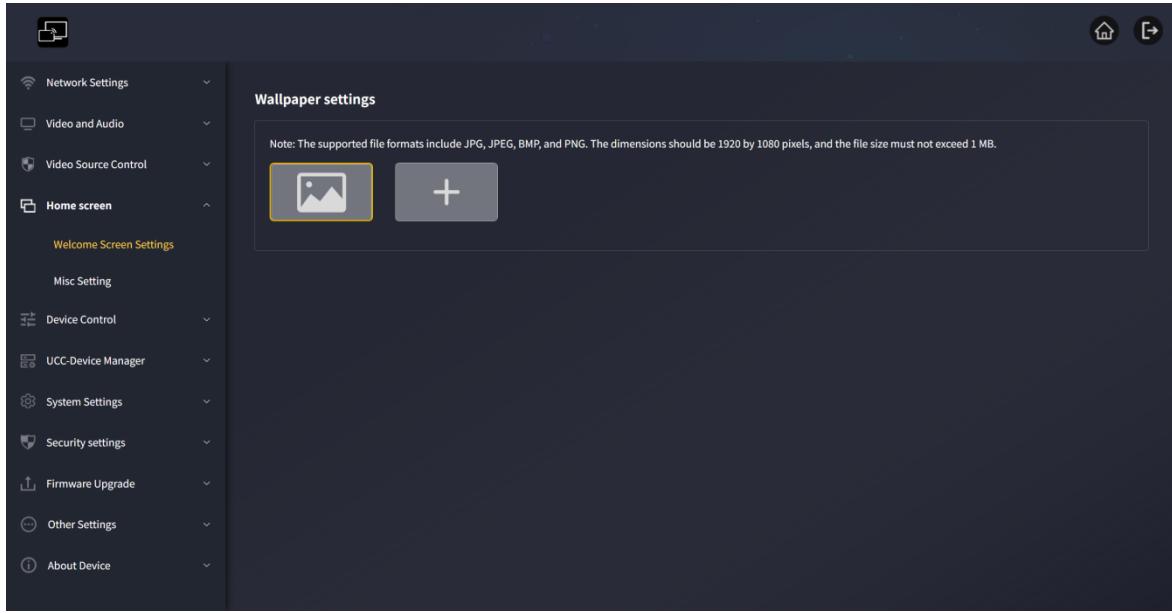
-Downstream devices can automatically switch and/or enter standby mode.

1.4 Welcome Screen

1.4.1 Customize welcome Screen

Support customizing the main screen background image. Click "+" to add local images as the main screen background.

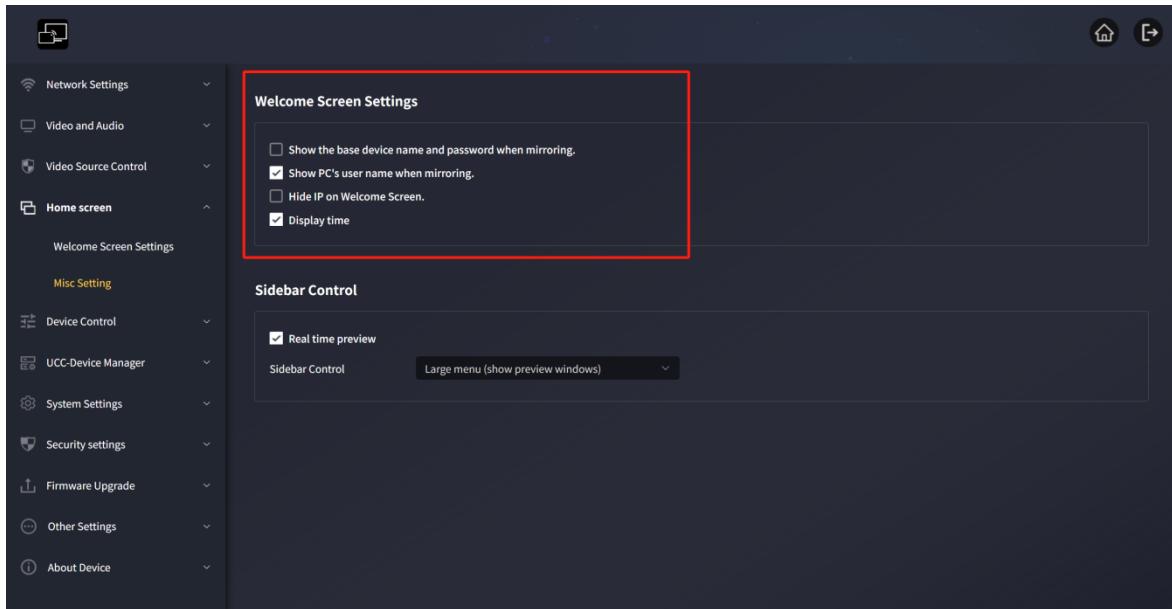
*Note: Currently supported image formats are: JPG/JPEG/BMP/PNG, with a maximum resolution of 1920*1080 and a file size within 1MB.*



1.4.2 Other Settings

1、Welcome Screen Settings

This setting is mainly used for customizing the display information status of the device welcome screen.

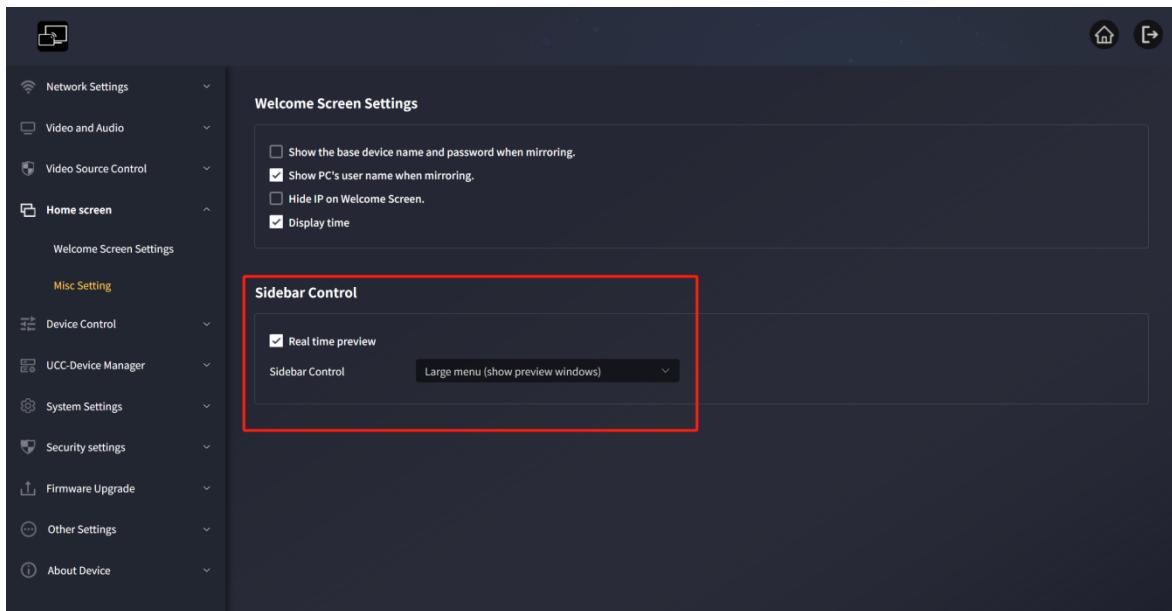


- **Still display device name and password when sharing the screen:** When checked, the device ID and password of S311 will not disappear during mirroring.
- **Display computer username during mirroring:** When checked, the PC username will be displayed during mirroring.
- **Hide IP when using non-default background image:** When checked, the PC username will be displayed during mirroring.

- **Display Time:** When checked, the main screen displays the time.

2、Sidebar Control

Mainly used to set the display status of the sidebar on the main interface of the device, with three options: Fully hide the sidebar (including the arrow), Small menu (without preview window), and Large menu (with preview window).



Real-time Preview: Checked by default, displays the real-time screen of the mirroring device.

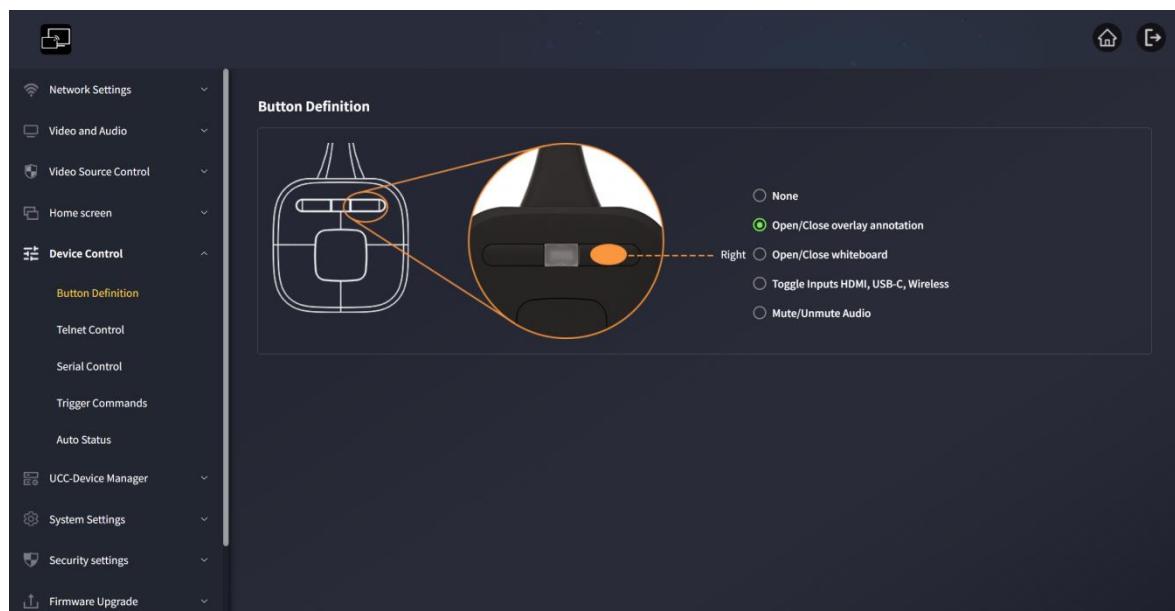
- Fully hide the sidebar (including the arrow):** The main screen does not display the sidebar at all.
- Small menu (without preview window):** The sidebar is displayed as a small menu (including whiteboard, annotation, and information icons).
- Large menu (with preview window):** The sidebar is displayed as a large menu, showing the mirroring preview window.

1.5 Device Control

1.5.1 Key Function Definition

Support customizing the right-click function of the dongle.

1. None: Clicking the custom key has no response.
2. Enable/Disable Annotation (Default): This function enables the annotation mode in the wireless channel, allowing users to draw or write annotations on the presented content of the active shared device.
3. Enable/Disable Whiteboard: This function opens a whiteboard in the wireless channel, allowing users to take notes and draw content.
4. Cycle Switch Between HDMI, USB-C, and Wireless Input Sources: This function realizes cycle switching of three signal sources, which can be quickly switched through the custom key.
5. Mute/Unmute Audio: This function plays audio and video during wireless channel mirroring, and mutes/unmutes when the custom key is clicked.

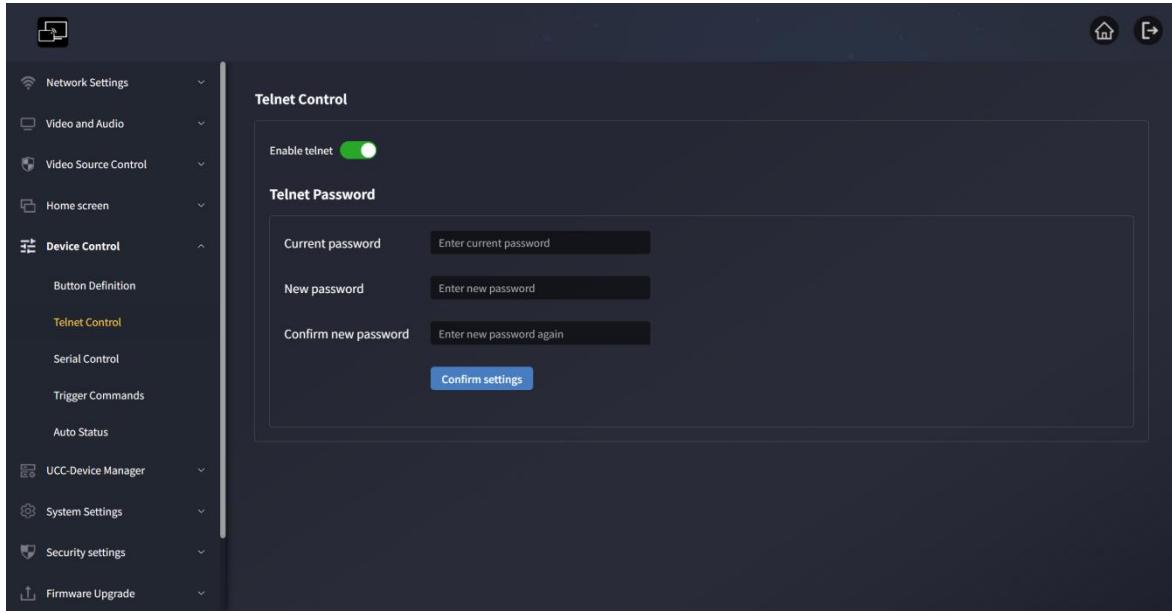


1.5.2 Remote Login (Telnet) Control

Allow Remote Login (Telnet) Function: Enabled by default. This switch needs to be turned on for Telnet commands to control the device.

Turning off the switch will disable the use of Telnet commands to control S311.

- For Telnet communication via TCP commands, enter the current S311 receiver IP address and port: 23.
- For commands containing multiple words, spaces are required between each word.
- Commands are case-insensitive.



This section allows users to change the password to access Telnet control of the device. The default password is "admin".

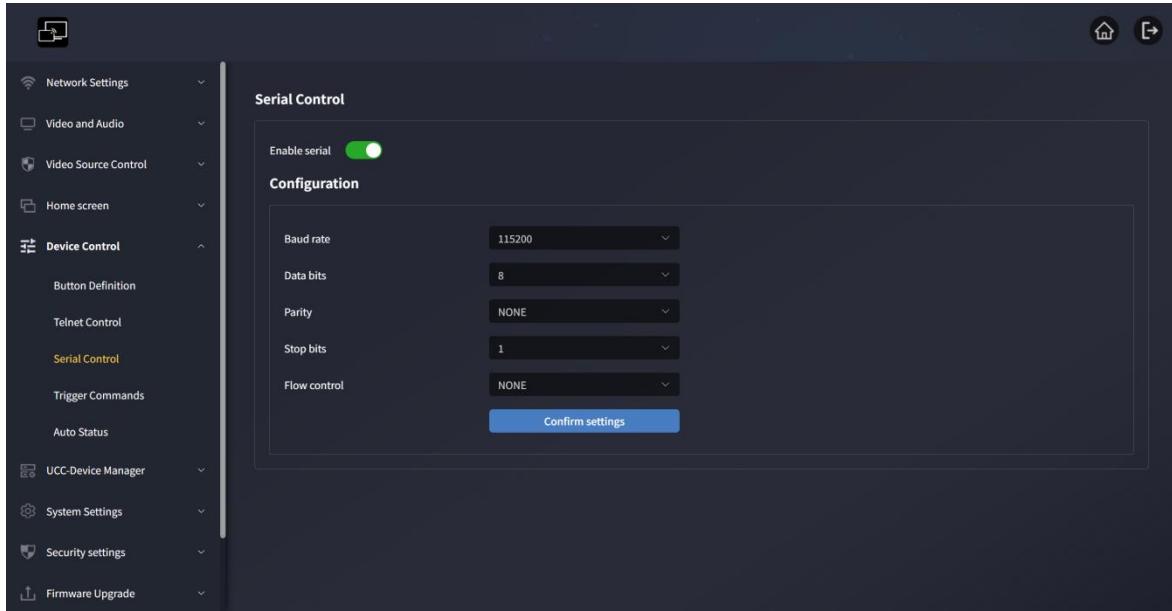
- Current Password: Enter the current login password of the device.
- New Password: Enter the new password you want to set.
- Confirm New Password: Enter the set new password again.

1.5.3 Serial Port Control

The serial port function is enabled by default. Turning it off will disable the use of RS-232 commands to control S311.

Set the baud rate, data bits, parity, stop bits, and flow control as needed.

- For RS-232 serial communication, as mentioned above, enter your selected parameters on the serial port setting screen.



1.5.4 Trigger Commands

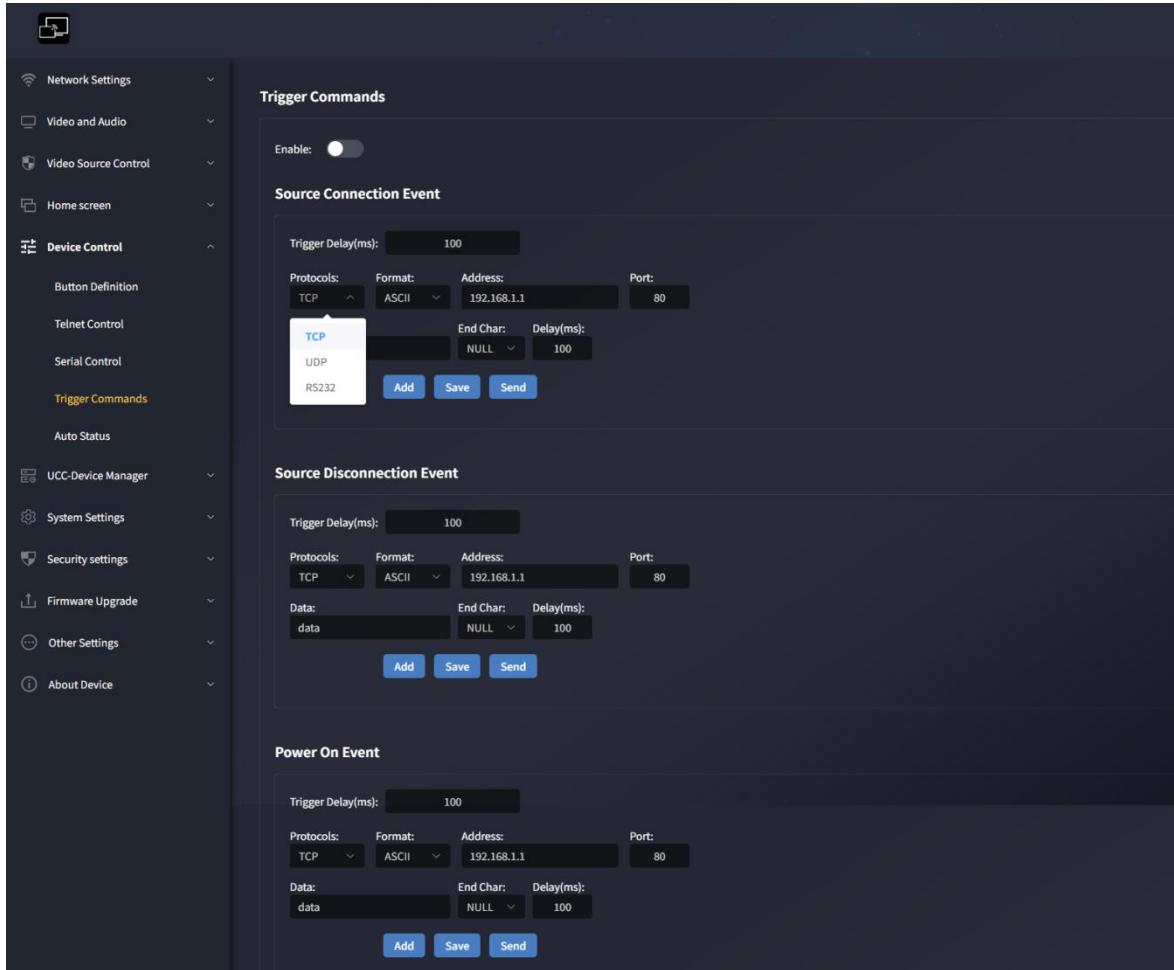
The command trigger function is disabled by default. When enabled, it will report the status information of three operations of S311 input source connection, disconnection, and device restart.

Set the delay trigger time, protocol, format, address, port, data, terminator, and delay time as needed.

- For TCP protocol, as mentioned above, the PC and the device are on the same local area network. Use the tool to enter your selected parameters on the TCP Server port setting screen.
- For UDP protocol, as mentioned above, the PC and the device are on the same local area network. Use the tool to enter your selected parameters on the UDP port setting screen.
- For RS232 protocol, as mentioned above, enter your selected parameters on the serial port setting screen.



The computer's firewall needs to be turned off for normal data reporting.



1.5.5 S311 Automatic Status Report

The automatic status report function is disabled by default. When enabled, it will report status information.

Set the target IP address port, target IP address, and sending interval as needed.

- As mentioned above, use the tool to configure and enter your set parameter information on the UDP port setting screen.