

WMS-20

Dual Screens Wireless Presentation System



User Manual

WMS-20 is a cost-effective wireless presentation system for small to medium-sized meeting rooms, classrooms and huddle spaces. it allows people to bring their own devices to share content anywhere they sit and also easily collaborate with others without any public contact, especially under post-pandemic environment, it helps conference or training went on safely as normal, with the least contact and required social distance. Laptop users simply use the plug&play dongle to share the PC content to the display. Mobile phones and tablets users can be shared just as easily via Airplay, Miracast, Chromecast or using the free Android app.

Feature List:

- Pure wireless presentation experience, bring your own device, no cable messy.
- Wireless content input up to 1080P, HDMI 2.0 output
- Support native wireless mirroring protocols like Airplay, Miracast, Chromecast
- Support plug-n-play HDMI/Type-C dongles for wireless presentation
- Support Android, MAC and Windows APP for wireless presentation
- Support wireless touch back on interactive whiteboard/touch screen
- Best-in-class data security and high standard encryption
- Support moderator mode with preview function.
- Support whiteboard and annotation.
- Customizable home screen page.
- Central management platform available.

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2. Overview



ID	Name	Description
1	Base Unit	Host unit
2	Transmitters	For PC/Lap-top to share the desktop/extended desktop.
3	“WMedia2” App for Android	For smart android devices to share the screen.
4	Airplay for IOS	For smart IOS devices to share the screen.

3. Specification:

Model	WMS-20
HDMI output	1x HDMI 19-pin female connector
Video Output Resolution	3840x2160@60Hz, 3840x2160@30Hz, 1920x1080@60Hz
Format Compliance	HDMI1.4/HDMI2.0
Video Capacity:	1080P @ <60Hz Airplay for IOS devices
	1080P @ <60Hz "WirelessMedia" app
	1080P @ <60Hz for all show-me button
HDCP	HDCP1.4/HDCP2.2
Analog Audio Output	1x 3.5mm PC audio female connectors
LAN port	RJ45 x1: 1000Mbps x1
USB interface	USB3.0 x1, USB 2.0 x1, Type-C x1
Audio Input	AirPlay, Windows/MAC, WMH
Control connectors	3.5mm Phoenix terminal
Number of window simultaneous on screen	≥1+15 (1 main windows+14 thumbnail windows)
Number of simultaneous connections	≥16
Data rate in wireless	Up to 1200Mbps



Video Playback Frame Rate	20–60 FPS
Latency	<100ms, Min 20ms
Wireless transmission protocol	WIFI IEEE 802.11 a/g/n/ac
Frequency band	2.4 GHz & 5 GHz
WIFI Antenna	MIMO 2x2
Dimension (W x D x H)	165mm x 95mm x 24.5mm
Weight	0.4lbs (200g)
Temperature	–4° ~ +140° F (–20° ~ +60° C)
Humidity (Storage / Operating)	20%–90% (non–condensing)
DC Power	12V / POE

3.Hardware Interface

3.1.1 WMS–20 Front Panel



ID	Name	Description
1	Front USB connector	USB port, for dongle pairing, mouse control, USB touch screen etc.
2	Front Type–C connector	Type–C port, for dongle pairing.
3	Power Button	Turn on or off the device.
4	Back–lit LED indicator	Initializing indicates RED, power on indicates flashing GREEN, “Ready to share” indicates static GREEN, “Sharing” indicates static cyan.

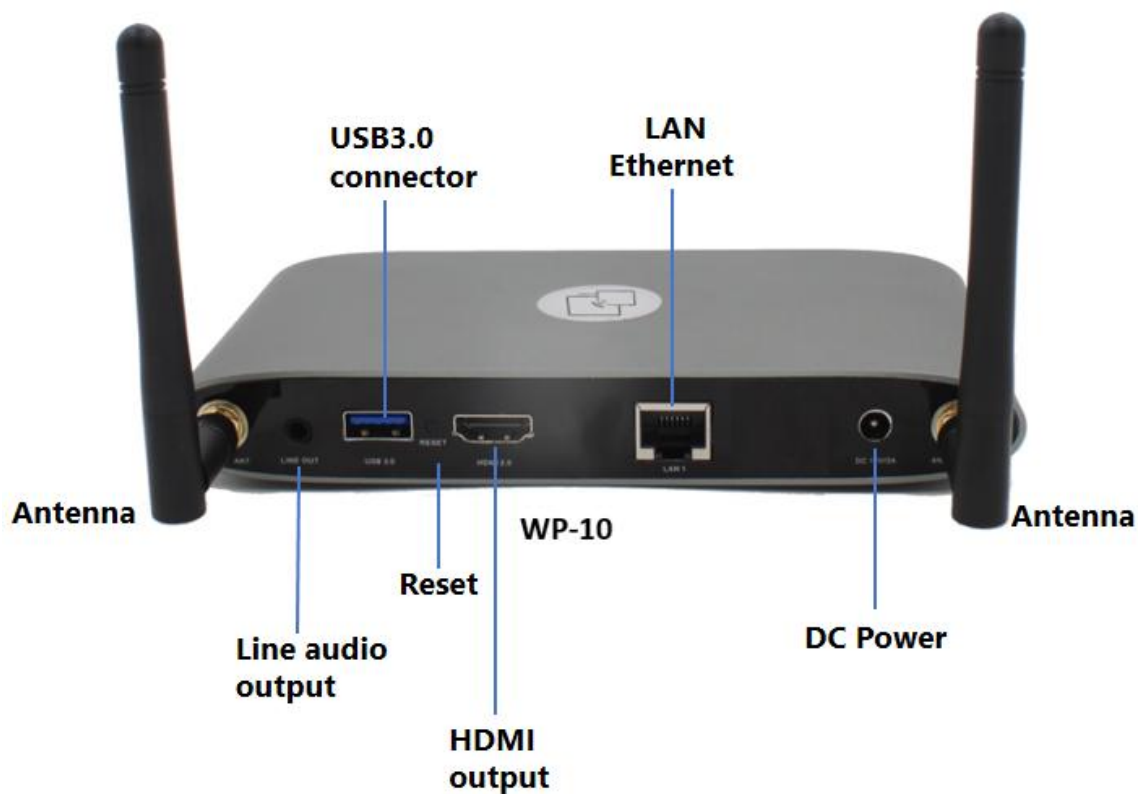
USB port

- The USB port is used for update the new software to the WMS-20.
- The USB port is used for pairing the dongle and base unit, when the transmitter is plugged-in.
- The USB port is used for connecting a mouse to create/upgrade Launcher by clicking **Download** button, hide SSID, PASS, Wifi IP and Lan IP by clicking **Info**, check **Security level button** and control PC source device, when a PC desktop is mirroring to the screen by plugging in the dongle.
- The USB port is used for connecting a USB-based touch screen to create/upgrade Launcher by clicking **Download** button, hide SSID, PASS, Wifi IP and Lan IP by clicking **Info**, check **Security level button** and control PC source device, when a PC desktop is mirroring to the screen by plugging in the dongle.
- The USB port is used for creating or upgrading Launcher by clicking **Download** button, when a USB stick is plugged in.

Type-C port

The Type-C port is used for pairing Type C dongle with base unit.

3.1.2 WMS-20 Rear Panel



ID	Name	Description
1	Line audio output	2 channel analog audio output, Connect a 3.5mm mini-jack PC connector from this jack to the Line in jack of an audio system.
2	USB3.0 connector	USB port, for USB dongle pairing, mouse control, USB touch screen etc.
3	Reset	Reset button to restore to the factory default setting.
4	HDMI output	Connect an HDMI cable from this port to an

		HD or 4K/HDMI2.0 display.
5	LAN Ethernet	1000Mbps, Connect an Ethernet cable between WMS–20 to LAN.
6	DC Power	Connect the included power adapter to this socket, and connect the plug to an available electrical outlet.
7	Antenna	Screw up the included two antennas to these two ports.

USB port

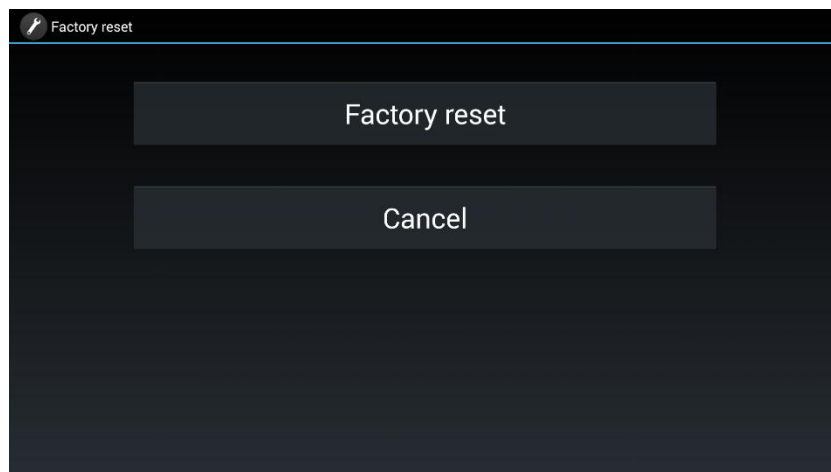
- The USB port is used to update the software of the WMS–20.
- The USB port is used for pairing the dongle and base unit, when the transmitter is plugged-in.
- The USB port is used for connecting a mouse to create/upgrade Launcher by clicking **Download** button, hide SSID, PASS, Wifi IP and Lan IP by clicking **Info**, check **Security level button** and control PC source device, when a PC desktop is mirroring to the screen by plugging in the dongle.
- The USB port is used for connecting a USB-based touch screen to create/upgrade Launcher by clicking **Download** button, hide SSID, PASS, Wifi IP and Lan IP by clicking **Info**, check **Security level button** and control PC source device, when a PC desktop is mirroring to the screen by plugging in the dongle.
- The USB port is used for creating or upgrading Launcher by clicking **Download** button, when a USB stick is plugged in.

3.1.3 Factory Reset

- Start up the Base unit.

- When the *Home Screen* is shown up, press the reset button at the rear panel of base unit. Press this button with a pointed object, e.g. an unbent paper clip until the “*Factory Reset*” page is shown up as below, for at least 2 seconds.
- The Base unit will reboot after 3 seconds to be default configuration.
- If you do not have a picture, press and hold the reset button until the red LED in the top panel will lit, to execute the reset.

All previous settings will be lost and you will need to do the set-up once more.



Default Configuration

- Ethernet:
 - Proxy: None
 - DHCP: Enable
- Wireless network:
 - Frequency: 5GHZ
 - Channel: Auto

- Auto change Wi-Fi hotspot password: 5minute
- Display & Audio
 - HDMI resolution: Auto
 - HDMI CEC:
 - ◆ Device auto power off: ON
 - ◆ Base unit auto power on: OFF
 - Audio output: Jack&HDMI
 - Airplay screen quality: High
 - show device name and password when mirroring: OFF
 - show PCs user name when mirroring: ON
- Moderator Control
 - Add a sub-window bar to enable previewing the connected devices: ON
 - Real time preview: ON
- System settings
 - Date & time: Automatic date & time: use network-provided time
 - Auto Standby: Never
 - Language: English
- Security Settings
 - Security Level: Security level 1
 - Connection Password: 4-digits password beginning with 0000
 - Change admin password: admin(default)

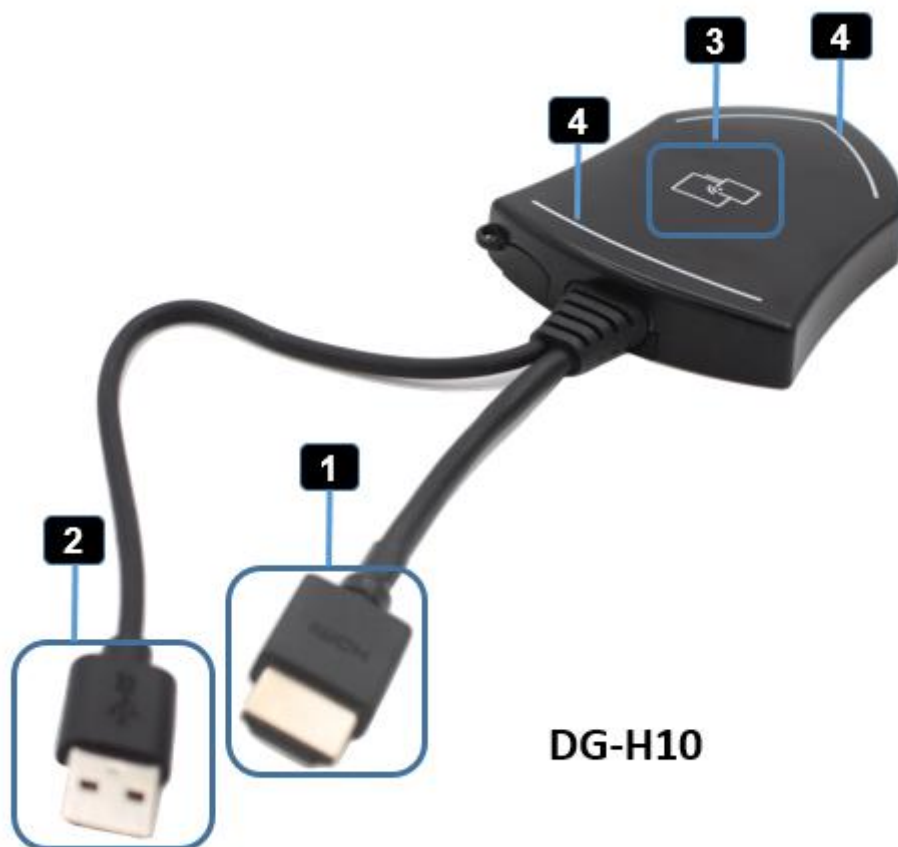
- Other settings
 - Auto create launcher: Disabled
 - Clear history after meeting: Always

3.1.4 Dongle Front Panel

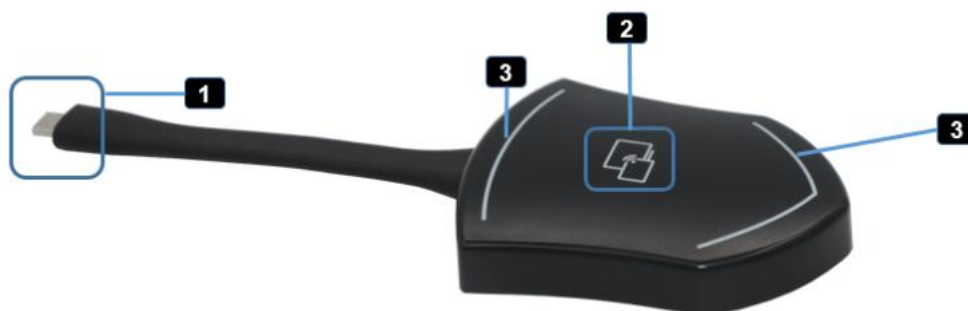
DG–H15, DG–C15 are dongles, which is used for toggling the mirroring from personal PC or MAC desktop on the main screen.

LED ring indicator behavior

- When LED indicator is static green, it's ready to mirror your PC desktop on the main screen.
- When LED indicator is static red, 1) it's mirroring your PC desktop on the screen, 2) pairing is done. You can now unplug the Button from the base unit.
- When LED indicator is blinking Green, it indicates 1) the button is plugged in the laptop and initializing or waiting for user to start the WirelessMedia application, 2) pairing/software upgrading of the button in the Base Unit is in progress.
- When LED indicator is Off (no light), it indicates 1) the button is not plugged in the PC/Lap-top; 2) the button is defective; 3) the USB port or computer might be defective.



ID	Name	Description
1	HDMI connector	Using HDMI connector of the button can be plugged into a PC/Laptop for sharing your screen.
2	USB connector	Supply power, or plug into the base unit for pairing the Button to the Base Unit or upgrade the dongle.
3	LED ring indicator	Indicates the status of the button.

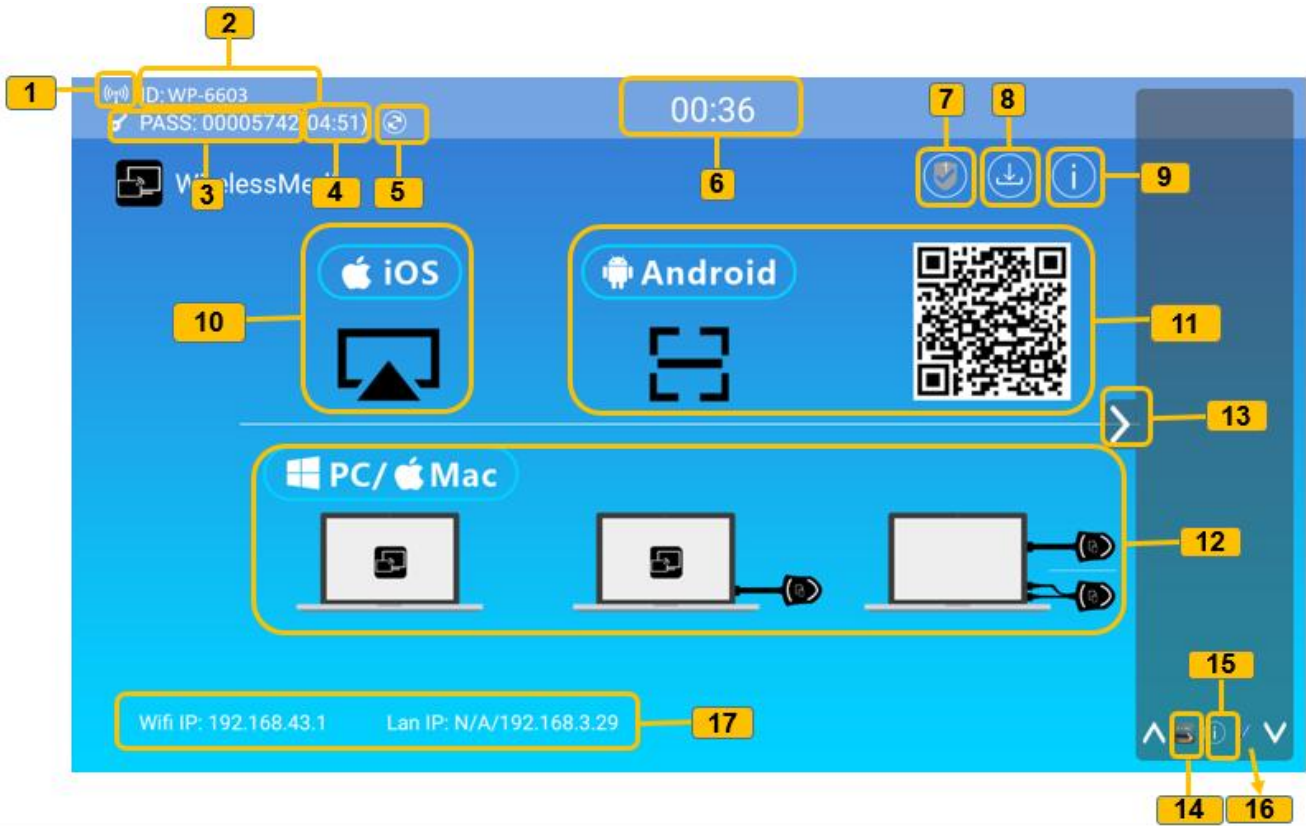


Note: DG-C15 is full function type-C interface with DP Altmode inside, which supports Audio and video transmission. Thus PC's type C connector also requires full function type C connector for mirroring screen.

ID	Name	Description
1	Type C (DP) connector	Using Type C (DP) connector of the button can be plugged into a PC/Laptop for sharing your screen.
2	LED ring indicator	Indicates the status of the button.

3.2 Software Interface

3.2.1 Home Screen



ID	Name	Description
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1	Wi-Fi Indicator	Wi-Fi Direct mode: internal access point is enabled  Wi-Fi Infrastructure mode: “Client-Mode” ,  Wi-Fi connection to router is established, icon displays the current signal strength. A secure Wi-Fi connection is established, or connection to a router failed:  Wi-Fi is not available:  LAN Infrastructure mode: access point is disabled
2	ID	Wi-Fi name or device name of the Base-unit access point.
3	PASS	Wi-Fi password of base unit.
4	Password-timer	only displayed, when timer is active; time until the password is changed automatically.
5	Refresh Wi-Fi-password	Generate new password manually for securing your Wi-Fi network.
6	TIME	Show time, if LAN has access to a time server; even after disconnecting the LAN connection, the time is

		displayed until the device has been disconnected from power.
7	Security level	Security level 1–3, display ONLY; the security features of the displayed level are displayed in detail by clicking on the icon; the settings can only be changed by administrator in the webserver console setting menu.
8	Download Button	Creating & upgrading Launcher “WirelessMedia.exe” for Windows, MAC to USB stick.
9	Info	Show status-bar (1) – (6) in Home screen showing/hiding
10	IOS Quick Start	Steps to instruct how to transmit smart mobile devices either powered by IOS, onto the main screen.
11	Load “WirelessMedia2” App from Store	Scan QR-code for Android device and download the App from GooglePlay Store.
12	Windows / MacOS Quick Start	Steps to instruct how to transmit PC/Lap-top onto the main screen. First-time users must first install the starter program from the web page or from the USB stick one time.

13	Preview function of the screen contents of the participants with transmitter and mobile devices; White Board& Annotation function icon	Preview function of the screen contents of all connected transmitters and mobile devices; White Board and Annotation function.
14	White Board icon	Whiteboard function
15	Info	Click to show ID and password when mirroring.
16	Annotation	Annotation function.
17	Wi-Fi IP LAN IP	● Wi-Fi IP: address of base unit in wireless LAN ● Assigned IP: address of base unit in LAN; “N/A” = no connection to network

4. Installation

Overview:

- Installation methods for the Base unit
- Table mounting
- Wall mounting
- Recommendations about antenna placement and orientation
- WMS-20 Power Connection
- WMS-20 Video Connection

- WMS-20 Audio connection
- WMS-20 LAN connection
- About USB device connection
- Wiring Diagram

4.1 Installation methods for the Base unit

Introduction to the installation methods:

The Base unit can be installed in different ways in a meeting room.

- Table mount
- Wall mount

The articulated antennas are removable. They can rotate for better wireless connection.

Attention: For optimal performance, install the Base unit close to the display and avoid obstacles between the Base unit and the Transmitters.

Necessary tools

- A drill (type of drill depends on the type of wall)
- The mounting screws (mounting screws not included in the package)

Necessary parts

- 2 mounting screws (Screw head diameter of screws shall be within 6–8mm)

How to install

1. Drill two holes in the wall as indicated on the drawing.

Horizontal distance: 177 mm $\pm$ 0.15

2. At the bottom of Base Unit, turn in 2 flat screws into 2 holes of its smallest diameter to be fasten enough.

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

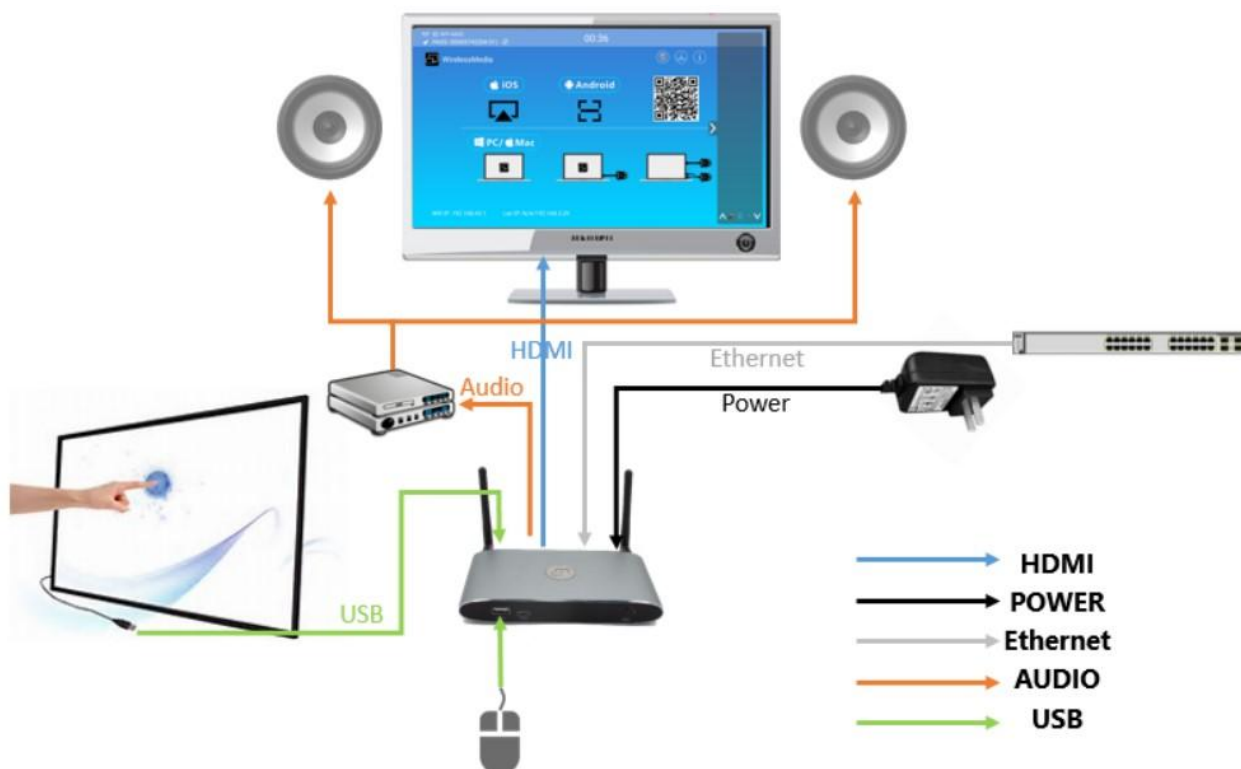
3. Place the WMS-20 on the wall and fixate the base unit with the 2 screws.

Antenna placement rules

- 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 Wi-Fi access points, cordless telephone, microwave ovens,... It is also best to install antennas at least 15 cm (6 inches) from concrete walls.
- The most favorable 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 WirelessMedia users. As a result, the advised position for the antennas is at the side of the meeting room.

4.2 Wiring Diagram



4.3 Power Connection

The Base unit can be powered by the external universal power adapter.

How to connect the external power adapter

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

Note: Once the base unit is powered, it starts up. From now on please use the **POWER** button with **Status LED** on front of Base-unit to switch **ON** or **OFF**.

Power over Ethernet

If the LAN Ethernet switcher support POE (Power over Ethernet), it could power up the Base-unit instead of using the external power adapter. (WMS-20 LAN2 Port is support POE.)

4.4 Video Connection

1. Connect the **HDMI Output** of base unit to a 4K or Full-HD display by a HDMI cable.
2. Connect the power adapter to the base unit **DC power socket** and connect the other side plug to an available electrical outlet and switch the base unit on.
3. After started, the system show the **home page**, as shown below.



4.5 Audio Connection

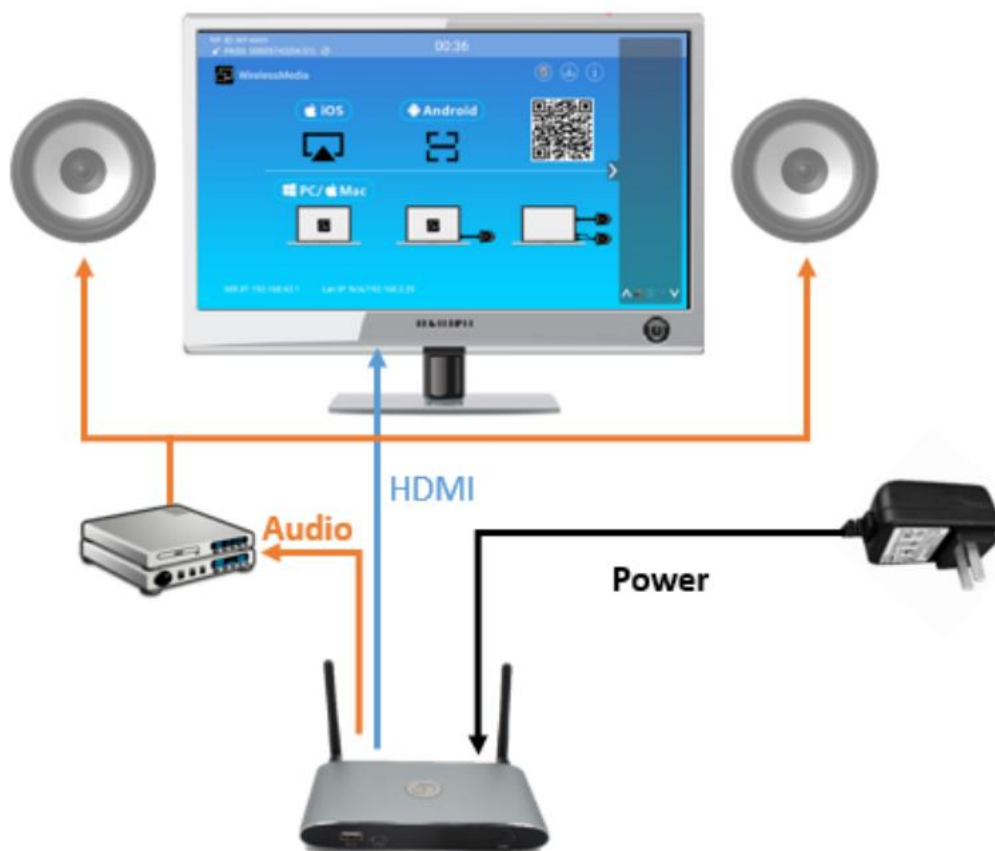
WirelessMedia transmitter can transmit the audio output of the PC/Lap-top, re-direct and send to the Base Unit together with the video signal. The audio will be output at line levels from mini jack socket 3.5mm

connector and via the HDMI output connectors simultaneously.

It's up to the user to decide whether or not to send the audio signal together with the video signal.

How to connect separate audio

1. Connect an audio cable with mini jack socket 3.5mm connector into the audio of the Base Unit
2. Connect the other side to the meeting room's sound system.



Sound is not sent out

WirelessMedia button will keep capturing and send the audio of PC/Lap-top, since PC/Lap is successfully mirroring desktop to the main screen.

1. Please be sure the button is static green and the PC/Lap-top is sharing on the screen
2. Check *Setting* configuration, to adjust the *Volume* set in *WirelessMedia setting* tab.

PC/Lap Sound

As default set, WirelessMedia will mute the internal speaker of PC/Lap and route the audio to the base unit, after PC/Lap is successfully mirroring desktop to the main screen, in order to avoid the repeated audio.

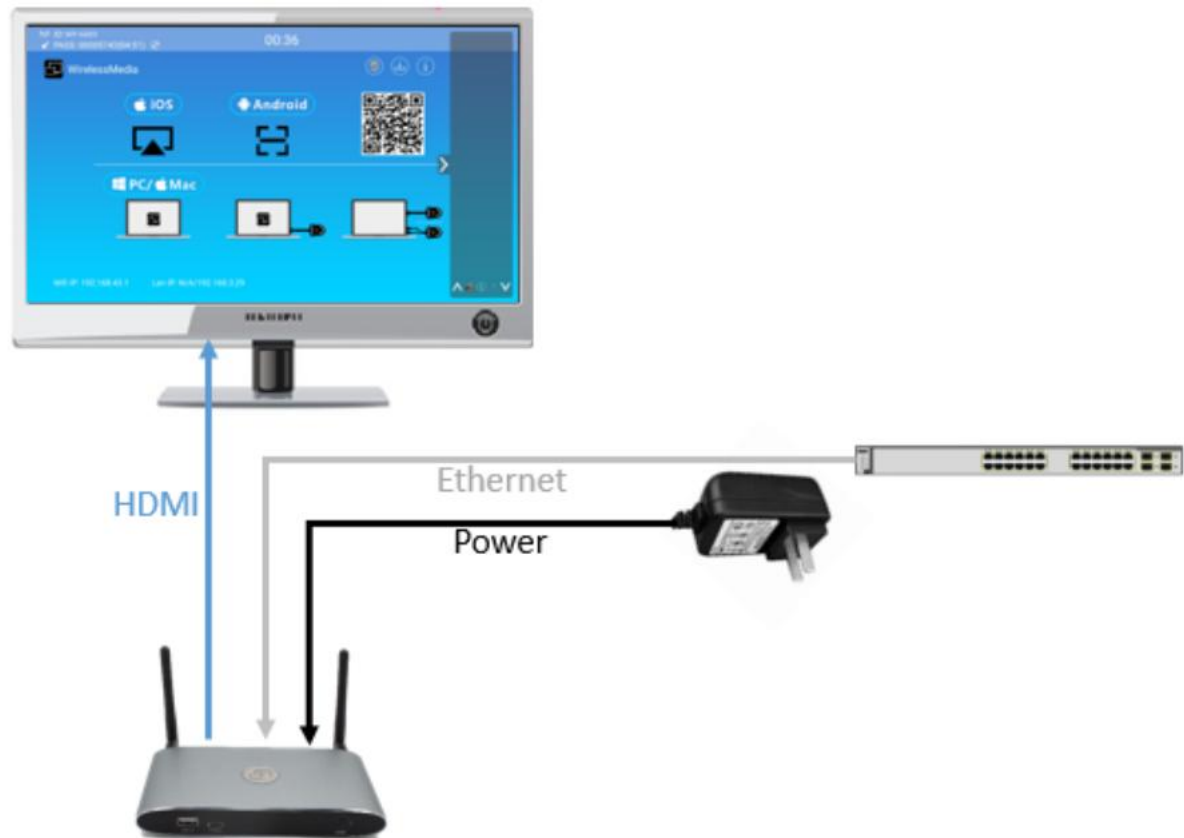
When click the button to stop sharing, local loudspeaker will return to previous status, you could adjust the volume on your PC/Lap.

Note: *If you want to keep the internal speaker of PC/Lap still while route the audio to the base unit, please click the audio mute icon in the status bar to turn on the internal speaker.*

4.6 LAN connection

The Base Unit can be connected to a local network or directly to a PC/lap-top. For normal operation, a LAN connection is not necessary. When needed, it's suggested to connect the WMS-20 to the Internet.

1. Connect a network cable with RJ-45 connector into the LAN port of Base Unit.

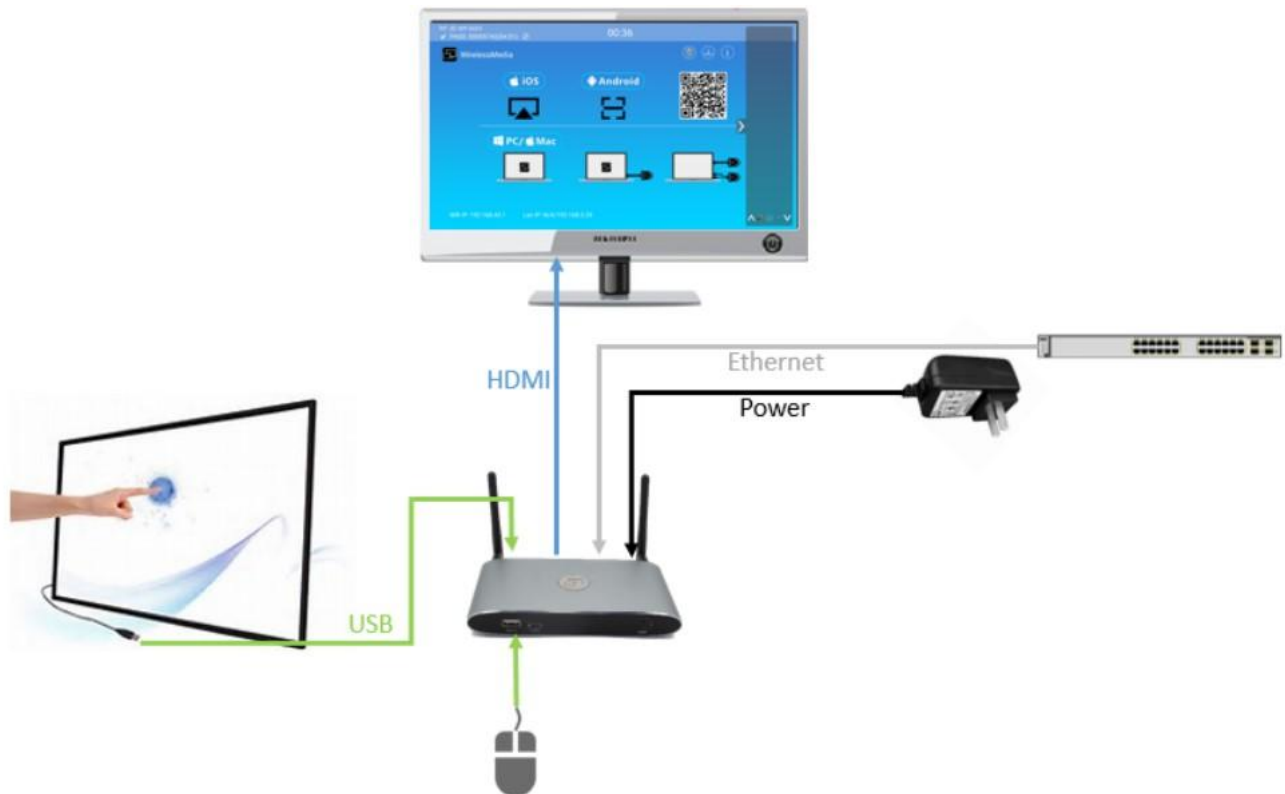


The LAN connection can be used for:

- Network integration of Base Unit in guest or company network.
- Telnet control the Base Unit.
- Maintenance purpose.

4.7 Usage of USB device

Please use a USB Mouse or Touchscreen:



1. To configure the **Security level check button, DOWNLOAD BUTTON, INFO.**
2. To control the sharing PC/Lap-top.
3. To activate system upgrading
4. For white board or annotation during a presentation, WirelessMedia transmits Video, Audio and the USB-HID

function for mouse-control and click-function of a touchscreen. Connect touch-interface of your screen to the USB-port on your laptop or PC.

USB control

USB mouse for configuration menu

- 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.

5. Quick-to-Start

5.1 Mobile device: Wireless Connection

1. Android devices:

Please download the WirelessMedia2 application from the Google Play store on your Android device.

2. Apple's iOS devices utilize AirPlay for screen mirroring.



5.1.1 Enable portable hotspot:

Connect to your PC WiFi to Base Unit SSID and enter the password (displayed on homepage).



5.1.2 Enable LAN connection:

Connecting to Base Unit Web Configurator point via Lan IP

1. Connect your company Lan to the Base unit Lan 1 port, Setting your PC Wi-Fi and select your configured company Lan WiFi from the network list.

2. Open the web browser (e.g. Google Chrome) on your laptop and enter the default IP address [192.168.X.XXX](#)

3. Default password for entering the Main menu on webserver console is “admin”.



5.2 Pairing transmitter with base unit

1. Connect the DG-H15 HDMI dongle to the USB port, connect the DG-C15 Type-C dongle to the Type-C port to pair all the transmitters with the base unit. The home page will then display as shown below.

2. When you plug in the transmitters, the message table will show "Dongle is booting, please wait..."



3. After completing the pairing, the message table shows “Succeeded to pair!” on the home page, as shown below.



Note: After changed the SSID/Wi-Fi channel in the menu, all transmitters must be paired again.

5.3 Mirroring

5.3.1 Laptop content sharing via dongle

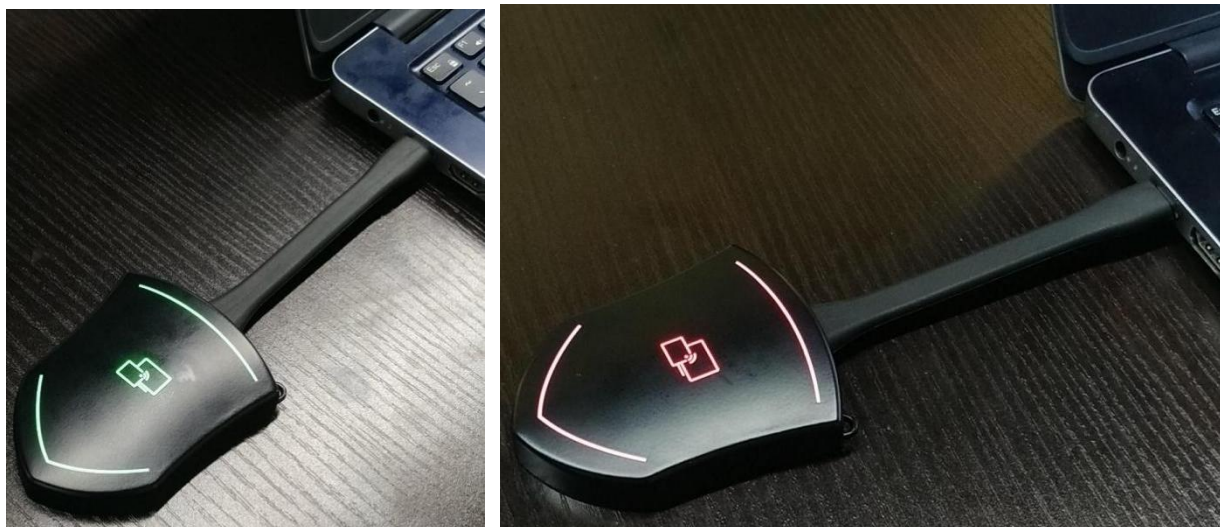
DG-H15 (HDMI dongle)

1. Plug the USB port of DG-H15 to base unit to pair.
2. Plug the USB port and HDMI port of DG-H15 to PC/Laptop/MacBook. USB port for power and HDMI for AV.
3. Touch to mirror when the LED indicates is static green.
4. When LED is static red, the desktop is mirroring to the main screen.



DG-C15 (Type C dongle):

1. Plug the Type C port of DG-C15 to base unit to pair.
2. Plug the Type C port of DG-C15 to PC/Laptop/MacBook.
3. Touch to mirror when the LED indicates is static green.
4. When LED is static red, the desktop is mirroring to the main screen.



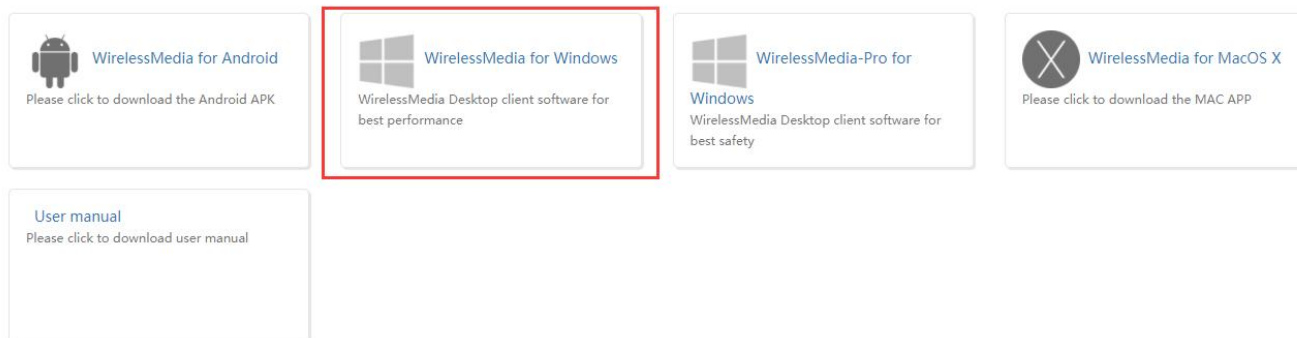
5.3.2 Laptop content sharing via application

How to install the "WirelessMedia" app on your laptop?

Use a universal USB disk to create a "Launcher" on the base unit. Connect the USB stick to the base unit and click the DOWNLOAD icon on the homepage to download "WirelessMedia-windows.exe" to PC.



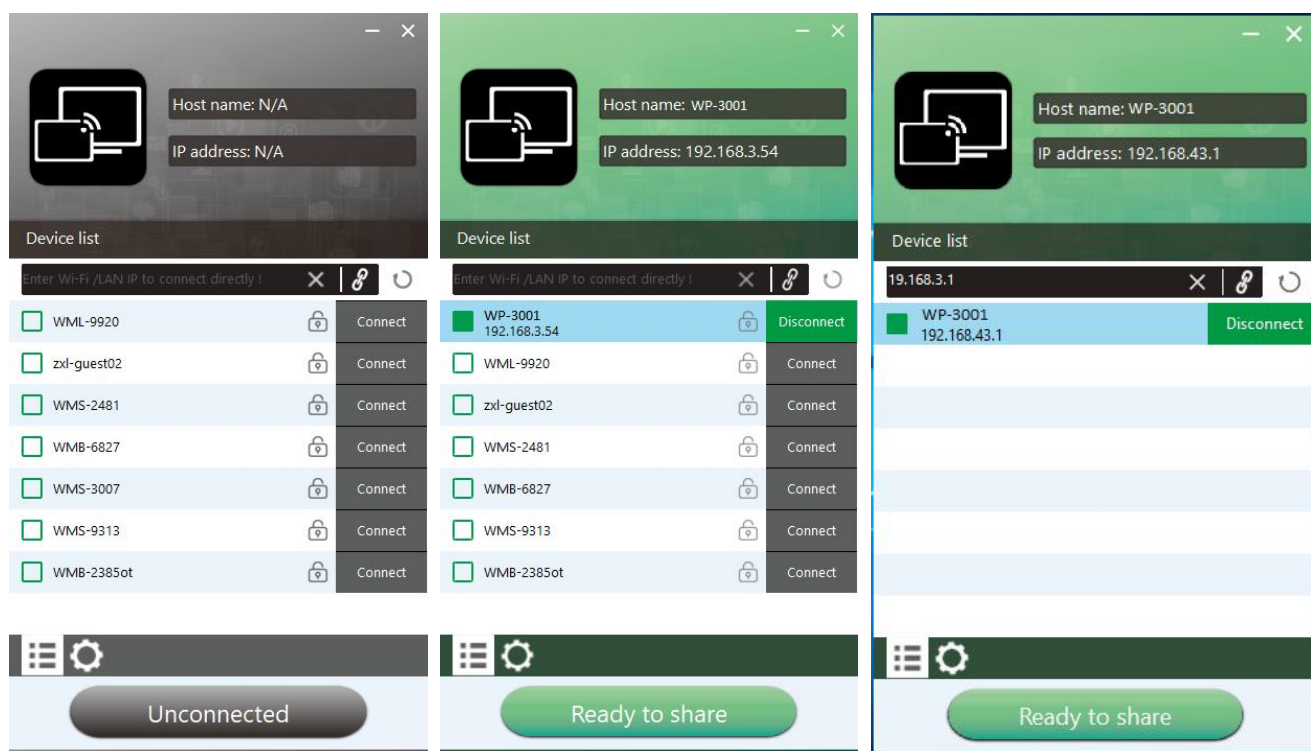
Or you could download the application through the web



1. Please connect your laptop to the Wi-Fi network displayed on the Home screen, or alternatively, connect to the LAN on the network using a network cable.

2. Select the WirelessMedia for Windows App for Windows PC, Select the WirelessMedia for MacOS App for MacBook.

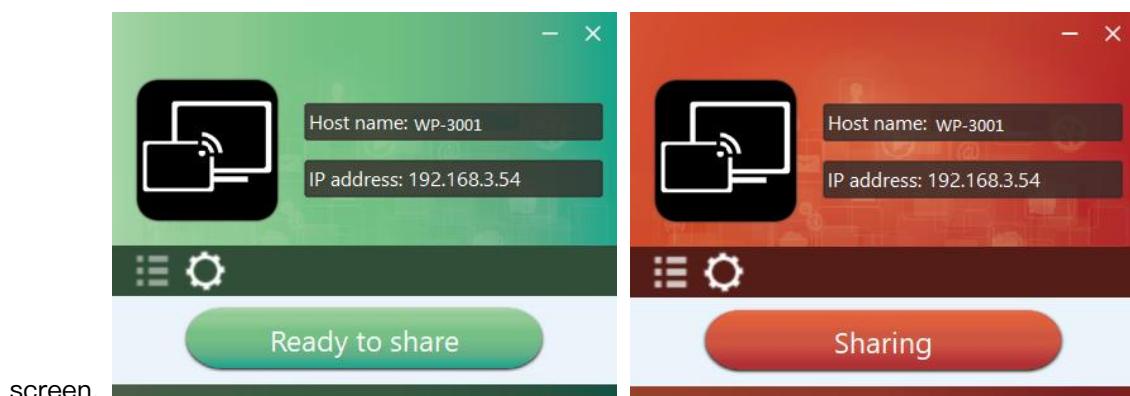
3. Double-click the "**WirelessMedia-windows.exe**" Launcher program  , a list of all available "WirelessMedia" in the **same network** will be displayed, select which device you want to connect to. The connections are password protected (lock icon ).



1. Enter base unit password and click “connect”, the system is ready to share.



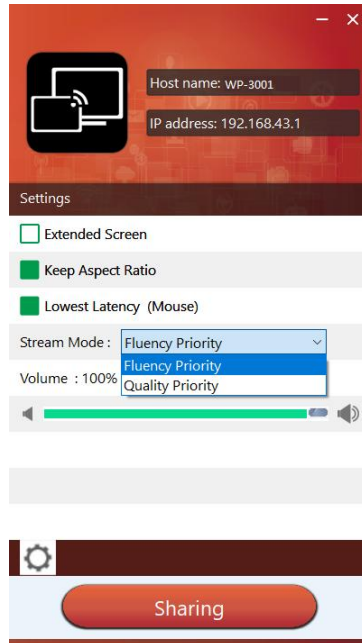
2. Click "Ready to share" on the PC. When the window color is static red, the screen is mirrored to the main



screen.

5.3.3 Laptop Extended Screen

Click the icon  in App to open/close “options”.



“Options”:

- **Extended Screen:**

The primary screen (1) is displayed on the laptop, while the virtually extended screen (2) is displayed on the main screen. In the event that the PC has already established a connection with an extended screen (3), the extended screen (2) will be displayed on the main screen.

When utilizing the "Extended Screen" function for the first time, a message will appear indicating the installation of the "Extended Display" driver. To proceed, click "Yes." Once the "Extended Screen" function is installed, it will be ready for use.

- **Keep Aspect Ratio:**

Keep the original aspect ratio to display on the main screen.

- **Stream Mode:**

- The Fluency Priority setting is the default option. It offers a brief image transmission delay and lower image resolution, it is suitable use for PPT presentation mode.
- Quality Priority: The image resolution is high quality and the image content is complex, it is suitable for presentation in the video.

- **Low Latency Mouse:**

This setting is for the laptop. The mouse pointer is the same as in the application. There may be a slight delay in cursor movement. Mouse pointer movement is displayed smoothly on the home screen with little delay, which improves application operation on the home screen.

- **Volume Slider:**

Adjust the volume on the main screen when using the laptop for a presentation.

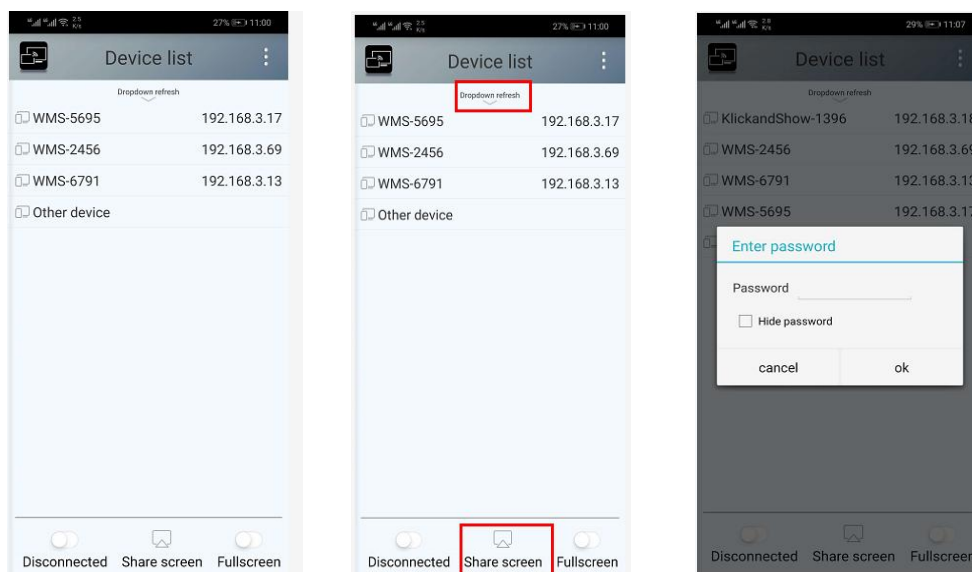
5.3.4 Android devices screen mirroring via “WirelessMedia” application

1. Please launch the “WirelessMedia” application.

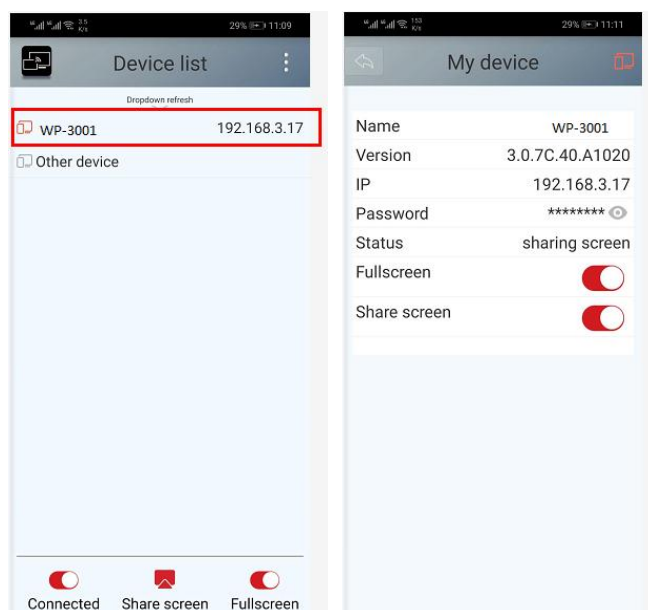


2. Connect your mobile device Wi-Fi network to WMS-20 SSID. Then launch the “WirelessMedia2” application in your mobile device, and you will see the Home Page of “WirelessMedia2” as shown below.

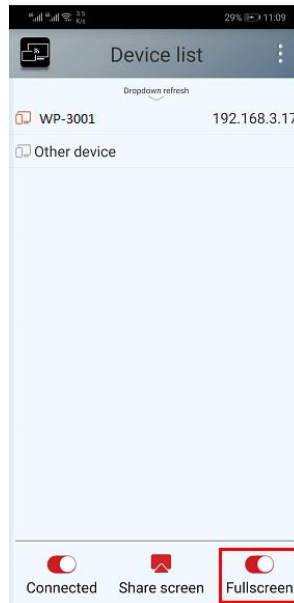
Then select the base unit you want to connect, enter password and mirror.



3. Click again the button “Share Screen” to screen mirroring or stop mirroring.
4. Click the connected device name to check the base unit status and base unit firmware version.



5. Click “Fullscreen” to be full screen in the main screen when more than one signal is connected and shared.



5.3.5 iOS devices screen mirroring via Airplay

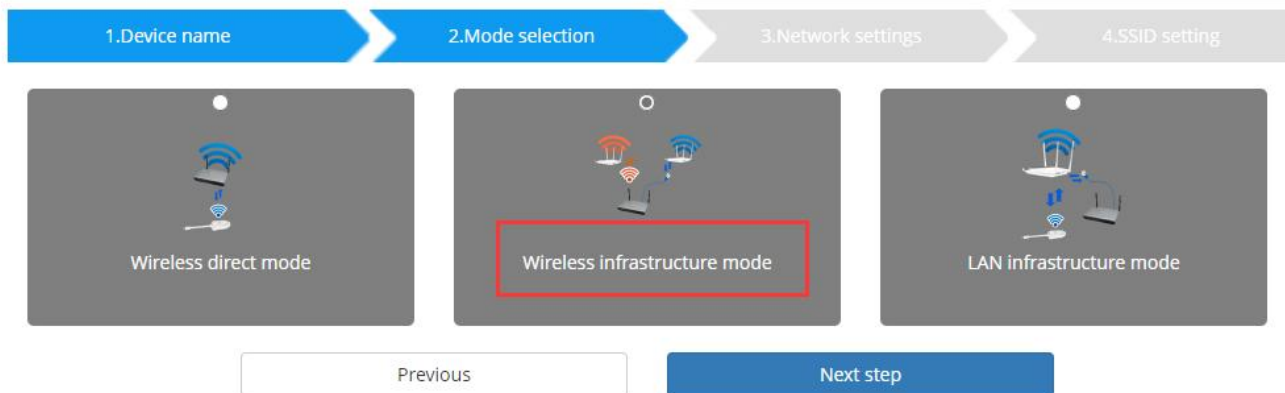
AirPlay technology enables users to stream their screen or audio content, including YouTube videos and images, wirelessly to the base unit.

1. Setting your iPhone WiFi connect to the base unit SSID.
2. Click the **Airplay** icon  on your Apple device and start screen mirroring through the WMS-20 to the main screen.

5.3.6 Miracast Screen Mirroring

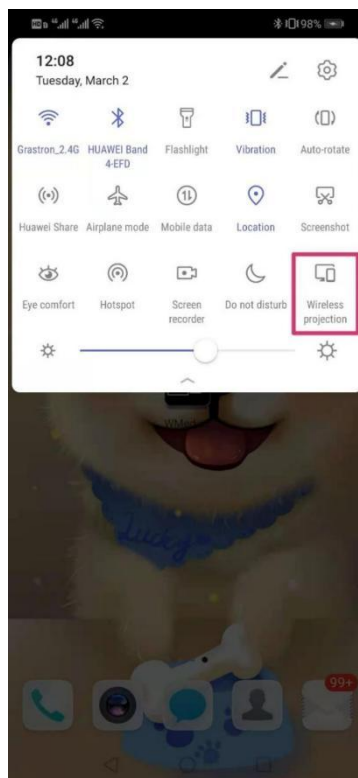
Note: WMS-20 is only compatible with "wireless infrastructure mode," which allows for Miracast functionality. To utilize this feature, users must install a compatible wireless USB adapter .

Wireless network

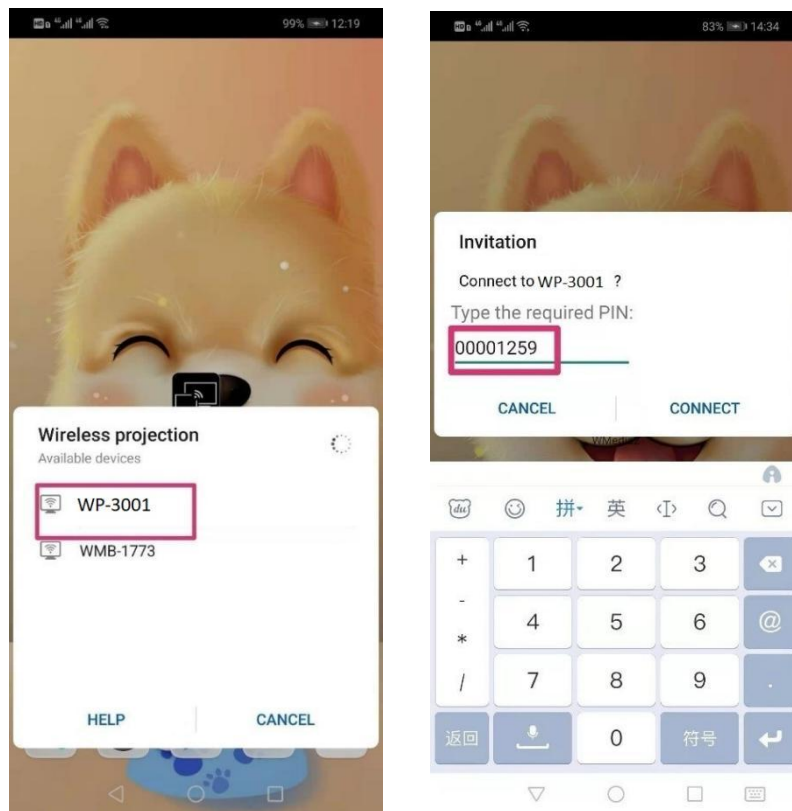


Android Devices Miracast

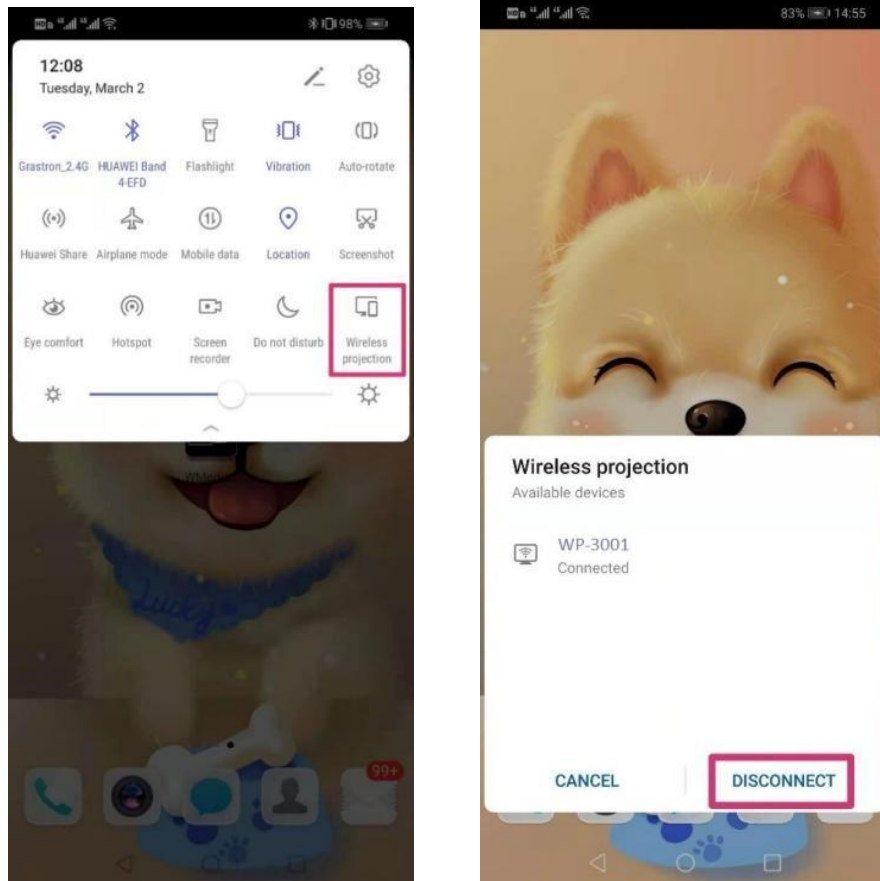
1. Please ensure that the Wi-Fi or WLAN is enabled.
2. To enable wireless projection, swipe down from the top of the phone's screen and click the wireless projection icon that appears in the popup page.



1. It will pop out the wireless projection window, find the proper base unit WP-5320 in the available list to connect.

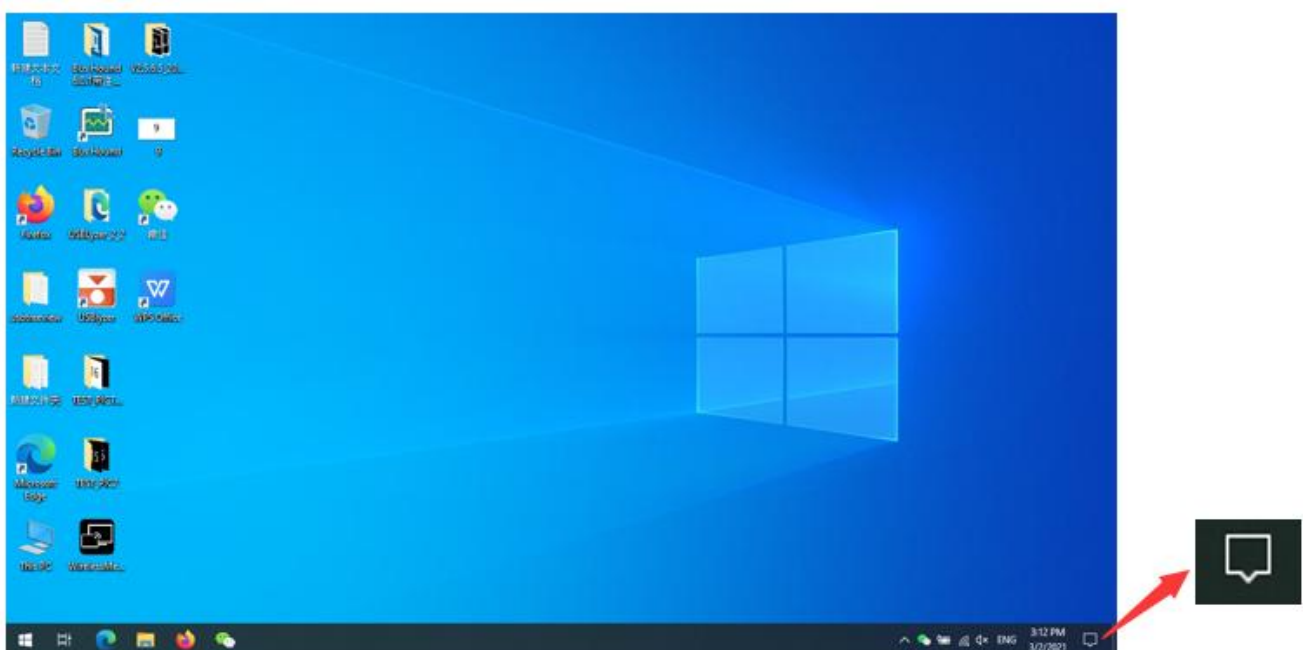


2. After entering password, your mobile screen is mirroring on display.
3. Click the “wireless projection” icon again, disconnect to stop mirroring.

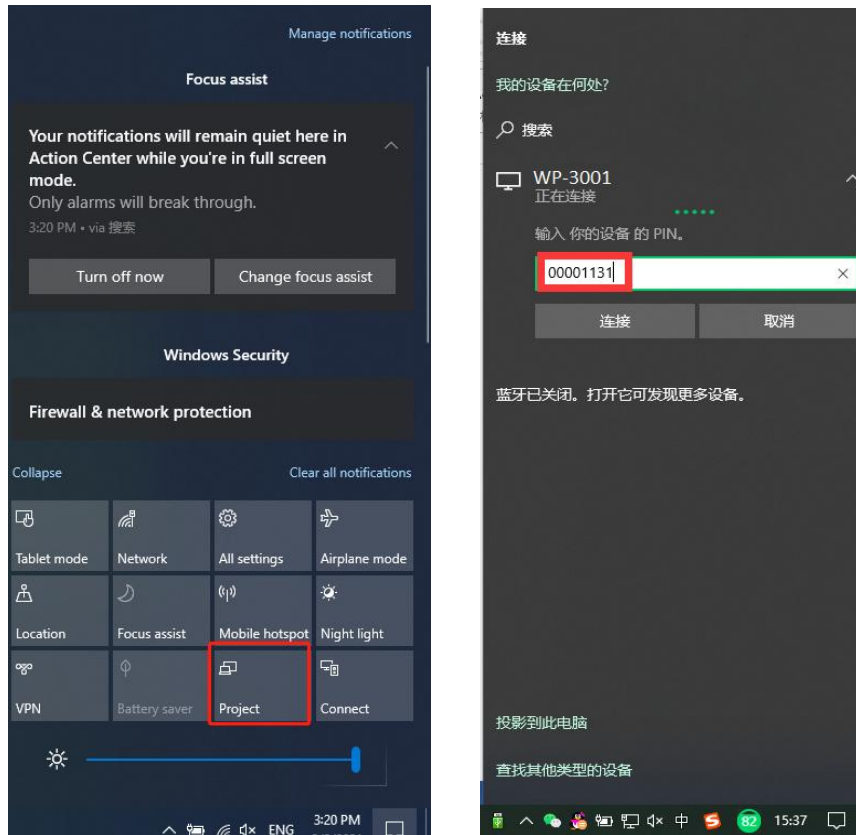


Laptop Miracast

1. Make sure the Wi-Fi or WLAN is enabled.
2. Click the PC bottom right corner operation zone icon as below.



3. Click “project” icon to enter password on home screen to connect and mirror.

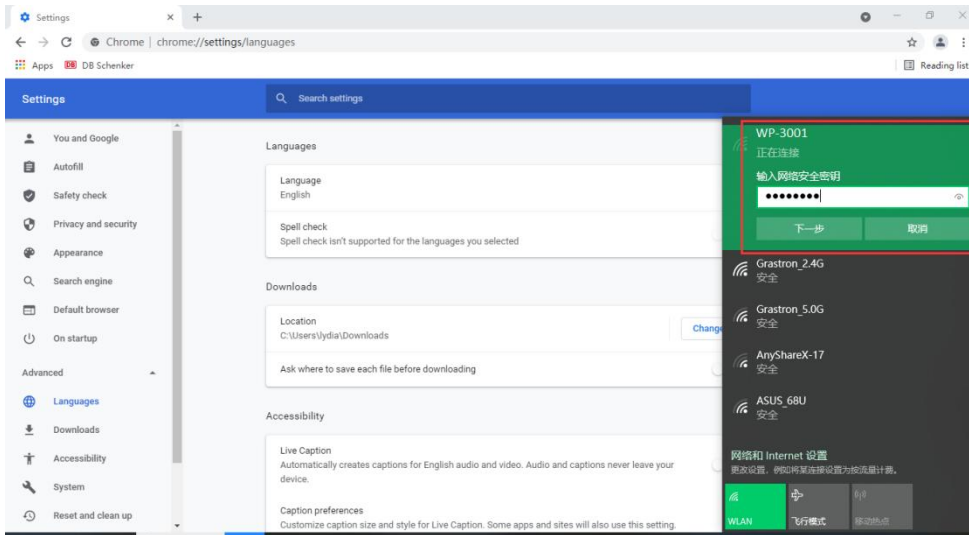


4. After entering password, your laptop screen is mirroring on the display.
5. Click the “project” icon again, disconnect to stop mirroring.

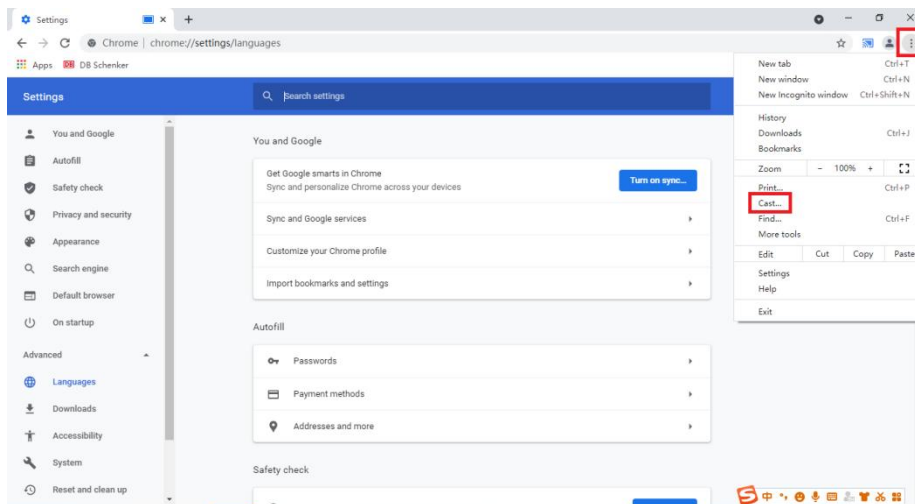
5.3.7 Chromecast on PC

WMS-20 support Chromecast function on WIN 7 to WIN 11 PC.

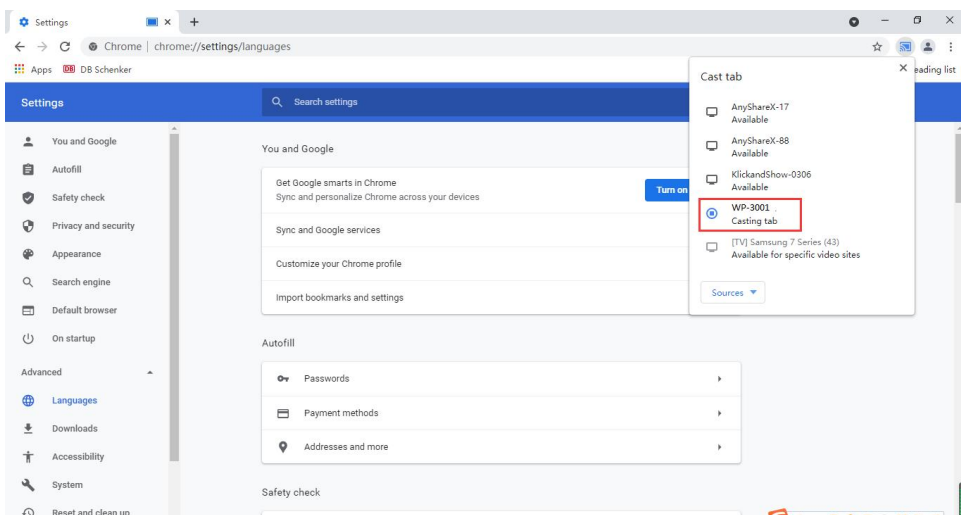
1. Open Chromecast browser, connect your PC with same network of WMS-20 as below pic.



2. Click “cast” to start Chromecast function.



3. Find target base unit SSID as below. Click to connect.



5.4 Preview Window

The preview function is available via a sidebar on the right side of the screen. This allows users to preview the images of all connected devices via WMS-20.



Click the start play icon to screen sharing.



Click the stop icon to stop sharing.



Click the full screen icon for full main screen,



Click to volume icon to adjust the volume of connected signal.

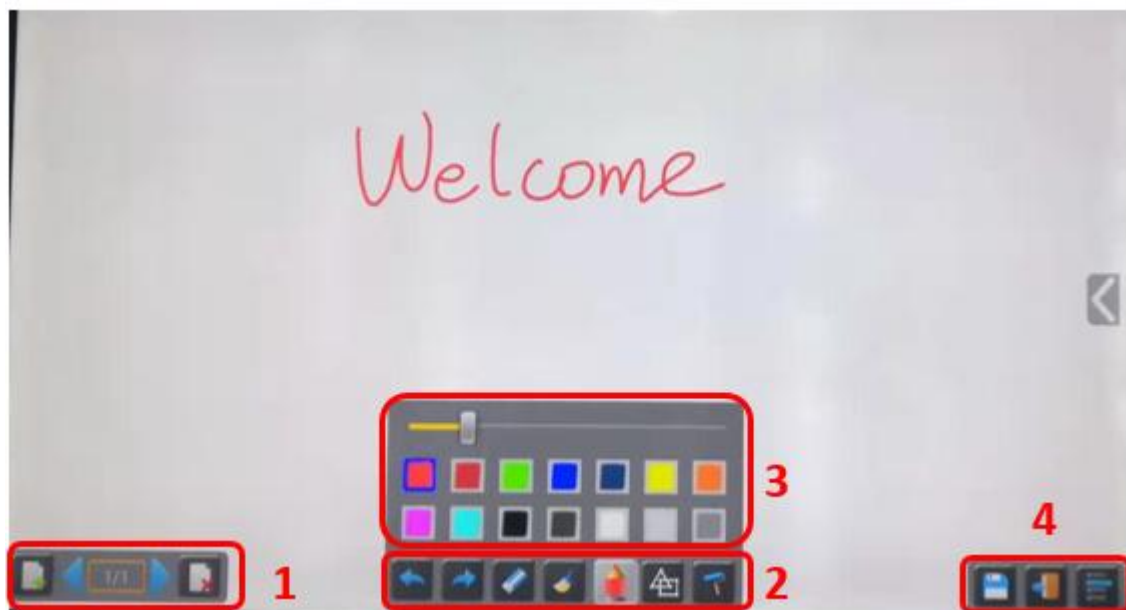
5.5 Whiteboard & Annotation

Whiteboard and Annotation is compatible with HID devices, including interactive whiteboards and touch screens. Its user-friendly interface facilitates enhanced collaboration within your organization, enabling seamless creation, editing, capture, and sharing of documents.

5.5.1 Whiteboard



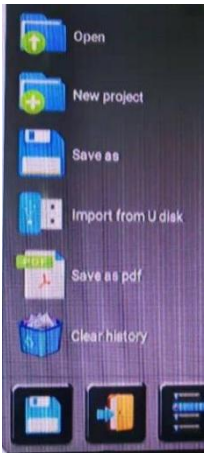
Click on the icon  to enter the white Whiteboard page. You can create free drawings on the touch screen.



The toolbar functions as below.

ID	Icons	Function
Tool bar 1		Add an empty page
		Delete the actual 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 color of board” is selected, for individual change of size of Pen, Shape or color.

Tool bar 4 File options 	  	Save the current screenshot on local storage (PNG+WMN) Close Whiteboard to go back to Home screen, actual project can be saved on local storage (WMN) File options: ● 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 whiteboard & annotation files on local storage
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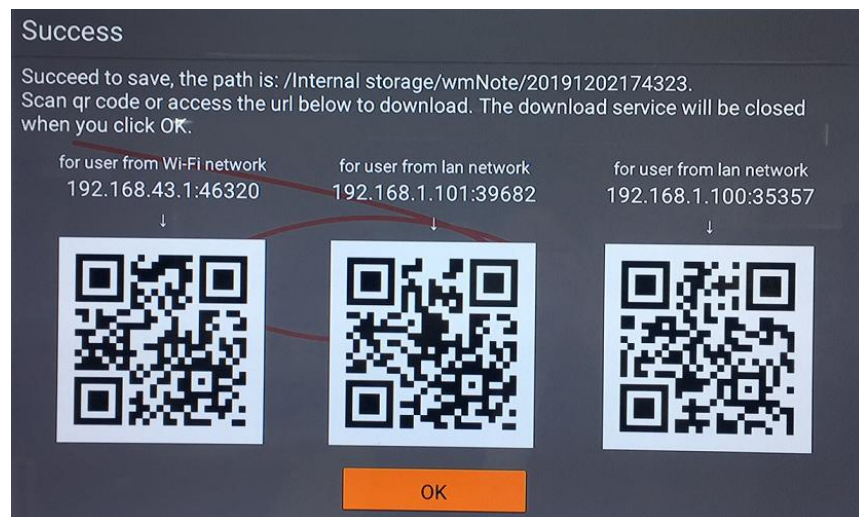
5.5.2 Annotation

Click on icon  to enter the Annotation function.



Download the drawings to connected users

Please scan the QR code with your mobile device or enter the provided IP address in your browser to retrieve the saved file.

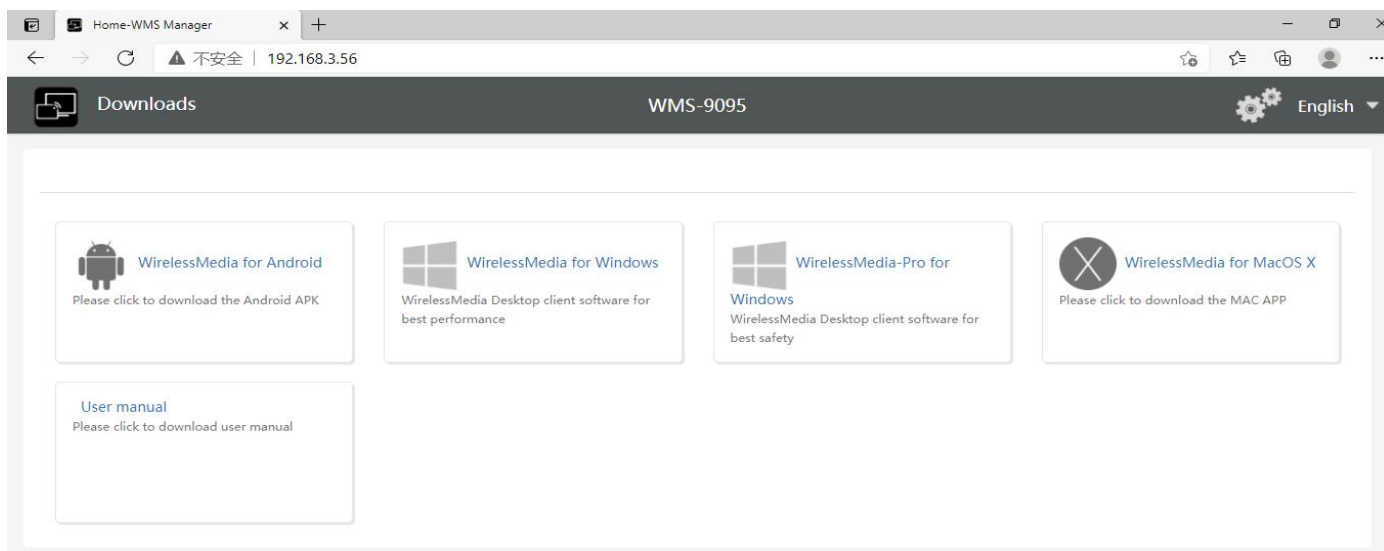


6. Web Setting Management Configuration

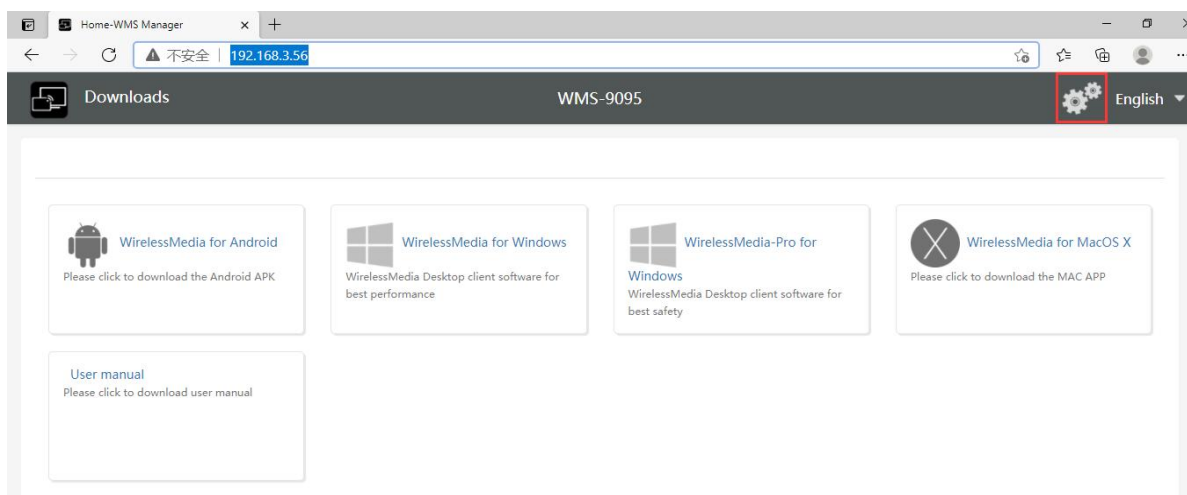
How to access the WebGUI page?

1. Please connect your laptop to the WMS-20 base unit via WiFi. The base unit SSID and password will be displayed on the homepage.

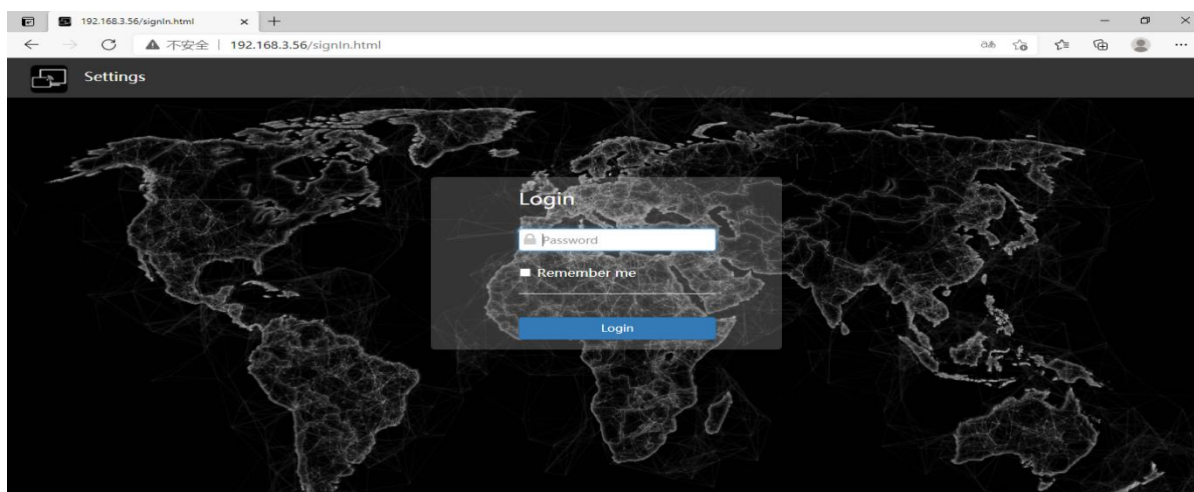
2. Open your laptop web browser and enter the base unit IP address. The default WIFI IP address is 192.168.43.1, which is displayed on the button of the homepage. Please click on the icon to access the management page and the login system.



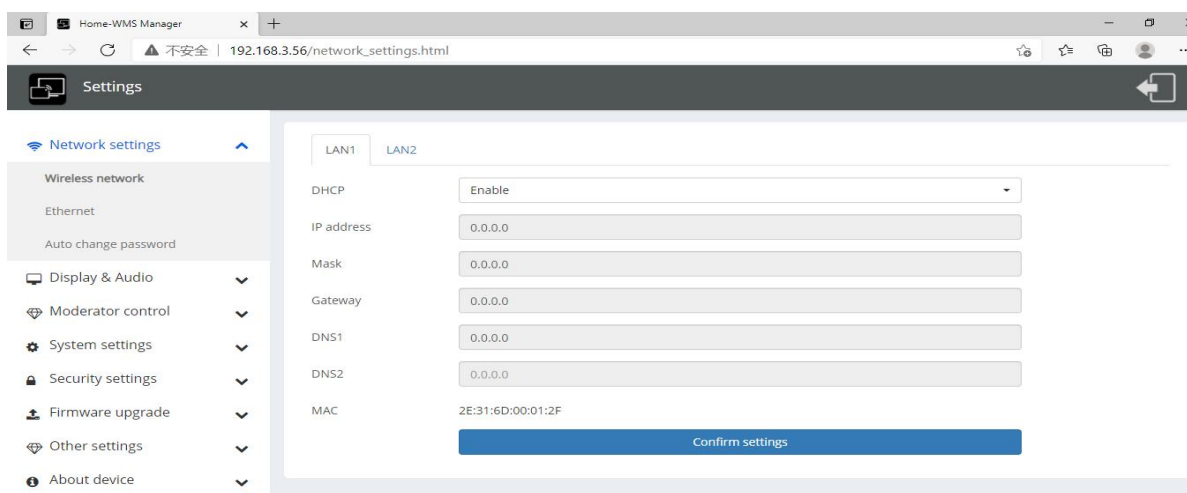
To access the configuration menu, click "Settings" in the top right corner.



Please enter your password in the login system, the default password is “admin” (as shown below)



You have accessed the Administration page of the host computer(as shown below). On the left side of the main page of the Administration page, includes Network settings, Display & Audio, Moderator control, System settings, Security settings, Firmware upgrade, Other settings and About device.



6.1 Wireless Network Configuration

WMS-20 has the capability to be integrated into an organization's network, whether it be a corporate network or a school network. Once integrated successfully, the WMS-20 is able to support your device's projection via an internal wired network or via wireless P2P.

Please change the device name for the base unit. If you have more WirelessMedia installed, we recommend using a descriptive name.

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting

Device name

WMS-9095

Note

The device name is the host name of the device, which is used as the WIFI name when it is set as Wireless Direct Mode, or host name when it is set as Infrastructure Mode. Please pay attention that the changing of ID may cause the re-pairing of the dongle. Please don't use special signs like :!@#%&^*().

Cancel

Next step

Click “Next step”. The wireless network offers three connection options.

wireless network

1.Device name

2.Mode selection

3.Network settings

4.Ssid setting



Wireless direct mode



Wireless infrastructure mode



LAN infrastructure mode

Previous

Next step

6.1.1 Wireless Direct Mode

Wireless Direct Mode also call AP mode.WMS-20 unit creates its own wireless access point for connect the all the device. This is a typical way to quickly set up for group meetings. The “Wireless Direct Connect Mode” Wi-Fi icon is displayed in the status bar at the top of the Home screen. The Guest and Staff use the internal Wi-Fi access point of Base-unit to present with all their units. No Internet access is required.

Recommended Environment

This option is ideal for use in conference rooms where network access is unavailable, or in situations where visitors are not permitted to use the corporate network due to stringent security requirements.

Set-up Wi-Fi access points, Frequency, Channel and Password.

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting



Allow internet access (bridging) via LAN 1



Allow internet access (bridging) via LAN 2



Disable internet access

SSID discovery and connection

Yes

Frequency

5GHz

Channel

36

Password

00001436



Previous

Next step

- **Frequency:** Click to select 2.4 GHz or 5 GHz Wi-Fi frequency. Default is 5 GHz.
- **Channel:** Click to select the Wi-Fi channel. Default is 5 GHz, Auto.

If the Wi-Fi channel is changed, no new pairing of the dongle is necessary.

2.4 GHz frequency band: channels 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,

5 GHz frequency band: no need to choose 5G channel, system will choose proper channel automatically.

Default is 5 GHz, channel: Auto.

Default channel (USA area): 36,40,44,48 or 149,153,157, 161. Four channels will be opened at the same time, system will automatically choose proper channel from them.

Default channel (European area): 36,40,44,48.

Default channel (China): 149,153,157,161.

- **Password:** Click in the input field to fill out the appropriate password with length of **8 characters**.

To edit or change the Guest or Staff network SSID, please click "Next step." This information will be displayed on the WirelessMedia home screen.

Wireless network



The interface shows a four-step process bar at the top: 1. Device name, 2. Mode selection, 3. Network settings (current step), and 4. SSID setting. Below the bar, there are two input fields for SSID: 'GUEST network SSID' with the value 'Gastron_Guest_5.0G' and 'STAFF network SSID' with the value 'Gastron_5.0G'. At the bottom, there are two buttons: 'Previous' and 'Submit settings'.

Please select the "Submit settings" option to complete the configuration process.

The dongle must be re-pairing with the base unit.

There are three ways of connecting the base unit to the Internet through "Wireless Direct Mode."

1. Allow Internet access (bridging) via LAN1: This option enables the device to connect to the Internet if the LAN1 port is available.

2. Allow Internet access (bridging) via LAN2: This option allows the device to connect to the Internet if the LAN2 port is available.

3. Disable Internet access: This option prevents the device from connecting to the Internet. This is a safety feature that should be used when necessary.

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting



Allow internet access (bridging) via LAN 1



Allow internet access (bridging) via LAN 2



Disable internet access

SSID discovery and connection: Yes
 Frequency: 5GHz
 Channel: 36
 Password: 00001436
 Previous Next step

6.1.2 Wireless Infrastructure mode

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting



Wireless direct mode



Wireless infrastructure mode



LAN infrastructure mode

Previous Next step

In this "wireless networking mode," also known as "wireless-bridge mode," the WMS-20 host will be wirelessly bridged to other 2.4GHz or 5GHz wireless hotspots in the organization's network through the wireless interface. The WMS-20 host will establish a wireless bridge to other 2.4GHz or 5GHz wireless

hotspots in the organization's network via the wireless interface. Please note that in this mode, all dongles and other personal devices are unable to connect directly to the WMS-20 host through the wireless interface.

Dual Network Configuration

In "Wireless Networking Mode", there are two different wireless bridge settings for the WMS-20 base unit and dongle.

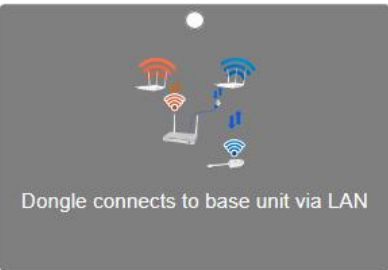
1. "Dongle connects to base unit via wireless network connection": WMS-20 and the dongle are wirelessly bridged to the same wireless hotspot on the organization's network .

Wireless network

1. Device name
2. Mode selection
3. Network settings
4. SSID setting



Dongle connects to base unit via wireless network



Dongle connects to base unit via LAN

☐ 5GHz ONLY

Select SSID Gastron_Guest_5.0G (SignalLevel:59%) Rescan List

Password ●●●●●●●● 👁

✓

✓

Previous
Next step

- ◆ Select 5G: Only 5GHz wireless hotspots within the organization's network are displayed.
- ◆ SSID Setting: Select the SSID you wish to connect to from the list.
- ◆ Please enter the password of the SSID you want to connect to, and then click the blank space, the system

will automatically help you to complete the password authentication process.

Click “Next step” to edit or change Guest network SSID and Staff network SSID.

Wireless network

1.Device name
2.Mode selection
3.Network settings
4.SSID setting

GUEST network SSID

STAFF network SSID

After submitting successfully, please re-pair dongle with base unit.

2. “Dongle connects to base unit via LAN.”: WMS-20 and the dongle are wirelessly bridged to the different wireless hotspot on the organization's network .

Wireless network

1.Device name
2.Mode selection
3.Network settings
4.SSID setting



Dongle connects to base unit via wireless network



Dongle connects to base unit via LAN

☐ 5GHz ONLY

Select SSID Rescan List ✓

Password ✓

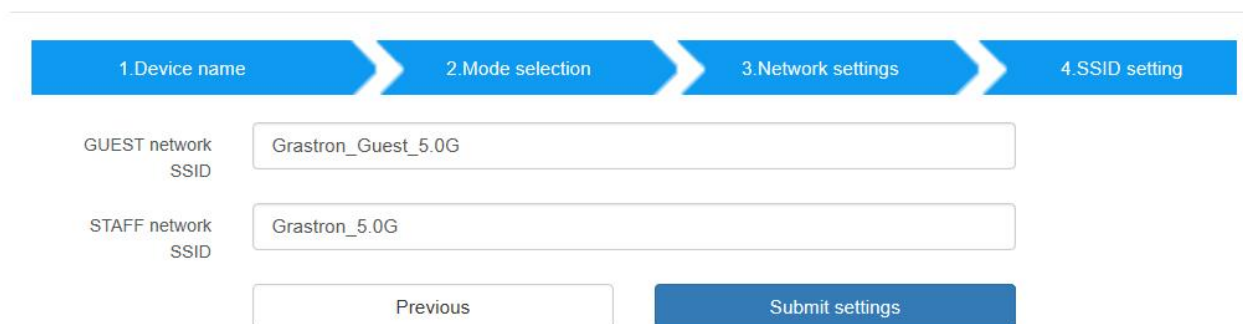
Select dongle SSID Rescan List ✓

密码 ✓

- ◆ Select 5G: Only 5GHz wireless hotspots within the organization's network are displayed.
- ◆ SSID Setting: Select the SSID you wish to connect to from the list.
- ◆ Please enter the password of the SSID you want to connect to, and then click the blank space, the system will automatically help you to complete the password authentication process.

Click “Next step” to edit or change Guest network SSID and Staff network SSID.

Wireless network



The interface shows a progress bar with four steps: 1. Device name, 2. Mode selection, 3. Network settings, and 4. SSID setting. Below the progress bar, there are two input fields for SSIDs. The first field is labeled 'GUEST network SSID' and contains the text 'Grastron_Guest_5.0G'. The second field is labeled 'STAFF network SSID' and contains the text 'Grastron_5.0G'. At the bottom, there are two buttons: 'Previous' and 'Submit settings'.

After submitting successfully, please re-pair dongle with base unit.

6.1.3 LAN Infrastructure Mode

In this "Wired Networking Mode," also known as "Wired-bridge Mode," the WMS-20 host bridges to the organization's network over the wired network, and the dongle must bridge wirelessly to a 2.4GHz or 5GHz wireless hotspot within the organization's network.

In Wired-bridge mode, the WMS-20 host bridges to the organization's network over the wired network, and the dongle must bridge to a 2.4GHz or 5GHz wireless hotspot on the organization's network. In this mode, the wireless interface of the WMS-20 host is disabled (as shown below).

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting


Wireless direct mode


Wireless infrastructure mode


LAN infrastructure mode

Previous

Next step

Click “Next step” to choose a LAN network which is used for the company staff users and pair the dongle into this network.

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting

☒ 5GHz ONLY

Select Sid

Gastron_5.0G (SignalLevel:99%)

Rescan List

Password

••••••••

Previous

Next step

Click “Next step” to edit or change Guest network SSID and Staff network SSID.

62

www.wirelessmediatech.com

Wireless network

1.Device name

2.Mode selection

3.Network settings

4.SSID setting

GUEST network
SSID

Gastron_Guest_5.0G

STAFF network
SSID

Gastron_5.0G

Previous

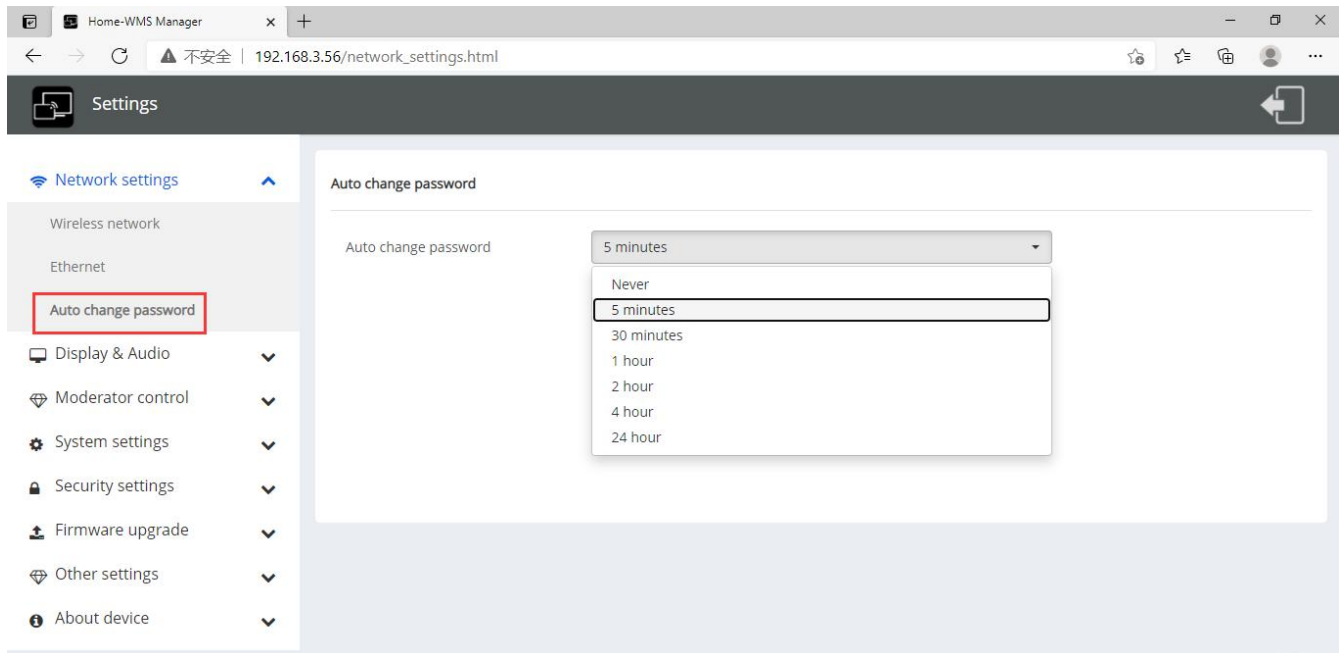
Submit settings

After submitting successfully, please re-pair dongle with base unit.

6.1.4 Auto change password

1. On the left side of the Administration page, in the "Settings Menu", click "Change Password Automatically" in the "Network Settings".

2. This "Change Password Automatically" setting page allows the system to automatically change the WIFI password of the ASI-2000 host at regular intervals. Please select "Interval" from the drop-down menu to enable the automatic password change mechanism (as shown below), the default setting is "Never".



6.2 Display & Audio

6.2.1 HDMI

HDMI Resolution

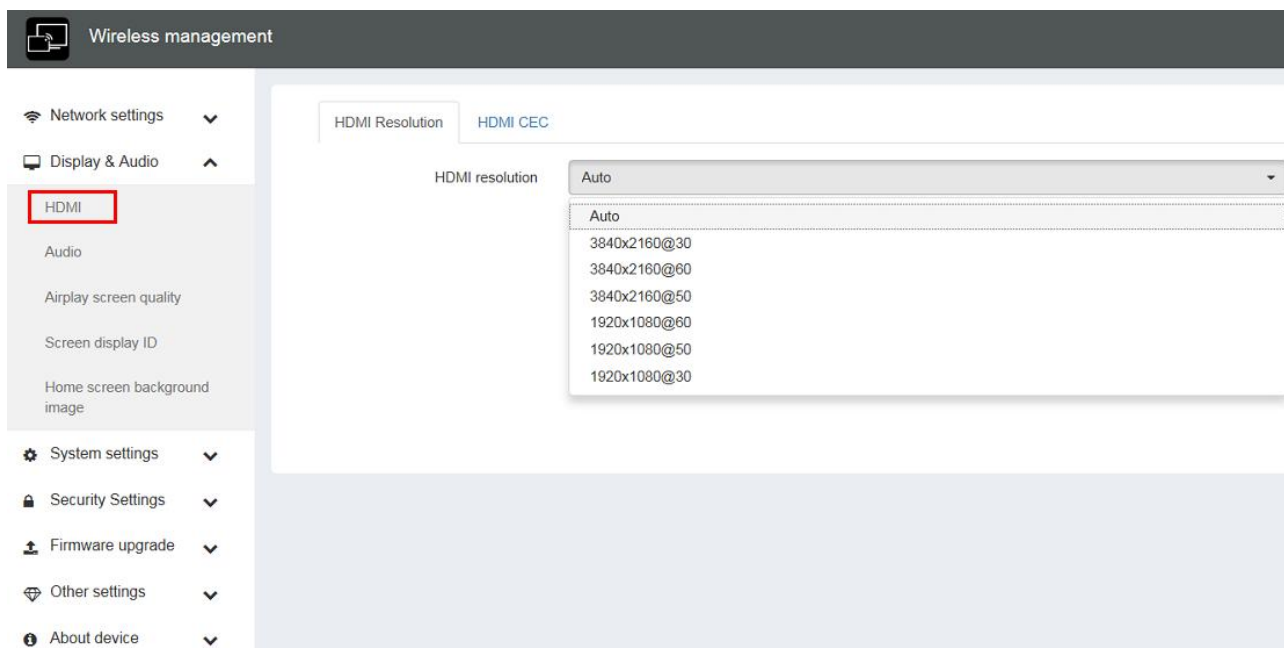
Select the resolution at HDMI output of Base-unit. Existing HDMI output resolution as below:

Auto

- ◆ 3840x2160 @30Hz
- ◆ 3840x2160 @60Hz
- ◆ 3840x2160 @50Hz
- ◆ 1920x1080 @60Hz

◆ 1920x1080 @50Hz

◆ 1920x1080 @30Hz



HDMI CEC

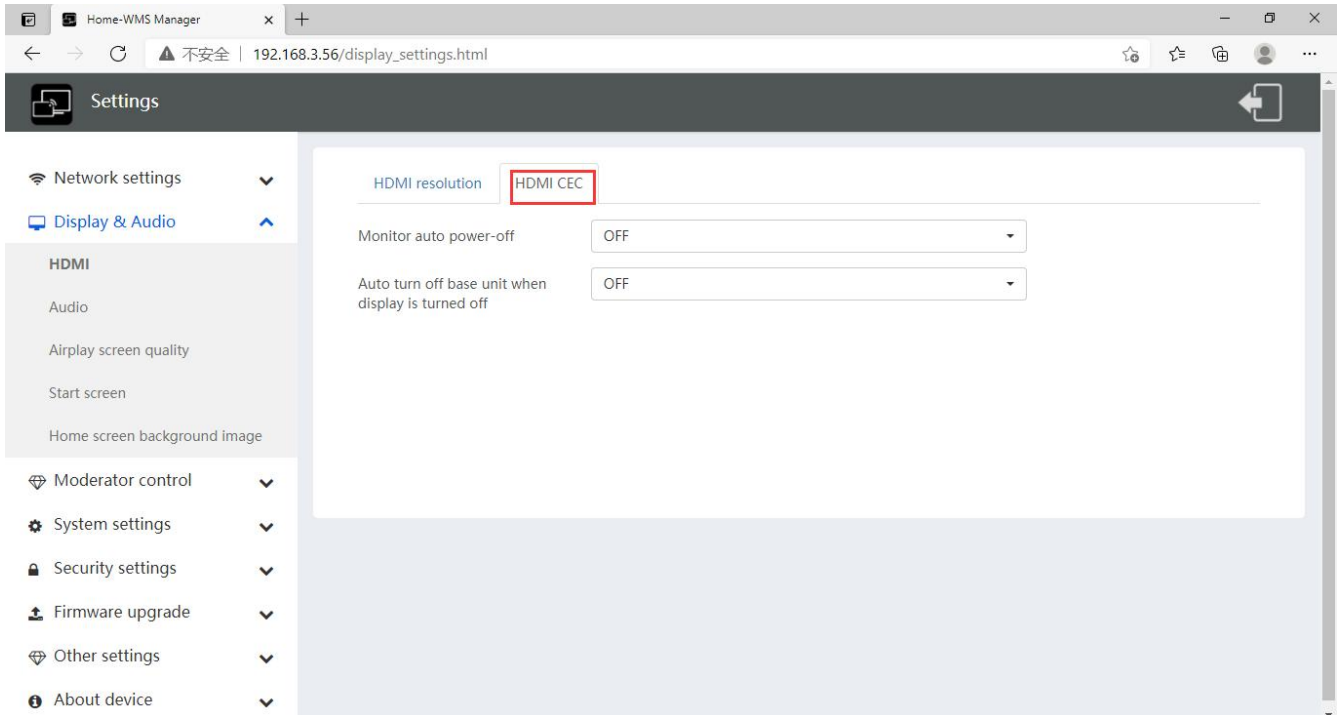
Base unit support CEC function if the connected display support CEC function.

◆ **Monitor auto power off:**

When the base is in standby mode, it will send commands via the HDMI cable to put the connected monitor into standby mode as well. If the "Device auto power-off" setting is disabled, no commands will be sent to put the connected monitor into standby mode. When the base unit is powered off, the display will not automatically turn off.

◆ **Auto turn off base unit when display turned off:**

- When the monitor is placed in standby mode, it will send commands via the HDMI cable to put the connected base unit into standby mode as well. The option menu allows the user to enable or disable the "Base unit auto power-off" function.



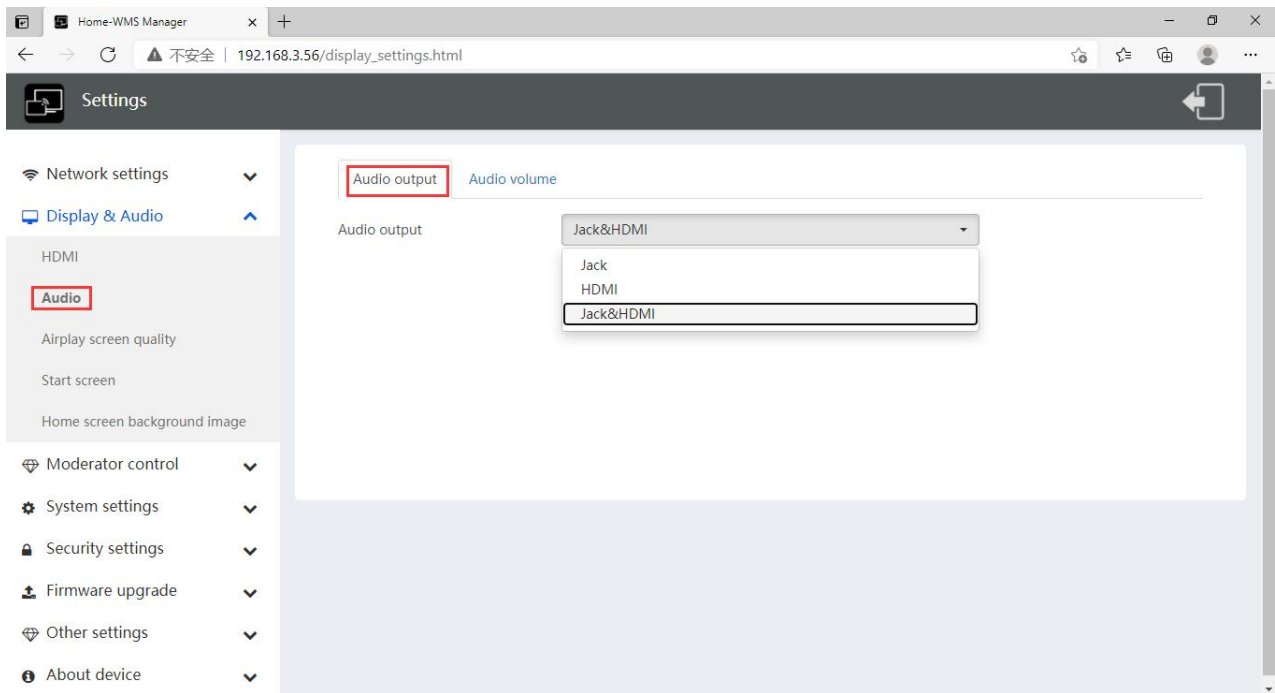
6.2.2 Audio

Choose audio output:

Jack: WMS-20 audio output to 3.5mm mini-jack audio.

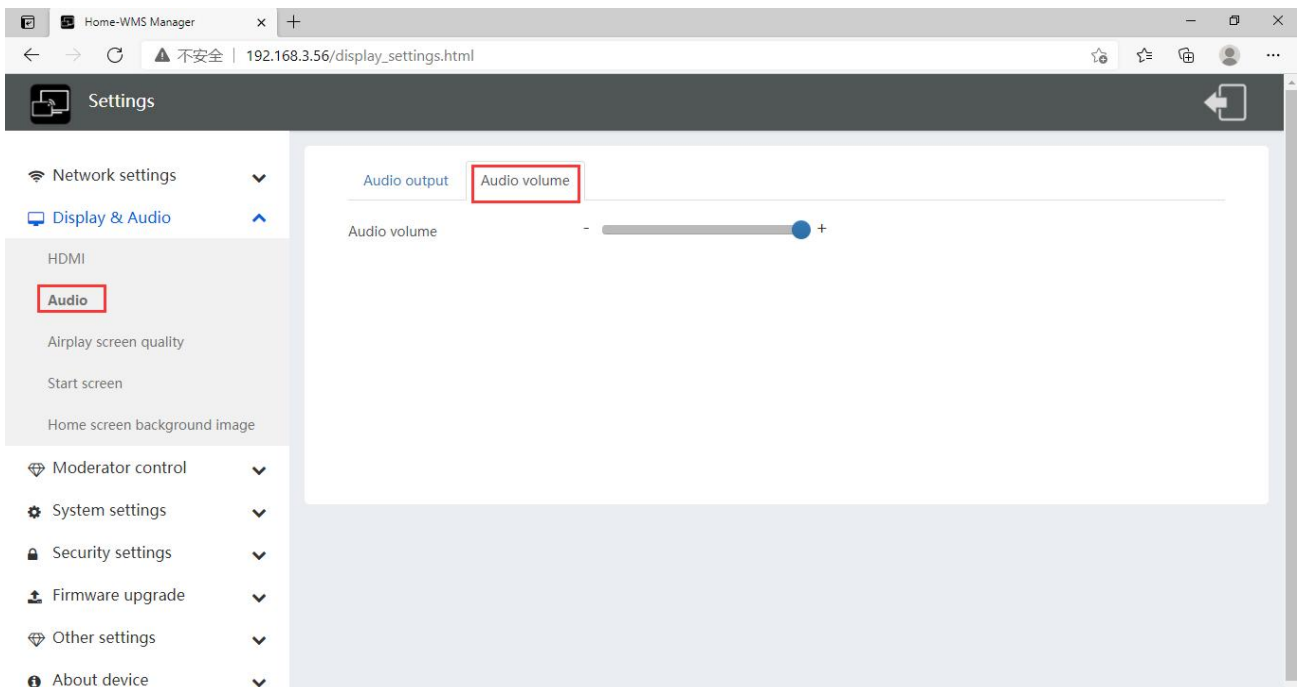
HDMI: WMS-20 audio output only HDMI audio.

Jack&HDMI (Default): WMS-20 audio output Jack & HDMI audio



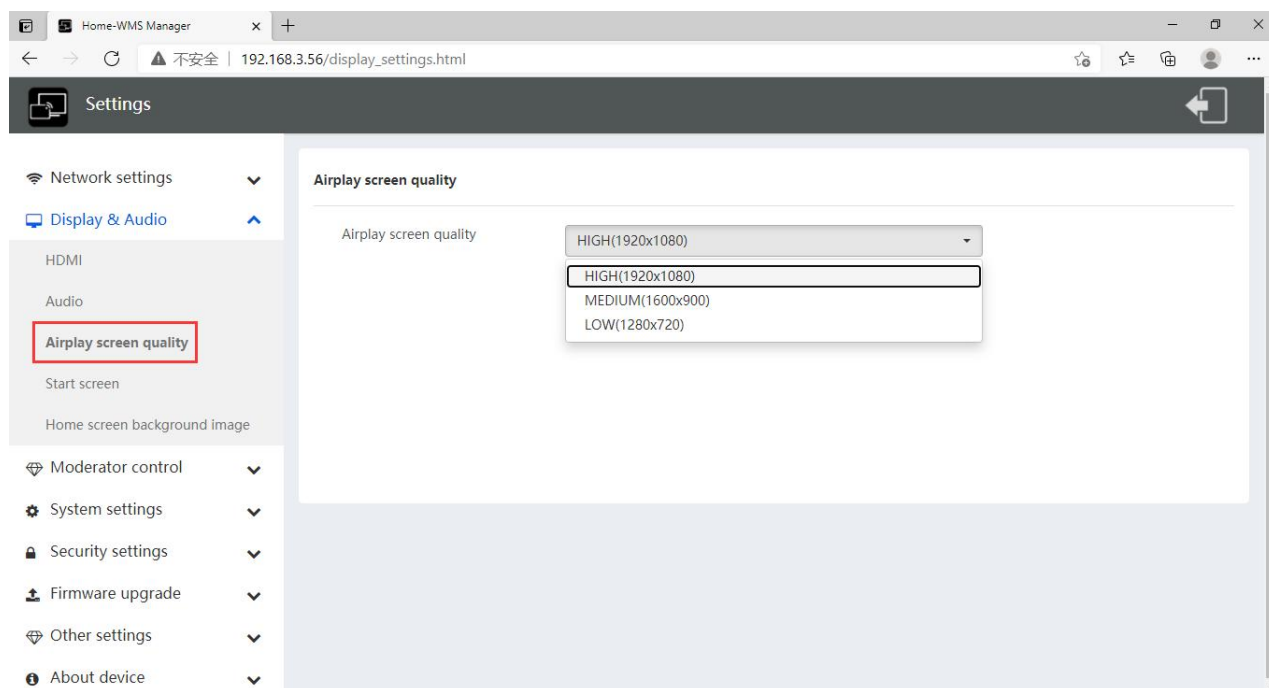
Volume

User can select volume of display from 0 to 100.



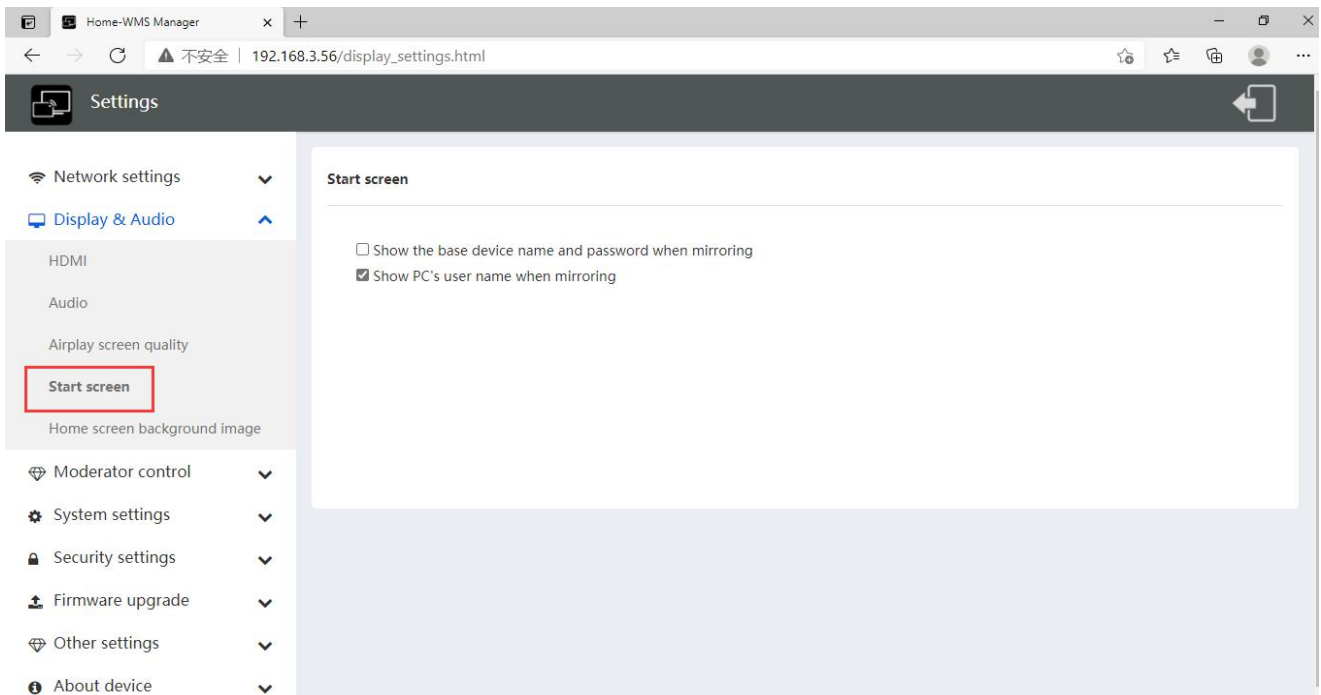
6.2.3 Airplay screen quality

The "AirPlay Quality" setting page allows users to adjust the output resolution when projecting via AirPlay, please select the "Resolution" that suits your needs from the drop-down menu (as shown below), the default setting is "High (1920x1080)".



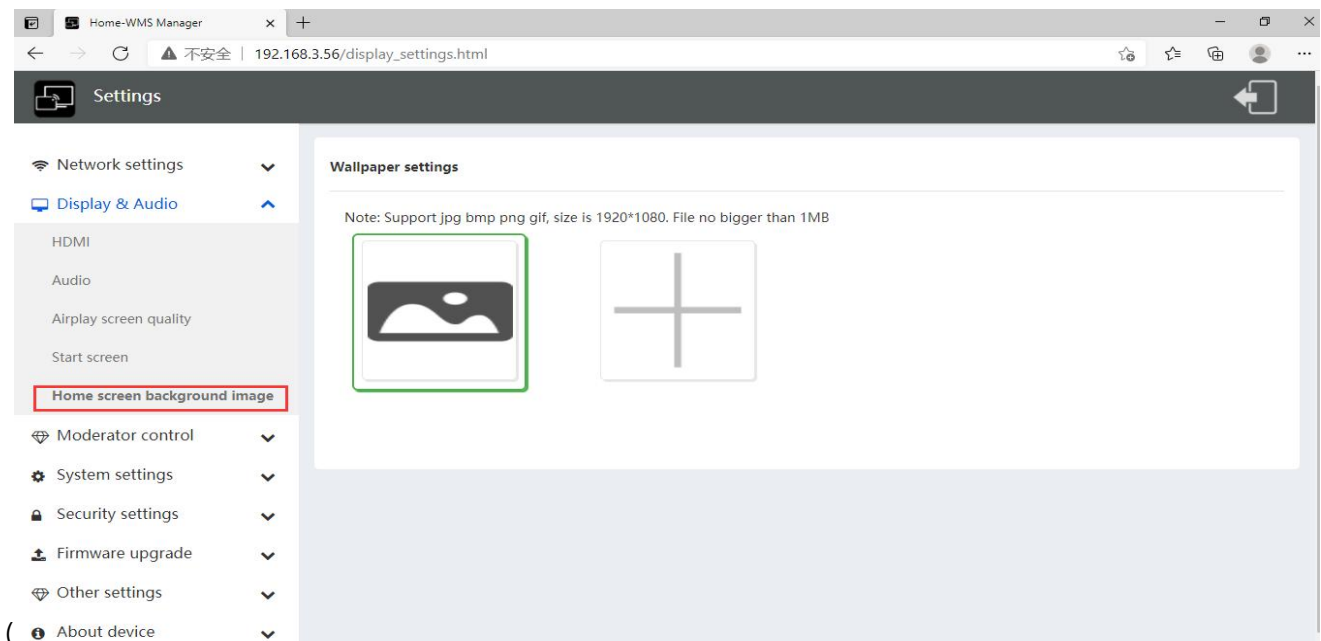
6.2.4 Screen display ID

This Start Screen setting page enables you to add the information displayed on WMS-20 screen (the default setting is as shown below).



6.2.5 Home Screen background image

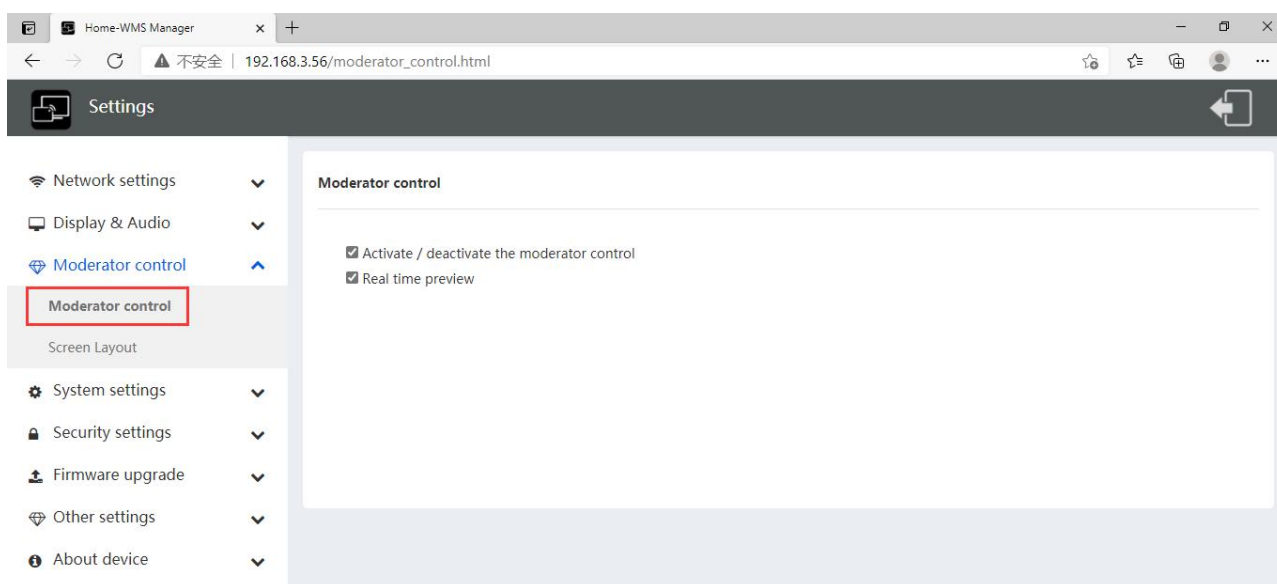
The Wallpaper Settings page enables the user change the default standby screen of the WMS-20 base unit, which is prepared and imported into your file according to the specified picture format and resolution.



6.3 Moderator control

6.3.1 Moderator Control

The "Moderator Control" setting page enables users to reveal the hidden sidebar on the WMS-20 homepage (as shown below), which is currently set to "Fully Hidden."



- Real time preview

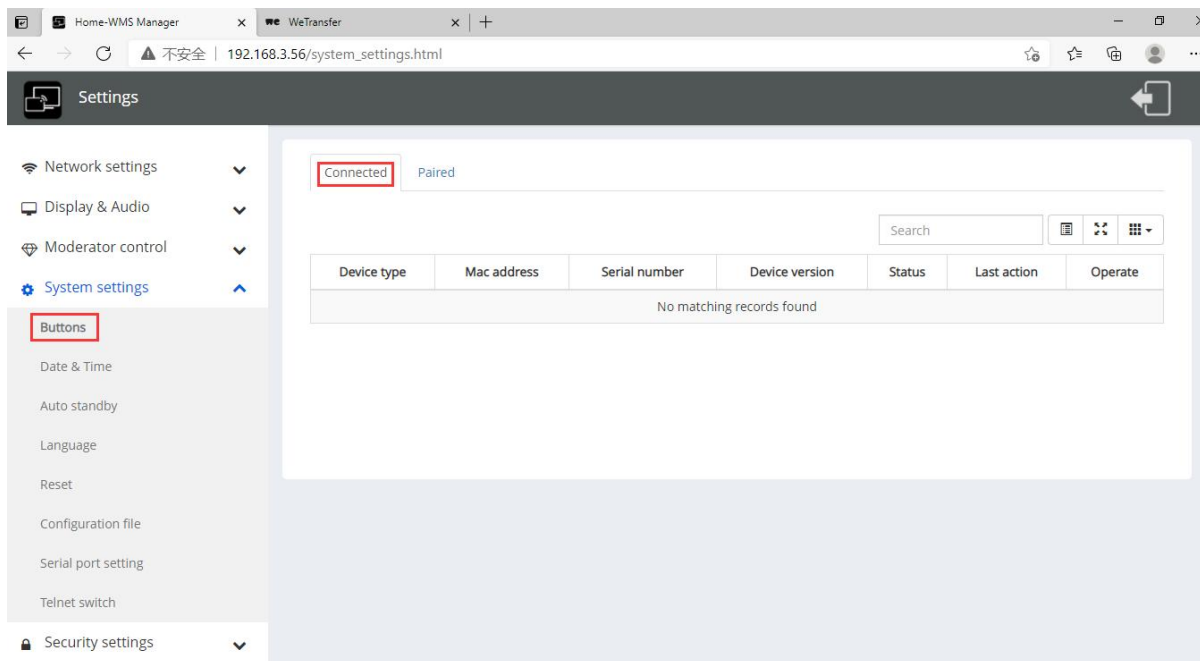
Select the real time preview window will show real time preview.



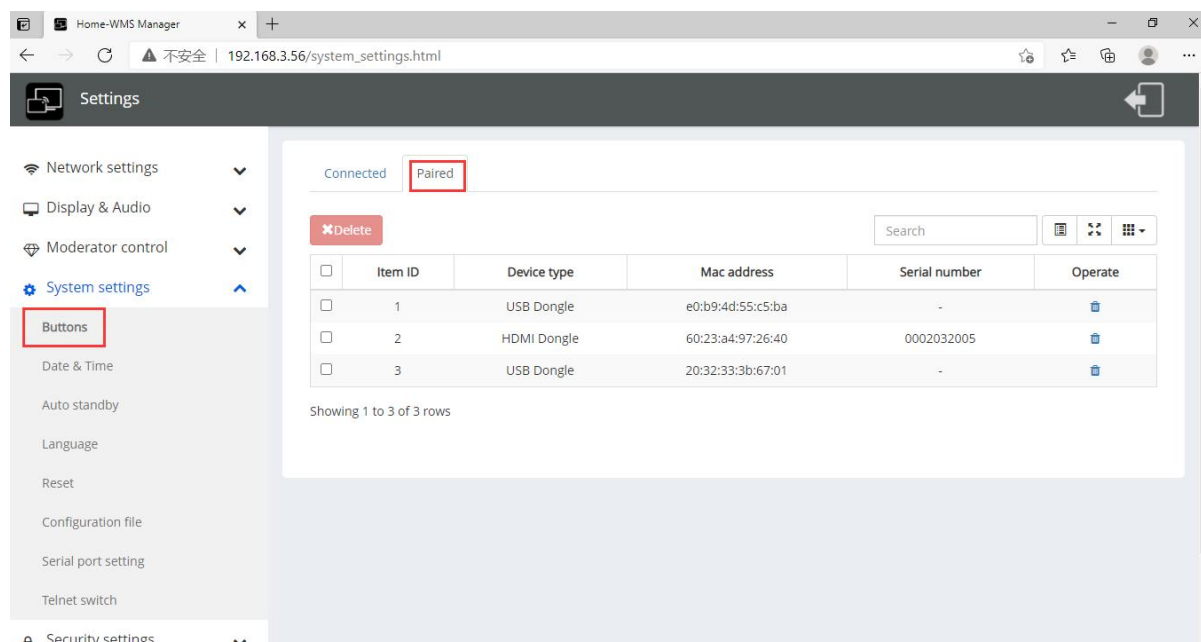
6.4 System settings

6.4.1 Buttons:

The Button settings page allows you to get information about the Connected and Paired Buttons on the WMS-20 base unit.



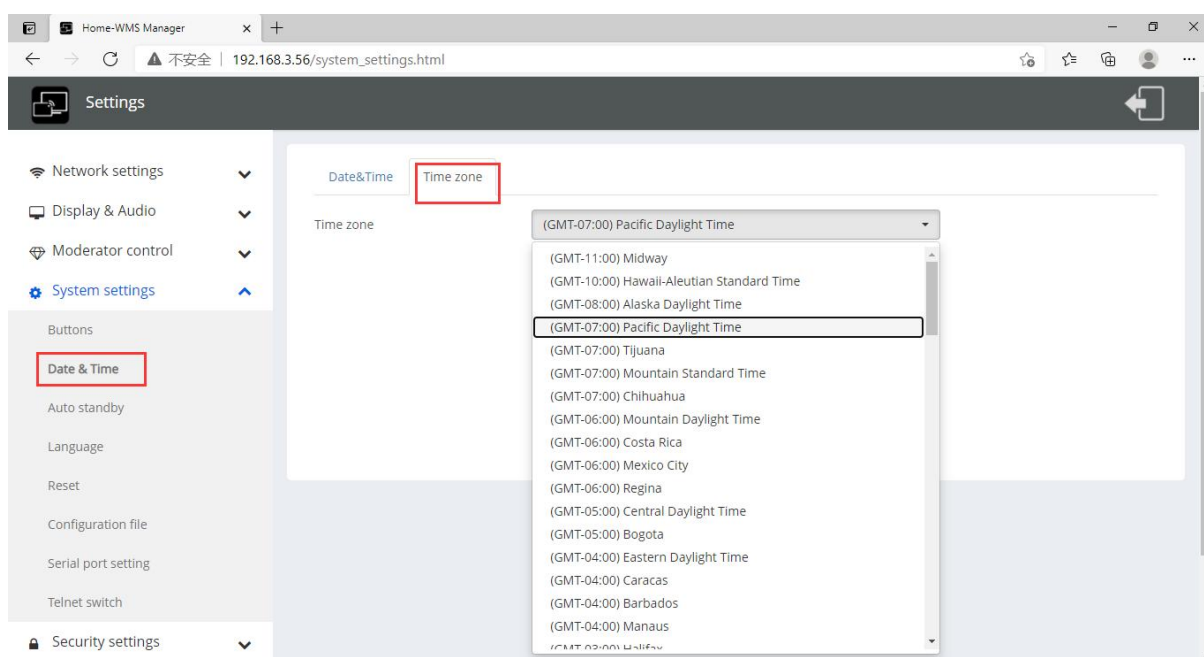
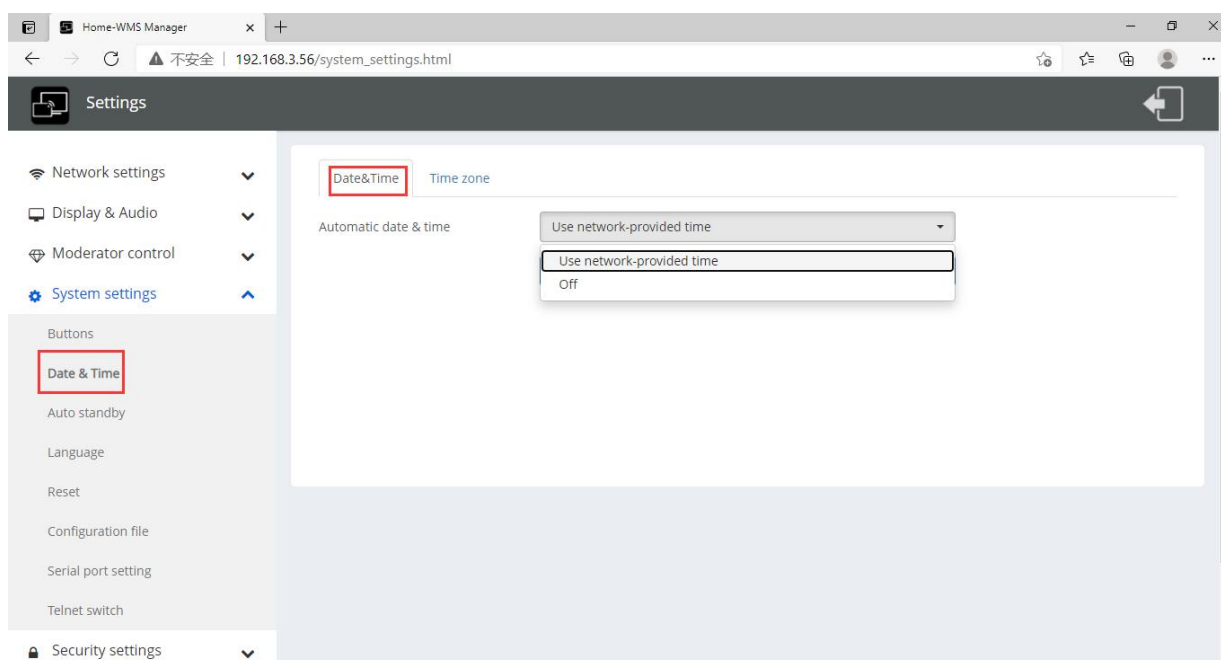
Paired: Includes the device type, MAC address, serial number, version, device status, last operation time, and operation (projection) of the Button (as shown below).



6.4.2 Date & Time

The "Date & Time" setting page allows users to change the "Date & Time" and "Time Zone" related settings of the WMS-20 base unit.

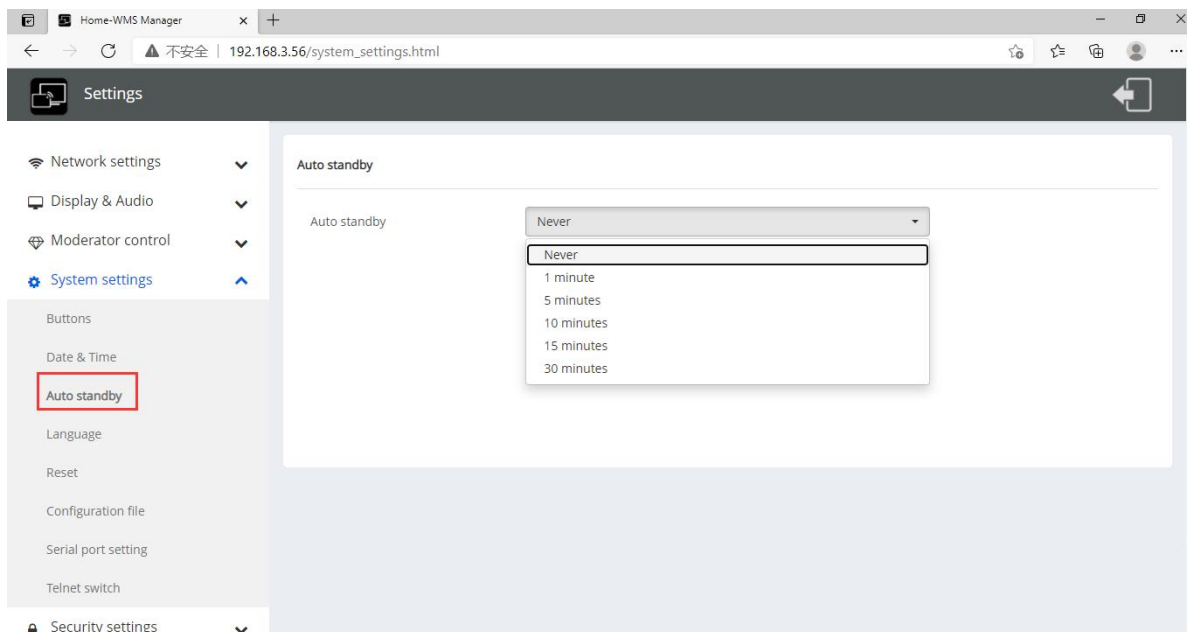
- **Automatic date & time:** Check to use a NTP time server to provide time as system time.
- **Set date:** Click in the input field to fill out the appropriate date.
- **Set time:** Click in the input field to fill out the appropriate time manually. The setting is **not** saved, when power is off.
- **Select time zone:** Click in the input field to fill out the appropriate time zone.



6.4.3 Auto standby

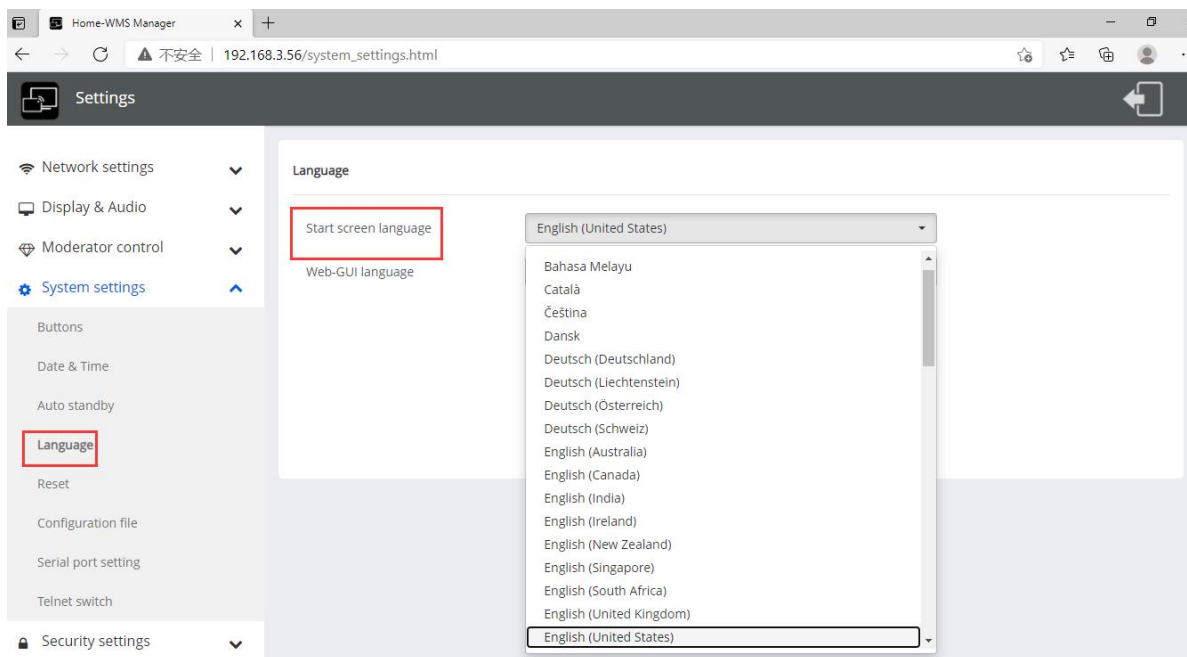
The "Standby Mode" setting page allows users to change the "Standby Mode" related settings of the WMS-20 Base Unit.

Please select the "Time Interval" from the following to activate the timer mechanism for the WMS-20 Base Unit to enter hibernation (power saving mode) (as shown below), the default setting is "Never".



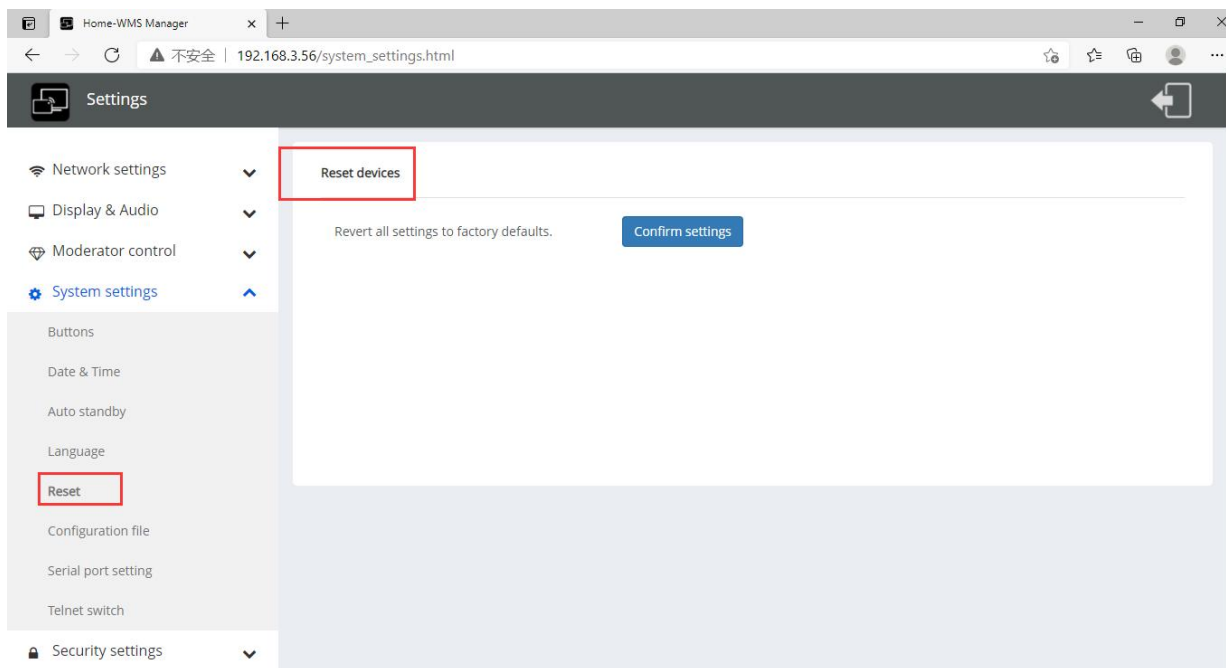
6.4.4 Language

The “Language” setting page allows users to change the language of WMS-20 homepage and WebGUI page.



6.4.5 Reset

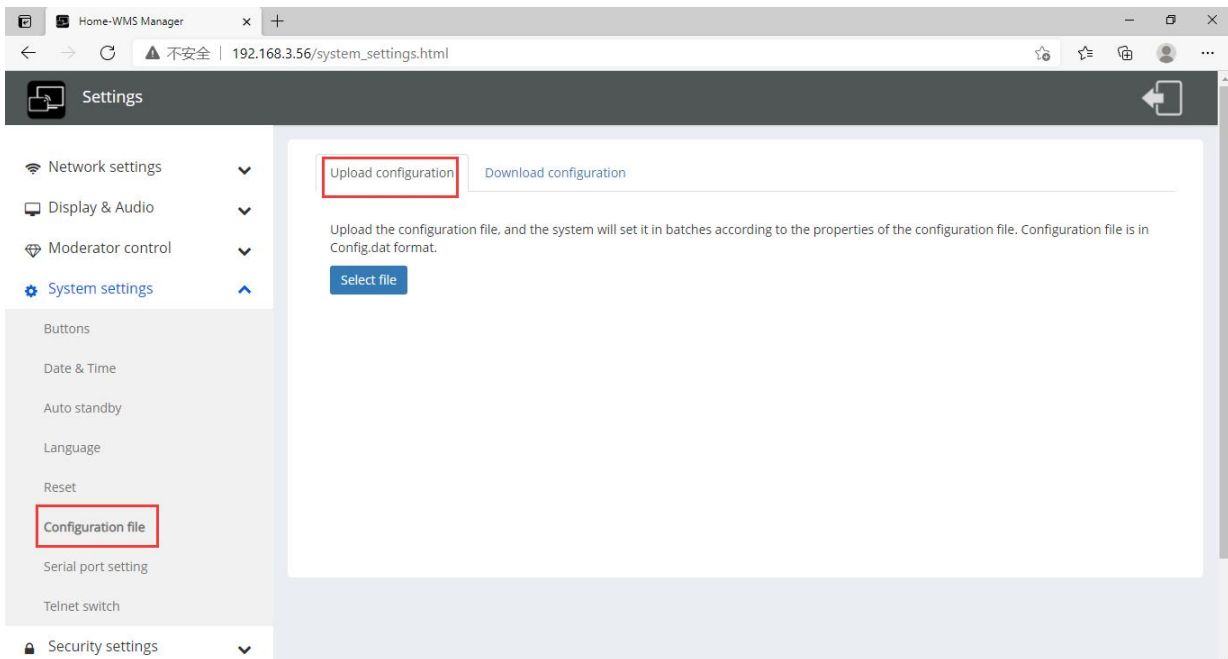
The function of the “Reset device” is to restore all the system settings to the factory setting.



6.4.6 Configuration File

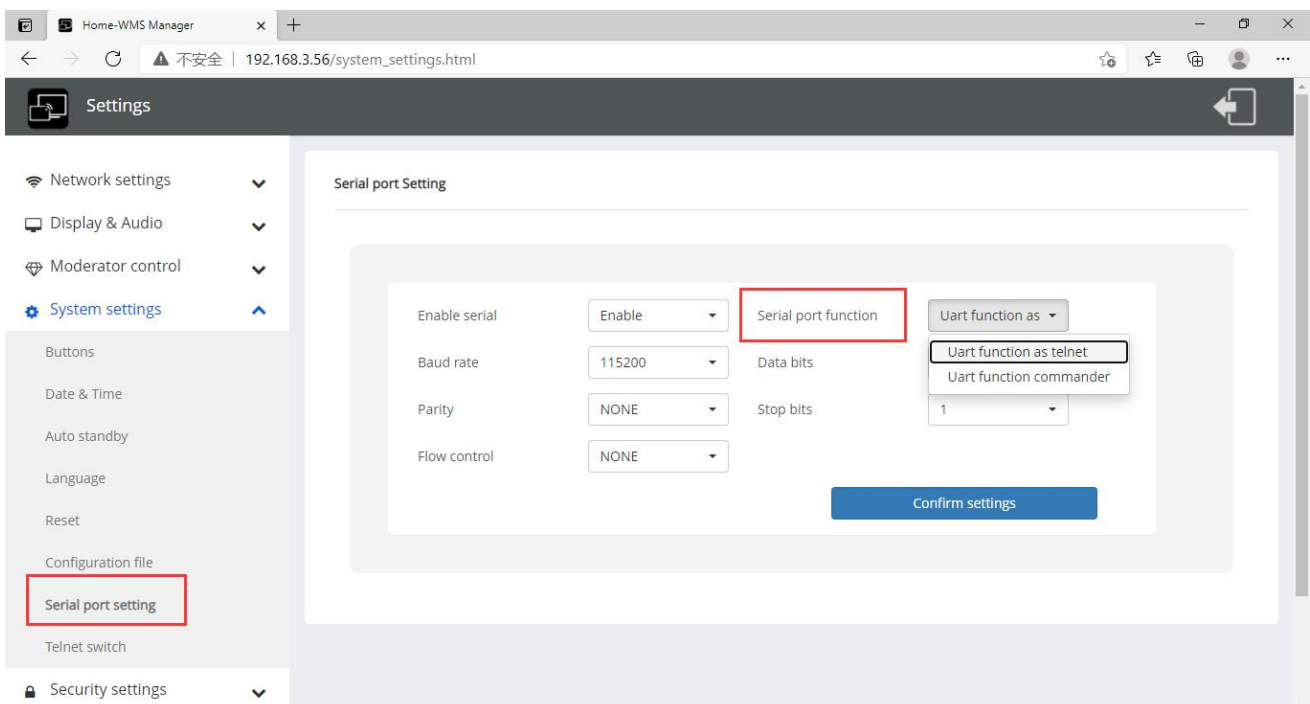
The configuration file is a packaged file that contains all of the configuration parameters for the WMS-20.

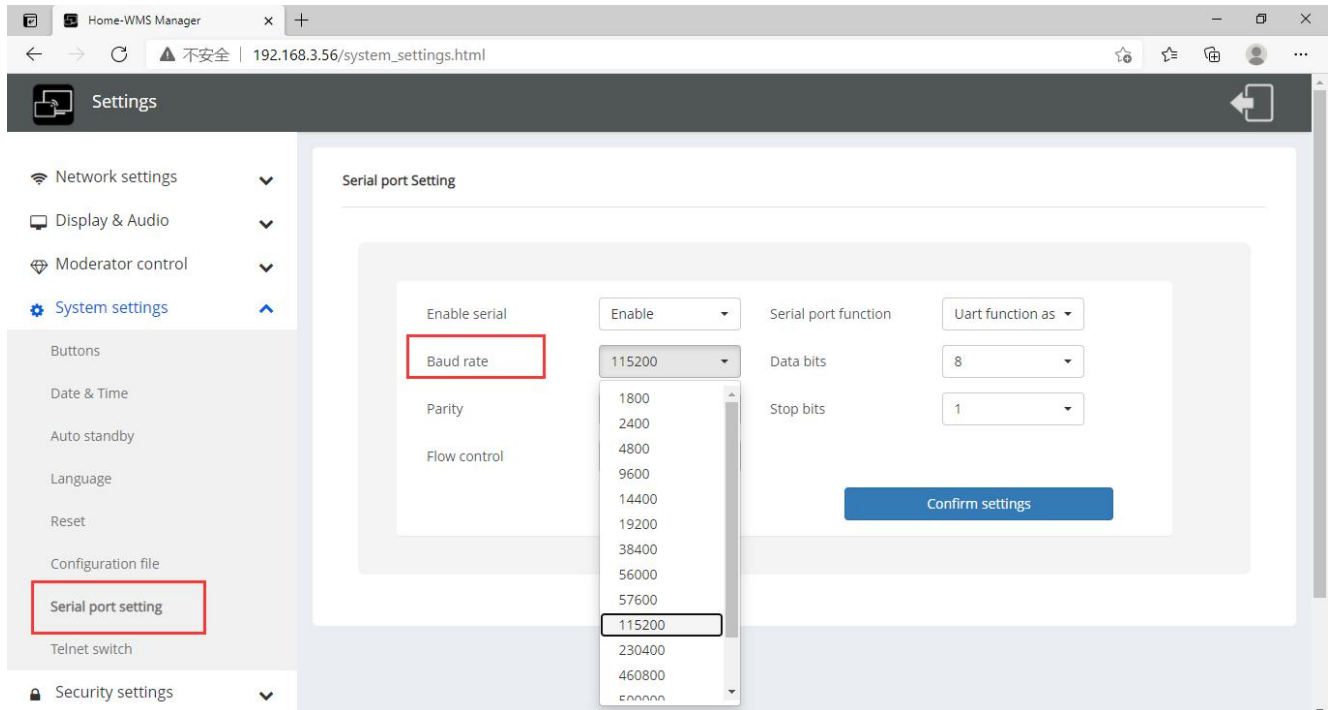
This file can be downloaded and copied to multiple devices that require the same configuration.



6.4.7 Series Port Setting

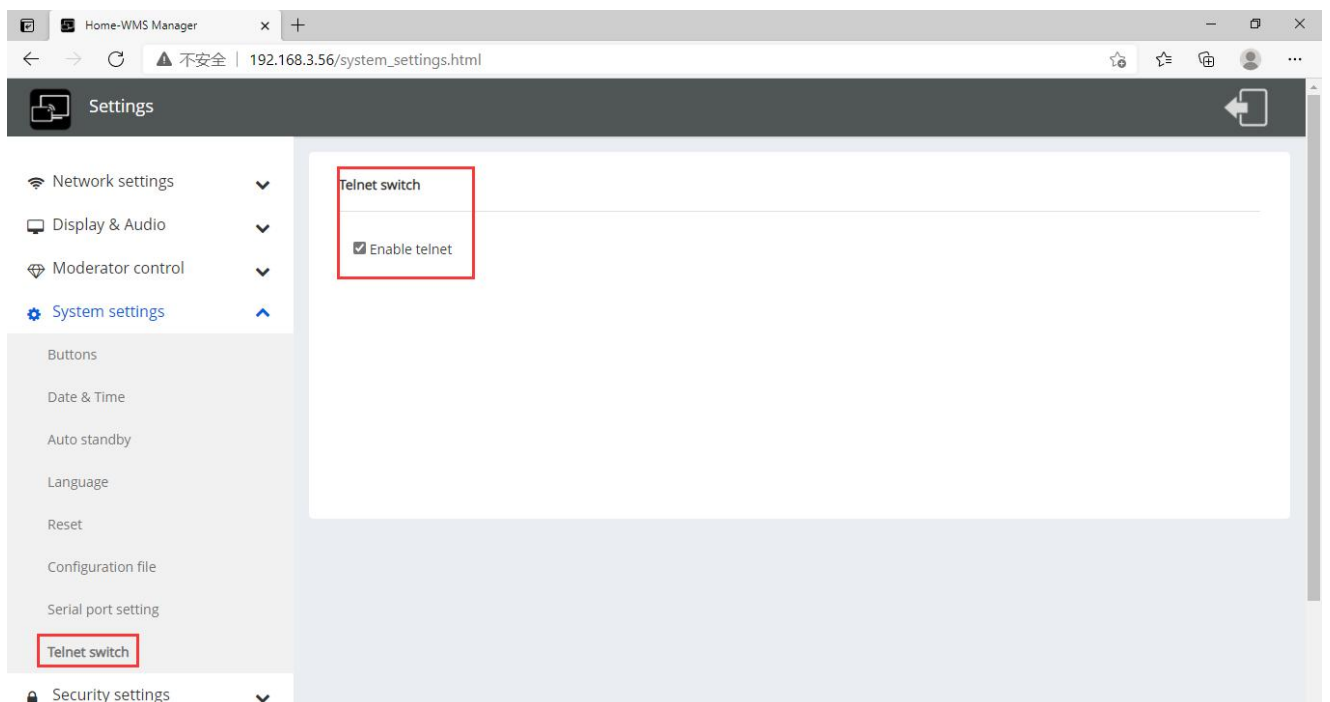
To configure telnet command and RS-232 command.





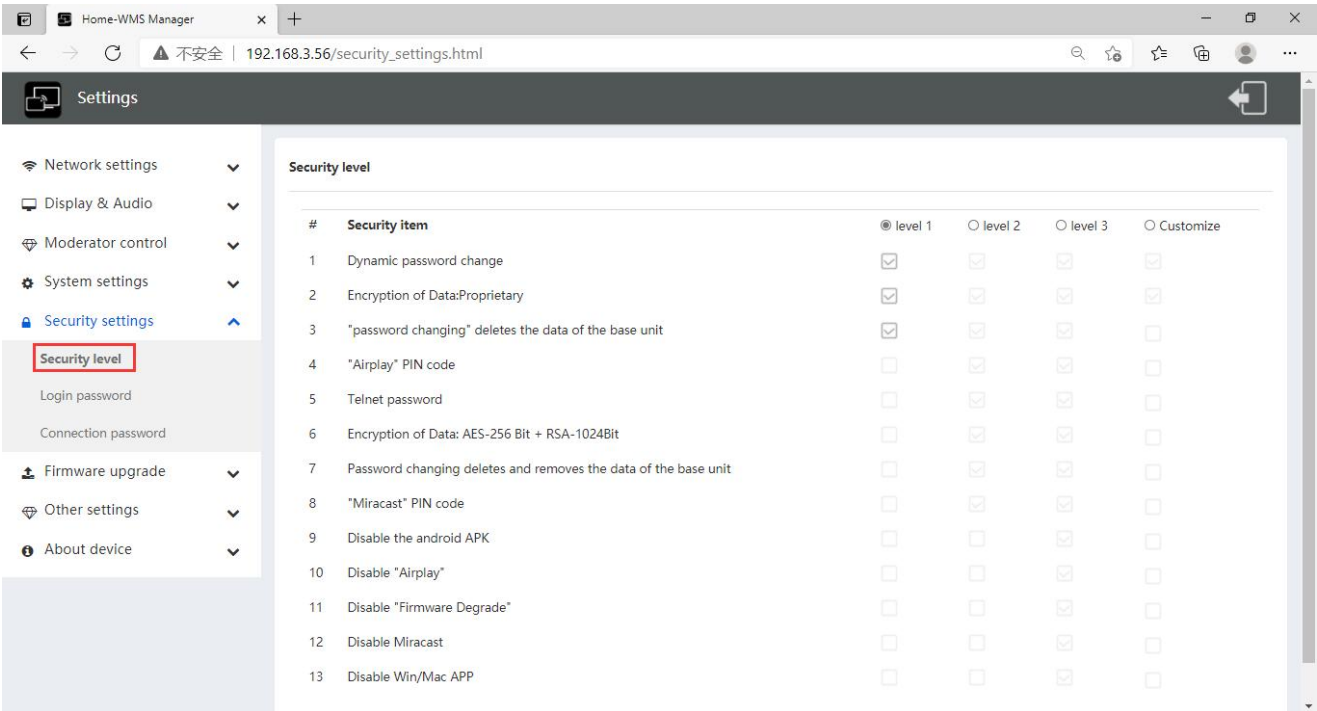
6.4.8 Telnet Switch

Telnet Switch, to enable or disable Telnet.



6.5 Security Settings

6.5.1 Security level



The WirelessMedia menu allows users to set three different security levels, according to their specific requirements. This enables users to customize the security settings to align with the unique needs of their environment or security policies. The default setting is level 1.

Level 1: normal safety; keeps the security in normal and daily usage for any organization, such like classroom, regular meeting room etc.

Level 2: higher security; provides increased security for companies, organizations, government agencies, etc.,

through powerful encryption of audio and video data; other security features include limiting the transmission of

"AirPlay" by introducing a password.

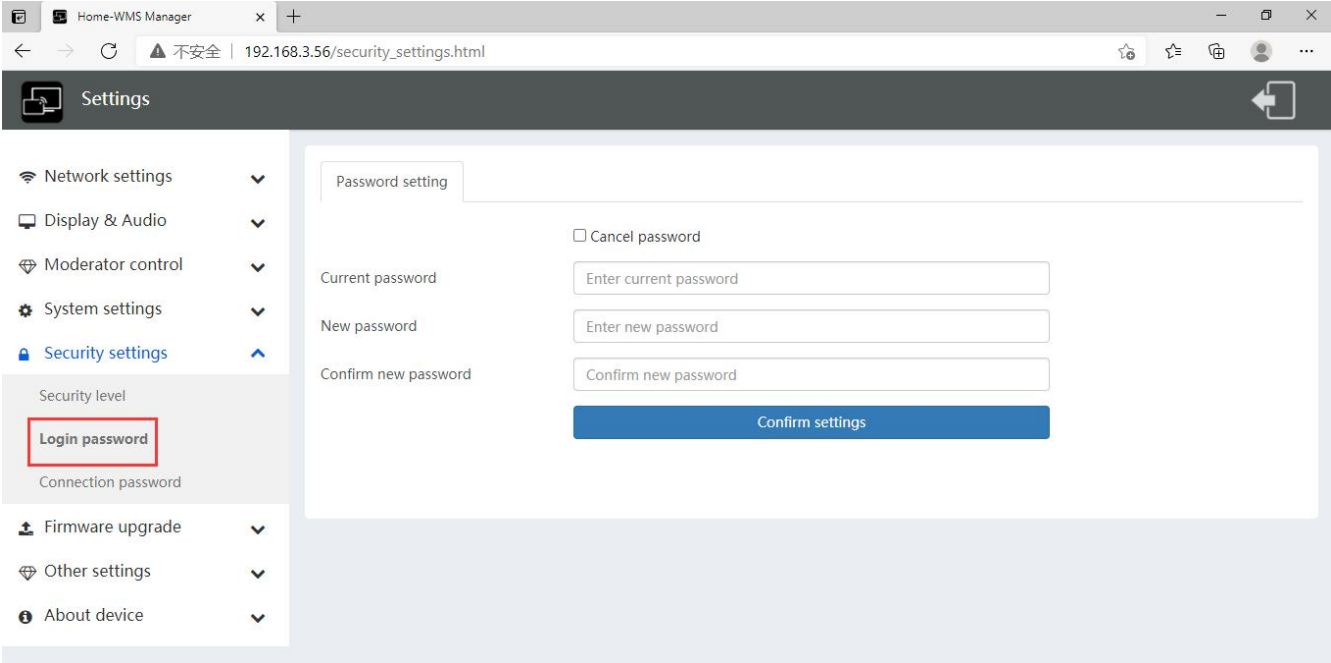
Level 3: is used for strict security requirements of companies, organizations, authorities, banks.

This level contains all “Level 2” security measures; in addition, all mobile applications, such as the Android APP as well as AirPlay are blocked, the web browser (WebUI) of the Base-unit is blocked. In addition, the downgrade of the firmware is not possible.

The setting of the security level is displayed in the Home screen, click the icon  for more information.

6.4.1 Login Password

The default or reset password for logging into WebGUI is “admin”. User also can change the password.



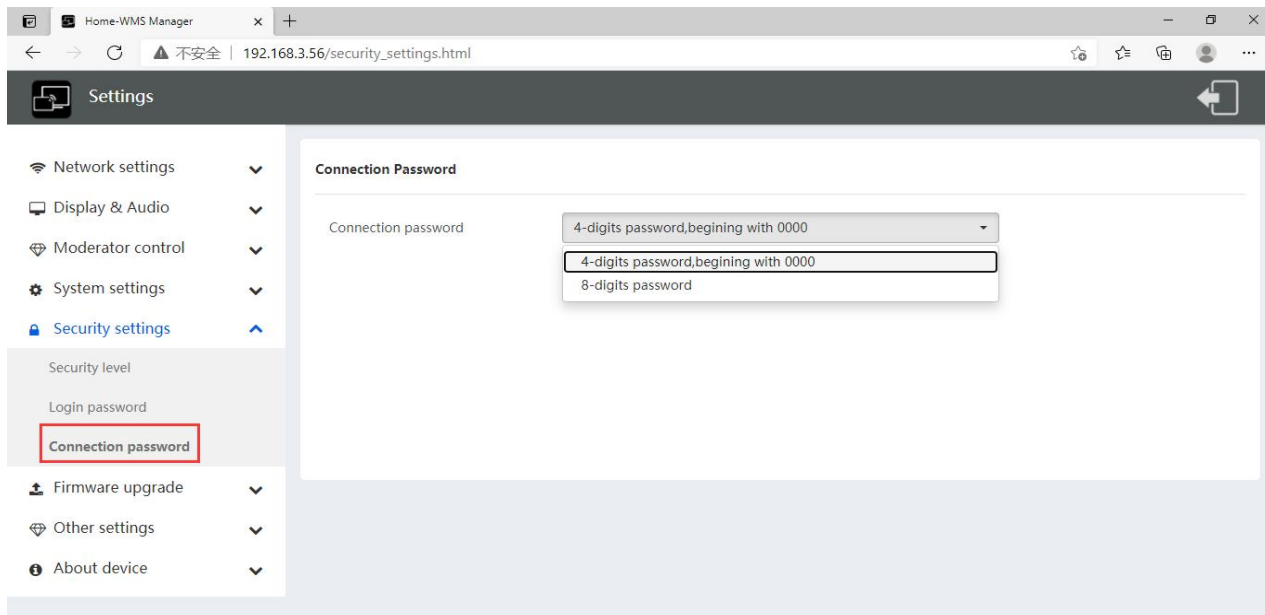
The screenshot shows a web browser window titled "Home-WMS Manager" with the address bar displaying "192.168.3.56/security_settings.html". The page is titled "Settings" and features a sidebar menu on the left. The "Security settings" section is expanded, and the "Login password" option is highlighted with a red box. The main content area displays the "Password setting" form, which includes a "Cancel password" checkbox, three input fields for "Current password", "New password", and "Confirm new password", and a blue "Confirm settings" button.

6.4.2 Connection password

Two type of password format can be chosen to show on home screen.

When set to “4–digit PIN” : The new PIN will be “0000XXXX” .

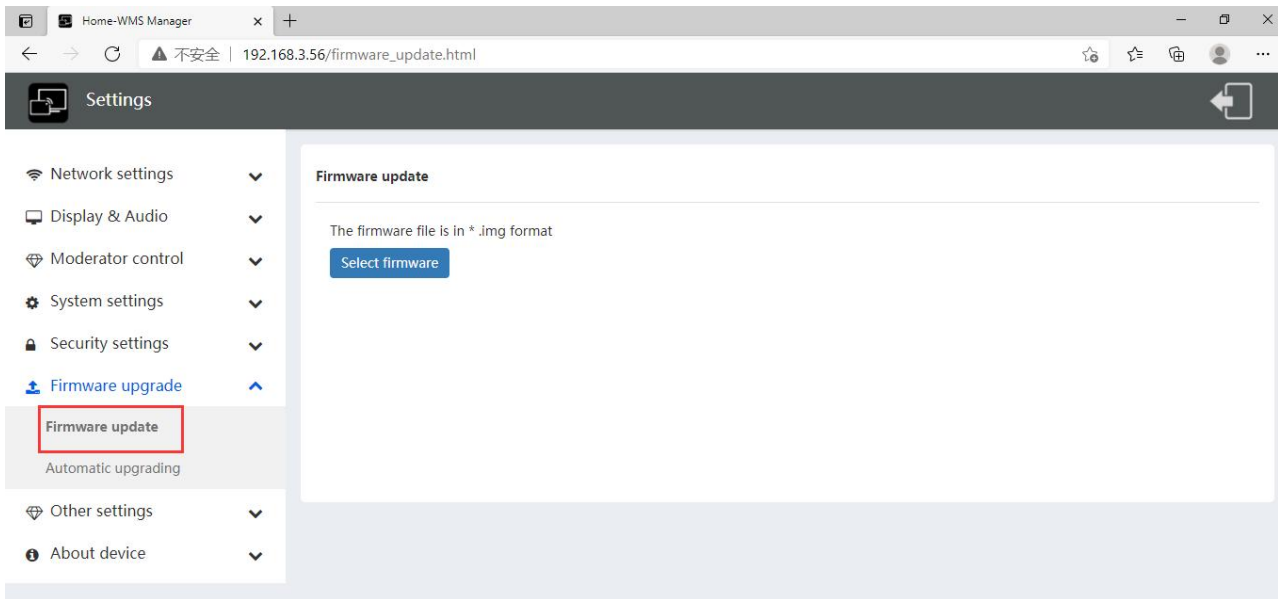
When set to “8–digit Password” :The new password will be “XXXXXXXXXX” .



6.5 Firmware upgrade

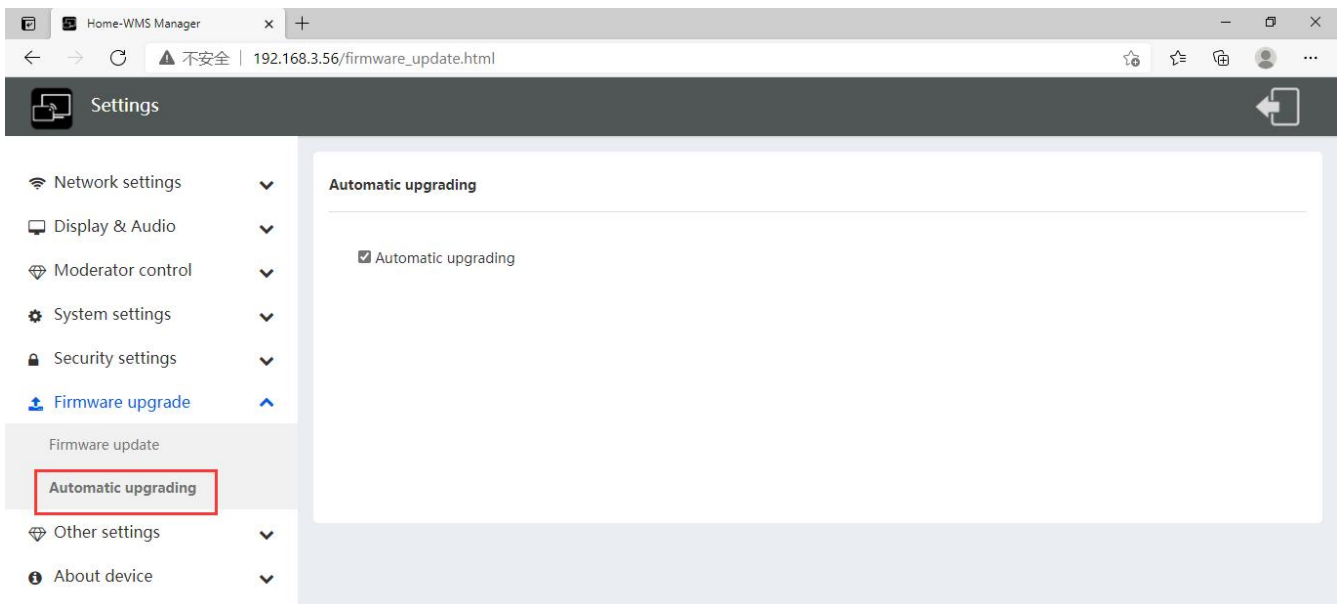
6.5.1 Firmware Update

Select the firmware file needs to be updated.



6.5.2 Automatic Upgrading

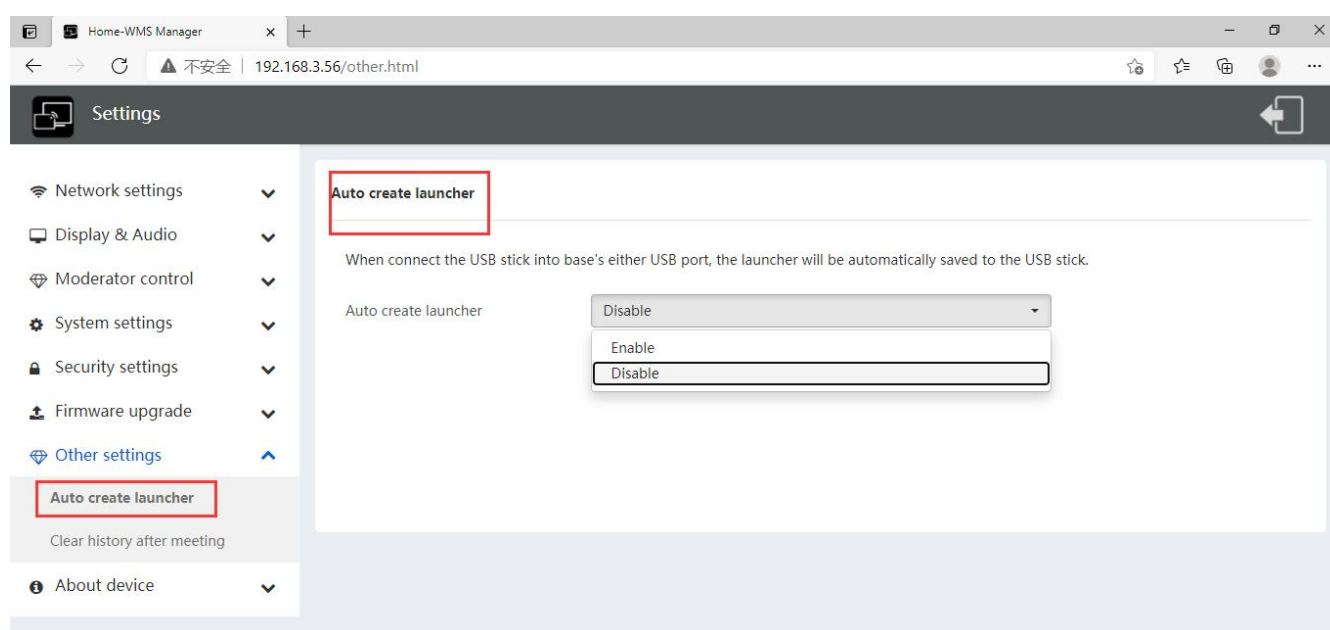
Tick to choose upgrading from OTA via Internet or from local files.



6.6 Other settings

6.6.1 Auto create launcher

This feature allows the user to enable or disable the automatic transfer of data from the WMS-20 to the USB memory stick when the latter is connected to the WMS-20 base unit USB port.



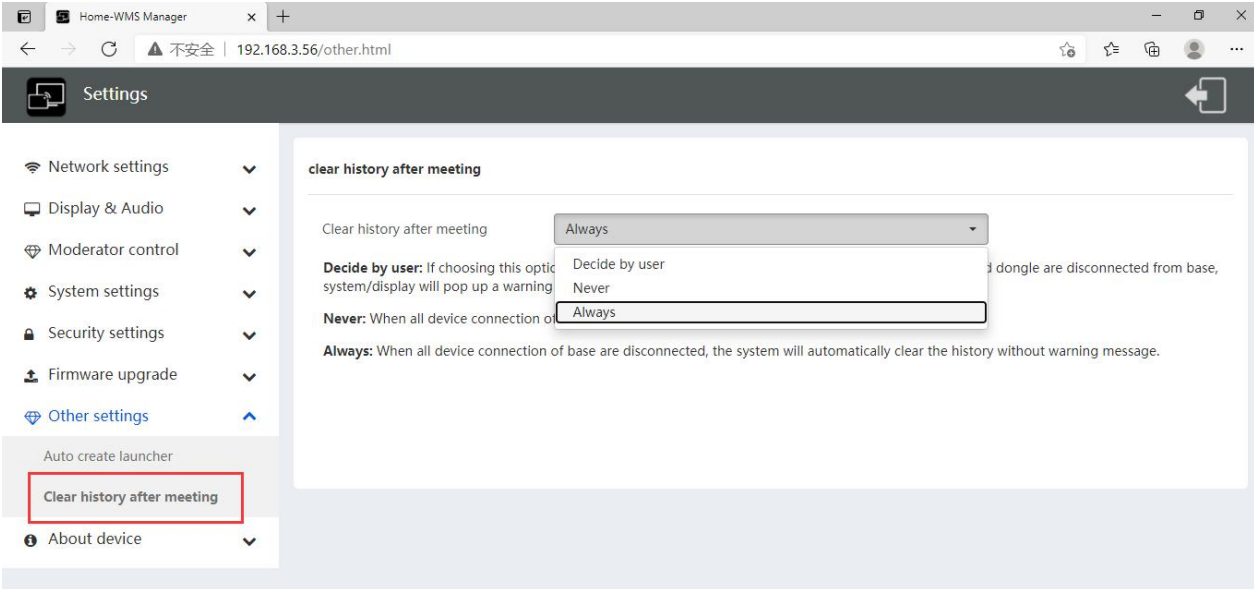
6.6.2 Clear history after meeting

The “Clear History After Meeting” setting page provides a mechanism to clear the internal memory of the WMS-20 base unit.

Decide by User — a dialog appears, when dongle is pulled.

Never — storage space is automatically erased, when memory is filled for 90%

Always — automatically deleted.



6.7 About device

The About Device configuration page provides information about the WMS-20 Base Unit system, including Model Number, Firmware Version, Web Server Version, and Serial Number. Web Server Version" and "Serial Number".

