

# TapPlay™ User Manual

## TP-U400

Receiver: TP-U400

Transmitter: TP-DGH (HDMI dongle), TP-DGC (Type C dongle)



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## 1. Overview

TP-U400 is a BYOM wireless presentation switcher designed for ease of use in conference room or classroom applications with less cabling and cost. This product is compatible with most USB cameras and conferencing audio solutions, such as speakerphones, AEC processors, video soundbars with audio integration, etc.

TP-U400 features its own Wi-Fi access point and support popular mirroring technology such as Airplay and Miracast from computers and phones. The product supports single view, 1x2 and 2x2 multiview and can have up to 16 devices connected with preview. It can be incorporated with interactive display or whiteboard to control source devices for manipulating or annotating. The use of TP-U400 can offer a powerful presentation and collaboration environment for conference and meetings.

### Key Features

#### TP-U400:

- Full wireless presentation and BYOM support
- Support wireless input up to 1080P@60Hz, and HDMI 2.0 output up to 4K@60Hz
- Support Windows/Android application and PnP HDMI/Type-C dongles for wireless connection
- Support wireless mirroring like Miracast
- Support USB peripherals like camera, mic, and speaker for wireless connection to PC/Mac
- Support mouse and keyboard control
- Support wireless touch back for PC/Android
- Fully compatible with VC platforms
- Support multiview up to 4 windows with preview
- Support PoE
- Support customisable home screen
- Built-in whiteboard and on-screen annotation
- Support WebUI for central management
- Low latency
- Best-in-class data security
- Support preview

### TP-DGC/TP-DGH:

- Support wireless transmission from PC/Mac to base unit
- Support quick switch of the PC signal for less than 1s by tapping
- Dual color LED, indicating active source signal and power/link
- Support USB peripherals such as camera, mic, and speaker over Wi-Fi sharing

### TP-U400 related devices and applications

A typical TP-U400 can work with two different types of dongles, 'TapPlay' for Android/Windows/Mac and Airplay for IOS. Depending on the application or size of the meeting room, users can purchase more dongles, e.g., HDMI dongle/ Type C dongle if necessary.



Name	Description
Base Unit	Base unit TP-U400
Dongles/Transmitters	For PC/Mac to share the desktop/extended desktop.
'TapPlay' app	For Android/Windows/Mac devices to share the screen.
Airplay for IOS	For IOS devices to share the screen.

## Accessories List

ID	Name	Description
1	Antenna	3 pcs of antenna are included in the box. To avoid damage, they are not pre-mounted. The antenna can rotate for a better wireless connection.
2	Power adapter	International plug inter-changeable power adapter, of which the plugs include US, Europe and UK standard.
3	Phoenix terminal	1 piece phoenix terminal for connecting the RS232 port of the back panel.
4	Download Card	1 piece download card that user can find related manuals on our website.

## 2. Specification

TP-U400 Specification	
HDMI output	1x HDMI 19-pin female connector
Video Output Resolution	3840x2160@60Hz/30Hz, 1920x1080@60Hz, 1280x720@60Hz
Format Compliance	HDMI1.4/HDMI2.0
HDMI input / max. resolution	Maximum 1080P@60Hz via TP-DGH/DGC, app, and Airplay
HDCP	HDCP1.4/HDCP2.2
Compatible dongles	TP-DGH, TP-DGC
LAN port	2x RJ45: 1x 1000Mbps with POE, 1x 100Mbps
USB interface	3x USB3.0, 1x USB 2.0, 2x Type-C
Control	Keyboard, mouse, and interactive display touch back
Content Input	TP-DGH/TP-DGC, AirPlay, Miracast, Windows/Mac application
Audio Output (Analog)	1x 3.5mm audio female connectors
Control interface	WebUI, Telnet, 3.5mm Phoenix terminal/ RS232 interface
Multiview	Up to 4 simultaneously with adjustable layout
Number of simultaneous connections	Minimum 16
Wireless transmission protocol	Wi-Fi IEEE 802.11 a/g/n/ac
Frequency band	2.4 GHz & 5 GHz
Data rate in wireless	Up to 1200Mbps
Latency	<100ms, min 20ms with low latency mouse cursor
Dimension (W x D x H)	220 x 120 x 34mm (incl. antennas 220 x 280 x 34mm)
Weight	0.74kg
Temperature	-4° ~ +140° F (-20° ~ +60° C)
Humidity (Storage / Operating)	20%-90% (non-condensing)
Power Supply	Power adaptor with exchangeable plugs (EU/UK/US) 12V/3A, POE
POE standard	POE plus - IEEE802.3af
Power Consumption	Maximum 36W
Security standard	WiFi: WPA PSK, WPA2 PSK - Video transmission encrypted with AES-256 bit + RSA1024 bit

### 3. Panel Layout

#### About this chapter

The installation chapter gives an overview of the interface of TP-U400.

#### Overview

- Hardware Interface
  - TP-U400 Front Panel
  - TP-U400 Back Panel
  - TP-DGH/TP-DGC Front panel
- Software Interface
  - Home Screen

#### 3.1 Hardware Interface

##### 3.1.1 TP-U400 Front Panel



**Note:** Front USB port and type C port cannot be used at the same time, type C port is prior to USB port.

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	RED: Initialisation Flashing GREEN: Power on Static GREEN: Ready to share Static Cyan, Sharing

### USB port

- The USB port can be used to pair dongles with the base unit.
- The USB port can be used to create or upgrade TapPlay Windows/Mac/Android applications by clicking **Download** button, when a USB stick is plugged in.
- The USB port can be used to connect a USB-based touch screen or mouse/keyboard for controlling when a PC desktop is mirroring to the screen.

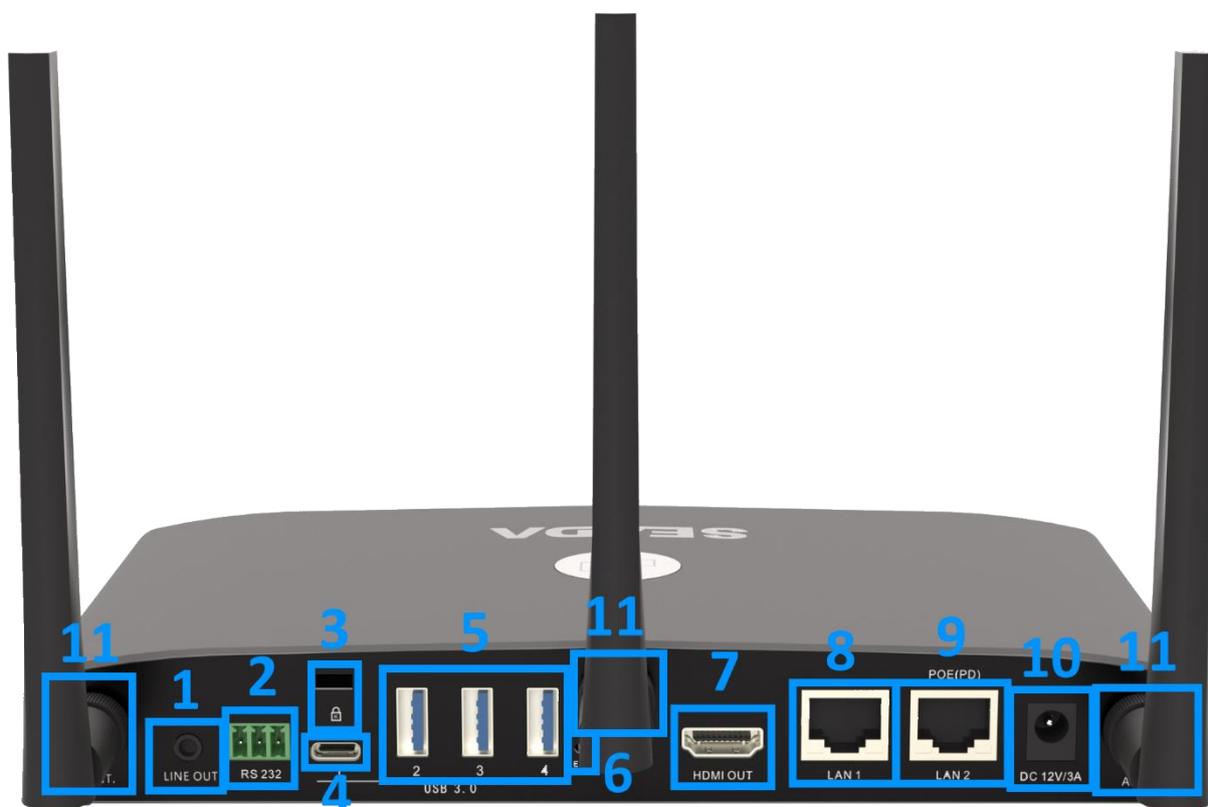
### Type-C port

The Type-C port can be used for pairing TP-DGC with base unit.

### Mounting

The mounting points for the unit are located at the bottom of the base unit.

### 3.1.2 TP-U400 back Panel



ID	Name	Description
1	Line audio output	2 channel analog audio output
2	RS-232	RS-232 port
3	Kensington Lock	Standard Kensington Lock to security the unit
4	Rear Type-C connector	Type C port for TP-DGC pairing
5	Rear USB3.0 connector	USB port for TP-DGH pairing, mouse control, USB touch screen and USB device such as USB camera and speaker etc.
6	Reset	Reset button to restore to the factory default setting
7	HDMI output	Connect an HDMI cable from this port to an HD or 4K/HDMI2.0 display

8	LAN Ethernet port 1	100Mbps Ethernet port
9	LAN Ethernet port 2	1000Mbps Ethernet port and support POE
10	DC Power socket	Power socket to boot up the unit
11	Antenna fixture points	Screw up the included three antennas to these three ports.

### USB port

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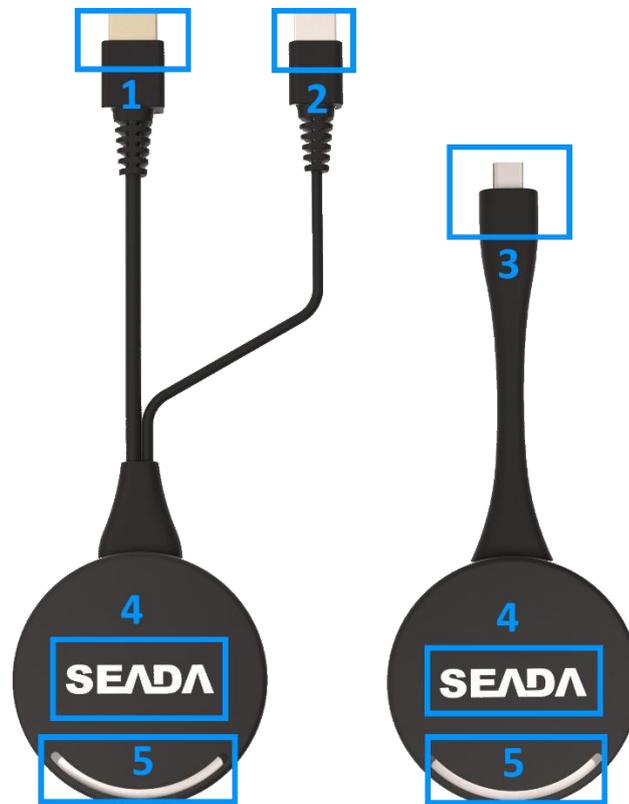
### 3.1.3 Factory Reset

1. Start up the base unit.
2. When the Home Screen is shown up, press the reset button at the back panel of base unit. Press this button with a narrow object, e.g., a paper clip until the '**Factory Reset**' page is shown up for at least 2 seconds.
3. The base unit will reboot after 3 seconds.
4. If no '**Factory Reset**' page showed up, press, and hold the reset button until the red LED in the top panel is up, to execute the reset.

### 3.1.4 Dongle Front Panel

TP-DGH (left) and TP-DGC (right) are dongles, used for toggling the mirroring from personal PC or Mac onto the main screen.

- When LED indicator is static green, it's ready to mirror desktop onto the main screen.
- When LED indicator is static red, 1) it's mirroring, 2) if the dongle is connected to the base unit, that means pairing is done.
- When LED indicator is blinking Green, it indicates 1) the dongle is plugged in and initialising or waiting for user to start the application, 2) if the dongle is connected to the base unit, that means pairing/software updating is in progress.
- When LED indicator is Off (no light), it indicates 1) the dongle is not plugged in; 2) the dongle is faulty; 3) the USB port of PC/Mac might be faulty.



ID	Name	Description
1	HDMI connector	HDMI connector of the dongle can be plugged into a PC/Mac for sharing screen.
2	USB connector	1) Power supply or 2) can be plugged into the base unit for pairing or upgrading of dongles.

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3	Type C (DP) connector	Type C (DP) connector of the dongle can be plugged into a PC/Mac for sharing screen.
4	Touching button	Touch the sensor button to start mirroring desktop onto the main screen. Touch again the sensor button to terminate the sharing.
5	LED indicator	Indicates the status of the dongle.

**Note: TP-DHC contains a fully functional type-C interface with DP Altmode inside, which supports audio and video transmission. The type C connector on the PC also requires a fully functional type C connector for mirroring.**

## 3.2 Software Interface

### 3.2.1 Home Screen



ID	Name	Description
1	Wi-Fi Indicator	<p><b>Wi-Fi Direct mode:</b> Access point is enabled: </p> <p><b>Wi-Fi Infrastructure mode:</b> Wi-Fi connection to router is established and the icon displays the current signal strength: </p> <p>A secure Wi-Fi connection is established, or connection to a router failed: </p> <p>Wi-Fi is not available: </p> <p><b>LAN Infrastructure mode:</b> Access point is disabled</p>
2	ID	Wi-Fi name of the base unit access point.
3	PASS	Wi-Fi password of the base unit.

4	<b>Password-timer</b>	Display time until the password changes automatically. This timer is only available when ' <b>auto change password</b> ' is activated.
5	<b>Refresh Wi-Fi-password</b>	Generate a new password manually to secure the Wi-Fi network.
6	<b>TIME</b>	Show time if LAN/Wi-Fi has access to a time server. The time is displayed until the device power is cut after disconnecting from the LAN/Wi-Fi connection.
7	<b>Security level</b>	Security level 1-3 ( <b>display ONLY</b> ). The details for the security features of the displayed level are shown by clicking on the icon.  The settings can only be changed by administrator in the WebUI.
8	<b>Download Button</b>	Creating & upgrading Launcher 'TapPlay.exe' for Windows, Mac, and Android to a USB stick.
9	<b>Info</b>	Show/Hide icons (1) - (6) and (10) in home screen.
10	<b>Camera and microphone indicator icon</b>	When TP-U400 is connected with a USB camera or microphone, the icon will be displayed.
11	<b>Preview &amp; White Board &amp; Annotation</b>	Previews for all connected dongles and mobile devices and functions to operate them. The white board and annotation function can also be found by clicking the button.
12	<b>Whiteboard icon</b>	Whiteboard function
13	<b>Info</b>	Click to show ID and password when mirroring.
14	<b>Annotation</b>	Annotation function.
15	<b>Wi-Fi IP LAN IP</b>	<ul style="list-style-type: none"> <li>● Wi-Fi IP: address of the base unit in Wi-Fi</li> <li>● Assigned IP: address of the base unit in LAN; 'N/A' = no connection to network</li> </ul>

## 4. Installation

This section gives an overview of the ways to install and connect the base unit.

### 4.1 Installation methods for the base unit

#### Introduction to the installation methods:

The base unit can be installed either by table mounting or wall mounting in a meeting room.

The articulated antennas are removable and rotatable for easier connection and better signal.

**Attention:** For optimal performance, install the base unit close to the display and avoid obstacles between the base unit and dongles.

#### Required tools

- A drill (type of drill depends on the type of wall)
- 2 mounting screws (mounting screws are not included in the package) (between 6 and 8 mm)

#### How to install

1. Drill two holes in the wall.
2. Insert 2 flat screws into the 2 holes and fasten
3. At the bottom of the base unit, plug 2 flat screws into 2 holes of its smallest diameter to fasten.

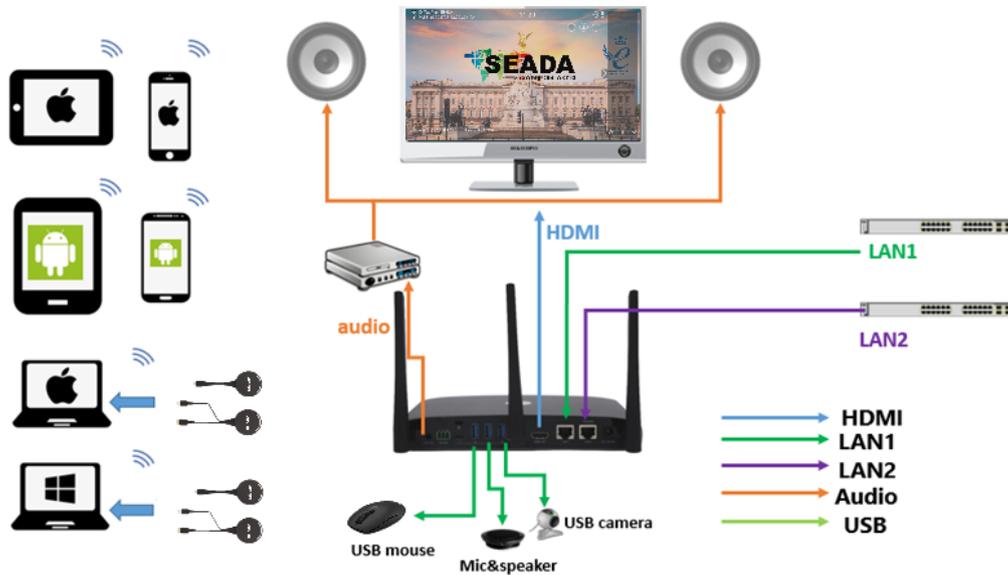
**Note:** Mounting screws are not included in the box. The type of screws depends on the type of wall (stone, wood, plasterboard, ...) the base unit is mounted to. Make sure the head of the screw is not larger than the hole at the bottom of the base unit.

4. Place the base unit on the wall and fix it with the 2 screws.

#### Antenna placement rules

- The antennas should be oriented vertically, 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 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 better to install antennas at least 15 cm (6 inches) from concrete walls.
- The best situation is a direct line of sight between antennas and transmitters. Any obstruction can cause the signal to follow a longer propagation path, which may result in performance degradation.
- Due to the radio pattern of the dipole antennas, the antennas should not be placed just above the position of the user. 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 external power adapters.

### How to connect the external power adapter

1. Connect the power adapter with the power lead and plug it into the power input of the base unit.
2. Choose the appropriate power plug (US, UK, or EU) to be installed on the power lead.
3. Plug the power lead into the wall outlet.

**Note:** Once the base unit is powered on, please use the POWER button with Status LED on the front of the base unit to switch the unit ON and OFF.

### Power over Ethernet

If the IP switcher supports POE (Power over Ethernet), it will power up the base unit without the use of any external power adapter.

## 4.4 Video Connection

1. Connect the **HDMI Output** of the 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, connect the power plug to an outlet and switch the base unit on.
3. The system will then display the home page.

## 4.5 Audio Connection

The base unit can transmit the audio output of the PC/Mac, re-direct and send it 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 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 audio port of the base unit.
2. Connect the other side to the sound system of the meeting room.

### PC/Mac Sound

By default, the internal speaker of PC/Mac will be muted, and the audio will be routed to the base unit after PC/Mac successfully mirrors desktop to the main screen, which is to avoid repeated audio.

When sharing is terminated, local speaker will return to previous status and the volume on PC/Mac can be adjusted.

## 4.6 LAN connection

The base unit can be connected to a local network or directly to a PC/Mac.

1. Connect an Ethernet cable with RJ45 connector into the LAN port of the base unit.
2. Connect the other side to LAN.
3. If the Ethernet switch supports POE (Power over Ethernet), it could power up the unit without the use of external power adapter.

### LAN connection can be used for:

- Network integration of the base unit in guest or company network.
- Telnet control the base unit.
- Maintenance purpose to access WebUI.

## 4.7 Use of USB devices

**USB control:** A USB mouse or touch screen can be connected to the base unit.

### USB mouse

- For configuration of the home screen.
- Single click to select.
- Right-click to back to the Home Page.
- Long press the left button to open the contextual menus, same as right-click of a USB mouse.

### Touch screen

- Click to select.
- Long press to open the contextual menus, same as right-click of a USB mouse.

### External USB Devices over Wi-Fi Sharing

TP-U400 supports USB Camera and USB speakerphone over Wi-Fi sharing.

There are 3 USB ports and 1 Type C port in rear panel of TP-U400 for connecting the external USB devices such as microphone and camera, to start meeting with all kinds of video conference software such as Teams and Zoom.



## 5. Quick Start

### 5.1 Mobile device: Wireless Connection

1. Connect the mobile device to the base unit via WiFi and type in the WiFi IP of the base unit in any browser. Then download the application named '**TapPlay-Android.apk**'.
2. For IOS devices, use Airplay to mirror the desktop.

### 5.2 Pairing dongles with base unit

1. Connect TP-DGH/TP-DGC to USB port/type C port of the base unit.
2. When the dongles are plugged in, a message will pop up showing '**Dongle is booting, please wait...**'.
3. Then, the message shows '**Pairing, please wait...**'.
4. After pairing is completed, a message will show '**Succeed to pair!**' on the home page. After that, the dongle can be un-plugged and connected to PC/Mac for use.

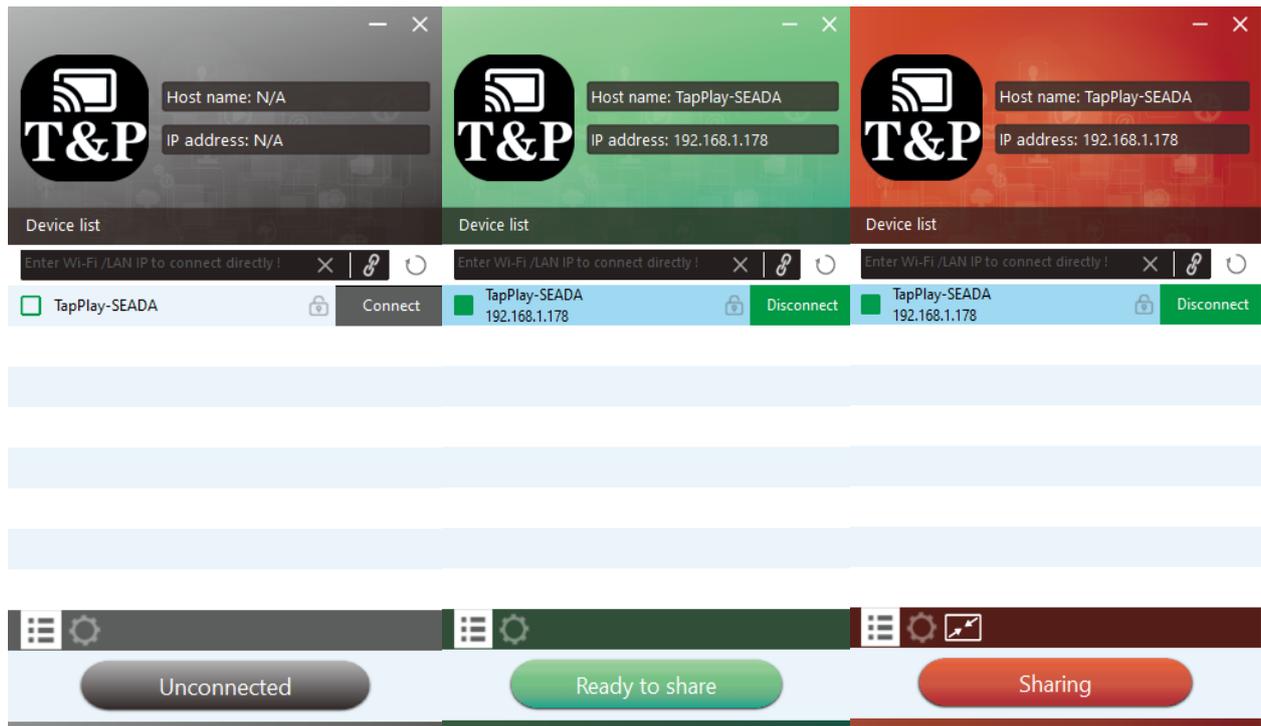
If the WiFi setting is changed or the firmware of the base unit has been updated, all dongles have to be paired again. One dongle can only be paired with a single base unit at a time and the dongle will always make connection to the last base unit it is paired with.

### 5.3 Mirroring

#### 5.3.1 Windows PC/Mac with application

The base unit can be operated by either the dongle or the application. If there are multiple participants in a meeting, it is possible to have multiple connection methods.

1. Connect the PC/Mac to the base unit via WiFi displayed on the home screen and type in the WiFi IP of the base unit in any browser. Then download the application named '**TapPlay-win.exe**' or '**TapPlay-mac.zip**' depending on the device.
2. Run the application. There will be a list of available base units displayed and user can click '**Connect**' to choose the base unit. The application will then automatically change PC's Wi-Fi for direct connection to the target base unit. A message box will pop up to enter the password for connection, which is shown on the home screen.
3. When the base unit is connected, user can click '**Ready to share**' to mirror the desktop onto the main screen. When the color of the application is static red, the desktop is mirroring to the main screen.
4. Click '**Ready to share**' again to stop mirroring and the color of the application will turn green.



5. User can right-click the status icon  in Windows taskbar to open up the menu.
  - **'About'**: User can check the version of the base unit, the dongle, and the application.
  - **'Exit'**: Exit the application.

For the first time user, when the application detects TP-U400 is connected with a camera/microphone/speaker, a message box will pop up indicating that a virtual drive needs to be installed. It is to activate USB over WiFi to start video conferencing via TP-U400.

The virtual driver is only for video conferencing. If the user only wants to mirror the desktop, the driver does not need to be installed. If TP-U400 is not connected with any camera/microphone/speaker, there will be no message pop up for installation.

### 5.3.1.1 Options for Windows PC/Mac

Click the icon  in the window to open/close 'Options'.

- **Extended Screen:**

Transfer extended desktop of the active source. (Depending on the operating system, it may require the installation of a virtual driver called '**Extended Display**'). The primary screen is displayed on the laptop and the extended screen is displayed on the main screen.

- **Keep Aspect Ratio:**

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

- **Stream Mode:**

- Fluency Priority: (Default) Small image transmission delay and lower image resolution, which is suitable for PPT presentations.
- Quality Priority: High image resolution, and more transmission delay when the image content is complex, which is suitable for watching video.

- **Low Latency Mouse:**

When using the original cursor on screen, there will be a delay in movement (approx. 150 ms). When this function is ticked, a mouse pointer will replace the original cursor and the movement of the replaced mouse-pointer will be smooth with hardly noticeable delay (about 20 ms) on the main screen

**Note:** The appearance of the replaced cursor will always be a pointer and keep the same in all applications.

- **Volume Slider:**

Adjust the playback volume of the main screen when mirroring of the PC/Mac is active.

### 5.3.1.2 Quad view mirroring

TP-U400 can mirror 4 sources onto main display simultaneously, which supports PC/Mac and mobile devices.

**Note:** By clicking '**Full Screen**' icon in the application, or long pressing the dongle, the content will be displayed in full screen. Click or short press again can bring the screen back to quad view.

### 5.3.2 Mobiles Devices

#### Sharing on Android devices

1. Download the '**TapPlay-Android.apk**' application.
2. Connect mobile device to the same network as the base unit.
3. Open the application in the mobile device, and the homepage will pop up. Click the device list refresh button to get the list of devices.
4. Select the base unit to connect to and enter the password.
5. After completing the pairing, an OSD '**Welcome \*\*\***' will be displayed on the homepage.
6. Click '**Share Screen**' to start mirroring.
7. Click again '**Share Screen**' to stop mirroring.
  - Click the connected device name to check the status and firmware of the base unit.
  - Click '**Fullscreen**' to show full screen on the main screen when more than one signal is connected and shared.
  - Click the upper right corner icon to check the version of the application.

#### Sharing on IOS devices

1. Connect the IOS device to the same WiFi network as TP-U400.
2. Activate the control center and click the '**Airplay**' Icon on the Apple device.
3. Select the TP-U400 to start mirroring.
4. User can mirror the screen/music/video/picture of the IOS device wirelessly to the base unit.

### 5.3.3 Miracast on Android Devices and WIN10 PC

#### Android Devices

1. Make sure WiFi or WLAN is enabled.
2. Swipe down the top of phone's screen and click the wireless projection icon in the popup page.
3. The wireless projection window will pop up and find the base unit in the available list to connect.
4. After entering password, the mirroring will start.
5. Click the '**wireless projection**' icon again to disconnect and stop mirroring.

#### WIN10 PC Miracast

1. Make sure WiFi or WLAN is enabled.
2. Click the '**Notification**' icon on the right-bottom corner in the menu bar.
3. Click '**Project**' icon to enter password on the home screen to connect and mirror.
4. After entering password, mirroring will start.
5. Click the '**Project**' icon again to disconnect and stop mirroring.

### 5.3.4 Chromecast on PC

TP-U400 supports Chromecast on WIN 7 and WIN 10 PC.

Before start, the PC has to be under the same network as the base unit.

1. Open a Chromecast supported browser and click '**Cast**' to start Chromecast function.
2. Find the base unit SSID and click to connect.
3. Choose from the three options to cast: Cast tab, cast desktop, and cast file.

## 5.4 Preview Window

On touchscreen or with mouse connected to the base unit, the **'Left'** and **'Right'** arrow on the right of home screen can be used to display or hide the preview. By default, the preview window will be hidden and when a USB device is connected, it will pop out for 20 seconds until it is hidden again.

Once the preview window is activated, live pictures of all connected devices will be available in the list. By clicking **'Play'** in the middle, the selected device will be activated and displayed in full screen. User can click **'Stop'** on the left to stop mirroring the signal and **'Volume'** on the right to adjust the volume of the selected device. When there are multiple windows activated, user can use **'Full screen'** to show full screen of the selected signal.

## 5.5 Whiteboard & Annotation

Whiteboard and Annotation requires an HID compatible device, such as interactive white board or interactive touch screen.

In **'Preview'** on the home screen, tap/click the **'LEFT'** arrow on the right of the screen and select

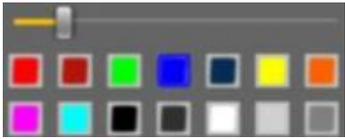
whiteboard  or annotation icon .

### 5.5.1 Whiteboard



Use the toolbar to select one of the following functions.

ID	Icons	Function
Tool bar 1		Add an empty page
		Delete the 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 writing/drawing
		Clear the entire writing/drawing on the screen
		Pen for writing/drawing in different colors
		Draw basic geometric shapes
		Select color of the board

Tool bar 3		This window will pop up, when <b>'Pen'</b> . <b>'Draw shape'</b> or <b>'Select color of board'</b> is selected, for change of the size and color.
Tool bar 4		Save the current screenshot on local storage.
		Close the whiteboard to go back to the home screen. The current project can be saved on local storage.
File options		<p>File options:</p> <ul style="list-style-type: none"> <li>● Open file from local storage and edit an old project</li> <li>● New project</li> <li>● Save on local storage in the base unit, which will be erased after POWER-OFF</li> <li>● Import stored project from external USB stick</li> <li>● Save all as PDF in local storage</li> <li>● Delete all whiteboard &amp; annotation files on local storage</li> </ul>

## 5.5.2 Annotation



Use the toolbar to select one of the following functions.

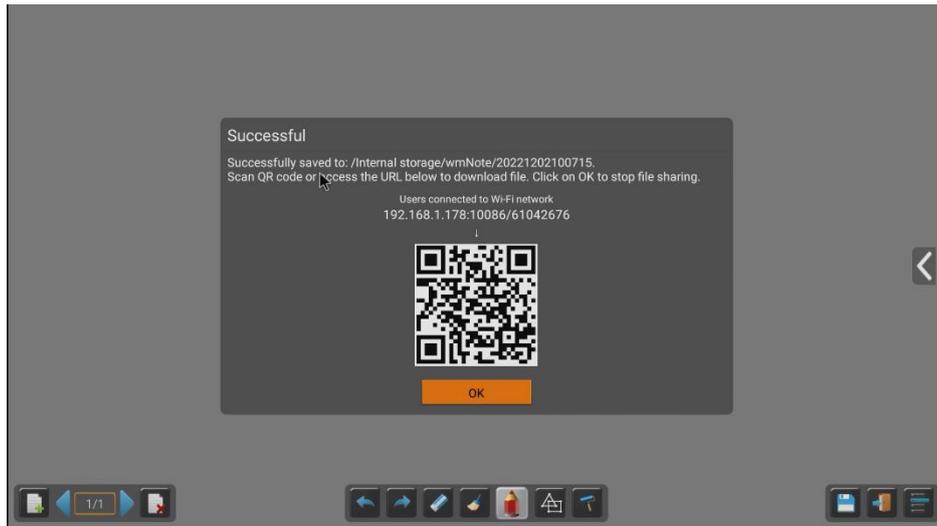
ID	Icons	Function
Tool bar 2		Undo: one step backward in changes
		Redo: one step forward in changes
		Erase part of writing/drawing
		Clear the entire writing/drawing on the screen
		Pen for writing/drawing in different colors
		Select color of the board
Tool bar 4		Save the current screenshot on local storage.



Close the whiteboard to go back to the home screen.  
The current project can be saved on local storage.

### Download drawings to connected users

Scan the QR-code with the camera of the mobile or enter the given IP-address in a browser. If the network connection is set properly, the saved files on the base unit can be accessed, which can be downloaded as PNG files.



## 6. Start video conferencing via USB-over-Wi-Fi technology

This function allows starting video conferences easily with PC, and at the same time utilise the room USB peripherals like camera, microphone, and speaker to have a better AV experience.

### 6.1 Start with application/dongles

1. Make sure the room USB peripherals and display are well connected with TP-U400 with cables.
2. Make sure that the PC/Mac is well connected with the base unit by the application.
3. A virtual driver is required to install in windows OS to support USB over Wi-Fi for the first-time use. When the driver is installed, there will be an icon of a camera and a mic displayed in the application as well as on the top-right of the home screen. When the icons are in the white color, it indicates that the USB camera and speaker/mic are connected. When they are in green color, it indicates that the USB camera and speaker/mic are in use.

**Note that Mac does not support this function.**

**Note that this step is only necessary when using the application.**

4. Launch any VC application such as Zoom from desktop and choose **Settings>Video>Camera>Virtual Meeting Camera**

**Settings>Audio**

For Speaker, select '**Virtual Meeting Audio**'

For Microphone, select '**Virtual Meeting Audio**'

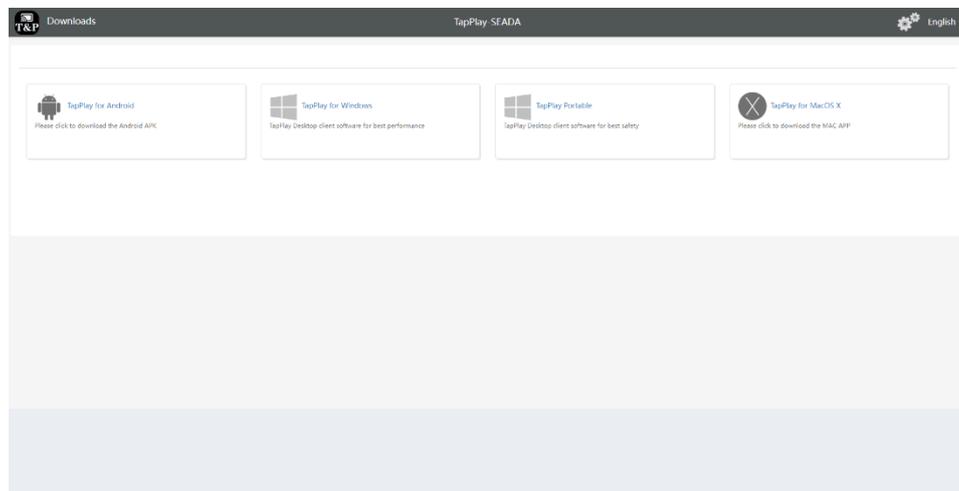
5. Click '**Ready to share**' button in the application or tap the dongle to share the desktop of PC to the display.

**Note that this function only works when the base unit and the PC are under the same network.**

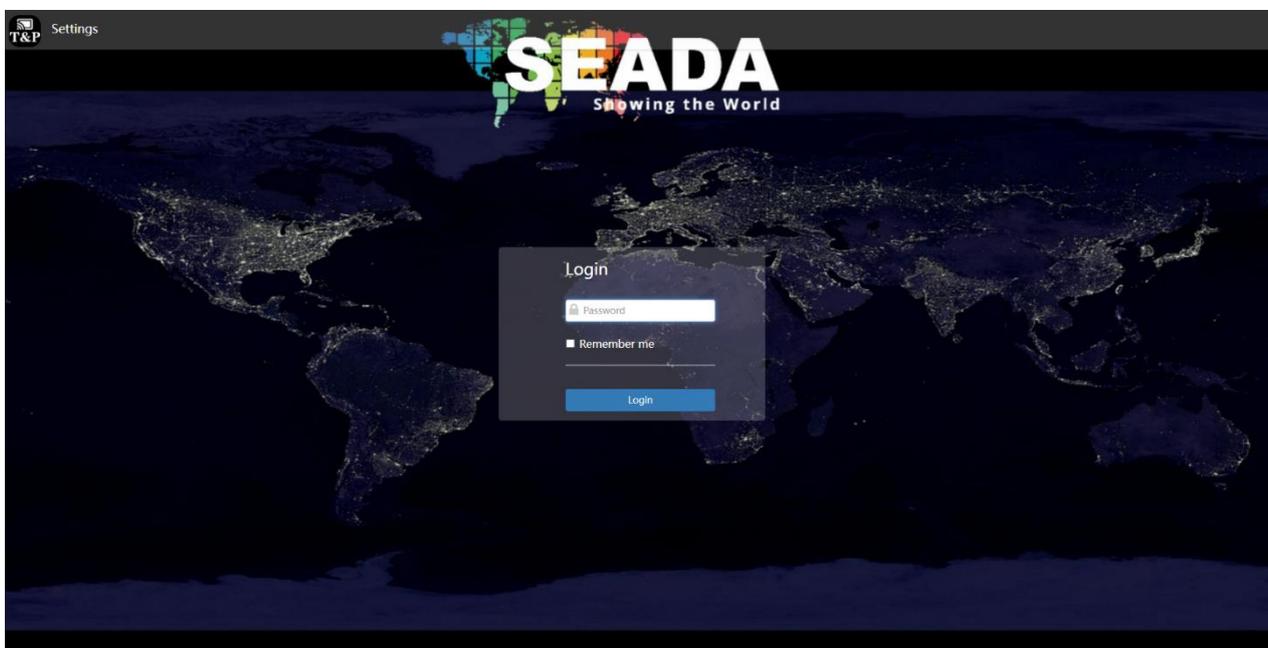
## 7. WEBUI

Connect the base unit to the PC/Mac and enter the IP address of the base unit in any browser to access the WebUI. All the applications for TapPlay can be downloaded here.

**Note: It is recommended to restart base unit at least 1 min after any modification on the setting.**



Click Setting button on the top right corner to enter the WebUI. By default, the password will be 'admin'.



## 7.1 Network settings

### 7.1.1 Wireless network

This wizard allows the user to create a customised configuration for integration of the base unit into existing wireless infrastructures.

#### **Wireless network configuration wizard**

Enter a device name for the base unit.

The default name is '**TapPlay-XXXX**'.

Click '**Next step**'. The following three connection methods are available:

#### **Wireless Direct Mode**

By default, the base unit will be in the default stand-alone '**Wireless direct mode**', where the base unit creates its own wireless access point. The Wi-Fi icon for the '**Wireless direct mode**' is displayed in the top status-bar of the home screen. User can connect to the access point of the base unit directly or by LAN.

#### **Recommended Environment**

This option is best for temporary operation, small installations, and rooms without network access or networks that do not allow network access for users, due to strict security concerns.

Click '**Next step**' to set up Wi-Fi access point including frequency, channel, and password.

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

**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 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 the input field to fill the appropriate password with length of **8 characters**.

Click '**Next step**' to edit the GUEST network SSID for direct connection and STAFF network SSID for LAN connection. This information will be shown on the home screen.

Click '**Submit settings**' to finish configuration and re-pair the dongles with the base unit.

### **Wireless Infrastructure mode**

The base unit can be connected to a wireless network. User can connect to the base unit with their usual access point of network without the need of changing the WiFi.

### **Recommended Environment**

This is very useful for big companies, which has a wireless '**Guest**' network for external visitors and a '**Staff**' network based on LAN for employees. In this case, the guest user will not be able to access any resource on the Ethernet of the company.

Click '**Next step**' to configure the network which dongle needs to be paired with.

### **Dongle connects to base unit via wireless network.**

*Note: usually in this mode, dongle paired for external guest usage.*

Choose a wireless network which is separate from the company LAN network for guest users.

**Select SSID:** Choose a wireless network to connect to base unit for guest.

**Password:** Enter password to connect the base unit to the guest network.

Click '**Next step**' to edit or change Guest network SSID and Staff network SSID.

Wi-Fi name of guest and staff will be shown on the home screen after clicking '**Submit settings**' and re-pair the dongles with the base unit.

### **'Dongle connects to base unit via LAN.'**

Choose a LAN network which is used for the company staffs.

*Note: usually in this mode, dongle paired for internal staff usage.*

**Select SSID:** Choose a wireless network to connect to base unit for guest.

**Password:** Enter the password to connect the base unit to the guest network.

**Select dongle SSID:** Choose the same LAN network which the base unit is connected to.

**Password:** Enter password for the LAN network.

Click '**Next step**' to edit or change Guest network SSID and Staff network SSID.

Wi-Fi name of guest and staff will be shown on the home screen after clicking '**Submit settings**' and re-pair the dongles with the base unit.

### **LAN Infrastructure Mode**

In this mode, the built-in Wi-Fi access point of the base unit **is disabled**

User can connect to the secured wireless access point of the company network. The base unit is hard-wired connected via LAN to the Ethernet of the company network. The staffs can connect to their usual access point of the company network, without the need to change the Wi-Fi.

### **Recommended Environment**

This option is good for small installations and meanwhile the base unit can be used as a stand-alone router to provide or boost WiFi signals for small companies.

Click '**Next step**' to choose a LAN network, which is used for the company staffs and pair the dongle into this network.

Click '**Next step**' to edit or change Guest network SSID and Staff network SSID.

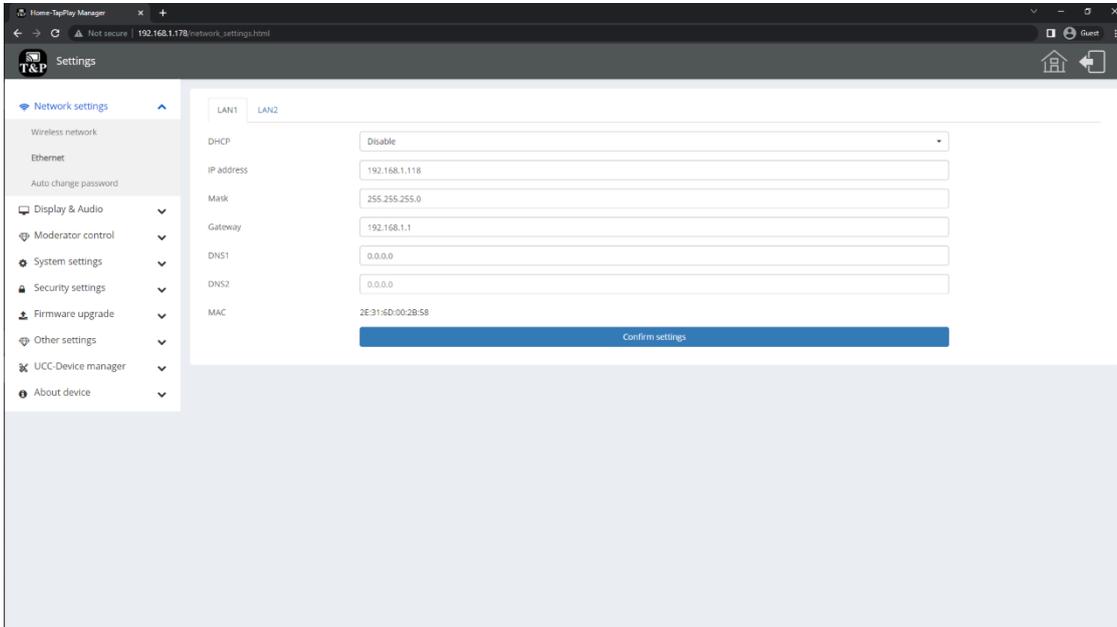
Click '**Next step**' to edit or change Guest network SSID and Staff network SSID.

Wi-Fi name of guest and staff will be shown on the home screen after clicking '**Submit settings**' and re-pair the dongles with the base unit.

## 7.1.2 Ethernet

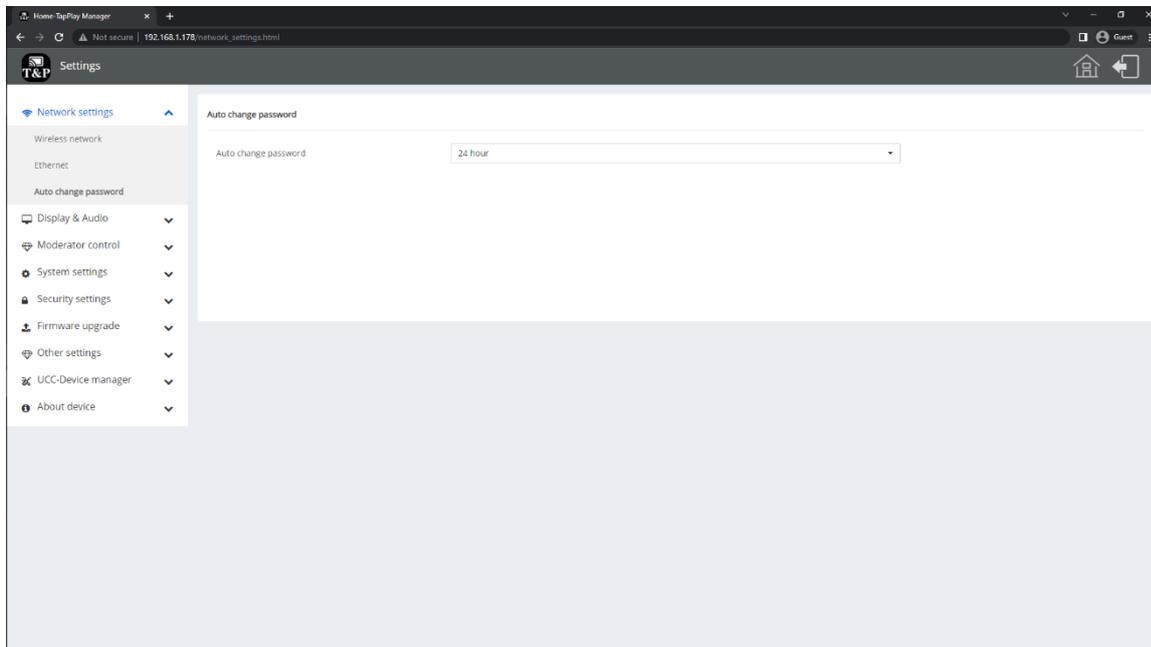
Configure the Ethernet settings.

By default, Ethernet setting of the base unit will be on **DHCP**.



### 7.1.3 Auto change password

The password will keep unchanged while at least one dongle or a PC/Mac/mobile device is connected to the base unit. After it is disconnected, the password will change in a given period.



Click to change the given time when the WiFi password will be changed automatically, including

- **Never:** never change WiFi password.
- **5 minutes:** change WiFi password every 5 minutes.
- **30 minutes:** change WiFi password every 30 minutes.
- **1 hour:** change WiFi password every 1 hour.
- **2 hours:** change WiFi password every 2 hours.
- **4 hours:** change WiFi password every 4 hours.
- **24 hours:** change WiFi password every 24 hours.

## 7.2 Display & Audio

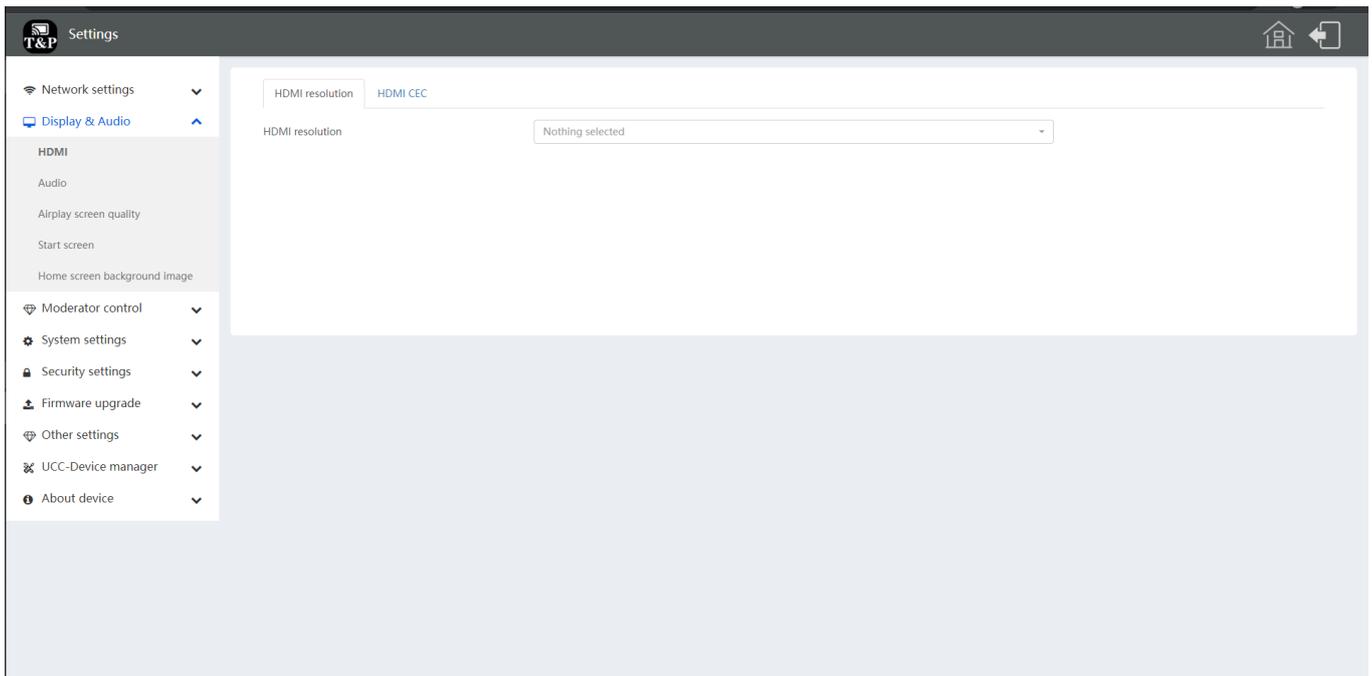
### 7.2.1 HDMI

#### HDMI Resolution

Select the resolution for the HDMI output of the base unit.

**Note that the resolution that is not supported by the display will not be shown in the list.**

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



## HDMI CEC

The base unit supports CEC if the connected display supports CEC.

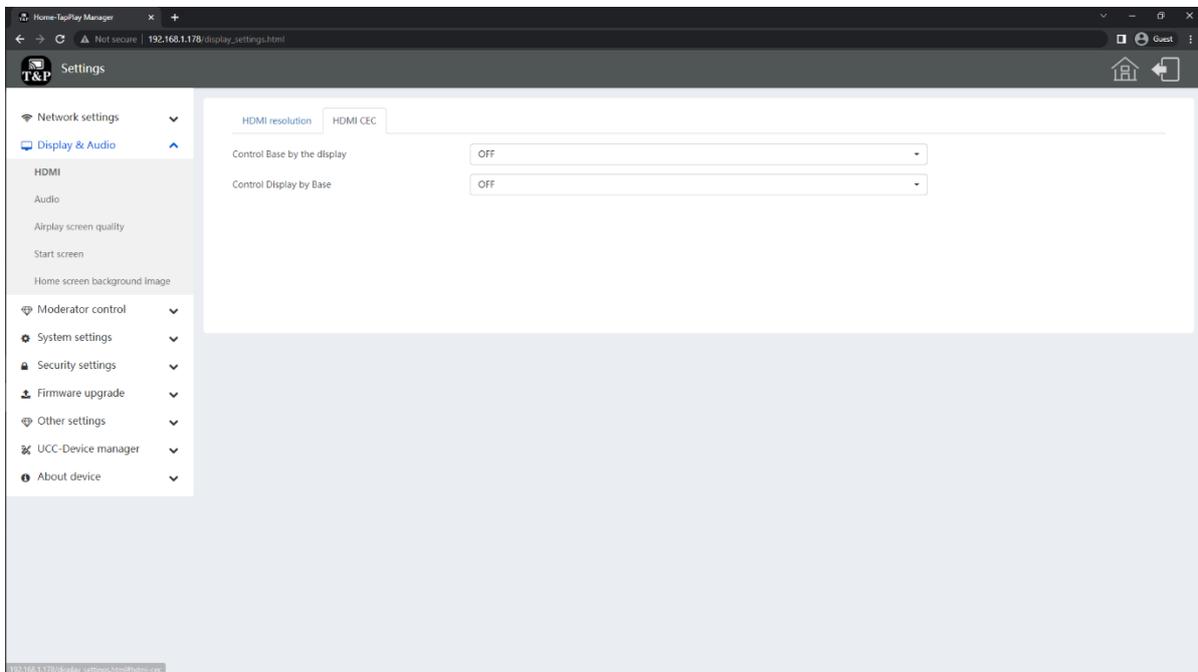
- **Device auto power off:**

- **ON (Default):** When the base unit goes into standby mode, it will send commands via the HDMI cable to turn off the display as well.
- **OFF:** Display will not automatically turn off when the base unit is powered off.

- **Auto turn off base unit when display is turned off:**

When the monitor goes into standby, it will send commands via the HDMI cable to turn off the base unit.

- **ON:** The base unit will be automatically turned off when the display is turned off.
- **OFF (Default):** The base unit will not be turned off when the display is turned off.



## 7.2.2 Audio

### Audio:

Choose audio output:

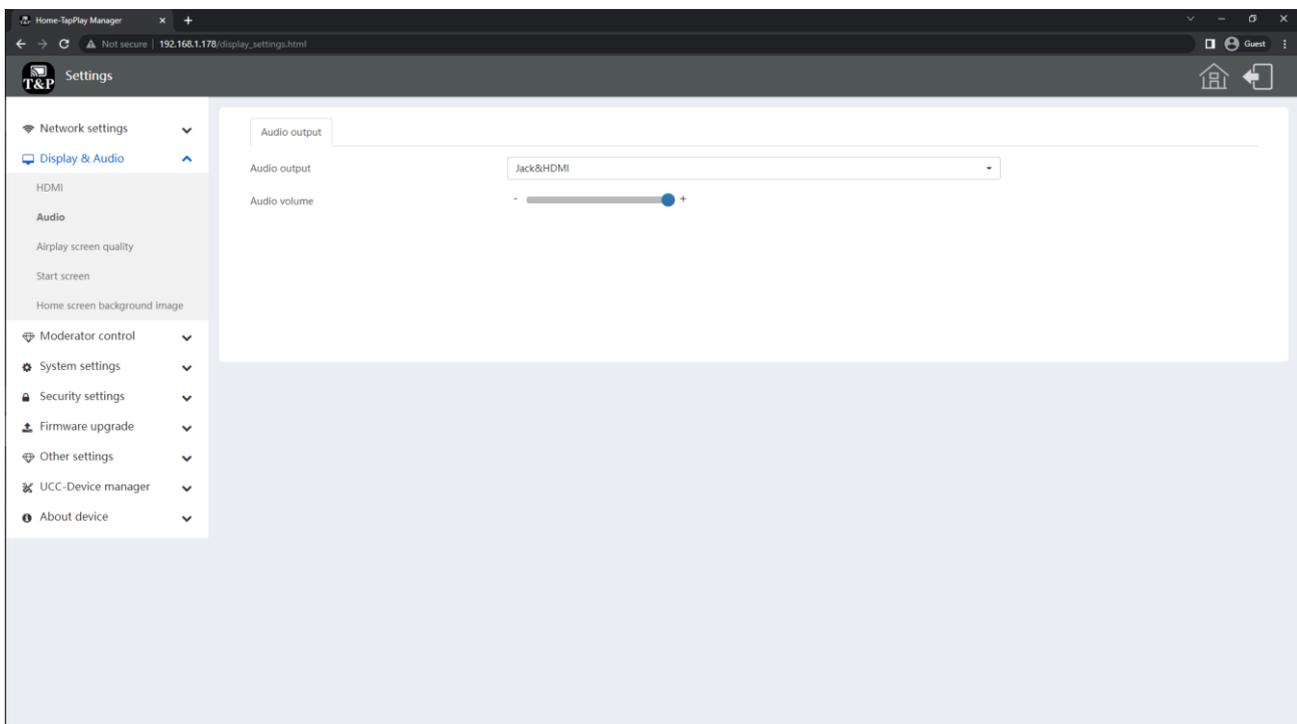
**Jack:** Output only 3.5mm mini-jack audio.

**HDMI:** Output only HDMI audio.

**Jack & HDMI (Default):** Output Jack & HDMI audio

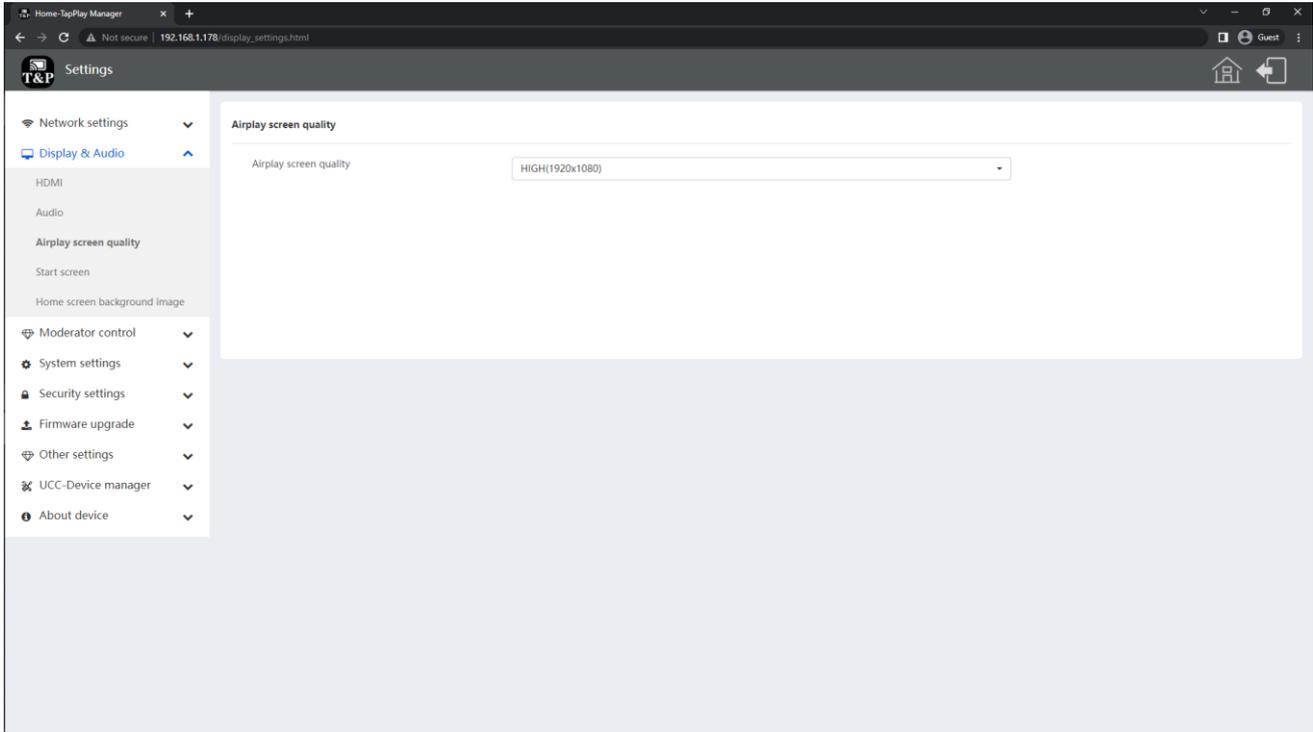
### Audio Volume:

User can select volume from 0 to 100.



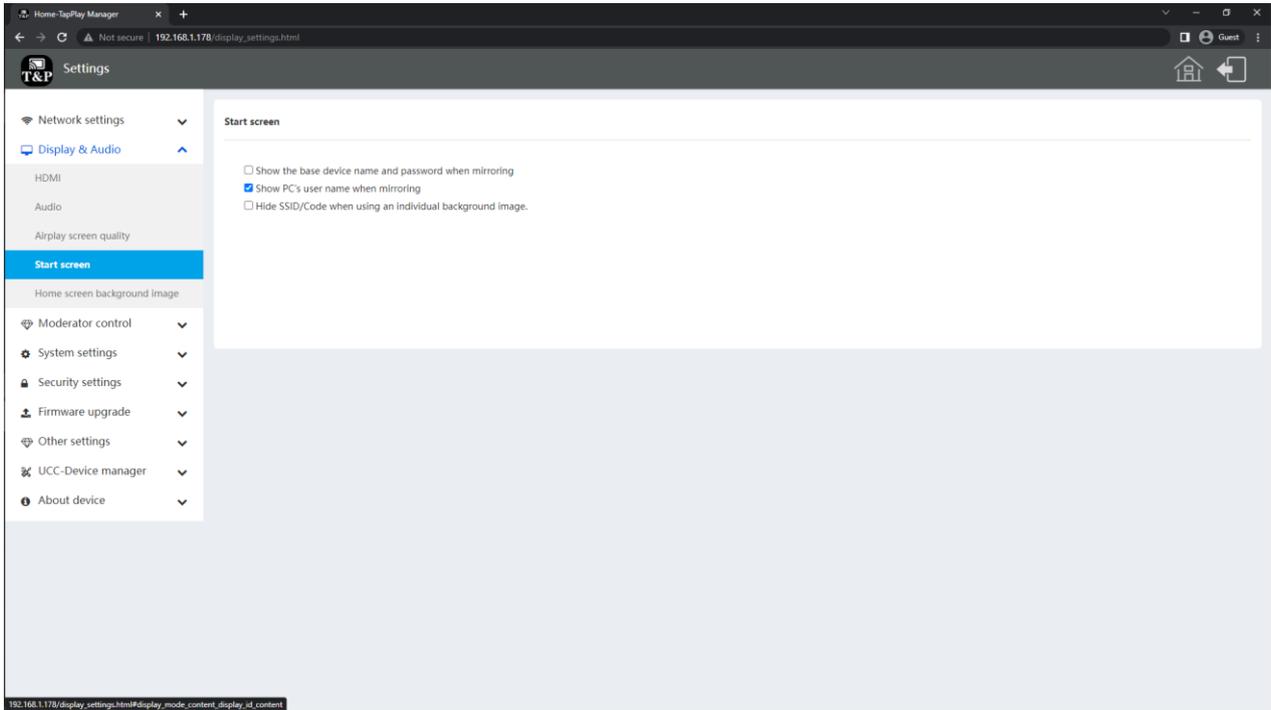
### 7.2.3 Airplay screen quality

Select the image quality when the screen of Apple device is mirrored by 'Airplay'.



## 7.2.4 Show the base device name and password when mirroring:

Name (ID) and Wi-Fi-password will be shown or hidden at the top of the home screen when mirroring.



### Show PC's username when mirroring:

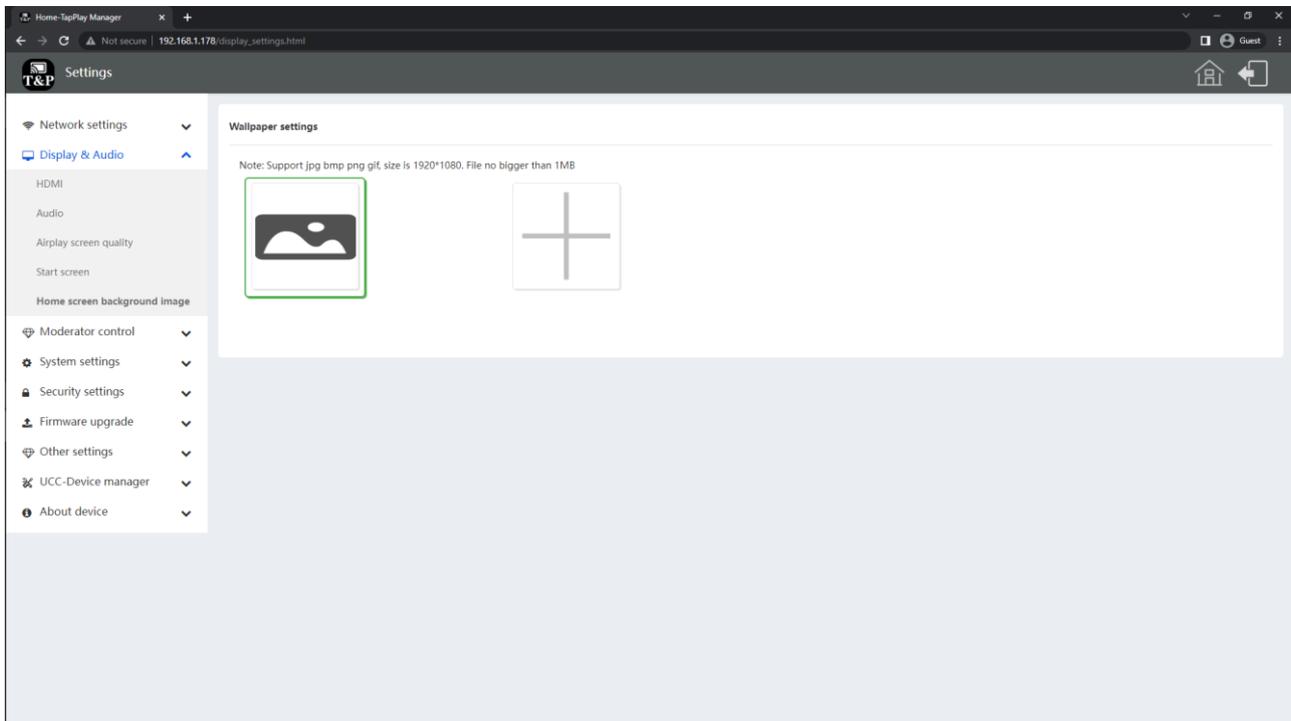
Show username of the device that are being mirrored.

### Hide SSID/Code when using an individual background image:

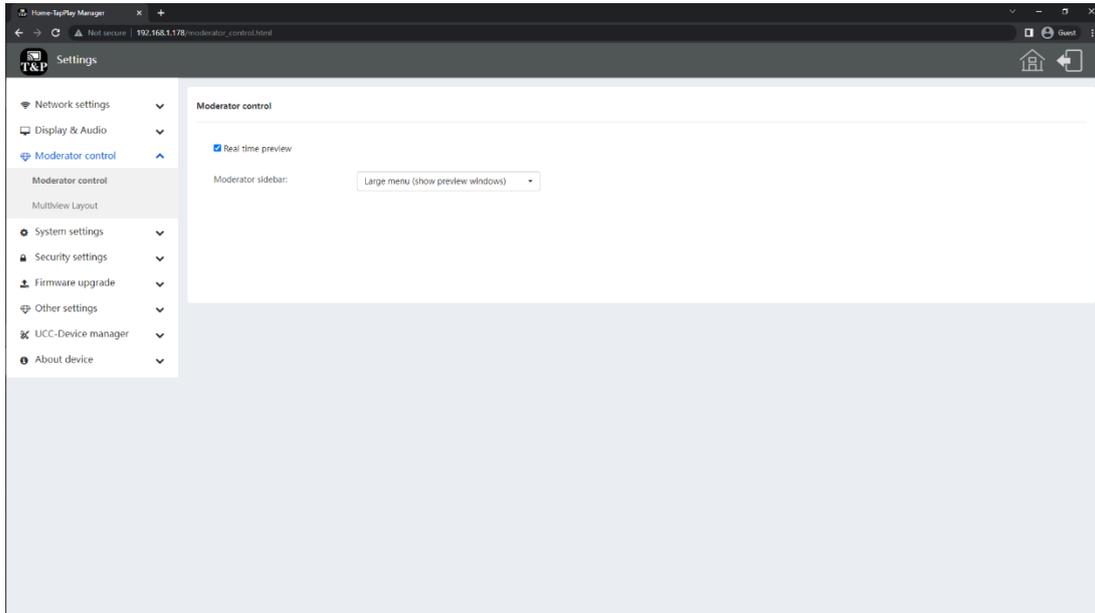
Hide the SSID information when user has changed the background image from the default one.

## 7.2.5 Home Screen background image

When powering up the base unit, the home screen will be displayed. User can change the background picture in this option. The format can be jpg, bmp, png or gif with resolution 1920x1080P)



## 7.3 Moderator control



### Moderator sidebar:

Hide side bar completely (including arrow) – Hide the preview side bar completely.

Small menu (no preview windows) – Show the preview side bar without preview windows.

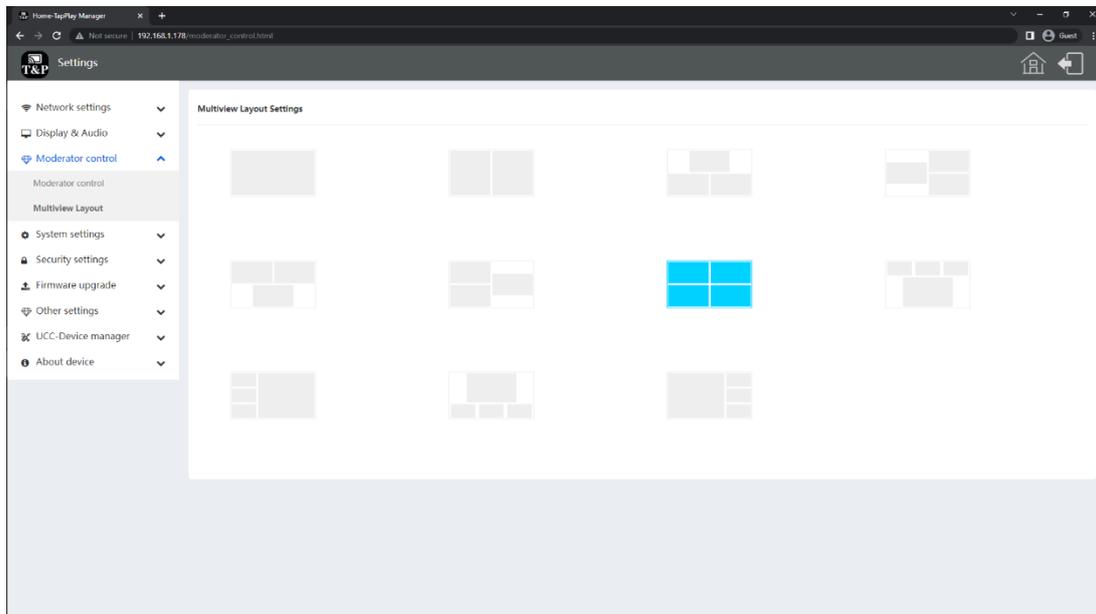
Large menu (show preview windows) – Show the preview side bar.

### Real time preview:

By ticking the option, the preview window will show real time preview. If unticked, the preview window will only show a static picture indicating the type of the device.

## Multiview Layout:

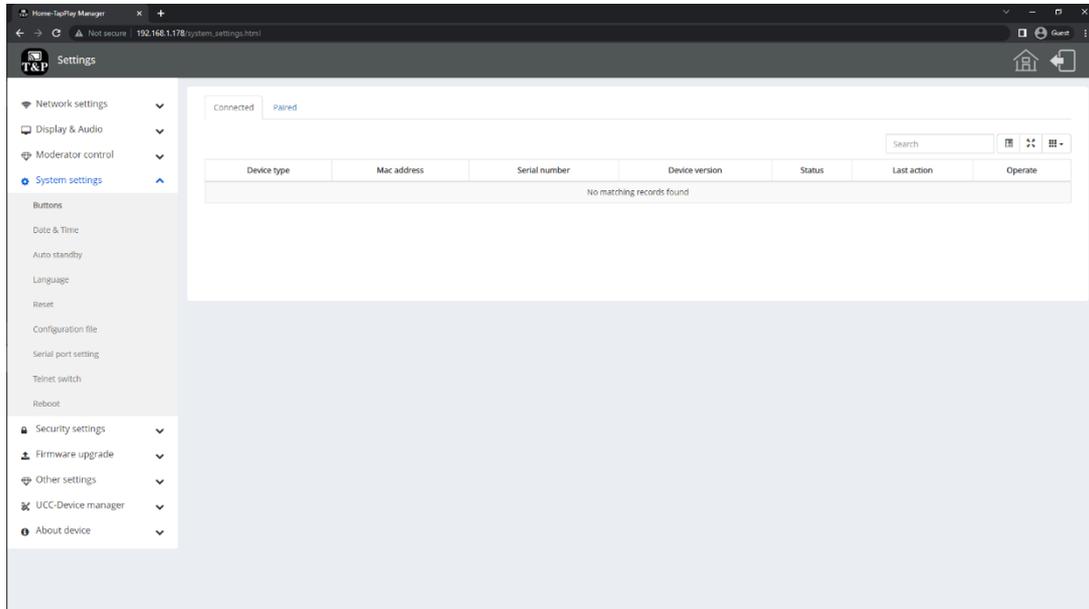
Choose from preset layouts for displaying the shared windows on screen.



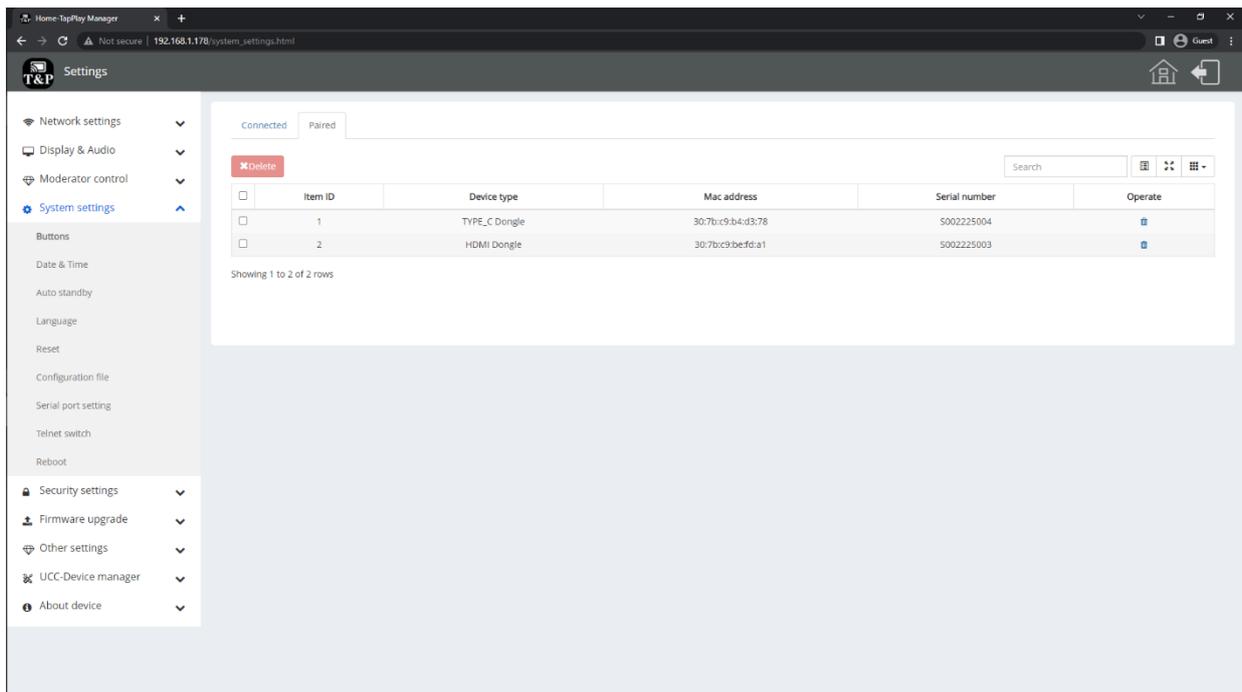
## 7.4 System settings

### 7.4.1 Buttons:

Show Device name, MAC Address, Serial Number, Device Version, Device Status, Last Action and Item Operate of the connected devices.

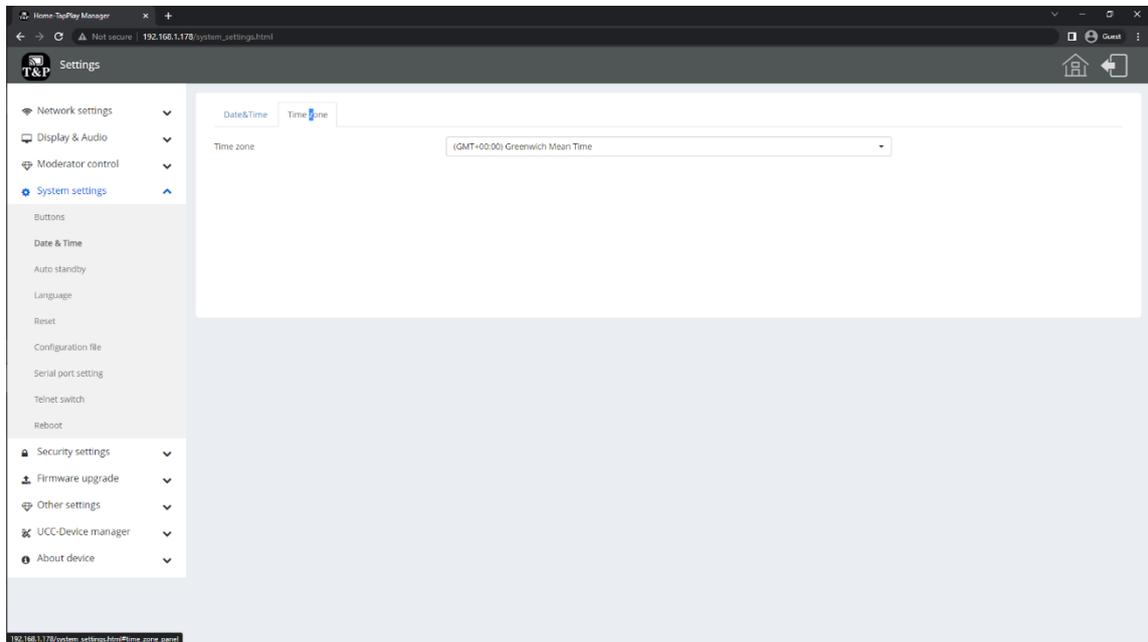
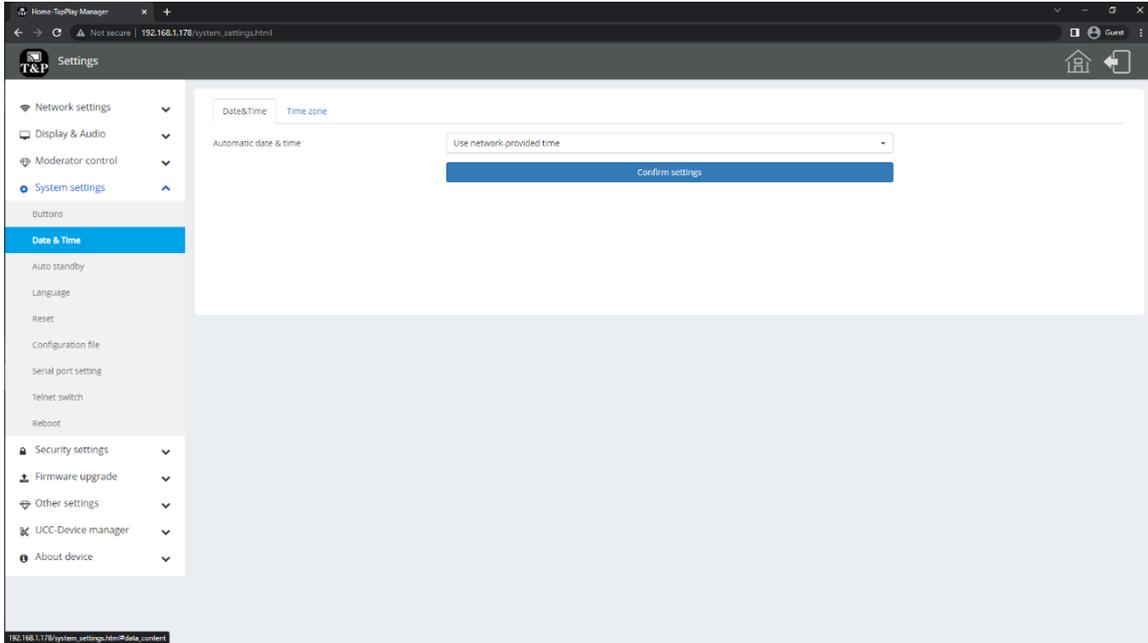


**Paired:** Show properties of the connected dongles.



## 7.4.2 Date & Time

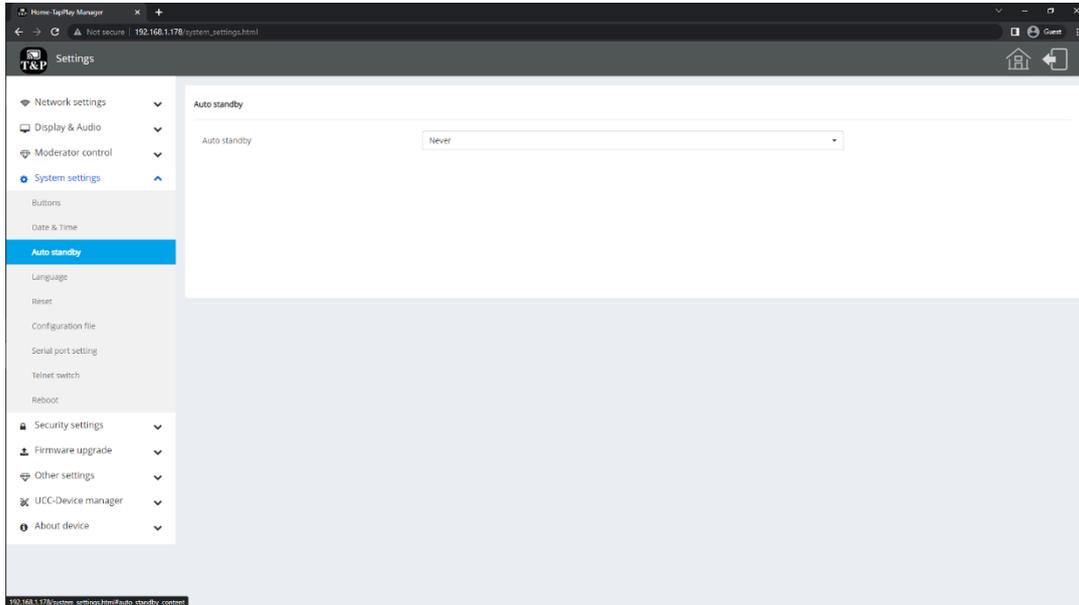
- **Automatic date & time:** Use an NTP time server to provide time as system time.
- **Set date:** Manually enter the date.
- **Set time:** Manually enter the time. The setting will not be saved after the power is off.
- **Time zone:** Enter the time zone.



### 7.4.3 Auto standby

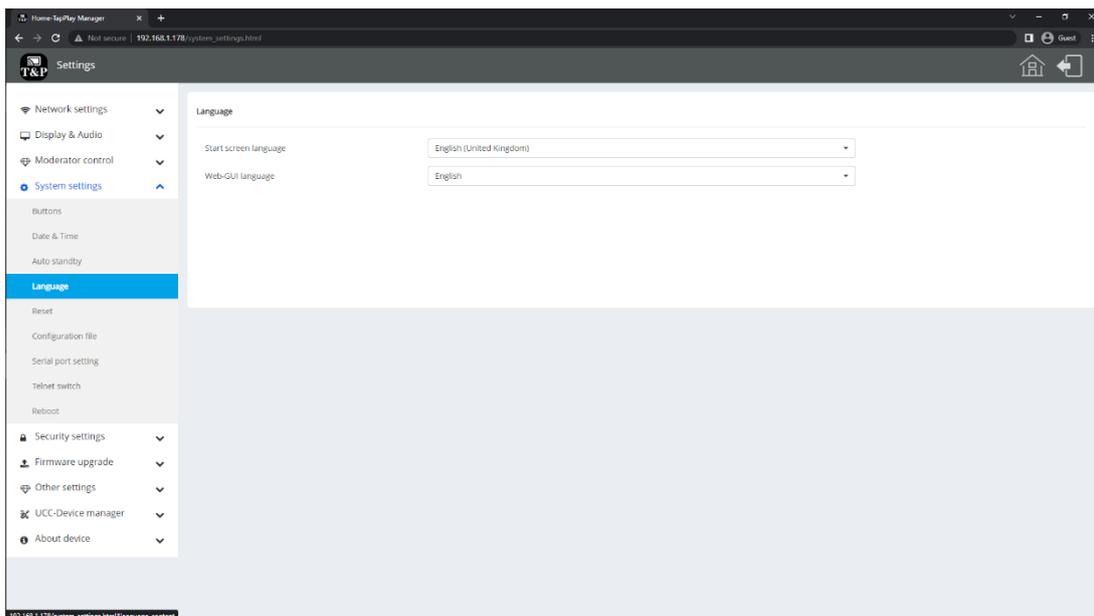
If the auto standby mode is activated, the base unit will automatically switch to power saving mode after a given time. The time is selectable from **Never** to **30 minutes**.

In standby mode, the green LED on the top of the base unit will flash and the HDMI output will be switched off. When a dongle or any device is connected, the base unit will leave the standby mode. Moving of mouse or touch screen connected to the base unit will also terminate the standby mode.



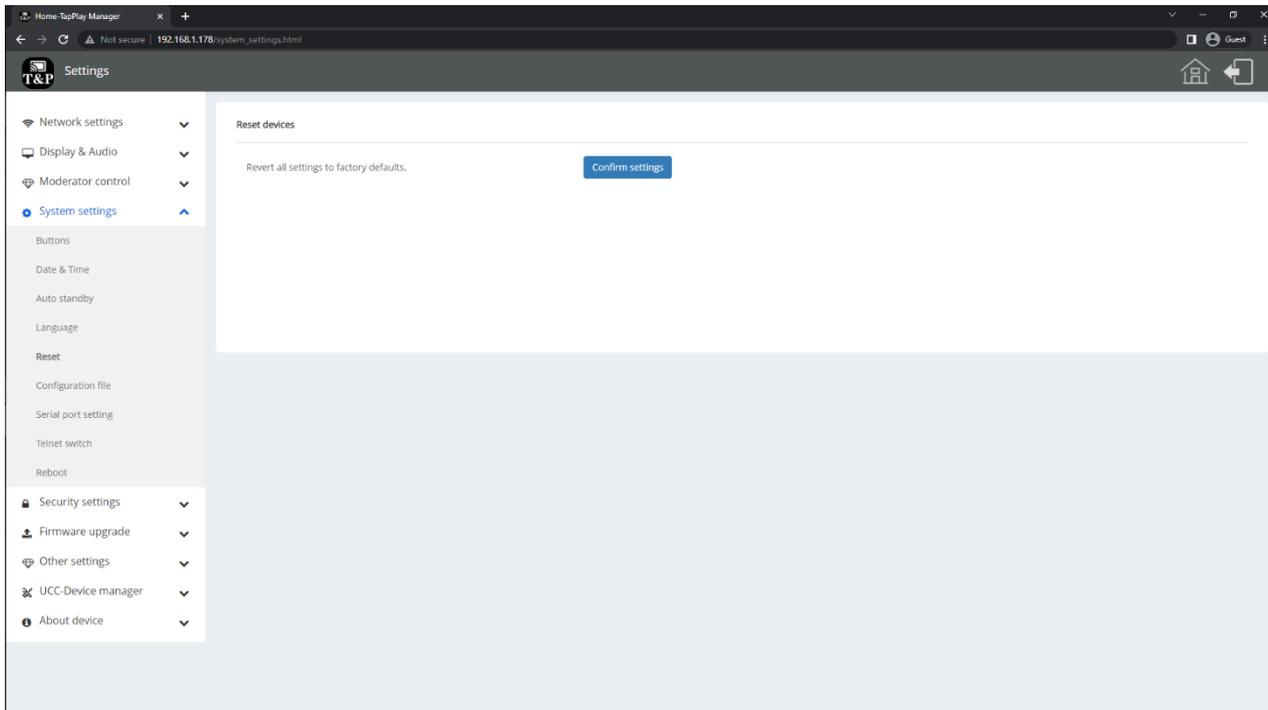
### 7.4.4 Language

Select the display language for the home screen and WebUI.



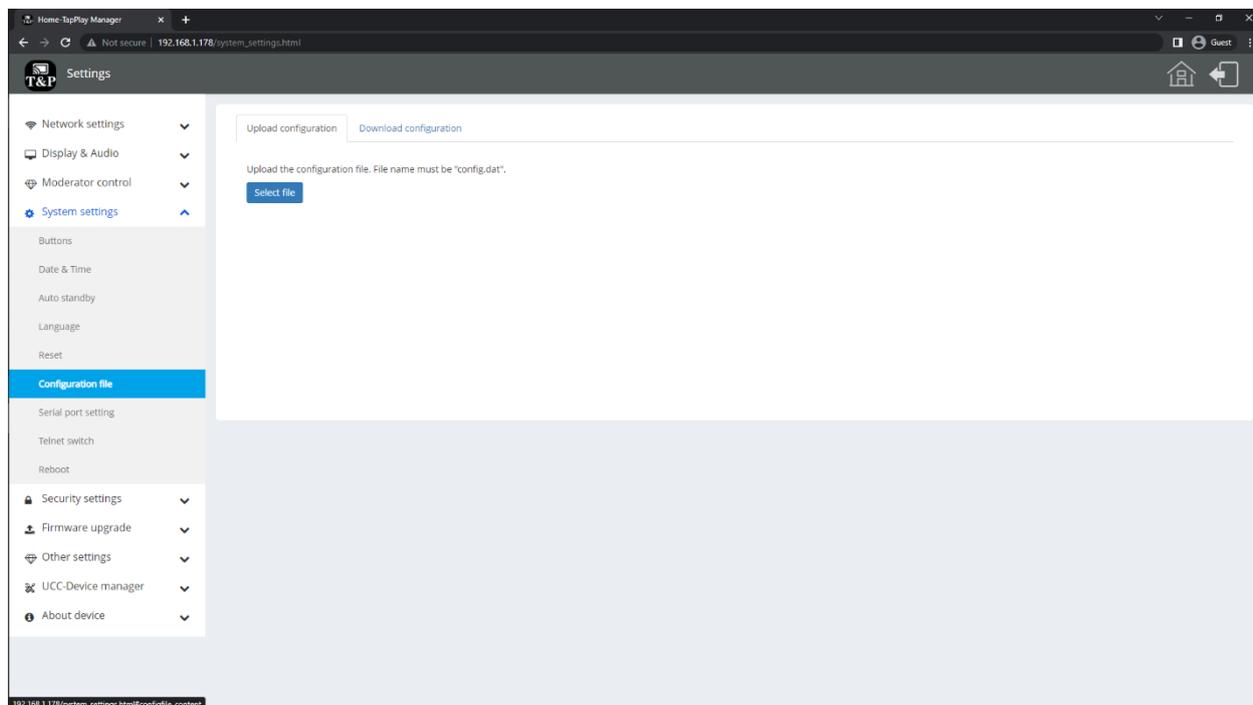
## 7.4.5 Reset

Reset the base unit.



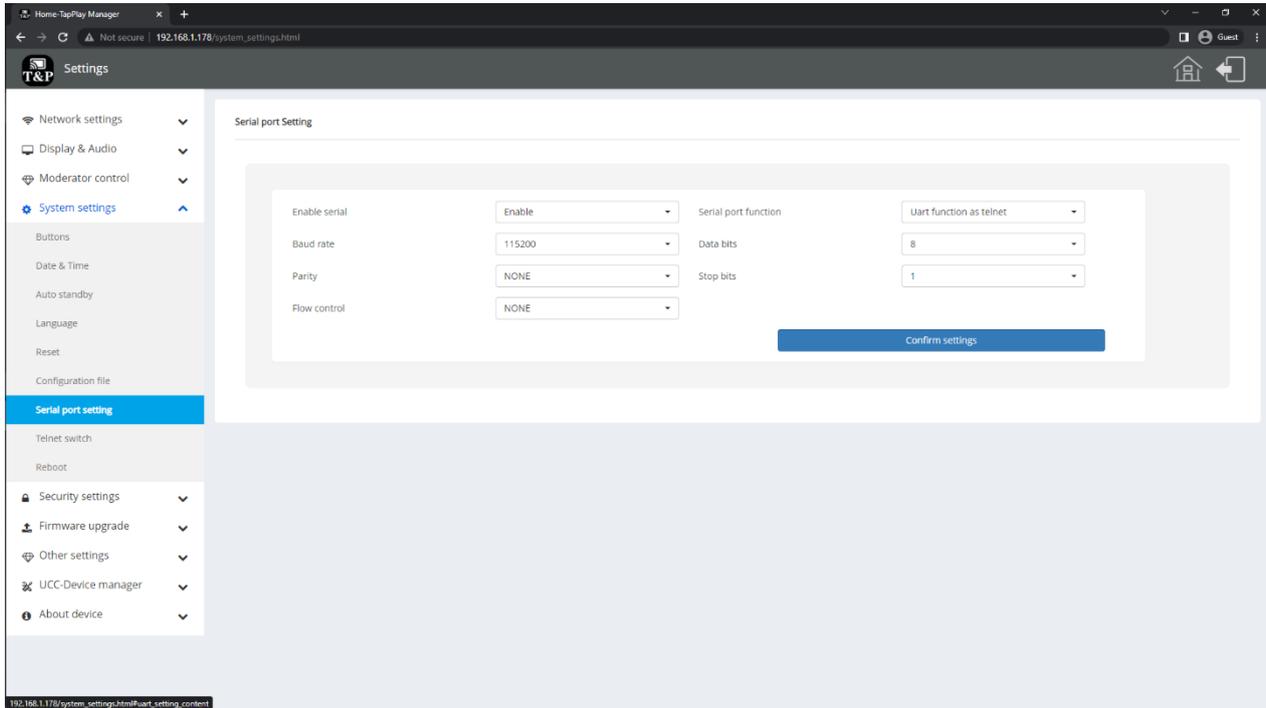
## 7.4.6 Configuration File

Configuration file is a packaged file which contains all the configuration for the base unit, which can be downloaded and uploaded to another device which needs to have the same configuration.



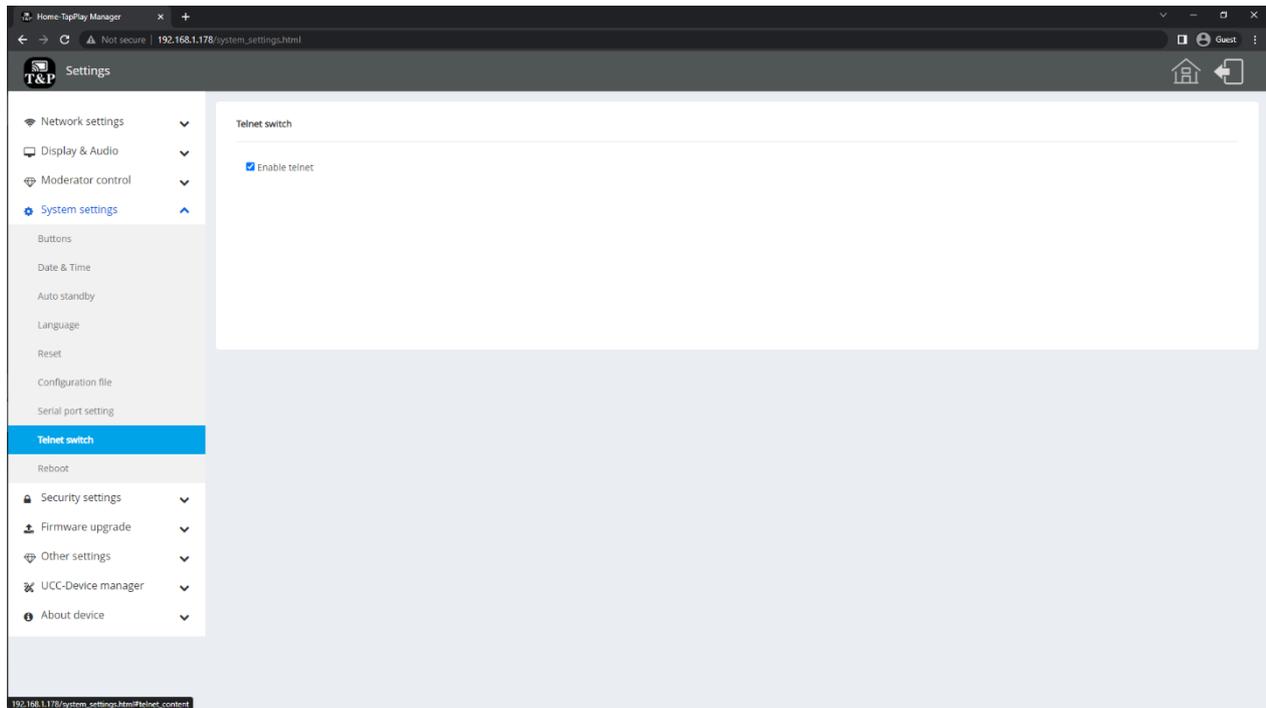
## 7.4.7 Series Port Setting

Configure telnet command and RS-232 command.



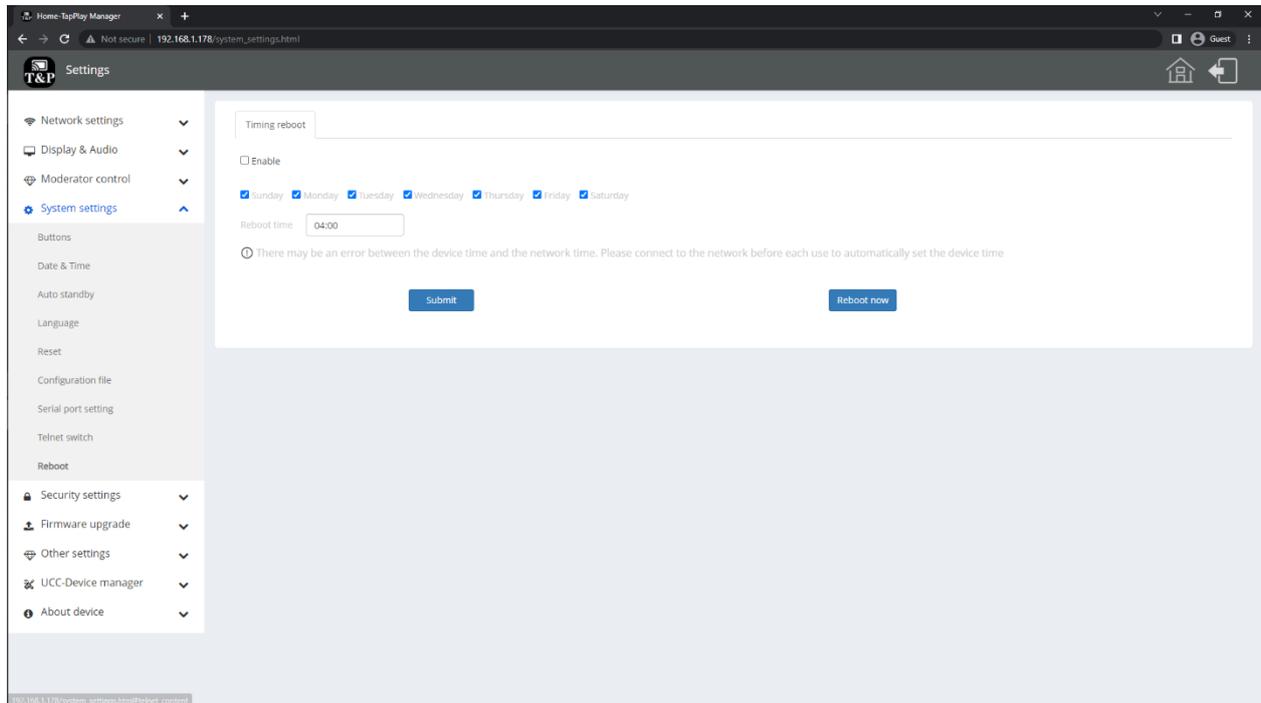
## 7.4.8 Telnet switch

Switch the telnet function ON or OFF.



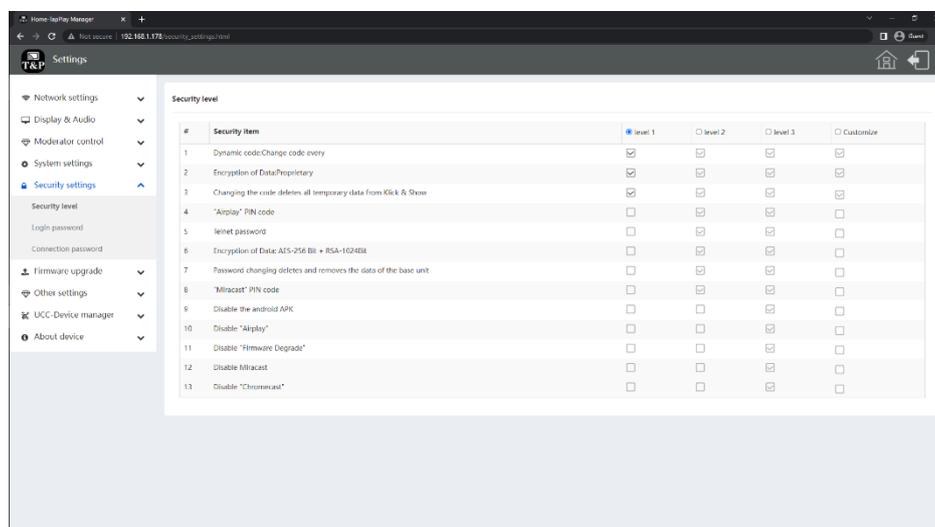
## 7.4.9 Reboot

User can set up timing reboot for the base unit.



## 7.5 Security Settings

### 7.5.1 Security level



Based on user requirements, **three different security levels** can be set to satisfy different requirements according to different security environments or security policies. There is also a customised security level for the users to set their own.

The default setting is level 1.

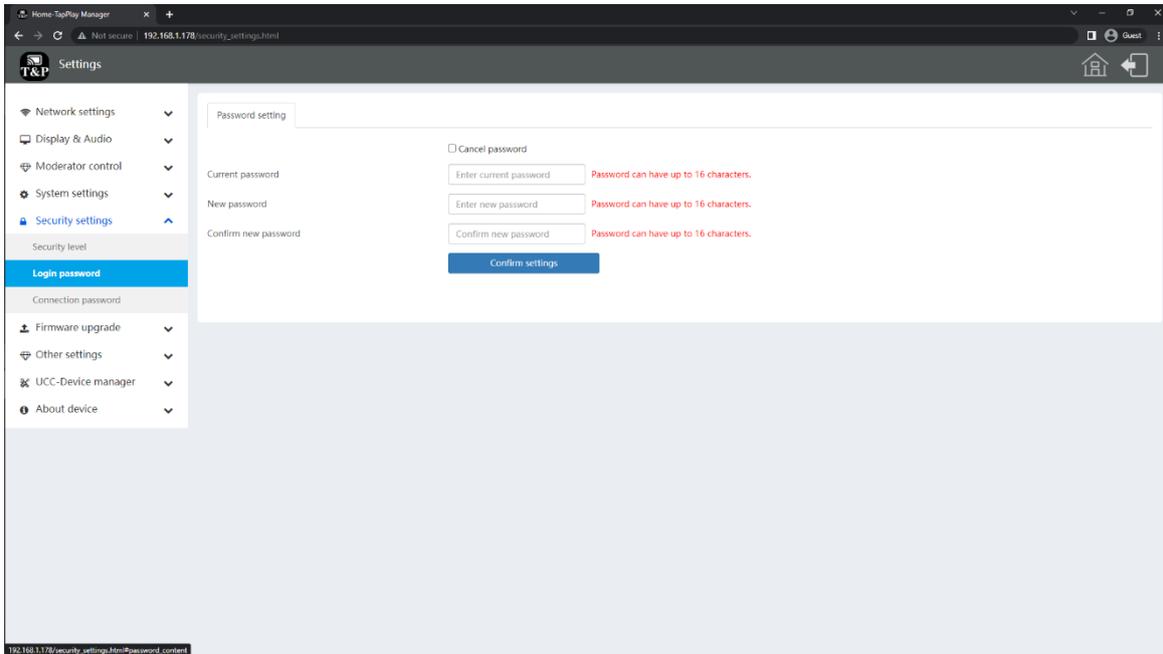
**Level 1:** Normal safety. It keeps the security in normal and daily usage for any situation, such as classroom and regular meeting room.

**Level 2:** High security. It provides increased security for companies, organisations, government agencies, etc., through powerful encryption of audio and video data. It also contains other security features such as limiting the transmission of Airplay by the requirement of entering a password.

**Level 3:** It is used for strict security requirements of companies, organisations, authorities, and banks. This level contains all the previous security settings. In addition, all mobile applications, such as the Android application as well as Airplay are blocked. It also forbids the degrading of the firmware of the base unit under this security level.

## 7.5.2 Login Password

Change admin password for WebUI. The default password after reset is 'admin'.

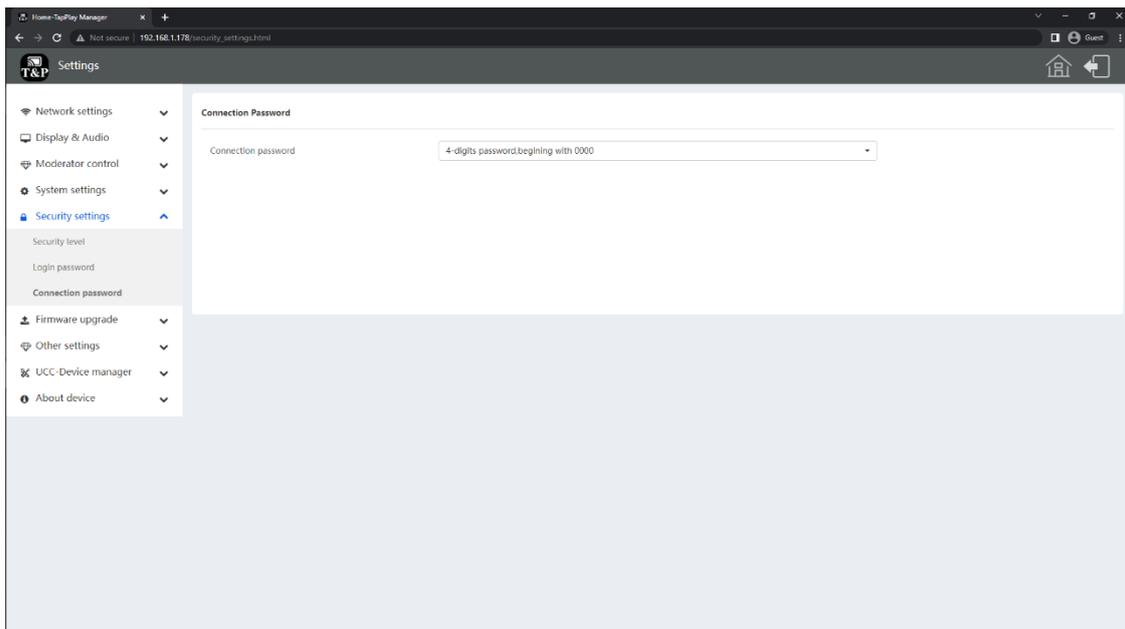


## 7.5.3 Connection password

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

**4-digits password:** beginning with 0000

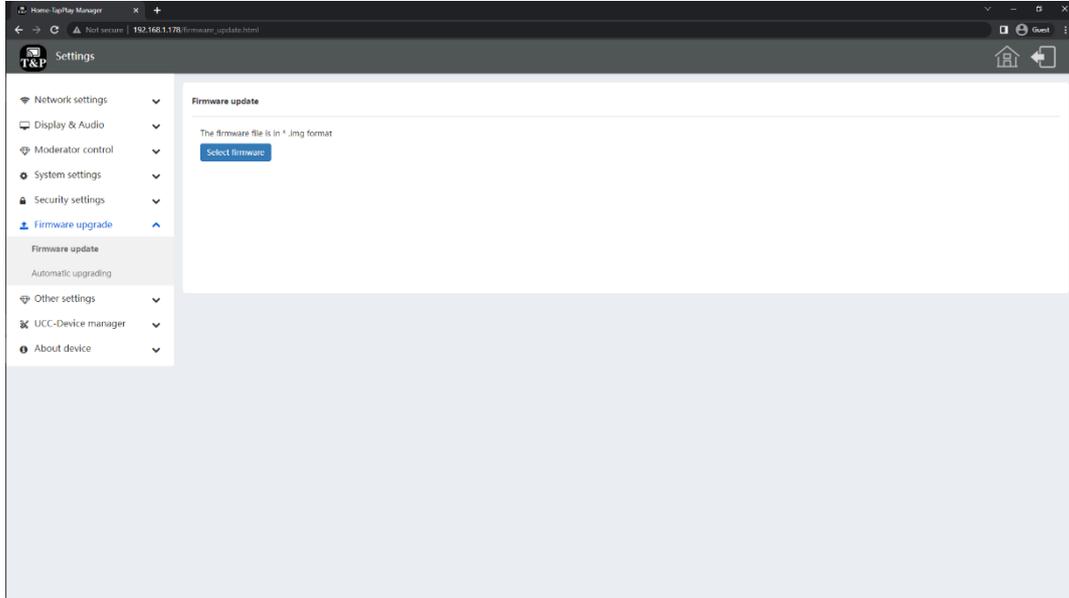
**8-digits password**



## 7.6 Firmware upgrade

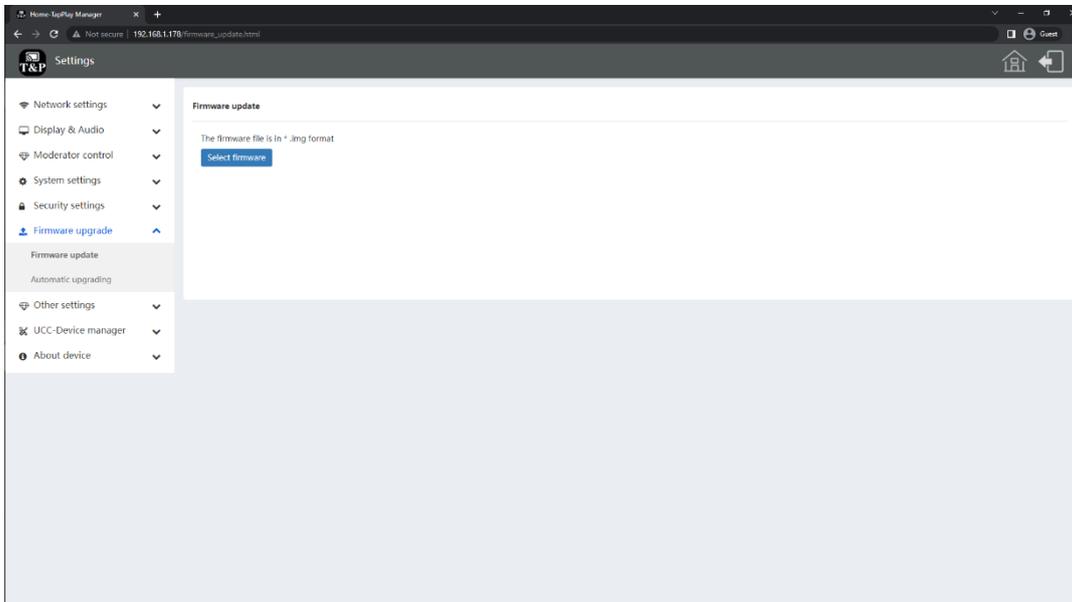
### 7.6.1 Firmware Update

To upgrade the firmware of the base unit.



### 7.6.2 Automatic Upgrading

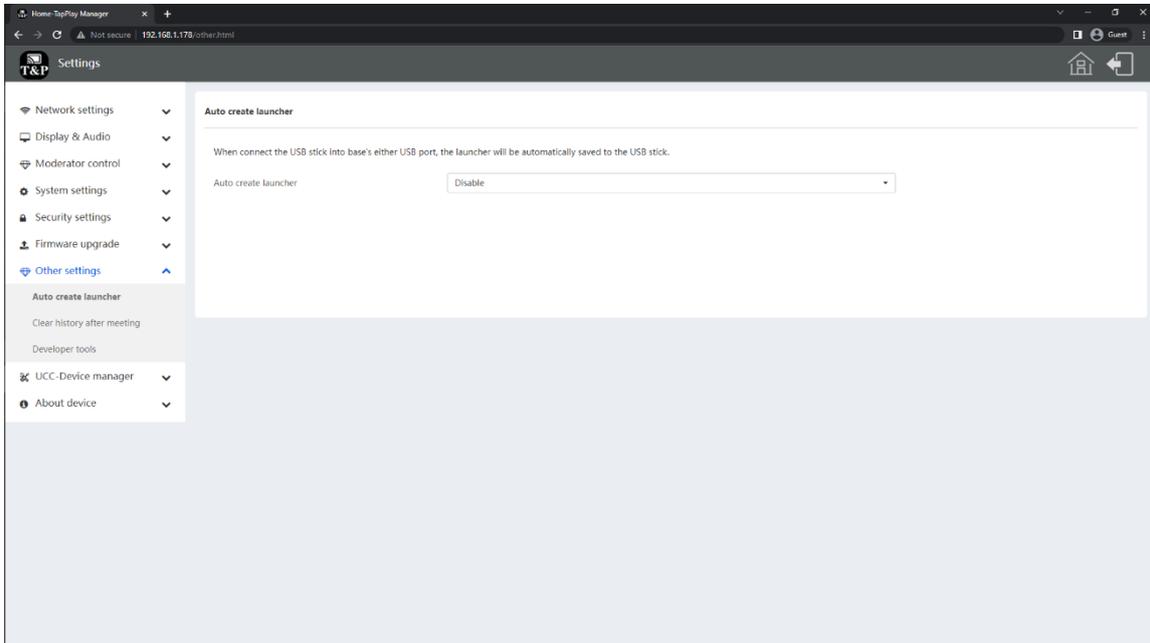
Tick to choose upgrading from OTA via Internet or from local files.



## 7.7 Other settings

### 7.7.1 Auto create launcher

When this function is enabled, if a USB stick is plugged into one of the USB ports of the base unit, all the application will be automatically copied into the USB stick.



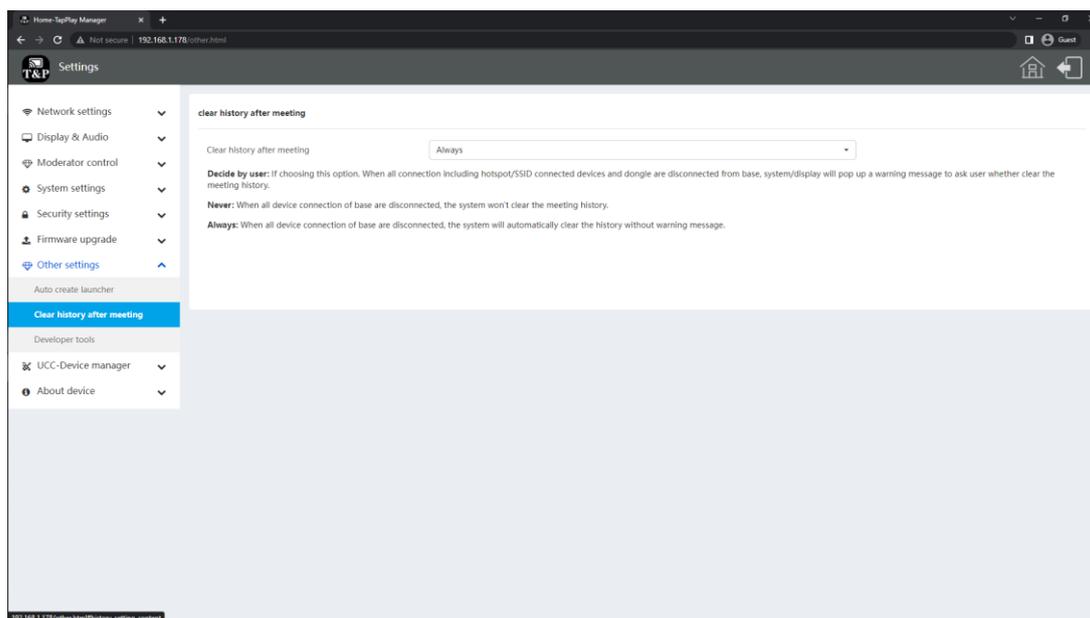
### 7.7.2 Clear history after meeting

Pictures, videos, and music of the connected devices will be stored in the storage of the base unit. This storage can optionally be erased when the device is disconnected.

**Decide by User:** When all devices and dongle are disconnected from the base unit, a window will pop up on the display to ask whether to clear the meeting history.

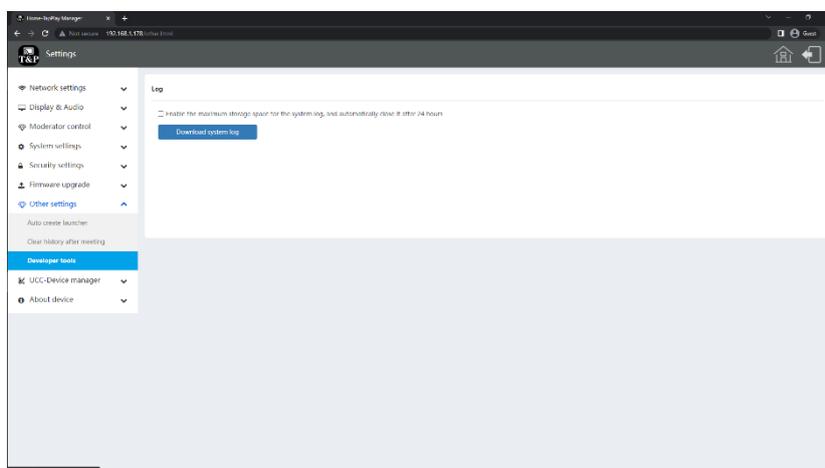
**Never:** The system will never clear the meeting history.

**Always (Default):** When all devices are disconnected from the base unit, the system will automatically clear the history without any warning message.



### 7.7.3 Developer tools

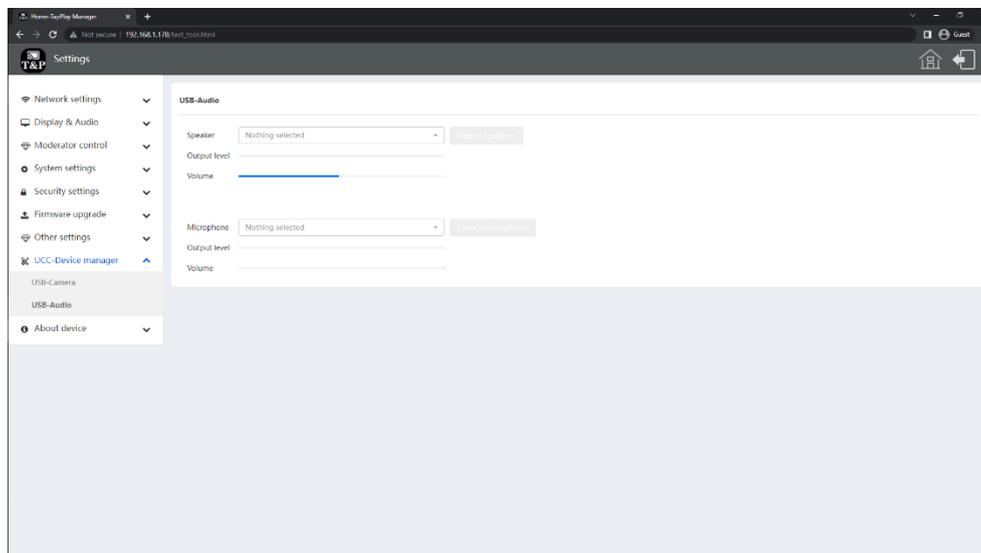
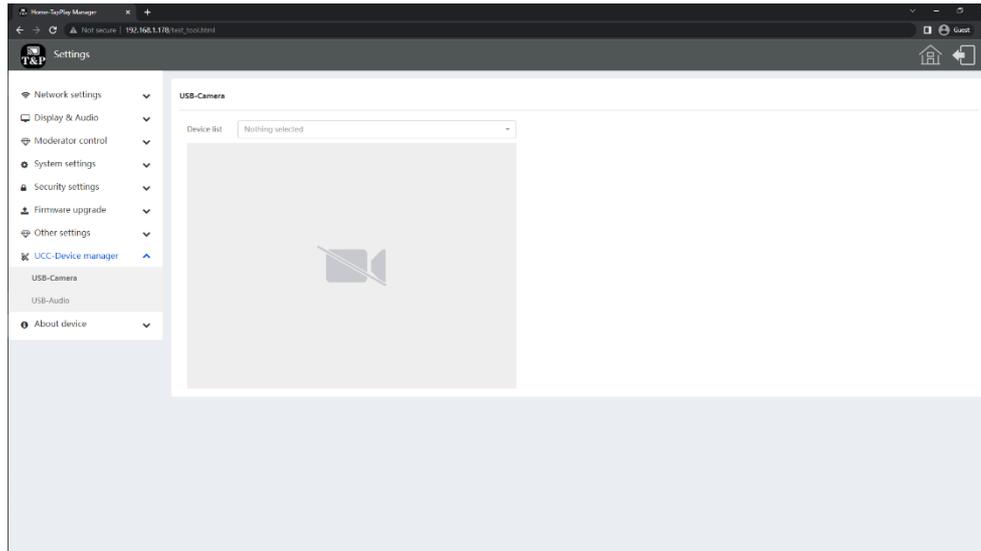
Download the latest system log.



## 7.8 UCC-Device manager

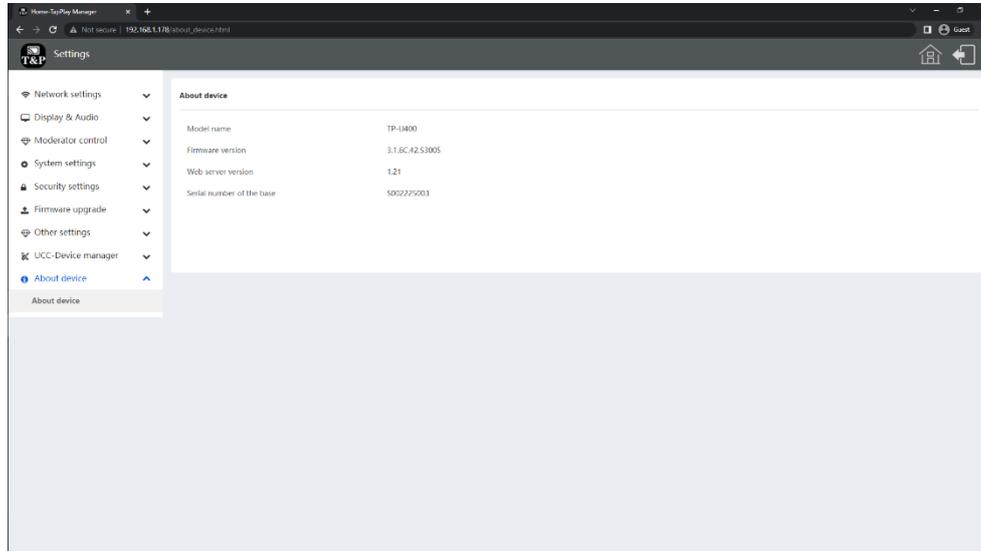
**USB-Camera:** When there are multiple USB cameras connected to the base unit for virtual meeting purpose, user can choose from the list which camera is activated.

**USB-Audio:** When there are multiple speakers/microphones connected to the base unit for virtual meeting purpose, user can choose from the list which speaker/microphone is activated.



## 7.9 About device

Check the firmware version of the base unit and WEBUI.



## 8. Troubleshooting

Below are some fundamental issues that might happen and possible causes and solutions.

Problem	Cause	Solution
Use “TapPlay-Android” application in Android device or Airplay on IOS device, and it can’t find base unit device.	Wi-Fi password of base unit changed when android or IOS device is connected to the Wi-Fi of base unit.	Reconnect the mobile device by entering password showed on home screen.
The image quality on the main display screen is not good.	The quality or length of the cable between base unit and the display or the connection between these two.	<ul style="list-style-type: none"> <li>● Replace the cable</li> <li>● Check if the cable fastens</li> </ul>
	<p>Improper resolution for the main screen.</p> <p>TP-U400 and TP-W200 can output 3840x2160_60Hz, 3840x2160_50Hz, 3840x2160_30Hz, 1920x1080_60Hz, 1920x1080_50Hz, 1920x1080_30Hz</p>	<ul style="list-style-type: none"> <li>● Change the resolution on the WebUI. And match it to the native resolution of the main screen.</li> </ul>
Bad wireless connection. The connection between the dongle/PC/Mac/Mobile devices and the base unit is not stable.	<p>Wi-Fi problems.</p> <ul style="list-style-type: none"> <li>● Interference in the radio channel.</li> <li>● Overload in the radio channel.</li> </ul>	<ul style="list-style-type: none"> <li>● Use a Wi-Fi scanner to find a free wireless frequency and channel and select it via the WebUI.</li> </ul>
	<p>Low signal strength:</p> <ul style="list-style-type: none"> <li>● Metal cabinets, walls and construction elements can cause reflections which deteriorates the wireless signal.</li> <li>● Obstacles between dongles and base unit cause decrement of the wireless strength and quality.</li> </ul>	<ul style="list-style-type: none"> <li>● Move the base unit closer to the main screen.</li> <li>● Change the orientation of the antennas at the rear panel of base unit to the dongle/PC/Mac/Mobile device direction.</li> <li>● Do not place the base unit in (metal) cabinets, suspended ceilings, under tables or in adjoining rooms.</li> </ul>
Can’t get the TapPlay application run when plugging the dongles to PC/Mac	<ul style="list-style-type: none"> <li>● When using the application for the first time, the application has to be run manually once.</li> </ul>	Re-download the application <b>via LAN or Wi-Fi of the base unit</b> and run it.

	<ul style="list-style-type: none"> <li>● Bad connection at USB port on the PC/Mac</li> </ul>	<ul style="list-style-type: none"> <li>● Reconnect to the USB port</li> <li>● Try another USB port</li> <li>● Reboot the PC/Mac</li> </ul>
	<ul style="list-style-type: none"> <li>● The software might be blocked by the anti-virus software on the PC/Mac</li> </ul>	If possible, add the software to the trust list of the anti-virus software or close the anti-virus software.
Low video performance (sharpness, audio and video dropouts, video stream is jerking, ...)	<ul style="list-style-type: none"> <li>● The media-player is not ideal.</li> <li>● The video quality is dependent on the computing power of the PC/Mac and the interaction and CPU load with other running software applications.</li> <li>● A laptop in battery mode can be switched to reduced computer power, to save energy. The transmission of HD video requires a certain amount of CPU power to guarantee the optimum quality of the transmission.</li> </ul>	<ul style="list-style-type: none"> <li>● Use another media-player (VLC player...), another browser.</li> <li>● Update the software of the video player to the latest version.</li> <li>● Reduce the CPU usage of other software applications.</li> <li>● Lower the screen resolution of the PC/Mac</li> <li>● Update driver of the graphic card.</li> <li>● End low power mode on the laptop.</li> </ul>
Video is not shown on screen	The content uses HDCP	<ul style="list-style-type: none"> <li>● TP-U400 and TP-W200 input can't support HDCP sources. Connect a splitter or any other switch device between the media player and the base unit.</li> </ul>
	The HDMI cable is not correctly connected.	<ul style="list-style-type: none"> <li>● Replace the cable or reconnect the cable</li> </ul>
	The display is off.	<ul style="list-style-type: none"> <li>● Switch on the display.</li> </ul>
	The base-unit is in <b>standby</b> mode,	<ul style="list-style-type: none"> <li>● Power off and on the unit.</li> </ul>
Content disappears from the display and the LED on the dongle is blinking	Connection to the base unit is lost.	TP-U400 and TP-W200 will try to restore the connection automatically. If it fails, the LEDs on the button start blinking red. Unplug the dongle and retry.
No LAN connection with the base unit	The IP address is wrong	IP address of the connected PC/Mac is not within LAN range
		DHCP is enabled/disabled

No Wi-Fi connection between mobile device with the base unit	Wrong Wi-Fi frequency	Check mobile device to select the correct 2.4GHz or 5GHz
	Wrong SSID and password	Enter the correct SSID
There is no sound on the main screen	No connected audio device.	Make sure, the audio is turned on.
	Volume is set to OFF.	Adjust level in the WebUI
	The volume level is set too low	Adjust the volume in the application
	Audio signal may be muted.	Click with right-mouse button at speaker icon in taskbar and switch on.
	An active virus scanner can block the Audio.	Check the filter-settings in the virus scanner or close it.
	Problem of sound-flower App, which is integrated in driver of TP-U400 and TP-W200	Go to the macOS System Preferences and select the "Security & Privacy" tab. Find the "allow to run/install the sound-flower". Click "Allow" next to "Matt Ingels", in order to allow this sound-flower to install on Mac.
	The volume is set too low, on the mobile device.	Increase the volume on the mobile device.
	Due to the limit of the Android system, Android doesn't provide an interface to capture the audio. In this case, there is no sound when mirroring the video.	Use dongle or Apple Airplay to do mirroring if possible.
There is no sound with Mac.	Flash disk format is NTFS	<ul style="list-style-type: none"> <li>● Please re-format the flash disk to be FAT format.</li> </ul>
There is no sound via AirPlay.	Operation System Requirement Mac OS 10.9  IOS 8.0 and later	<ul style="list-style-type: none"> <li>● To use AirPlay, the iOS device has to be connected to the Wi-Fi of TP-U400 and TP-W200 and enable the AirPlay feature in the Control Center.</li> </ul>
Can't use the USB connected camera/speaker/microphone	The PC/Mac is not connected to the same network as the base unit	Connect the PC/Mac to the same network as the base unit.