Wizard 4
Wizard 4U

User Manual

Wireless AV & BYOD Content Sharing and Collaboration System

Wireless media presentation system supporting BYOD
for use in conferences and training rooms

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Thank you for purchasing this product

This Wizard 4 and Wizard 4U products are designed with the professional AV installers in mind. The many extensive features assist in system integration, validation and maintenance.

Installation precautions

These products have special circuitry to protect them against moderate surges and static discharges. However, to ensure reliable operation and long service life, it is important to take the necessary precautions against any spikes, surges and static discharges.

Place the Wizard unit away from heat sources and allow adequate ventilation.

Shielded cable and in particular cat6, cat6a or cat7 is highly recommended. As much as possible cables should be routed away from any noisy sources and avoiding long runs in close proximity to AC mains cables.

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The Wizard 4 and Wizard 4U are BYOD wireless/LAN presentation system designed for use where sharing and collaboration is required, such as in conferences or training rooms. Attendees can bring their own devices and connect to the Wizard device and have their image displayed. BYOD devices include Android and iPhone smart phones, and iPads.

There are two wireless wands, SY-WAND-H and SY-WAND-C, which allow wireless connections of either an HDMI source or a USB-C source as inputs to the Wizard device. These Wands must first be paired with the respective Wizard device before use.

A maximum of sixteen wireless sources can connect to the Wizard 4 or Wizard 4U but only a maximum of four can be viewed on the display, a sidebar menu allows the selection of which input signals can be displayed. The first four wireless/LAN signals that arrive are automatically assigned to the display windows and to the sidebar menu, subsequent signals are added to the sidebar menu. A mouse will be required to select the additional inputs.

Features

- Pure wireless presentation experience
- Bring Your Own Device (BYOD), no messy or unsightly cables
- Connect USB devices such as cameras, microphones, or speakers
- Fully compatible with mainstream VC platforms such as Zoom, WebEx, etc.
- Wireless content up to 1080p60
- Output HDMI 2.0 signals up to 4K60 4:4:4
- Supports native wireless mirroring protocols such as Airplay, Miracast, Chromecast
- Wireless dongles for HDMI sources and USB-C video
- PoE support on LAN port 2 only
- RS232 control
- Built-in WebGUI for configuration and moderator control

Package Contents

Wizard 4

- 1x Wizard 4
- 2x Wi-Fi antennas
- 1x 12V DC PSU
- 1x Manual

Wizard 4U

- 1x Wizard 4U
- 3x Wi-Fi antennas
- 1x 12V DC PSU
- 1x Manual

Optional Extras

• SY-WIFI-DONGLE	Dongle for Airplay (only required for Wizard 4)
• SY-WAND-H	Wand for HDMI sources, requires a USB-A power source
• SY-WAND-C	Wand for USB-C sources

Connectors and Controls

Front

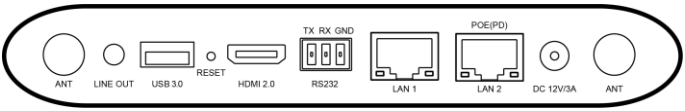
Wizard 4

Wizard 4U

Name	Description
USB 2.0	USB 2.0 port for USB devices
USB-C	USB-C port for USB-C devices
POWER	Power switch

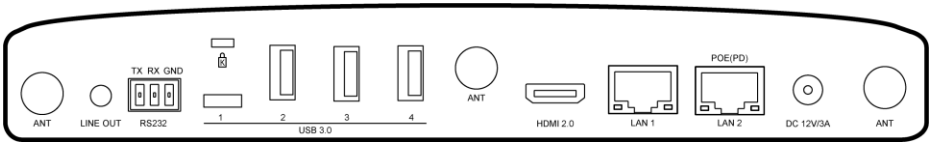
Rear

Wizard 4



Name	Description
ANT	Wi-Fi antenna connection 1
LINE OUT	Audio output
USB 3.0	USB 3.0 Type A port
RESET	Reset button (recessed)
HDMI 2.0	HDMI output to display
RS232	RS232 control port
LAN 1	LAN port 1
LAN 2	LAN port 2 with PoE support
DC 12V/3A	PSU input
ANT	Wi-Fi antenna connection 2

Wizard 4U



Name	Description
ANT	Wi-Fi antenna connection 1
LINE OUT	Audio output
RS232	RS232 control port
K	Slot for Kensington lock
USB 3.0 Port 1	USB 3.0 Type C port
USB 3.0 Ports 2~4	USB 3.0 Type A ports
ANT	Wi-Fi antenna connection 2
HDMI 2.0	HDMI output to display
LAN 1	LAN port 1
LAN 2	LAN port 2 with PoE support
DC 12V/3A	PSU input
ANT	Wi-Fi antenna connection 3

Top SY Decal

On the top of the Wizard 4 and the Wizard 4U is an SY decal that lights with different colours depending on the status of the unit:

Decal Colour	Description – The Wizard device is:
Off	Not powered
Flashing Red	Booting after being powered up
Solid Red	In standby mode, press the POWER button to activate the Wizard unit
Green	Not connected to any input source
Blue	Connected to at least one input source

Using this Product

Required Connections

1. Connect a display device to the HDMI output.
2. Attach the antennas to the rear of the Wizard unit.
3. Connect the 12V DC PSU to the PSU input port.

Optional Connections

1. Connect a LAN cable to either or both the LAN ports.
2. Connect an RS232 cable to the 3-way RS232 connector.
3. Connect a 3.5mm stereo jack connector to the audio output.
4. Attach any USB devices, such as a mouse to access to the on-screen menu system.

Additional Options

SY Wands

SY-WAND-H HDMI wireless wand to connect an HDMI source to the Wizard device. A USB port is required to power the SY-WAND-H.

SY-WAND-C USB-C wireless wand to connect a USB-C video source to the Wizard device. Power is taken from the USB-C output port.

Pairing the Wizard with a Wand

To use either of these Wands, it must first be paired with the same Wizard device it is being used with. To perform the Wand pairing do the following:

1. Plug the SY-WAND-H into the USB-A port, or the SY-WAND-C into the USB-C port on the front of the Wizard device.
2. Wait for the pairing process to complete and then unplug the wand and connect it to the source device. The SY-WAND-H requires a separate USB-A port to act as its power supply source.
3. Wait for the indicator on the Wand to stop flashing and then touch the centre of the Wand to begin sending the video to the Wizard device.

Once paired, the Wand will always connect to the same Wizard device. Pairing will need to be repeated should the same Wand need to work with a different Wizard device.

Wand Light Colours

The SY-WANDs display a colour bar to indicate its current operating status:

Colour	Description
Flashing Green	Wand is finding the Wizard device it was last paired with.
Steady Green	Wand is ready to begin sharing.
Steady Red	Wand is sharing with the paired Wizard device.

The Home Screen

The Home screen is always displayed when there are no input sources, or when all active input sources have been stopped from the sidebar menu or by a control command.

The Home screen provides the following information:

- The device ID: Wizard 4 or Wizard 4U. This can be changed using the built-in web interface (see **Network settings**
- **Wireless Settings**).
- The current password for BYOD sources, this may change depending on the setting of the 'Auto change password' option in the 'Network setting' tab of the built-in WebGUI.
- The three circled icons have the following meanings:
  - The tick icon has a number that shows the current security level. Click the icon to display a screen showing the security level settings. Use **Security settings**
  - **Security Level** from the WebGUI to change the security level.
  - The middle icon requires the presence of a USB memory device to save or the current settings of the Wizard device. Any previously saved configuration file can be reloaded to configure the Wizard device.
  - The i icon toggles the display mode of the top info bar. The bottom info bar is always on.
- The current time – Configured on the 'Date & Time' settings in the 'System Settings' tab of the built-in WebGUI.
- The upper half of the middle section shows how to connect casting devices to the Wizard.
  - For the SY Cast, use your Android mobile to scan the QR code and install the SY Cast app. Start the SY Cast App to wirelessly connect your mobile to the Wizard unit.
- The lower half of the middle section shows how to connect laptops and PCs to the Wizard using one of the two SY Wands.
- The bottom shows the WiFi IP address of the Wizard unit and the LAN IP address for LAN port 1 and LAN port 2 respectively. N/A indicates that the IP address for that port is Not Available. The Lan IP addresses will be different if DHCP is enabled.

On-Screen Drawing and Whiteboard Modes

The Wizard 4 and Wizard 4U both have two distinct drawing modes:

1. Whiteboard mode - A plain background is displayed (white by default)
2. On-Screen drawing - The video is displayed as the background

Both these modes require a mouse or touchscreen that must be connected to any USB port on the Wizard unit. Drawing is done by moving the mouse while the left button is pressed, or by drawing directly on the touchscreen surface.

Click on one of the following icons from the bottom menu of the Wizard sidebar to select the desired mode:

Enable whiteboard drawing mode.

Enable on-screen drawing mode.

With either mode active, use the mouse or touchscreen to draw on the display, change the pen colour, change from lines to shapes, erase portions of the drawing, or save the drawing to the internal memory of the Wizard device – note that this memory is lost when the Wizard unit is powered down.

Drawing Mode Icons

The selected drawing mode will show either one toolbar or three toolbars. In each case some or all of the following icons will be present:

Icon	Description
	Add a new page in whiteboard mode
	Delete the current whiteboard page
	Page Selection in whiteboard mode
	Undo
	Redo
	Erase parts of the drawing, use a longer left button click to increase the pen size
	Erase the entire drawing
	Set the pen colour and size – another menu appears with the pen colour and size options
	Draw geometric shapes – another menu allows selection of the desired shape
	Select background colour – any drawing will be kept
	Save the current drawing to local storage
	Exit drawing mode and return to normal operating mode
	File options – see below Only available in whiteboard mode

File Options Menu

The file options menu has the following items on it:

Open	Open a previously saved drawing file from local memory and display it
New Project	Create a new project
Save as	Save a WMN file in local storage
Import from U-disk	Load a stored project from a USB memory device
Save as PDF	Save the current drawing as a PDF file
Clear History	Delete all whiteboard and annotation files from local storage

The file options access the internal local memory of the Wizard device – note that anything saved to this memory will be lost when the Wizard unit is powered down. To access the files, either scan the QR code with your mobile's camera or enter the given IP address in a web browser. The downloaded image files will be in PNG image format.

Streaming from PC, Laptop, or Android

Use the Built-In Web Interface to download the SY Cast app appropriate to your OS.

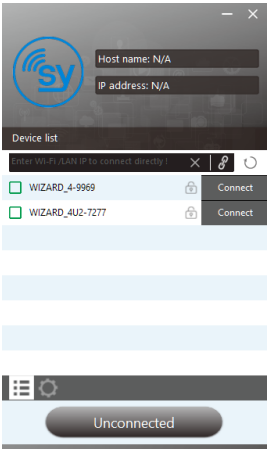
Run the downloaded app to install SY Cast on your computer system. This will also install three drivers – **Virtual Meeting Camera**, **Virtual Meeting Audio** and **Virtual Meeting Microphone**. These can be used with any Meeting software, such as Zoom.

The SY Cast app will create an additional video display to allow streaming to the Wizard device using either WiFi or LAN connections. This will allow you to continue using your primary display or displays. This additional display is only visible to the Wizard device but any type of content can be moved to this display as required.

The IP addresses shown in this section are examples only, the IP of your Wizard device will always be shown on your PC.

Open the SY Cast app from the SY Cast icon:

The app will then search for and list all Wizard devices that are visible to the PC, laptop, or Android device:

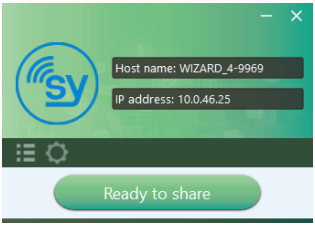


Click the Connect button to the right of the Wizard device and the password enter window will appear:

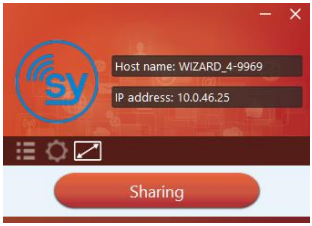
Enter the eight-digit password as displayed on the Home page of the Wizard unit, including any leading zeros. Click OK to complete the connection.

If you are prompted to download a newer version of the SY Cast app, use the Built-In Web Interface to obtain the latest version appropriate to your computer system.

Once connected, the following screen will appear:



When ready to being sharing your screen, click on the Ready to share button. The screen will now change to:

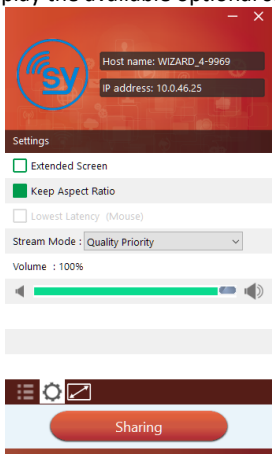


Click the **Sharing** button to stop sharing with the Wizard unit.
Above the Sharing button is a row of icons:

	Display a list of detected Wizard devices
	Settings – see below
	Toggle between split screen and full screen.
	Select Camera

Settings

Selecting the settings icon will display the available optional settings:



Any active item is indicated by a filled green box.

The following table describes each option:

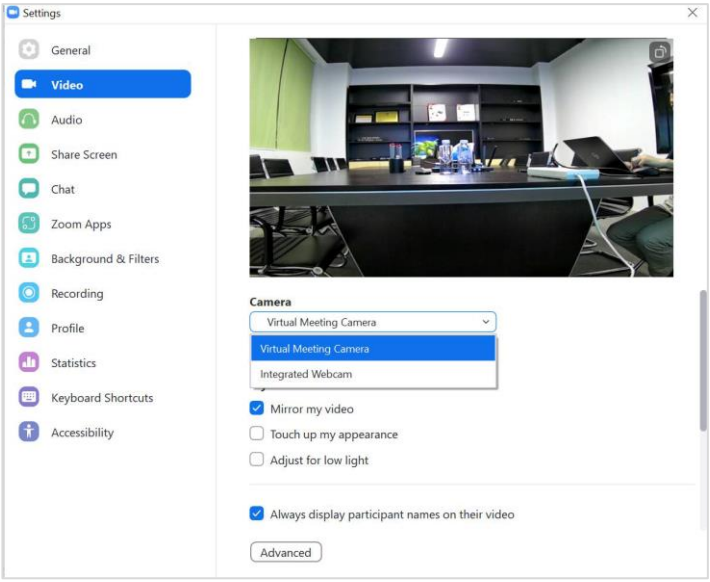
Setting	Default State	Description
Extended Screen	Off	Toggle between streaming the secondary (desktop extend) or primary display
Keep Aspect Ratio	On	Toggle between maintaining the aspect ratio of the streamed display or stretching the image to fit.
Lowest Latency (mouse)	On	Change the mouse latency, lowest when enabled.
Stream Mode	Quality Priority	Select between Fluency Priority and Quality Priority. This setting will depend on the quality of the network connection.
Volume	100%	Set the output volume level for any sounds sent from the computer.

Click the button in the top right corner to close the SY Cast app. A confirmation box will appear, click the Yes button to end the session.

Setting Up a Meeting Camera – Wizard 4U Only

The following can only be done on the Wizard 4U, the Wizard 4 does not support this feature. A WebCam is required for this feature to function. A separate microphone may also be required.

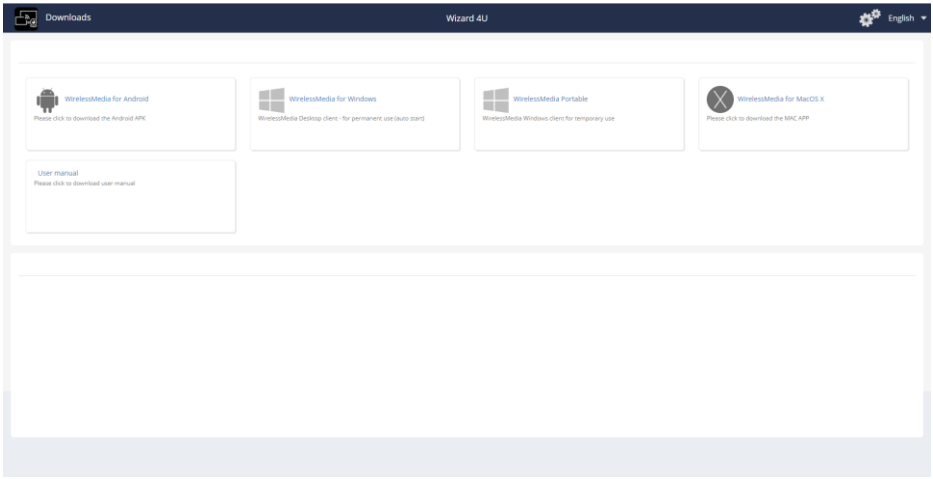
1. Use any SY-WAND to wirelessly connect the laptop or PC to the Wizard 4U.
2. Launch a virtual meeting application, such as Zoom, from the laptop or PC desktop.
3. In the virtual meeting application, navigate to **Settings** → **Video** → **Camera** → **Meeting Camera**, see the image on the next page.
4. Select the **Virtual Meeting Camera** option for the **Camera**.
5. In the **Audio** section, select **Meeting Audio** for both the **Speaker** and **Microphone**.



Setting the Virtual Meeting Camera in Zoom

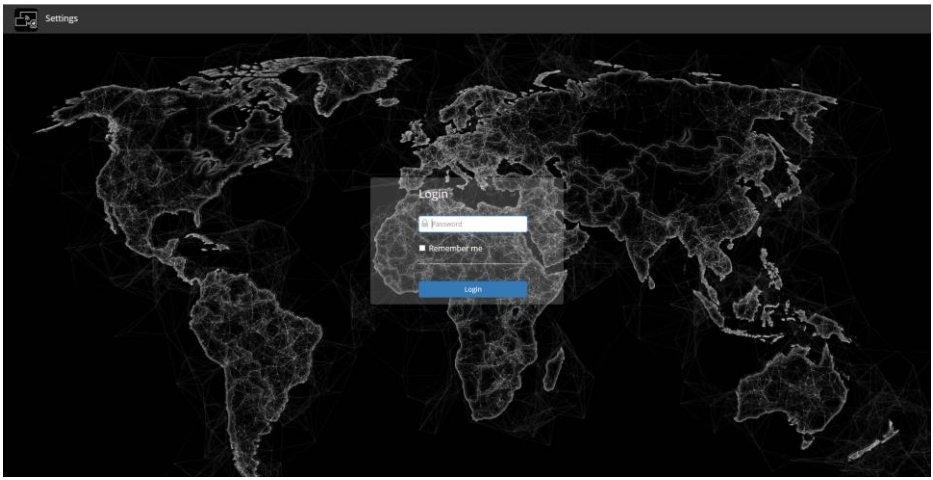
Built-In Web Interface

The Wizard 4 and Wizard 4U devices have a built-in Web GUI interface for changing the settings and configuration of the Wizard unit. Use the Home screen to get the IP address for the LAN port you wish to use and the download page will appear after entering the IP address in a web browser address bar:



This page provides several buttons to download the Wizard streaming software package for various platforms and for accessing the User Manual.

To access the configurations settings pages, click on the twin gear icon at the top right and the login page will appear:

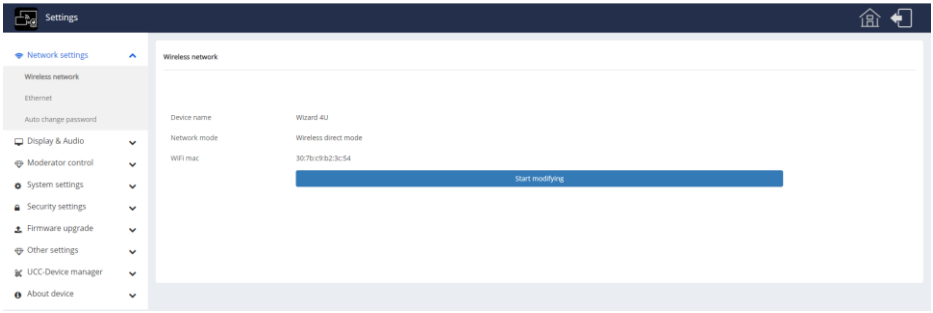


Enter the current network password and click the Login button.

The default login password is: **admin**.

Settings Page

After entering the password the Settings page will appear with the Network settings tab already opened to the Wireless network section.



The sidebar menu selects the respective settings page, each detailed in the following sections. Any settings already in progress will not be lost if a different page is selected.

Navigation Icons

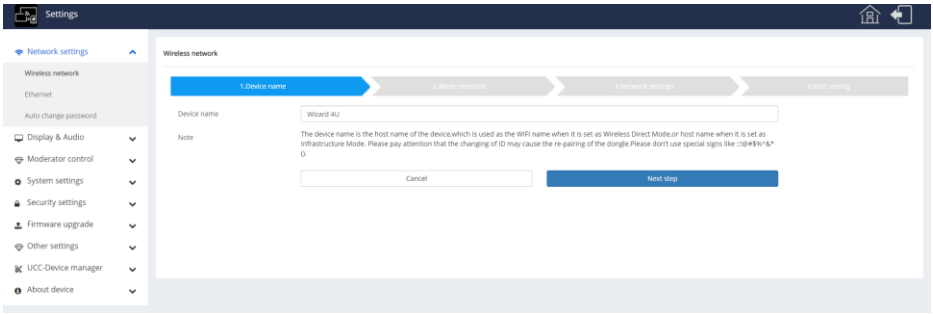
The two icons on the right of the top bar are:
Home – Return to the Downloads page, select the twin gears to return to the above Network settings page.
Logout – Return to the login page.

Network settings

Wireless Settings

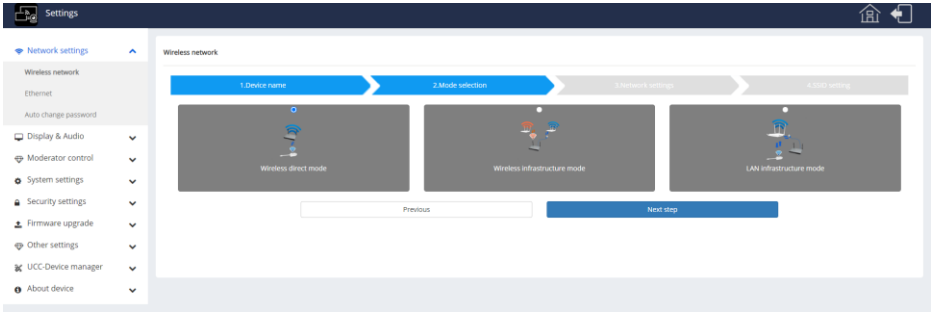
The Start Modifying button will initiate a four step process to change the settings for the wireless network identify of the Wizard device:

1. Device Name – Enter a new device name to clearly identify the Wizard device on the wireless network.



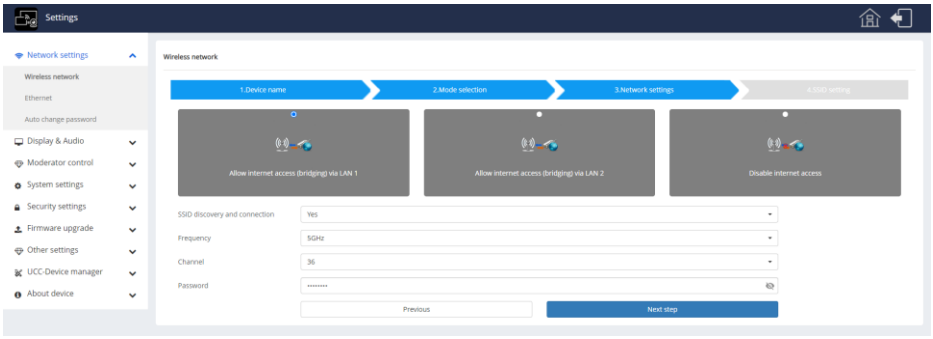
Click **Next** step to go to step 2 or click **Cancel** to abort the Wi-Fi settings mode.

2. Mode selection – Choose one of the wireless operating modes.



Click Next step to go to step 3 or click Previous to return to step 1.

3. Network settings – Choose one of the options for the internet access mode.

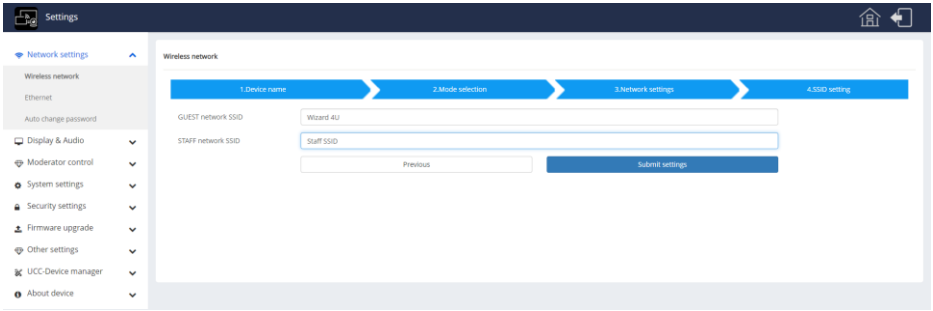


The dropdown boxes have the following settings:

- SSIS Discovery and connection — Yes or No — Default is Yes
- Frequency — 2.4GHz or 5GHz — Default is 5GHz
- Channel — 36, 40, 44, 48, 149, 153, 157, 161 — Default is 36
- Password — This is the same as shown on the HDMI Home page

Click Next step to go to step 4 or click Previous to return to step 2.

4. SSID setting – If needed, enter the GUEST and/or STAFF network SSID.



Click Submit settings to confirm any changes made or click Previous to return to step 3.

Note: SSID – Service Set Identifier.

Checking the WiFi Setting

To do either of the two checks described below, use of a WiFi Analysis app is required.

Checking the Wizard Device WiFi Settings

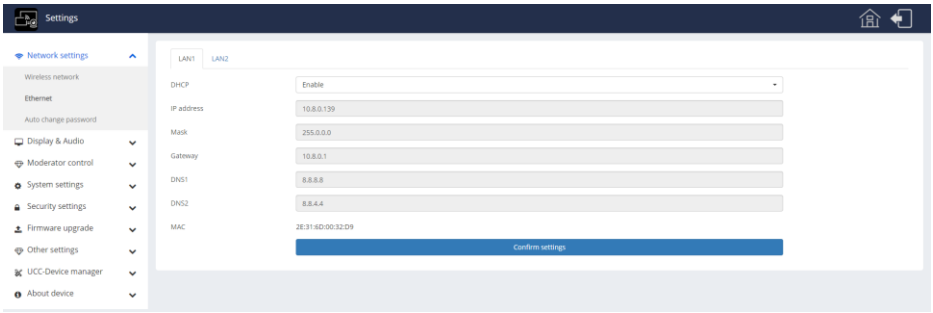
Use the WiFi App to confirm which frequency the Wizard is on and which channel it is on. Use the above form in step 3 to change the settings to a free WiFi channel.

Checking the WiFi RSSI for Dongles or Mobiles

RSSI is the Received Signal Strength Indicator. For best result the value should be above -70dB. Please refer to the *Bad wireless connection* in the Troubleshooting section on how to improve the RSSI.

Ethernet

Select LAN 1 or LAN 2 from the top tab selectors as desired:



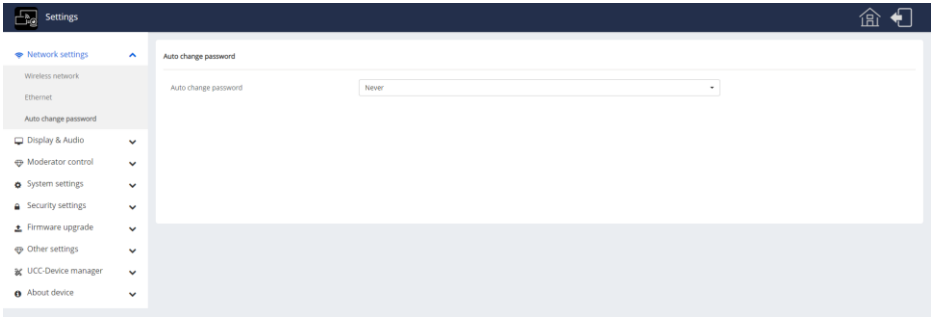
DHCP – select Enable or Disable as needed. When DHCP is set as Enable, the remaining edit boxes are not usable.

IP Address	set the static IP address for the Wizard LAN port.
Mask	set the network subnet mask for the Wizard LAN port.
Gateway	set the IP address of the default Gateway device.
DNS1	set the IP address for the first domain name server.
DNS2	set the IP address for the second domain name server.
MAC	the MAC address of the Wizard device, this cannot be changed.

Click the Confirm settings button to set the changes into the Wizard device.

Auto change password

This is the access password for wireless BYOD devices, to change the login password see_. This pages sets how often this password is changed from one of the following: Never, 5 minutes, 30 minutes, 1 hour, 2 hour, 4 hour, or 24 hour. The interval chosen will take effect immediately and will be acknowledged by a green Success banner at the bottom of the browser window.

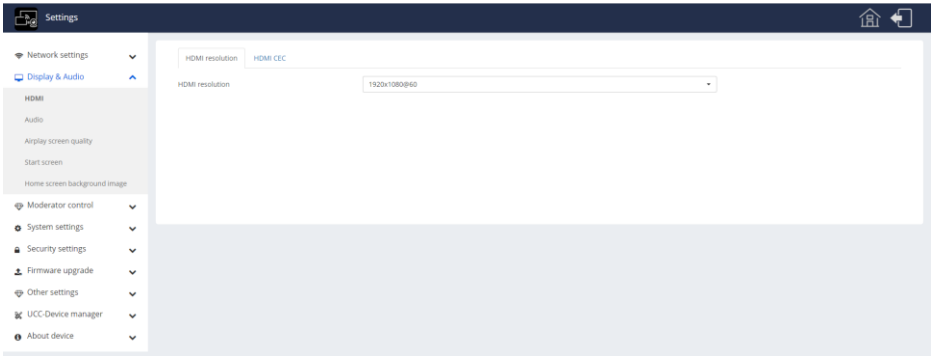


Display & Audio

HDMI

HDMI Resolution

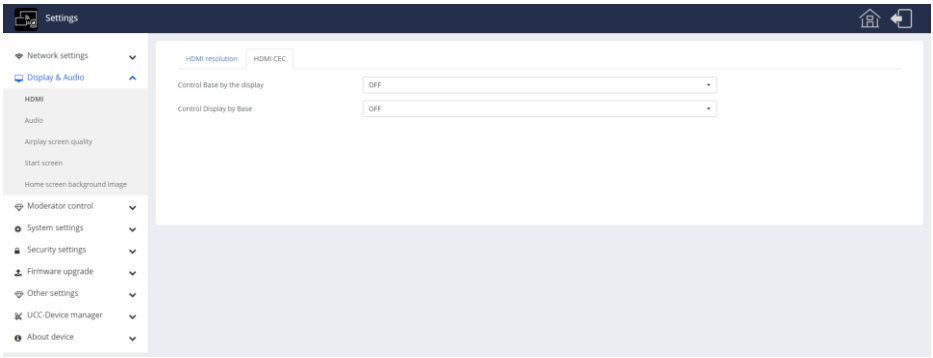
Select the desired output resolution, or Auto to allow the Wizard to automatically choose the best output resolution for the display device. The selected option will take effect immediately and will be acknowledged by a green Success banner at the bottom of the browser window.



Only resolutions that the connected HDMI display device supports will be shown in the dropdown list.

HDMI CEC

This page sets the CEC power mode options.



Control Base by the Display

ON – when the CEC enabled display device is put into standby, the Wizard will also enter standby mode.

OFF – putting the CEC enabled display device into standby will not affect the Wizard device.

Control Display by Base

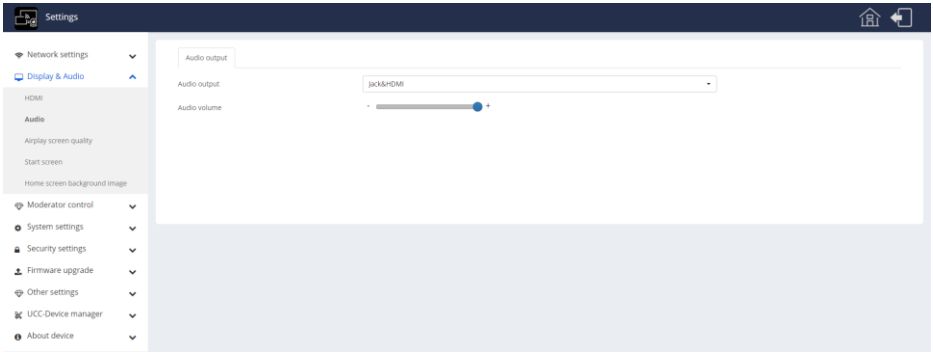
ON – when Wizard goes into standby, the CEC enabled display device will also be set to standby.

OFF –the Wizard device will not turn off the display device.

The default state is with both options set to OFF.

Audio

This page sets the audio output options.



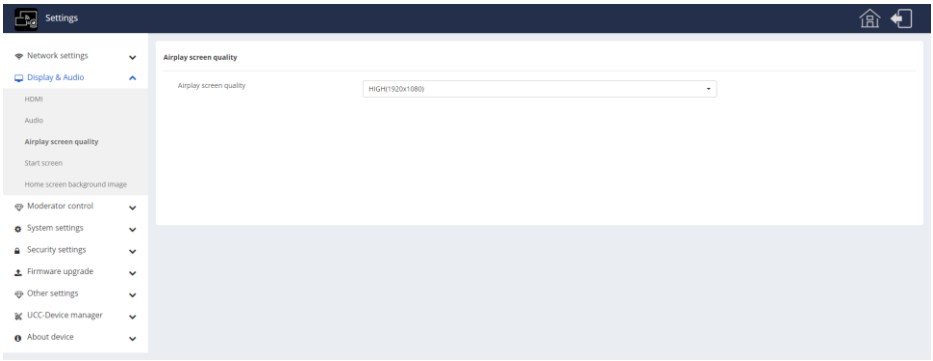
From the dropdown list, select where the audio is to be output:

Jack	This is the LINE OUT analogue audio output on the rear of the Wizard device. In this mode there is no HDMI audio to the display device.
HDMI	The HDMI output carries the audio. In this mode there is no analogue audio on the LINE OUT connector.
Jack&HDMI	Both the HDMI output and the LINE OUT carry the audio signal.
USB	This will only appear if USB speakers are connected to the Wizard device. In this mode the audio signal is sent only to the USB speakers.

The audio volume slider sets the maximum output volume level for the Wizard device.

Airplay screen quality

This sets the resolution for in-coming Apple Airplay signals:



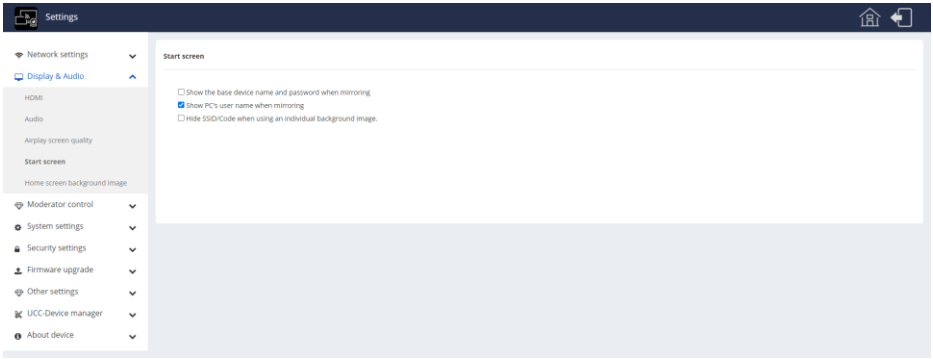
Select the desired resolution for Apple AirPlay signals:

HIGH (1920x1080)
MEDIUM (1600x900)
LOW (1280x720)

The selected option will take effect immediately and will be acknowledged by a green Success banner at the bottom of the browser window.

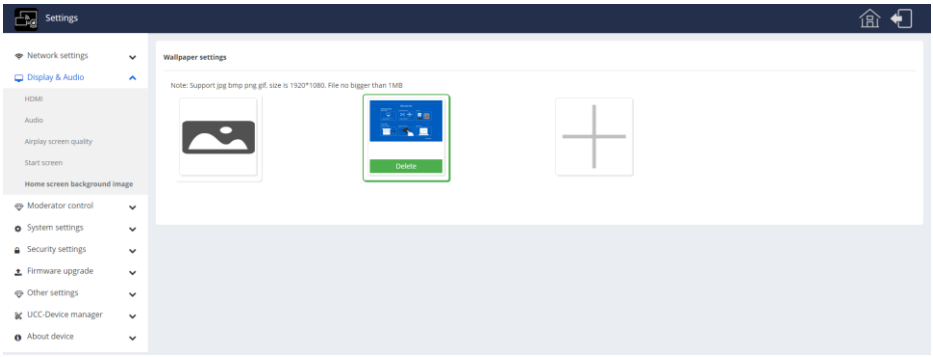
Start screen

These options select what information is displayed on the Home, or Start, screen of the Wizard device.



Home screen background image

The loaded image always overrides the default Home screen image.

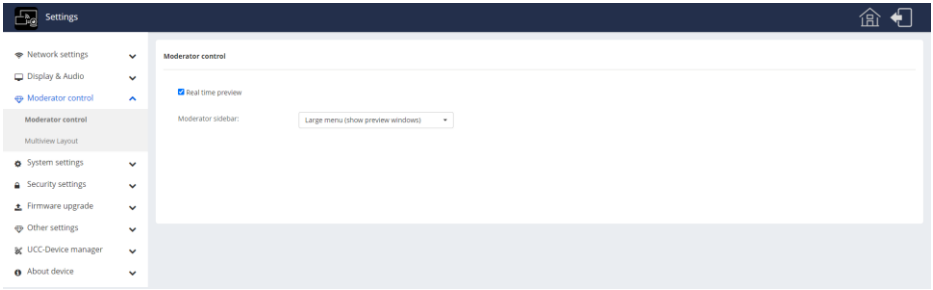


The left icon opens a file browser to choose a new image for the Home screen.
The middle icon(s) allows the selection or deletion of existing images. All loaded images must be deleted to restore the default Home screen.
The large **+** icon allows more images to be loaded.

Moderator control

Moderator control

The Moderator control section controls the appearance of the sidebar menu on the HDMI display:

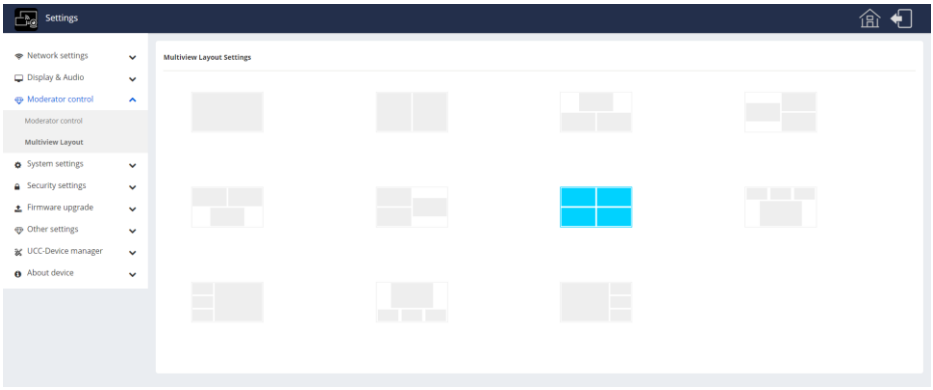


To use the sidebar, a mouse must be connected to the Wizard unit to access the sidebar and select which preview images in the HDMI output sidebar list are presented to the display. A maximum of four images are allowed at any time.
The options are:

Hide side bar completely	- The menu open arrow is also removed
Small menu	- The preview windows are not shown in the side menu
Large menu	- The preview windows are displayed in the side menu

Multiview Layout

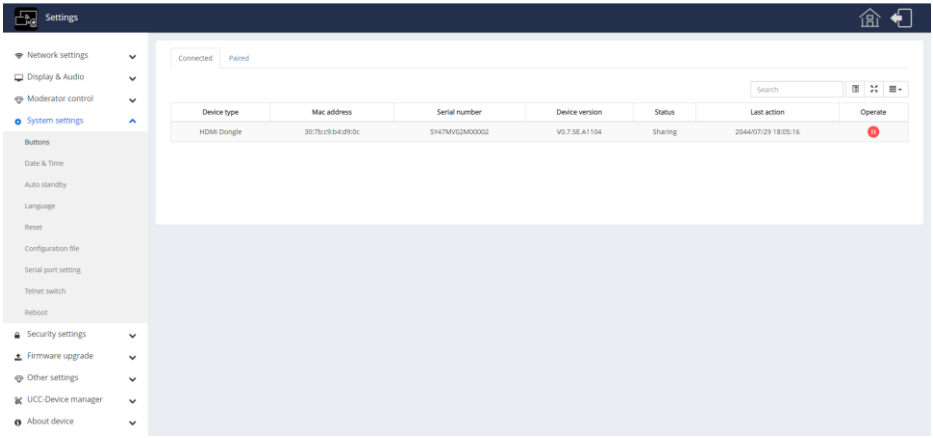
Select one of the 11 multiview layout views for the HDMI output:



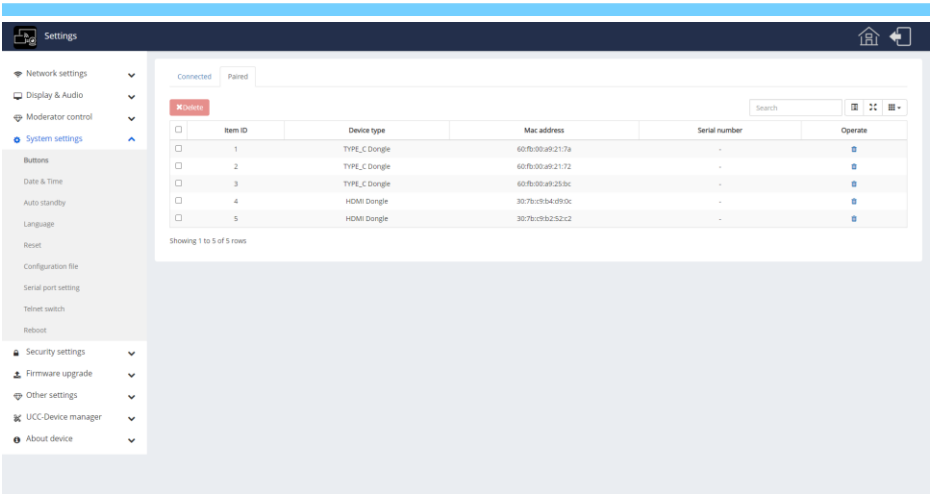
System settings

Buttons

The Connected and Paired tabs show the details of the currently Connected SY Wand units (Buttons) and the history of any SY Wand units that were previously used with the Wizard device. Note that the actual details given will different for each installation.



The Operate column shows a red Pause icon for active SY Wands and a green play icon for SY Wands that are not currently sending to the Wizard unit. Click on the respective icon to change the state of the selected SY Wand.



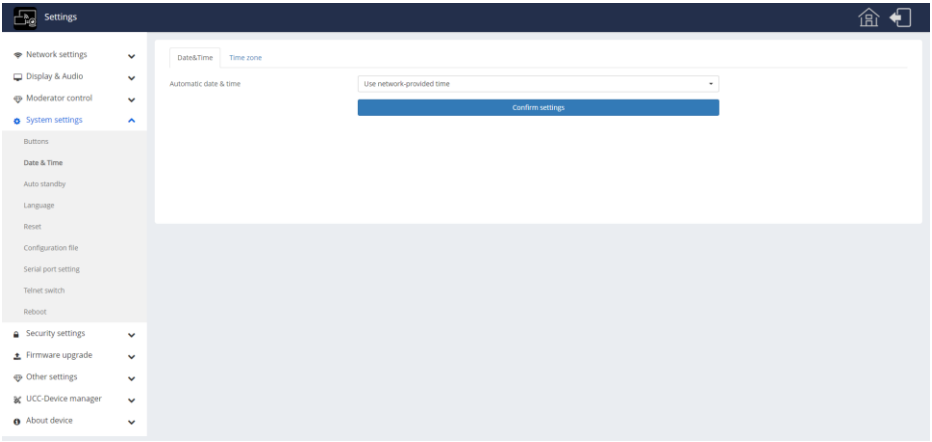
This is a list of any SY Wand that was paired with the Wizard unit at any time in the past. To remove items from the list either use the left side check boxes to select the item to remove and then click the red Delete button, of click on the Trash bin icon to remove an individual item. Be careful when using this last option as the entries are immediately deleted with no confirmation window.

Date & Time

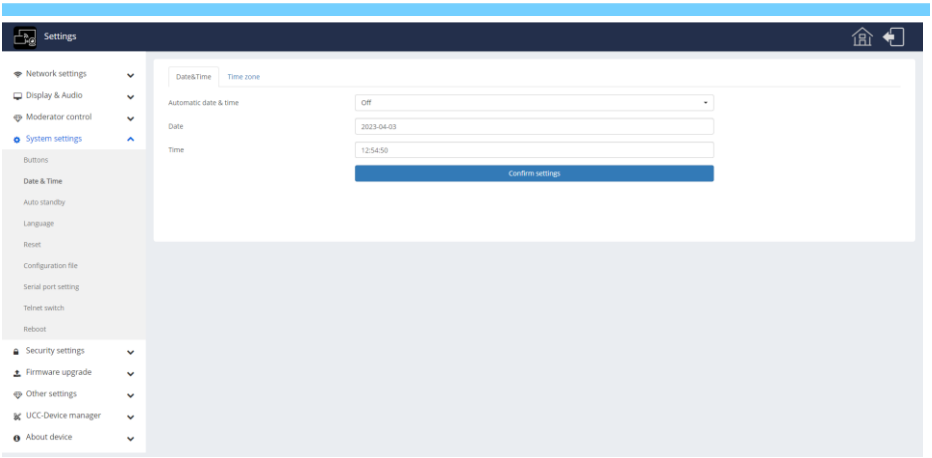
The Date and Time tab has one dropdown box with the following options:

Automatic date & time
Use network-provided time
Off

Click the Confirm settings button to accept the new option.

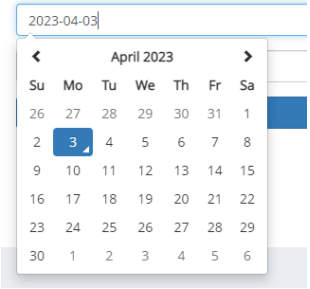


When the Automatic date & time is set to ‘Off’, the following screen will appear:

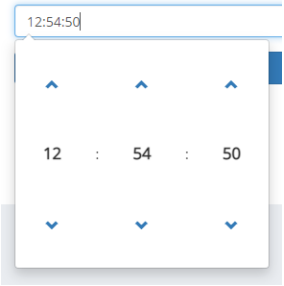


Enter the date and time in the respective boxes. As shown above, the date format is entered in ISO 8601 format: YYYY-MM-DD.

To aid in entering the date and time values, a selection pop-up will appear below the respective edit box:



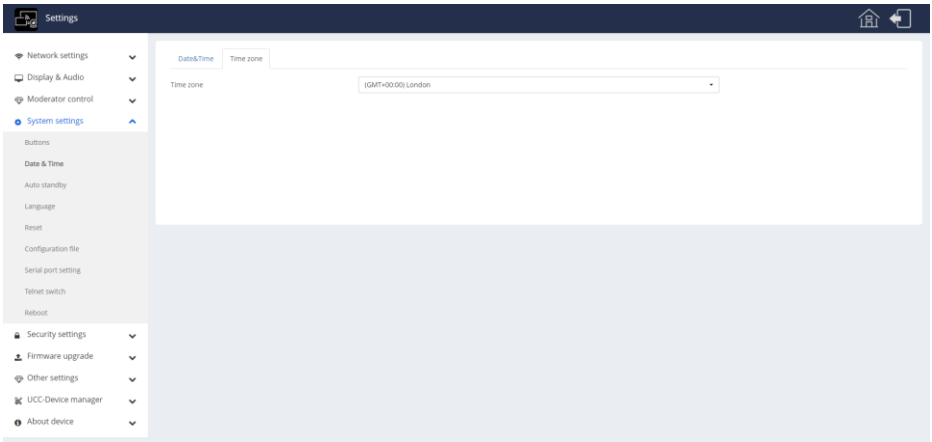
The date picker



The time selector

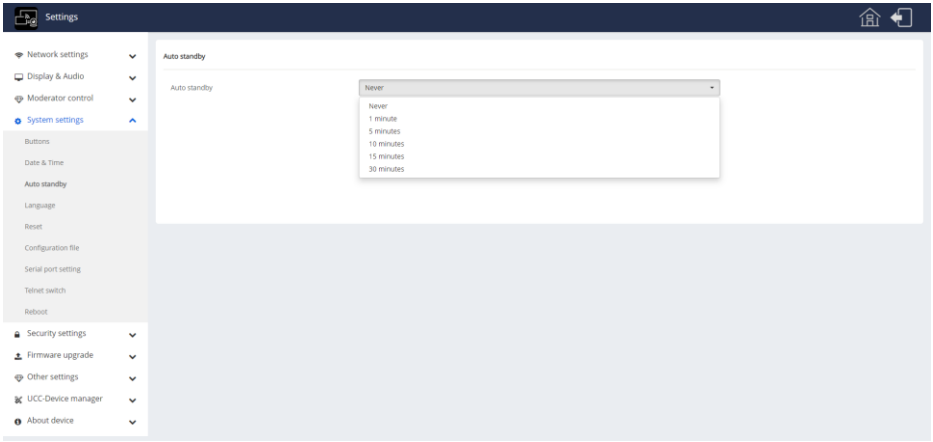
For the time selector panel, note that the seconds will wrap over to the minutes, and the minutes will wrap over to the hours.

The Time Zone tab is used to adjust the time and date display to your locale. Select your time zone from the dropdown list:



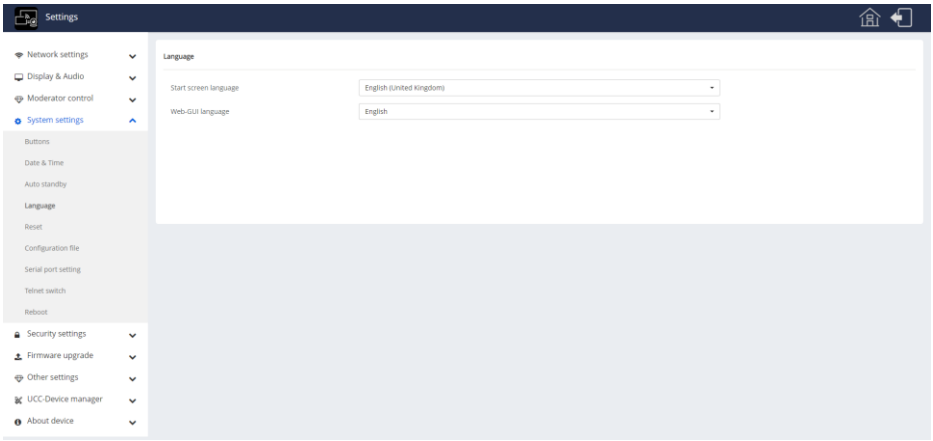
Auto standby

This page is used to set the duration of inactivity after which the Wizard will automatically enter its standby mode.



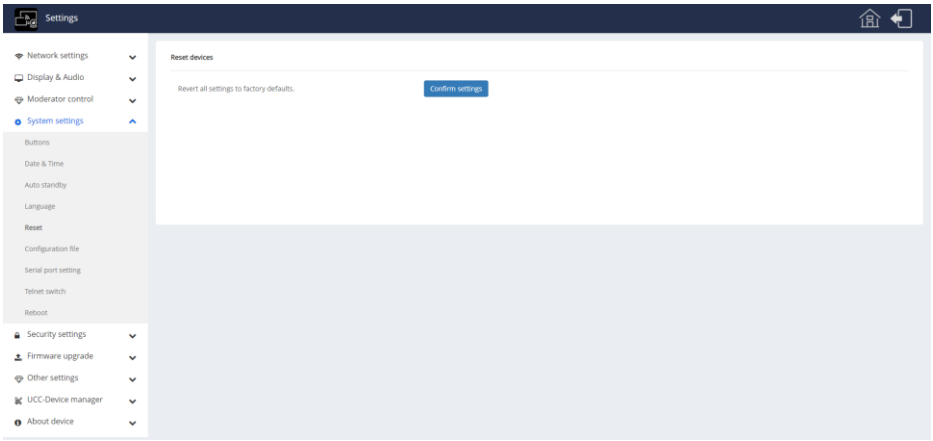
Language

This page changes the language of the overlay items on the Home screen, any text that is part of the background image will not change.

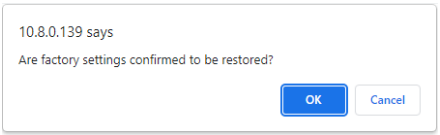


Reset

Use this page to reset all configurable options to the factory defaults.



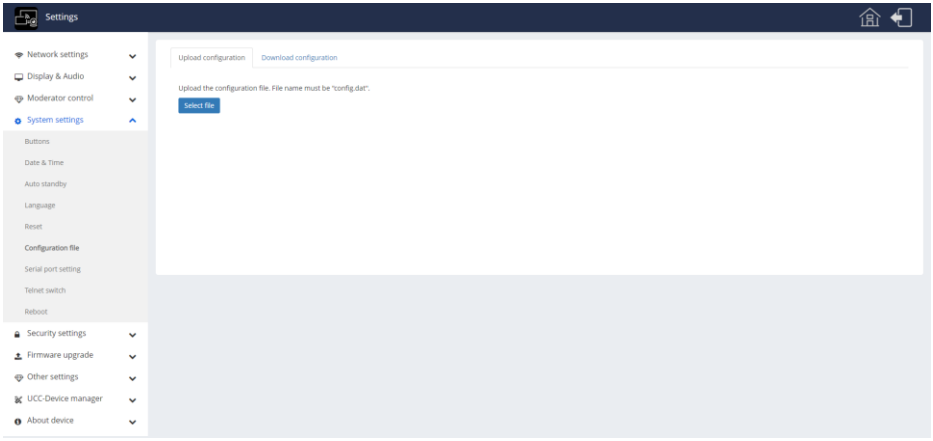
Clicking the Confirm settings button with bring up a confirmation box:



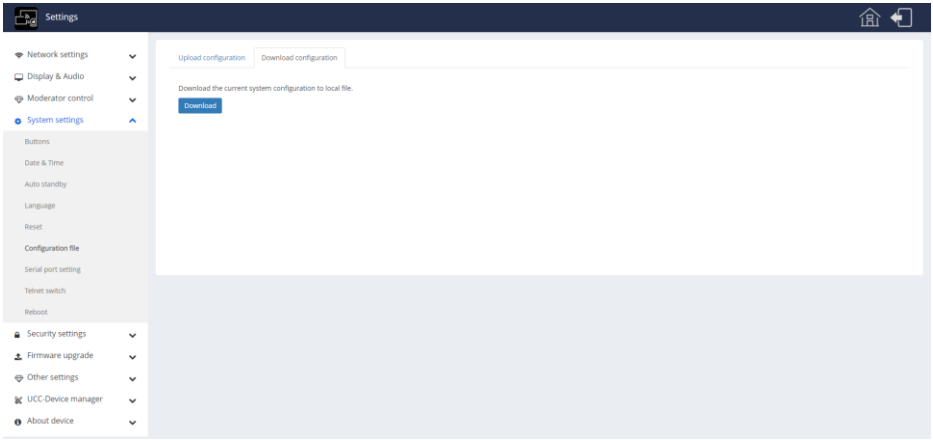
Click OK to restore the Wizard unit to its factory default settings.
Click Cancel to keep current settings.

Configuration file

There are two tabs, Upload configuration and Download configuration. The configuration file, named *config.dat*, is a binary image of the current configuration of the Wizard unit. This can be used to restore a last known good configuration to the Wizard unit to replace a bad or faulty configuration.



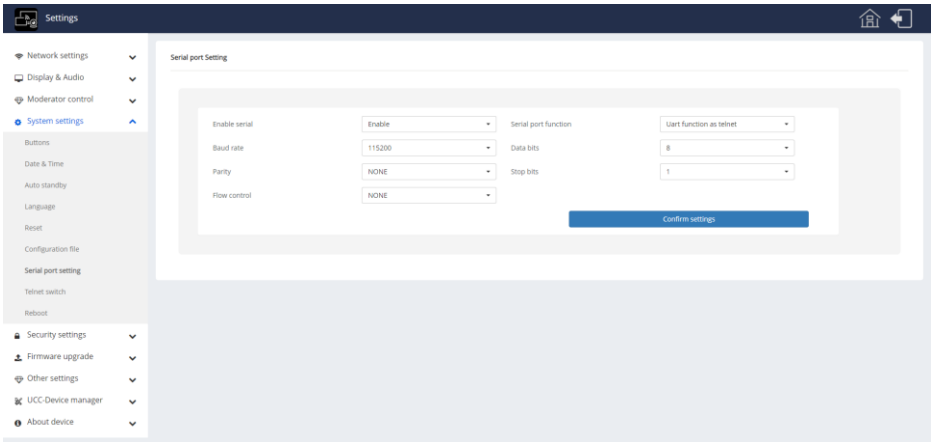
Click **Select file** to choose the desired config.dat file.



Click the **Download** button to save the current configuration of the Wizard unit to the binary image file 'config.dat'. The actual download location depends on the web browser settings.

Serial port settings

This page configures the RS232 serial port options.



Bold items in the following list are the factory defaults:

Enable serial:	**Enabled** / Disabled
Baud Rate:	1800, 2400, 4800, 9600, 19200, 38400, 57600, **115200**
Parity:	**NONE**, EVEN, ODD
Flow control:	**NONE**, XON/XOFF
Serial port function:	**UART function as telnet** / UART function commander
Data bits:	5, 6, 7, **8**
Stop bits:	**1**, 2

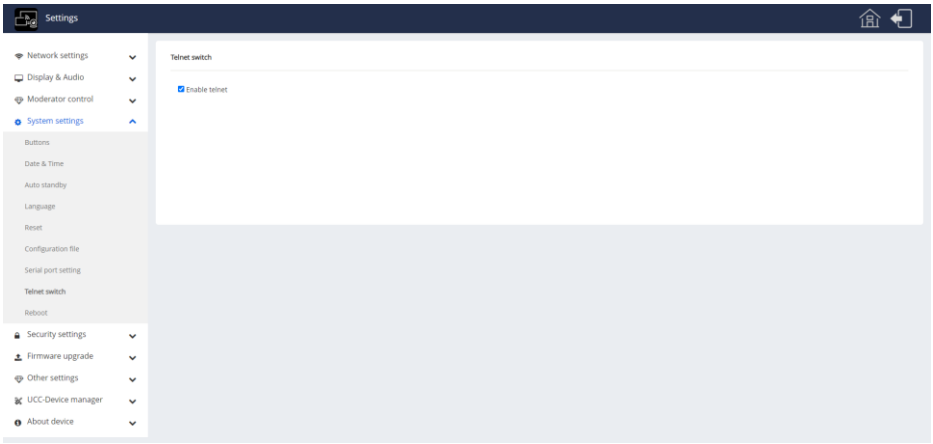
The UART function as telnet option accepts the RS232 commands given in: **Controlling the Wizard Device**.

The UART function commander option accepts direct RS232 commands.

Click the Confirm settings to accept any changes. The green Success banner will appear at the bottom of the browser window.

Telnet switch

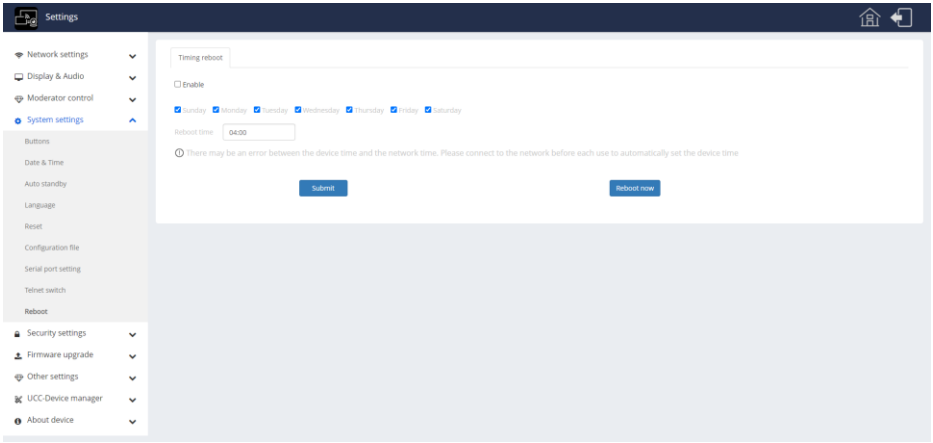
This page is used to enable or disable the telnet option.



Clicking the selection box causes the green Success banner to appear at the bottom of the browser window to confirm the new setting.

Reboot

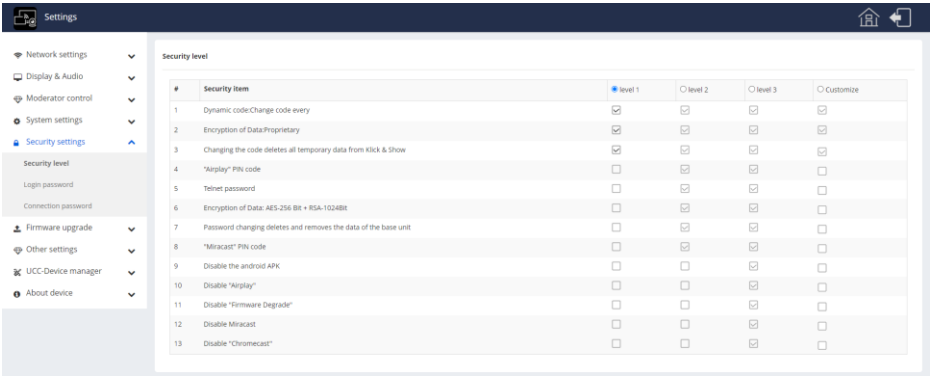
When the Enable option is set, the Day options are used to set the days, with a time in when the Wizard device shall automatically reboot. Click the Submit button to set any changes to the options. Click the Reboot now button to reboot the Wizard device immediately.



Security settings

Security Level

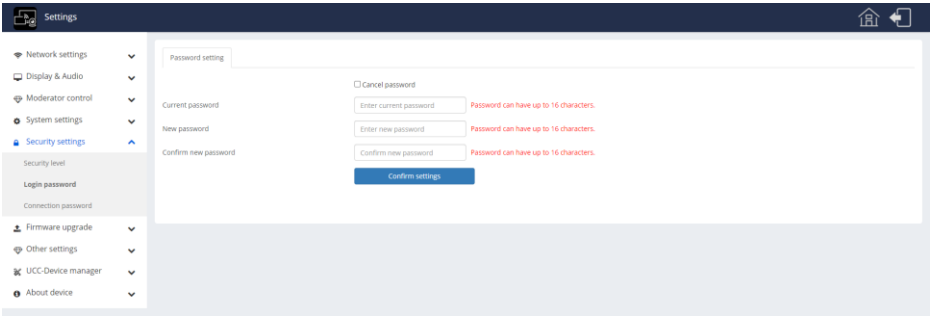
Use the top row selection buttons to choose the desired security setting.



Select the Customize column to set a specific combination of security features, all other columns cannot be modified.

Login password

This page allows for changing of the WebGUI login password.



The **Cancel password** option will delete the login current password and enable entry to the settings pages with no password requirement.

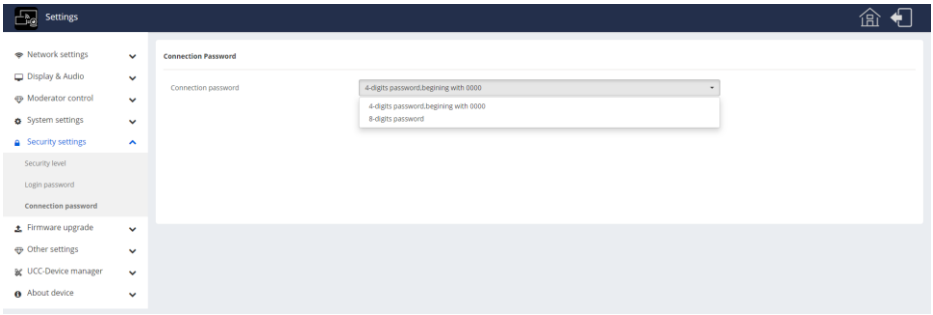
To change the login password, enter the details as given in the edit boxes.

Click the **Confirm** settings button to accept the changes.

The factory default password is ‘admin’. This is also the login password after resetting the Wizard unit to factory defaults.

Connection password

This option changes the format of the numerical password displayed on the Home page that allows devices to connect to the Wizard.



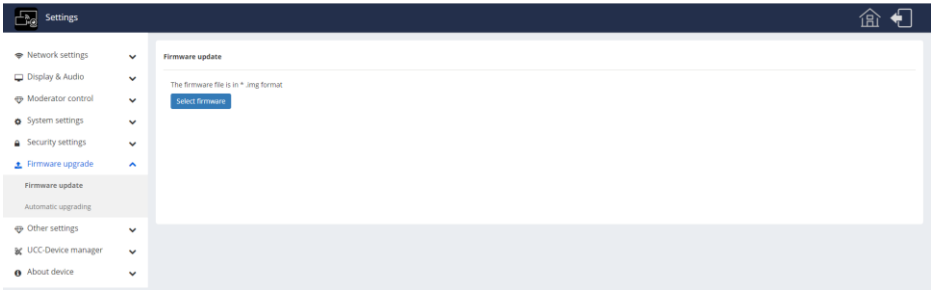
The password format can be four leading zeros followed by a 4-digit password (0000xxxx), or an 8-digit password (xxxxxxxx). The change is accepted immediately with the green Success banner being shown at the bottom of the browser.

Any user that wishes to connect to the Wizard unit must always enter all the 8 digits shown on the Home screen, regardless of the chosen password format.

Firmware Upgrade

Firmware update

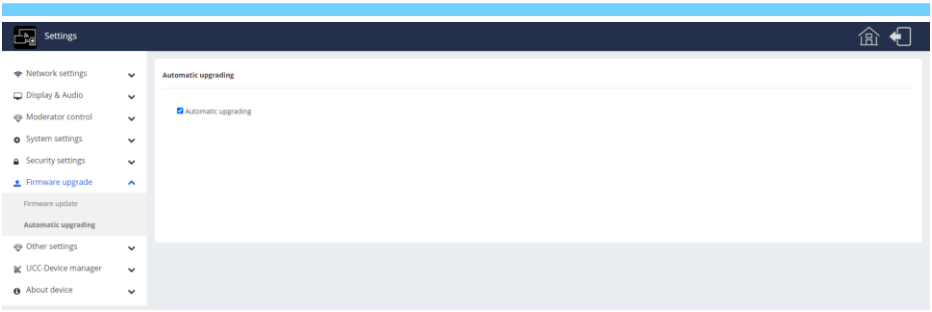
Only use this page if a valid firmware upgrade file is available on your PC or laptop.



Click the Select firmware button to open the default file browser for your OS. Navigate to the folder containing the firmware update file and click the Open to begin the update.

Automatic update

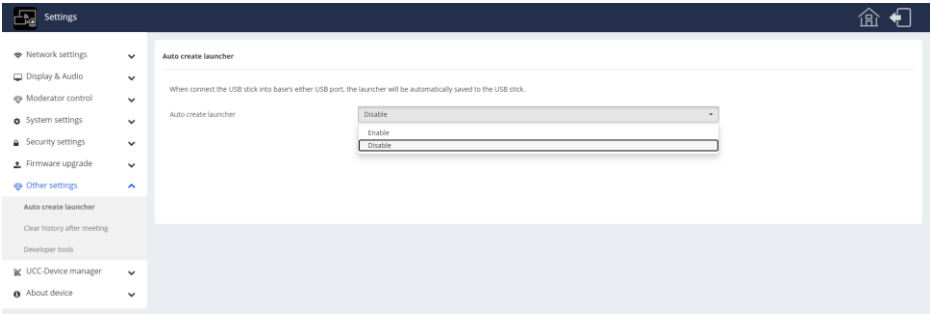
This option enables or disables Automatic updates via the Internet or from a local file.



Other Settings

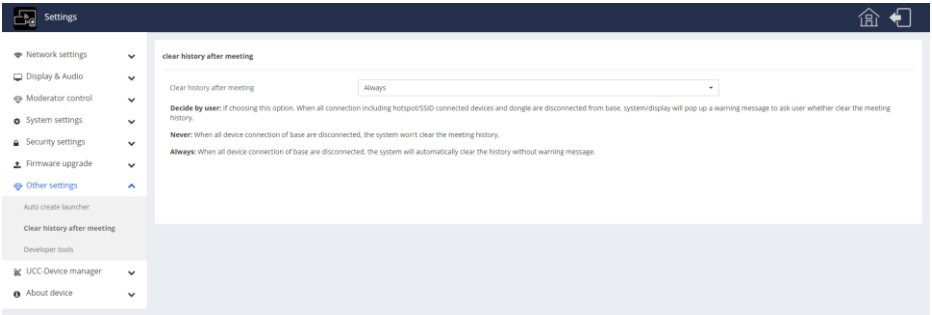
Auto create launcher

This option determines whether the SY Cast software will be automatically copied to a USB memory stick when it is plugged into any of the USB ports on the Wizard device.



Clear history after meeting

Manage the meeting history recorded by the Wizard device.



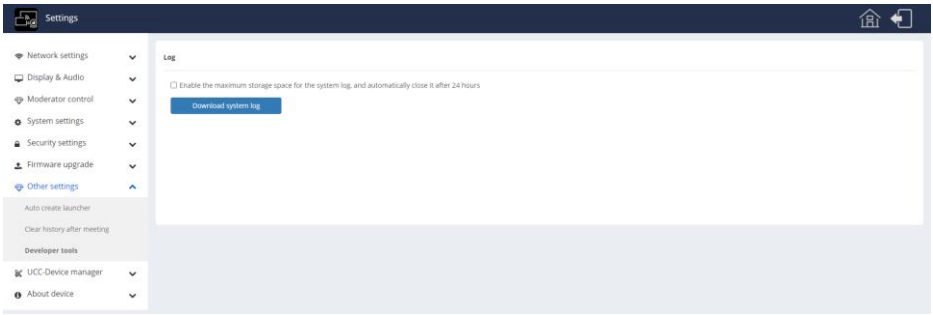
There are three options for clearing the history of any device that connected to the Wizard unit during a meeting session:

Decide by user	When all connections, including hotspot/SSID connected devices and dongles, are disconnected from Wizard, a pop-up warning message appears to request of the user if the meeting history should be erased.
Never	When all device connections to the Wizard are disconnected, the system leaves the meeting history intact.

Always	When all device connections to the Wizard are disconnected, the system automatically clears the history without giving a warning message.

Developer tools

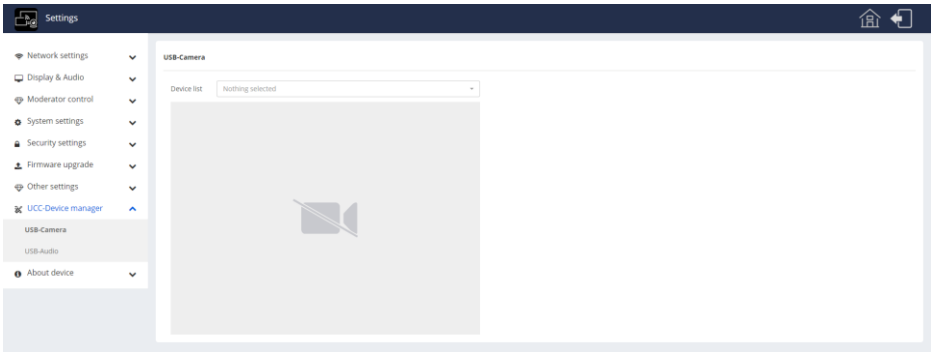
This page is for downloading a System log.



UCC-Device Manager

USB-Camera

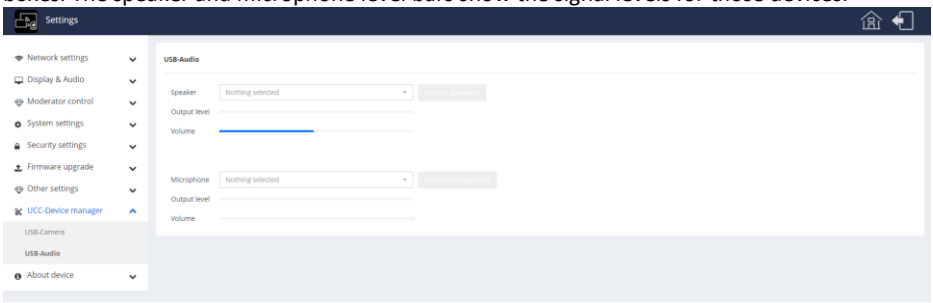
This page lists any USB cameras available to the Wizard, choose the desired camera and a preview will be displayed.



Any PC or Laptop running the SY Cast app will be able to view that camera be selecting the Virtual Meeting Camera in the camera app on the PC or laptop.

USB-Audio

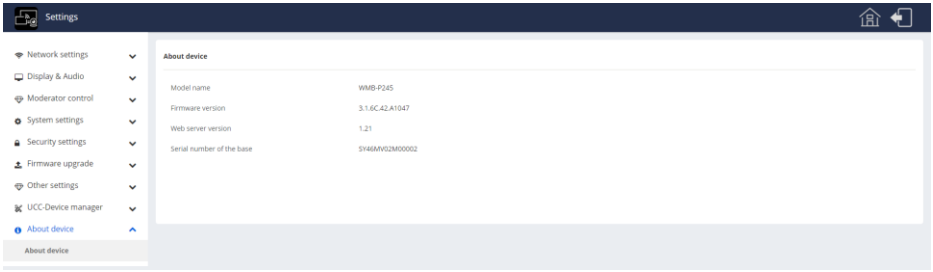
Any USB connected speaker or microphone system will be listed in the respective selection boxes. The speaker and microphone level bars show the signal levels for those devices.



To use USB speakers, be sure that the USB option is selected on Audio web page detailed on page 20.

About Device

This page gives the internal model name, firmware version, Web server version and the product serial number.



Controlling the Wizard Device

The Wizard unit can accept control commands using either RS232 or a Telnet interface. The following settings are used to connect to the Wizard unit.

RS232 Settings

Check the **Serial port settings** tab of the built-in WebGUI for the current serial port settings. Ensure that the serial is enabled and the Serial port function option is set to **Uart function as telnet**. Click Confirm settings button. The factory default RS232 Settings are:

UART Function:	Telnet
Baudrate:	115200
Data bits:	8
Parity:	None
Stop bits:	1
Flow control:	None

Each command sent to the RS232 port must end with a carriage-return and line-feed sequence.

Telnet Settings

The default Telnet settings are:

IP: IP address of the LAN port to use as shown on the Home page
Port: 23

Once a Telnet connection is made, the unit responds with the following:

```
Welcome to WMedia telnet
Input 'help' to see command list
WMedia>+home on
WMedia>+standby off wakeup
WMedia>+volume unmute 100
WMedia>+mute off
WMedia>+wifi ap-on 36 WIZARD_4U-8591 00007202OK
WMedia>
```

The actual values will be different each for each Wizard device and the eight digit password will also be different each time. See the command list for an explanation of each of the response messages.

Command List

1. Note that all commands are case insensitive: help, Help and HELP are all identical.
2. All commands are single words and any parameters must be separated by one or more spaces.
3. All RS232 commands must end with a carriage-return and line-feed sequence.
4. Take care when typing manually, the backspace is not accepted and will display as ^H instead.
5. When using the Hercules program, type all Telnet commands into the main window. Sending commands from any of the three command boxes at the bottom of the Hercules program does not behave as expected.
6. Response messages will begin with either '+' or '#', these are both the same and have no specific meaning.
7. Valid Telnet responses always end with 'OK'.
8. Any command errors give the response **ERROR:** followed by a number. Please check the spelling and that the command has the correct parameter specified.

Help Command

The HELP command has two uses:

Command	Description
HELP	List all available commands
HELP xxx	Show help detail for command xxx For example: HELP STATUSBAR statusbar show display the home screen statusbar statusbar hide turn off the home screen statusbar

Standby Control

Command	Description
STANDBY SET x	Set auto standby time where x is one of the following: OFF Disable auto standby 1MIN Set auto standby to 1 minute 5MIN Set auto standby to 5 minutes 10MIN Set auto standby to 10 minutes 15MIN Set auto standby to 15 minutes 30MIN Set auto standby to 30 minutes
STANDBY SLEEP	Put the Wizard into standby mode
STANDBY WAKEUP	Wakeup the Wizard from standby mode

Home Screen

The Home screen is the info screen that is shown when there are no devices streaming to the Wizard unit. Invoking the HOME command

Command	Description
HOME	Display the home screen – this can only be turned off when a device begins sharing again. Response: OK WMedia>+home on WMedia>+button stopShare 1692971494 c0a82b7a,307bc9b251fe,V0.7.5E.A1118,2,1,1,1,WMT-H,SY47MV200072WMedia>OK The first two lines are confirmation of the command. The remainder will list all Wands and devices that are no longer sharing with the Wizard unit.
HOME ?	Determine if the home screen is shown from one of the following responses: #home on The home screen is being displayed #home off The home screen is not being displayed

Audio Control

These commands control the audio volume and mute status. Note that the MUTE and VOLUME commands are independent, the volume can be changed while the audio output is muted but no sound will be present until the MUTE OFF command is sent.

Command	Description
VOLUME x	Set volume level where x is a value from 0 to 100
VOLUME ?	Return the mute state and current volume level #volume unmute 100 Full, unmuted volume #volume mute 100 Audio is muted, volume = 100%
MUTE ON	Mute the audio output. Response: +mute on
MUTE OFF	Unmute the audio output. Response: +mute off
MUTE ?	Return the mute status: +mute on or +mute off

Autoshare

Turn the auto share mode on or off.

Command	Description
AUTOSHARE ON	Turn on the Autoshare mode.
AUTOSHARE OFF	Turn off the Autoshare mode.
AUTOSHARE ?	Return the current Autoshare mode setting.

Get Wand Info

This command lists all paired SY-Wands associated with the Wizard device and gives details status information.

HOME	Display the home screen
BUTTON ?	Return info for all connected SY-WAND units. Button 1692971494 c0a82b7a,307bc9b251fe,V0.7.5E.A1118,2,1,1,1,WMT-H,SY47MV200072OK This is decoded as follows: Button 1692971494 The current time in the Wizard unit – number of seconds since 1970-01-01 00:00:00 c0a82b7a Wand IP address, 192.168.43.122 307bc9b251fe Wand MAC address 30:7b:c9:b2:51:fe V0.7.5E.A1118 Wand firmware version 2 Reserved 1 Wand is connected, 0 means Wand is not connected 1 Wand is sharing to screen, 0 means Wand is not sharing 1 Wand is ready to share, 0 means Wand is not ready yet WMT-H Wand is SY-WAND-H SY47MV27M00072 Wand serial number OK End of response message

Pair

Control the pairing of the SY-WANDs. In each of the following commands, xxx can be either the serial number or the MAC address of the respective Wand.

Command	Description
PAIR REMOVE xxx **PAIR RM xxx**	Remove a paired SY-WAND from the list of paired dongles.
PAIR ENABLE xxx	Enable a paired SY-WAND. The Wand must already exist in the list of paired devices.
PAIR DISABLE xxx	Disable a paired SY-WAND. The Wand must already exist in the list of paired devices.
PAIR STATUS xxx	Check the pairing status of an SY-WAND. The Wand must already exist in the list of paired devices.
PAIR ?	List all the paired dongles.

Forceshare

Force a sharing device or SY-WAND to display in fullscreen mode.

Command	Description
FORCESHARE xxx	The parameter xxx can be the IP address, the name of the sharing device, or one of 0, 1, 2, 3, or 4. The value 0 will restore the multiview display mode and values 1 to 4 refer to multiview windows 1 to 4.

Password Control

This password is the eight digit number used for any device that wishes to stream to the Wizard device, not the WebGUI password.

HOME	Display the home screen
PASS ?	Return the current BYOD password. The format of this password depends on the settings on the built-in web interface – see Auto change password. Response example: #pass : 00005673
PASS REFRESH **REFRESH PASS**	Use either of these commands to generate a new password.

Floatmenu

Control the display of the sidebar menu.

Command	Description
FLOATMENU 1	Turn off the sidebar menu.
FLOATMENU 2	Set the sidebar menu to not show any thumbnail views.
FLOATMENU 3	Set the sidebar menu to show the thumbnail views.

WiFi Hotspot Info

These commands control the operation of the Wi-Fi hotspot of the Wizard device:

Command	Description
WIFI ON	Turn on the Wizard WiFi hotspot
WIFI OFF	Turn off the Wizard WiFi hotspot
WIFI LIST	Output the WiFi MAC and IP address
WIFI CHANNEL n	Set the WiFi channel number – see Specifications for valid channel numbers.
WIFI SSID n	Set the WiFi SSID network name.
WIFI PASS p	Set the WiFi hotspot password to p, where p is an eight digit value formatted in accordance with the settings on the **Connection password** tab of the built-in web interface.
WIFI AMOUNT	Return the number of WiFi devices connected to the Wizard
WIFI ?	Return WiFi status: +wifi ap-on 36 WIZARD_4U-8591 00005673 The message is as follows: +wifi Wi-Fi request response ap-on Wi-Fi mode is on 36 Wi-Fi channel number WIZARD_4U-8591 Wi-Fi device name 00005673 Current sharing password

Security Level Control

Set the Security Level. The security level options are shown in the WebGUI page.

Command	Description
SECURITY 1	Set minimal security level.
SECURITY 2	Set moderate security level.
SECURITY 3	Set maximum security level.

Login

This requires security level 2 or 3. No password is required for security level 1. Is the Telnet password option is set in the custom security mode, then the following command will be required to use RS232 control.

Command	Description
LOGIN xxxxx	Login to telnet with password xxxxx

Control the Home Screen Status Bar

Optionally show or hide the status bar at the top of the Home screen.

Command	Description
STATUSBAR SHOW	Display the top statusbar on the Home Screen
STATUSBAR HIDE	Turn off the top statusbar on the Home Screen

Specifications

General

Source Video Format	Up to 1080p60
HDMI Output Resolutions	HDMI Output: 4K60, 4K30, 1080p60, 720p60
HDMI Standard	HDMI 2.0 for the output
HDCP Compliance	HDCP 1.4 and HDCP 2.2
LAN/Ethernet	Port 1: 100Mbps Port 2: 1000Mbps, supports PoE Default settings: Proxy: None DHCP: Enabled IP addresses for both Port 1 and Port 2 are shown on the Home screen
Wi-Fi Antennas	Wizard 4: 2 Wizard 4U: 3
Audio input	AirPlay, Miracast, DLNA, Windows/MAC, WMH, USB, BT SpeakPhone
Analogue audio output	3.5mm stereo jack
USB interfaces	Wizard 4: Front 1x USB 2.0 & 1x USB C Rear 1x USB 3.0 Wizard 4U: Front 1x USB 2.0 & 1x USB C Rear 1x USB-C, 3x USB 3.0
RS232	1x 3-way pluggable terminal connector (Tx, Rx, Gnd)
Number of simultaneous windows	Up to 4 on display screen Up to 14 in thumbnail list

Number of simultaneous connections	Up to 16
Wireless data rate	Up to 1200 Mbps
Latency	< 100ms, 20ms minimum
Wi-Fi Transmission Protocol	WIFI IEEE 802.11 a/g/n/ac
Wi-Fi Frequency Bands	2.4 GHz & 5 GHz
Wi-Fi Channels	2.4 GHz – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or 11 5.0 GHz – 36, 40, 44, 48, 149, 153, 157, 161
PoE Standard	IEEE 802.3f
Power Supply	12V DC or PoE
Power Consumption	10W max.

Environmental

Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Operating Humidity	20 ~ 90 %RH (non-condensing)

Physical

Product	**Wizard 4**	**Wizard 4U**
Dimensions (WxHxD)	165 x 90 x 23 mm	220 x 120 x 41 mm
Weight	375 g	705 g

Troubleshooting

Problem	**Cause**	**Solution**
SY Cast for Android app running on Android device, or *Airplay* on iOS device, cannot find the Wizard base unit	The Wi-Fi password of base unit changed when Android or iOS device is connected to the base unit using Wi-Fi	Reconnect the Android or iOS device and enter the new password displayed on the Wizard home screen
Poor image quality on the main display	The cable between the Wizard and the display is either of poor quality or too long Wrong output resolution	• Try another cable • Replace the cable • Check that the cable connectors are fitting properly in the HDMI connectors Change the Wizard output resolution to match the preferred resolution of the display.

Problem	Cause	Solution
Bad wireless connection	Wi-Fi problems • RF Interference • Channel over used The Wizard device does not automatically jump to other channels	Use a Wi-Fi scanner to find a free Wi-Fi channel and select it using the WebGUI configuration settings. Regularly check the RF environment to determine if there are frequent changes in Wi-Fi networks your area
Low signal strength	• Metal cabinets, walls, building construction, etc., causing reflections and affecting the Wi-Fi signal • Obstacles between the Wand and the Wizard unit are reducing the Wi-Fi signal strength and/or quality	• Place the Wizard unit nearer to the display • Change the orientation of the antennas in relation to the sender direction • Remove or limit as many obstructions as possible between the Wizard device and transmitter
The “SY Cast” app doesn’t start when the Wand is connected to a laptop computer	• When using for the first time, the Launcher app must be installed on the laptop	• After installing the Launcher program, “SY Cast” is ready to use at any time

Safety Instructions

To ensure reliable operation of this product as well as protecting the safety of any person using or handling these devices while powered, please observe the following instructions.

1. ONLY USE the power supply provided. If an alternate supply is required, check the voltage, polarity and that it has sufficient power to supply the device it is connected to.
2. DO NOT operate this product outside the specified temperature and humidity range given in the above specifications.
3. Ensure there is adequate ventilation as this product generates heat while operating.
4. Repair of this product should only be carried out by qualified professionals as this product contains sensitive devices that may be damaged by any mistreatment.
5. Only use this product indoors and in a dry environment. DO NOT allow any liquids or harmful chemicals to come into contact with this product.

After Sales Service

1. Should you experience any problems while using this product, firstly refer to the Troubleshooting section in this manual and/or your local dealer before contacting SY Technical Support.
2. When calling SY Technical Support, please provide the following information:
   - Full Product Name and Model Number
   - Product Serial Number
   - Details of the fault and any conditions under which the fault occurs.
3. This product has a two year standard warranty beginning from the date of purchase as stated on the sales invoice. For full details please refer to our Terms and Conditions.
4. The SY Product warranty is automatically void under any of the following conditions:
   - The product is already outside of its warranty period
   - Damage to the product due to incorrect usage or storage
   - Damage caused by unauthorised repairs
   - Damage caused by mistreatment of the product
5. Please direct any questions or problems you may have to your local dealer before contacting SY Electronics.