

ASTROS Station AS-201

User manual

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1 Introduction

ASTROS wireless presentation solution enables users to experience modern ways of communication with Astrogate's advanced network-based wireless AV distribution technology. Cross-platform ASTROS Apps and our native mirroring protocol supported allow users to present contents from various devices with existing network infrastructure. ASTROS also offers collaboration features that work seamlessly with touch displays to further increase the efficiency of communication and stimulate creativity.

ASTROS Station 201 (AS-201) Key features highlight

High performance wireless presentation

- 4K full screen or 2K split-screen wireless presentation
- 4K video output

Screen sharing and advanced features by cross-platform ASTROS App

- Support Windows, macOS, Chrome OS, iOS and Android
- Window Sharing: choose to project entire screen or selected application window on Windows and macOS
- Remote View: View and save the main screen with high quality in real time
- One-to-many: project different contents to maximum 4 ASTROS Stations simultaneously
- Touch Back: remotely operate a touch-supported device from a touch display
- Native mirroring: AirPlay mirroring/streaming and Google Cast

Intuitive and collaborative main screen features

- contents shared on the main screen simultaneously- including AirPlay and Google Cast
- Moderation Mode: control what is being presented to the audience
- Auto layout or manual layout: automatically arrange the presented contents, or drag and drop to change the layout
- Whiteboard, annotation, and Screen Capture: quickly express idea during the session

Manage ASTROS Station with ease

Browser-based ASTROS configuration page

Network

Up to 20 users can connect to AS-201 simultaneously

Wireless access point supporting 802.11ac

Security: 4-digit Login code / data encryption

2 About ASTROS Station 201

Package contents

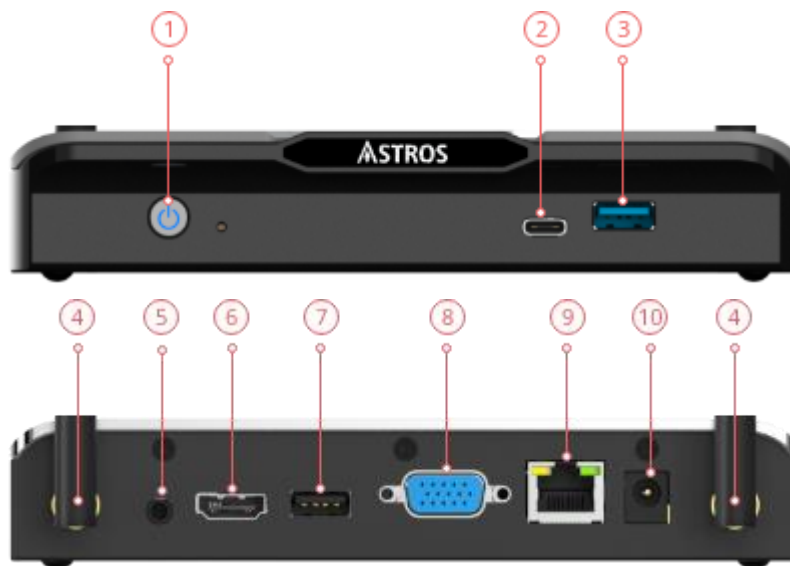
ASTROS Station (AS-201) x1

Antennas x2

Quick Start Guide x1

Power adaptor (12V 2A) x1

Interface



- | | | | |
|---|--------------------|----|----------------|
| 1 | Power button* | 6 | HDMI 1.4 out |
| 2 | USB Type-C | 7 | USB 2.0 Type-A |
| 3 | USB 3.0 Type-A | 8 | VGA out |
| 4 | Antenna connectors | 9 | Ethernet port |
| 5 | Audio out | 10 | Power jack |

* Power button and LED behavior

Enter/quit Sleep or Suspend mode: short press for 1 second

Factory reset: long press until "Restarting..." dialog appears on screen

Red: sleep mode; Blue: power on; Blinking red and blue: firmware updating

* USB devices support on AS-201

Mouse / Keyboard / USB flash drive

Others

1. Product name and Model name: ASTROS Station AS-201
2. PSU power rating: 12V / 2A
3. POE power rating: 48V / 0.32A
4. Max. operating temperature: 0° - 40°
5. Max. storage temperature: -10° - 70°
6. Height of wall mounting: lower than 3 meters (suggested)
7. Warning:
 - The RTC battery inside of the ASTROS Station is forbidden to charge, decompose, heat or throw into fire.
 - Do not ingest or swallow the RTC battery, or it can cause severe internal burns in just 2 hours and can lead to death.
 - Keep the RTC battery away from children.
 - Please use in accordance with the product manual to avoid damage to the product and affecting the warranty.
8. Warranty: 3 years
 - Product problems caused by the following improper use will not be covered by the warranty:
 - Disassemble or repair the product by yourself;
 - Disassemble or replace the RTC battery in the product;
 - Make the system short-circuit by spraying liquid improperly on the system;
 - Use equipment that is not in the product packing, such as power adapter or antennas... etc.
 - If you have any other questions, please contact our customer support or distributor, and send the product for repair if necessary.

3 ASTROS Station Installation

3.1. Mounting

Wall mounting

1. Drill two holes in the wall with the distance shown on Figure 4.1.1. Use screw anchors if needed

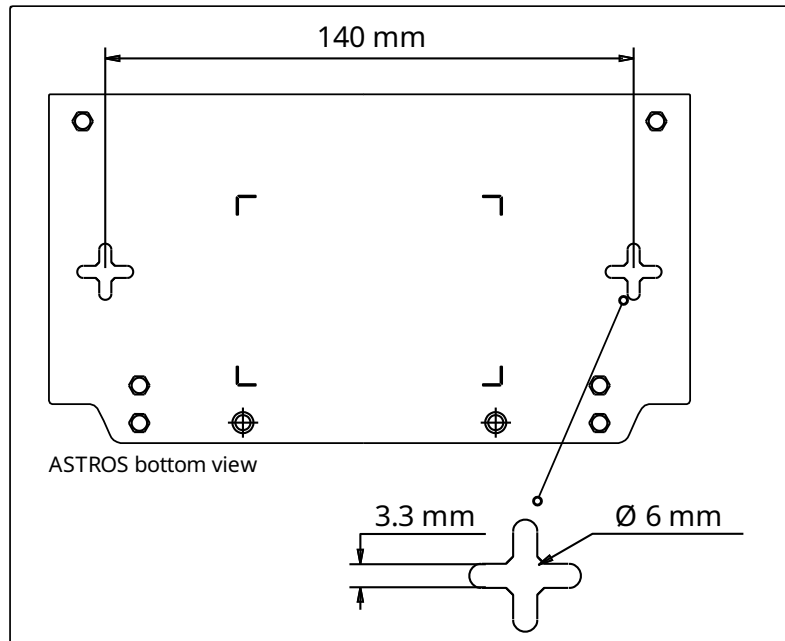


Figure 3.1.1. ASTROS Station bottom view

2. Drive in two screws.
The screw head diameter must be between 3.3 and 6 mm.
The screw rod diameter must be smaller than 3.3 mm.
Do not drive in the screws completely.
3. Hang the ASTROS Station to both screw heads and slide downwards until it's fixed.

3.2. ASTROS Station Configuration

Access ASTROS configuration page

1. Prepare a device with web browser capability (a laptop is preferable)
2. Connect your device to the ASTROS Station
Make sure your device and the ASTROS Station are connected to the same network
For more information, see [Network integration](#)
3. On the Standby Screen, find ASTROS Station's IP address on the left-hand side

4. Type in https://IP or https://Device name in a web browser
For example, use https://192.168.120.11 on the default IP address when no Ethernet cable is connected.

5. On the Landing Page, type in the administrator password.

The default password is admin.

! It is strongly suggested to change the administrator password the first time you configure your AS-201.

! "https://" in IP address is necessary for the browser to direct to the ASTROS configuration page correctly.

! You will be automatically logged out to the Landing Page if idle for 15 minutes.

The Landing Page

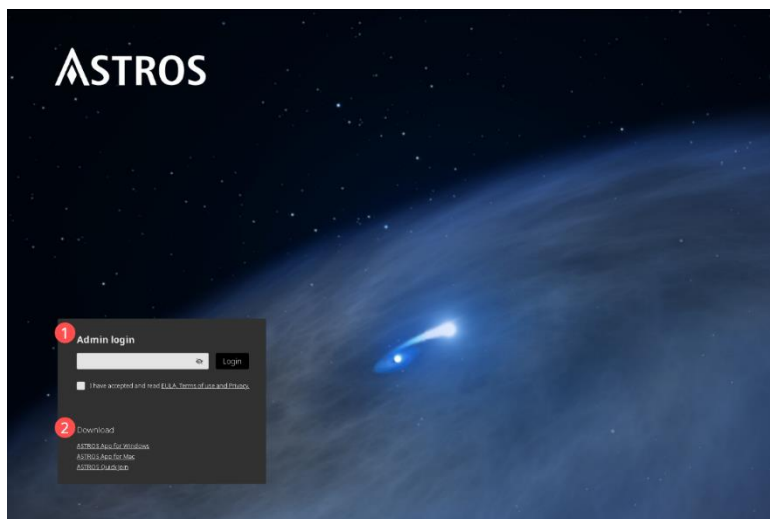


Figure 3.2.1.

1 Admin login

Default login code is admin

2 Download apps

ASTROS App for Windows and macOS: redirect to Astrogate website

ASTROS Quick Join: download a shortcut file with connection information of this ASTROS Station; see ASTROS Quick Join for more information.

! Download Windows installation-free app at www.astrogate.com/support

General

Basic

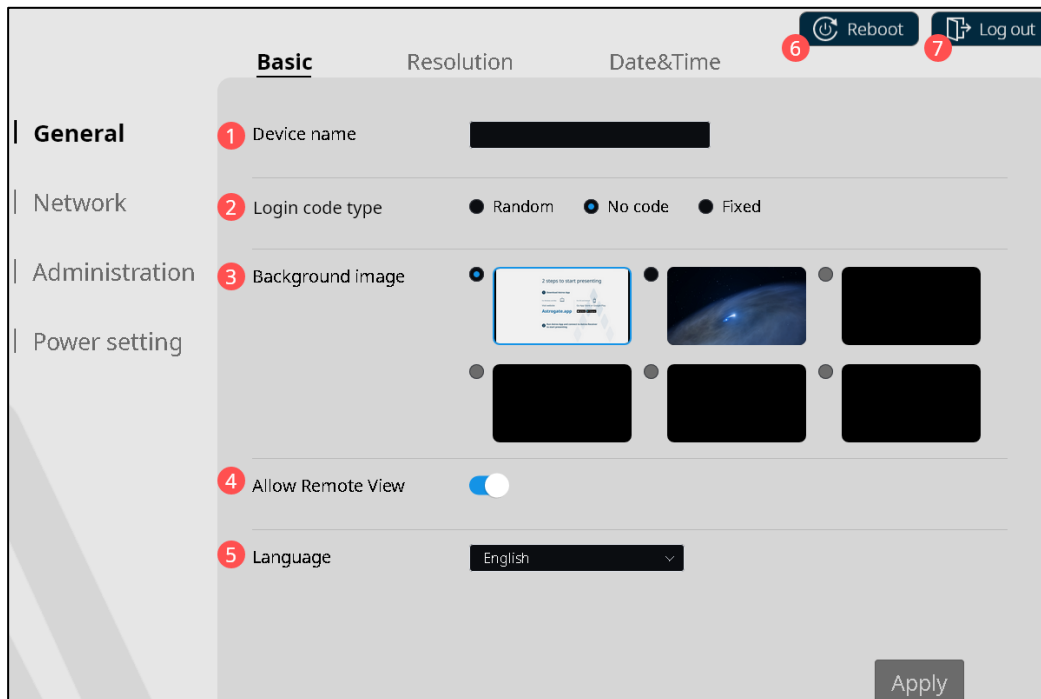


Figure 3.2.2.

- | | |
|---|--|
| <p>1 Station name input</p> | <p>The displayed name for this ASTROS Station. The name will be displayed on the Standby Screen and ASTROS App's Station list. It will also be the SSID (WiFi name) for ASTROS Station wireless access point.</p> <p>Default name: AS201-xxxx</p> <p>Format: A to Z, a to z, 0 to 9 and "-" hyphen sign. Maximum 16 characters.</p> |
| <p>2 Select Login code type</p> | <p>Random: Login code enabled, generated randomly</p> <p>No code: Login code disabled</p> <p>Fixed: Login code enabled, customized 4 digits</p> |
| <p>3 Select background image</p> | <p>There are two built-in images (unremovable) with the first one selected as default. Hover your mouse to any empty block and click on the "add" button to upload a custom background image from your device. Hover your mouse on a block with custom image, and click on the "delete" button to delete the custom background image.</p> <p>Image format: png or jpeg; width/height ratio between 1.5-2.0; less than 4K resolution is recommended</p> |
| <p>4 Remote View switch</p> | <p>Enable this option will allow all users in the session to view the main screen via ASTROS App.</p> |
| <p>5 Language selection</p> | <p>Select the language for this ASTROS Station.</p> |

- 6 Reboot button Click this button to reboot ASTROS Station.
- 7 Log out button Log out to the landing page.

Resolution

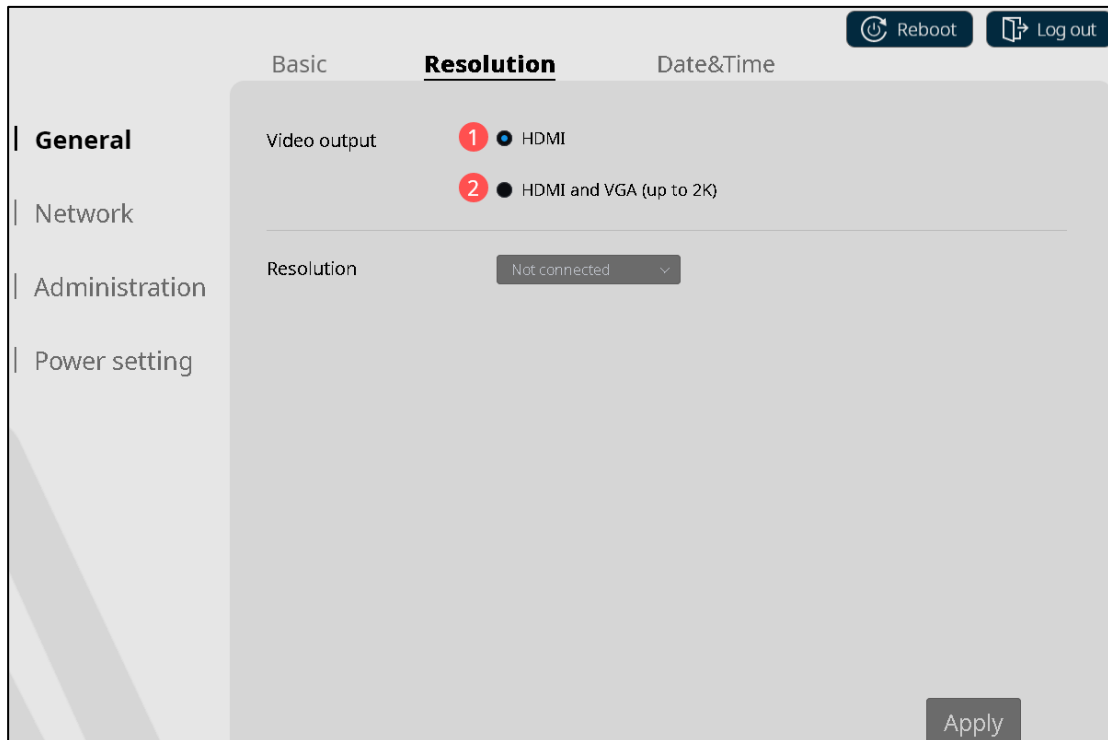


Figure 3.2.3.

- 1 HDMI only (default) Maximum resolution is up to 4K resolution.
- 2 HDMI and VGA duplicate Enable dual-display output. In this mode, the maximum resolution is up to 1080p.

! The available resolution depends on the connected monitor. When using dual-display output, both will be set to the same resolution.

! When audio jack and HDMI are both connected, the audio will be duplicated.

Date & Time

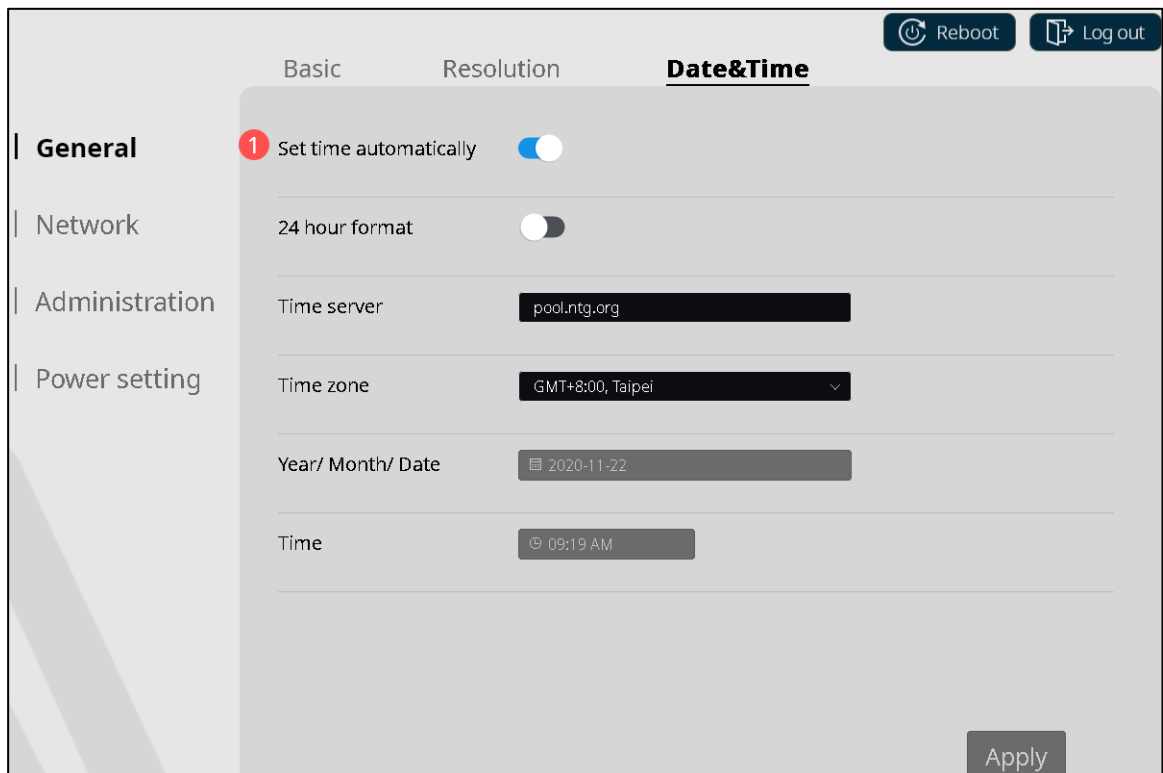


Figure 3.2.4.

- 1** Time retrieval method Automatic time retrieval by default.
Enabled: automatically retrieve time and date from specified timer servers
Disabled: manually set time and date
! Time synchronization is necessary for screen projection.
Please ensure the date and time is set correctly.

Network integration

There are three types of setup to integrate the ASTROS Station to your organization network (LAN). How an administrator or a user access the ASTROS Station depends on which type of setup you choose.

! It is recommended to connect to the ASTROS Station via Ethernet when performing Wi-Fi configuration.

! Switching Wi-Fi modes requires clicking Apply button to take effect.

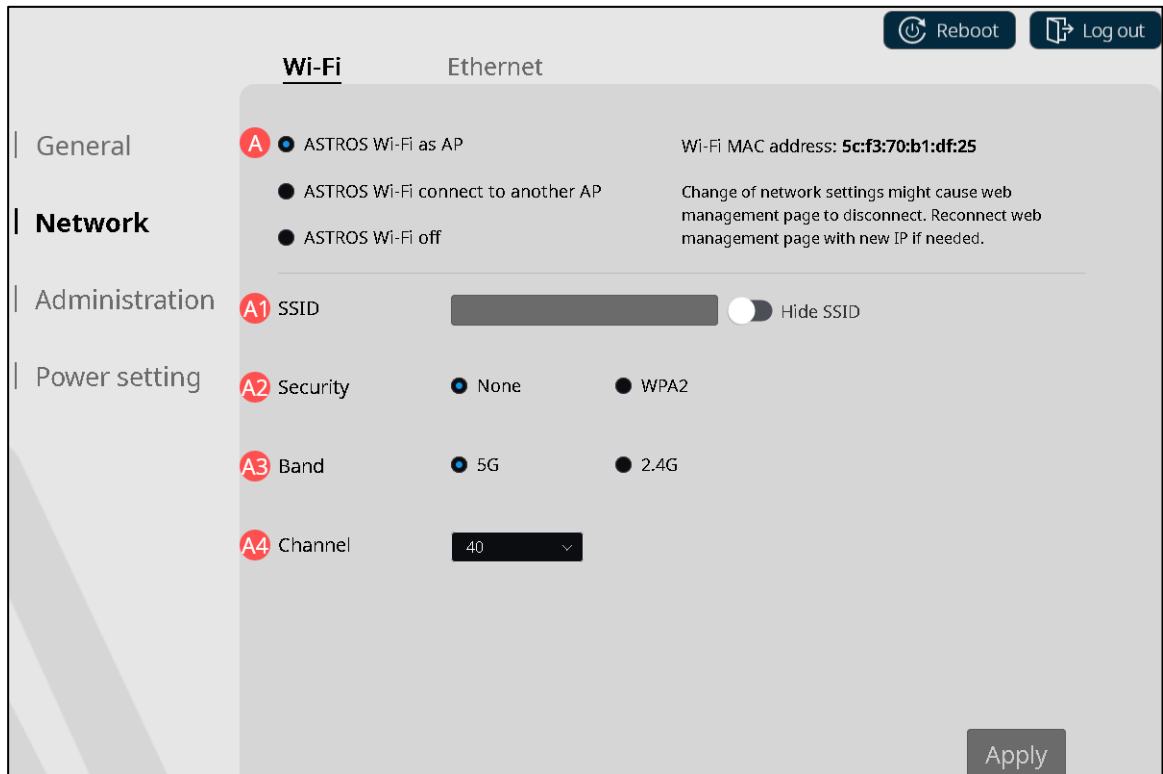


Figure 3.2.5. Wi-Fi setting page- 1

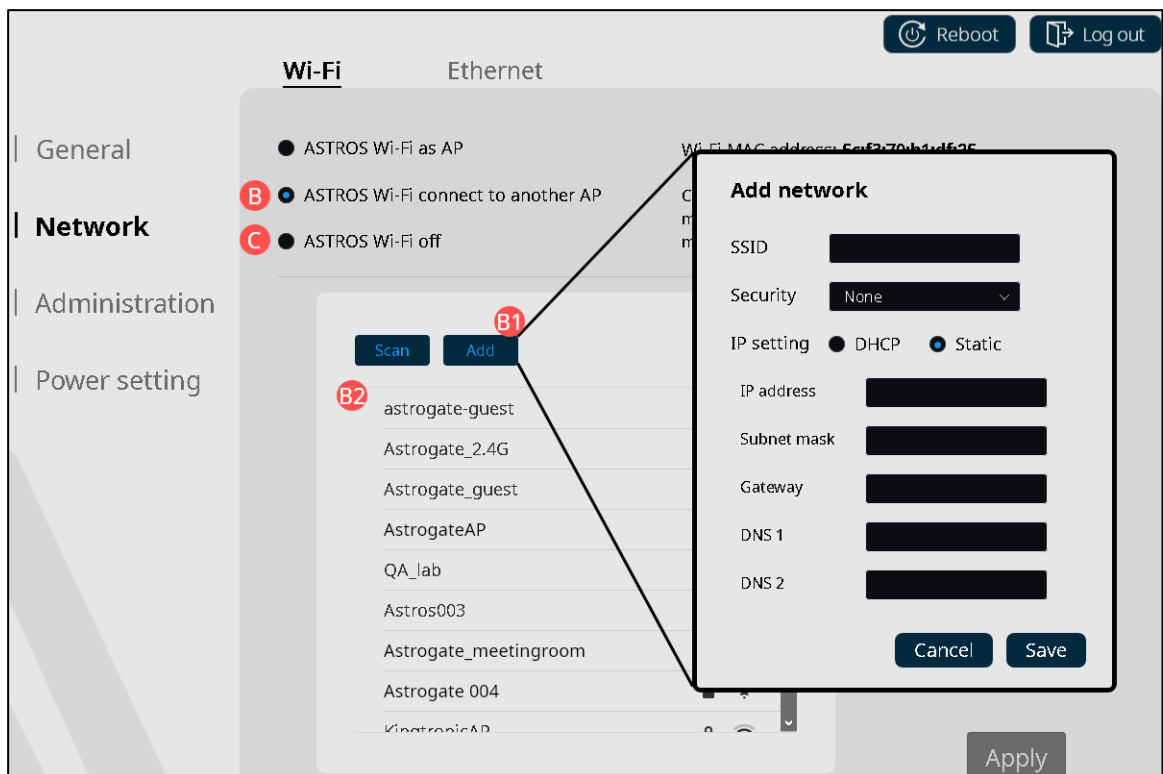


Figure 3.2.6. Wi-Fi setting page- 2



Figure 3.2.7. Ethernet setting page

Type 1: ASTROS Station standalone network (recommended)

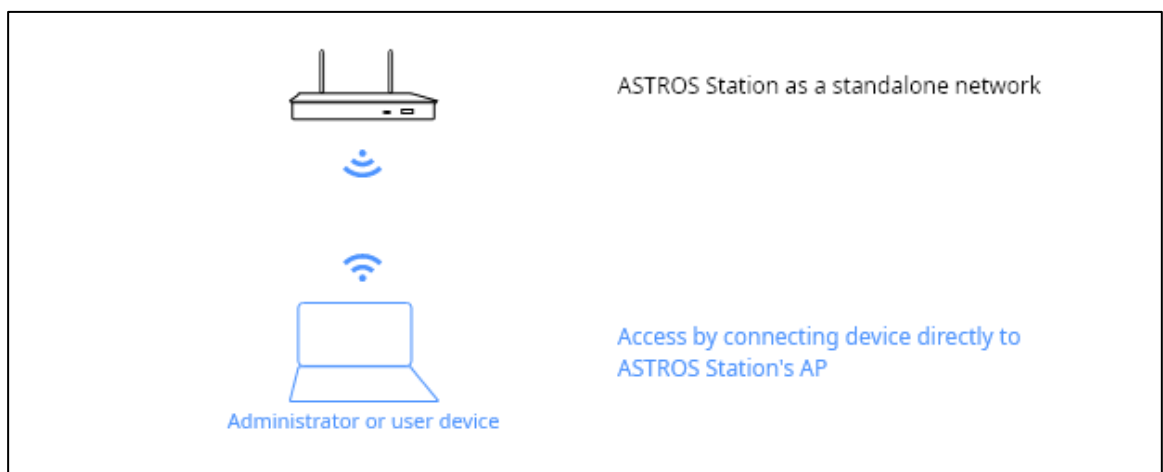


Figure 3.2.8. ASTROS Station standalone network

This is the default network state when you first time turn on an ASTROS Station, without an Ethernet cable connected.

ASTROS Station will become a wireless access point with default SSID AS201-xxxx.

Under this circumstance, the default IP address is 192.168.120.11.

With the following steps, you may set an ASTROS Station to Type1 mode:

1. On the ASTROS configuration page, navigate to Network > Wi-Fi

2. Choose ASTROS Wi-Fi as AP (marked **A** in Figure 4.2.5.)
3. Click on the Apply button

Advanced ASTROS wifi access point settings:

See Figure 4.2.5.

- | | |
|--------------------------|--|
| A1 SSID | The broadcasted WiFi name of this ASTROS Station.
SSID by default is set to the same as the Station name. To change this, go to General > Basic > Station name. |
| A2 Security | Set WiFi protection mode to None or WPA2.
WPA2 password format: A to Z, a to z, 0 to 9; 8 to 16 characters. |
| A3 Band selection | Select 5G (default; recommended) or 2.4G. |

Type 2: ASTROS Station join another LAN via Ethernet cable (recommended)

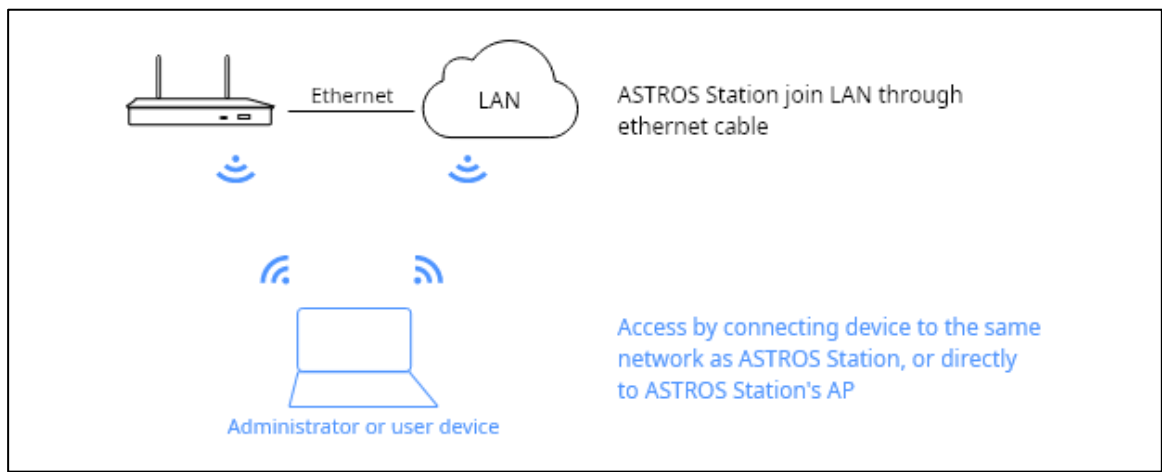


Figure 3.2.9. ASTROS Station join another LAN via Ethernet

Same as Type 1, but Type 2 has a Ethernet cable connected to ASTROS Station.

ASTROS Station will be a wireless access point with default SSID AS201-xxxx and default wireless IP address 192.168.120.11.

The Station will also obtain Ethernet IP address from the DHCP server, and display it on the Standby Screen.

With the following steps, you may set an ASTROS Station to Type 2 mode:

1. On the ASTROS configuration page, navigate to Network > Wi-Fi
2. Choose ASTROS Wi-Fi as AP (see **A** in Figure 4.2.5.)
3. Click on the Apply button

Advanced setting: you may choose to turn off ASTROS Station wireless access point with the following steps:

1. On the ASTROS configuration page, navigate to Network > Wi-Fi
2. Choose ASTROS Wi-Fi off (see **C** in Figure 4.2.6.)
3. Click on the Apply button

Advanced setting: you may set static ethernet IP address instead of DHCP with the following steps:

1. On the ASTROS configuration page, navigate to Network > Ethernet
2. Choose Static IP (see ② in Figure 4.2.7.)
3. Fill in valid IP information. All information should be in IPv4 format.
4. Click on the Apply button

Type 3: ASTROS Station join another LAN through Wi-Fi

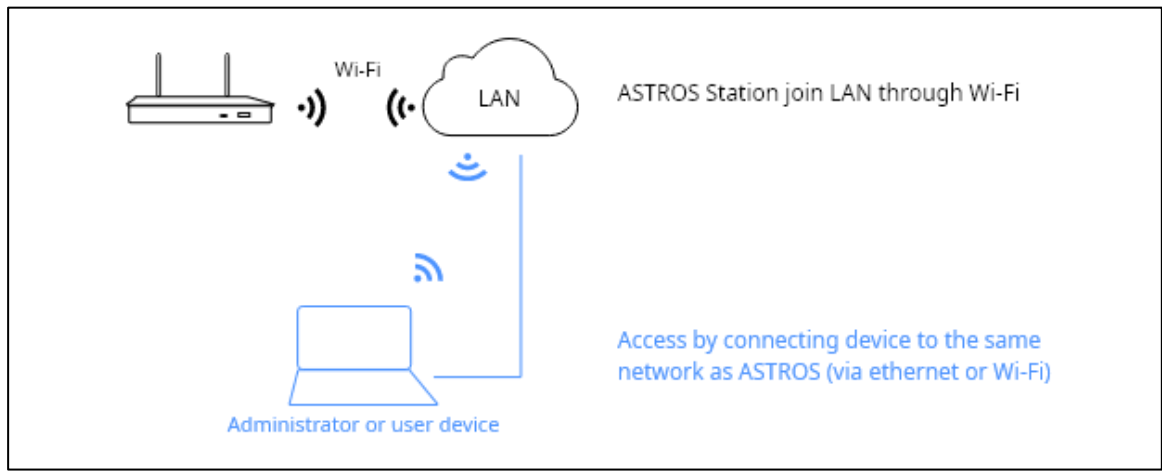


Figure 3.2.10. ASTROS Station join another LAN through Wi-Fi

Type 3 setup allows you to integrate ASTROS Station to your organization LAN with internal Wi-Fi. With this setup, users or administrators must connect their device to the organization LAN to access ASTROS Station.

ASTROS Station will obtain IP address from the DHCP server, and display it on the Standby Screen.

With the following steps, you may set an ASTROS Station to Type 3 mode:

1. On the ASTROS configuration page, navigate to Network > Wi-Fi
2. Choose ASTROS Wi-Fi connect to another AP (see ① in Figure 4.2.6.)
3. Find a wireless access point on the Wi-Fi list and connect (see ② in Figure 4.2.6.)
4. To connect to a wireless access point manually, click add button to start connection process (see ③ in Figure 4.2.6.)
5. Click on the Apply button

! Ethernet cable must be removed for Type 3 to take effect.

Administration

Update

There are two methods to upgrade a ASTROS Station.

1. Update ASTROS Station Over-the-air (OTA)

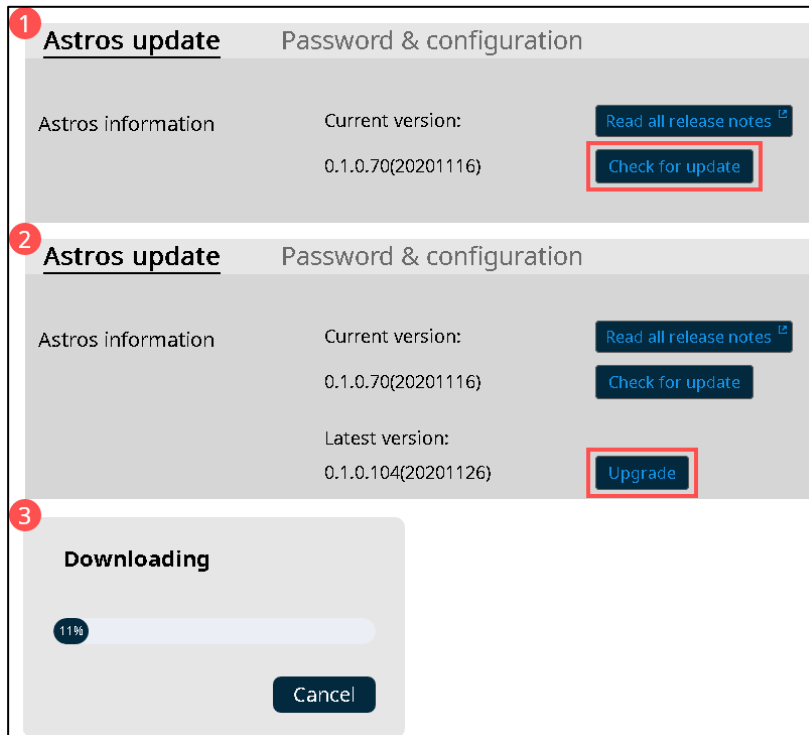


Figure 3.2.11.

- 1 Click “Check for update” to check latest firmware version.
- 2 If new version is found, click “Upgrade”.
- 3 The firmware download begins. ASTROS Station will start firmware upgrade process when download is complete. The configuration page will not be accessible until the upgrade process is completed.

2. Update ASTROS Station by uploading firmware manually

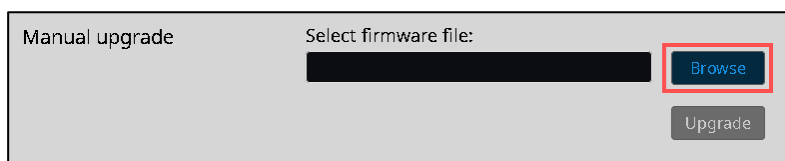


Figure 3.2.12.

Download the latest ASTROS Station firmware from

<https://www.Astrogate.com/support>

Click on the “Browse” button to upload the latest ASTROS Station firmware, then click on the “Upgrade” button to start the upgrade process.

Password & configuration

This page allows you to change configuration page password and perform system settings.

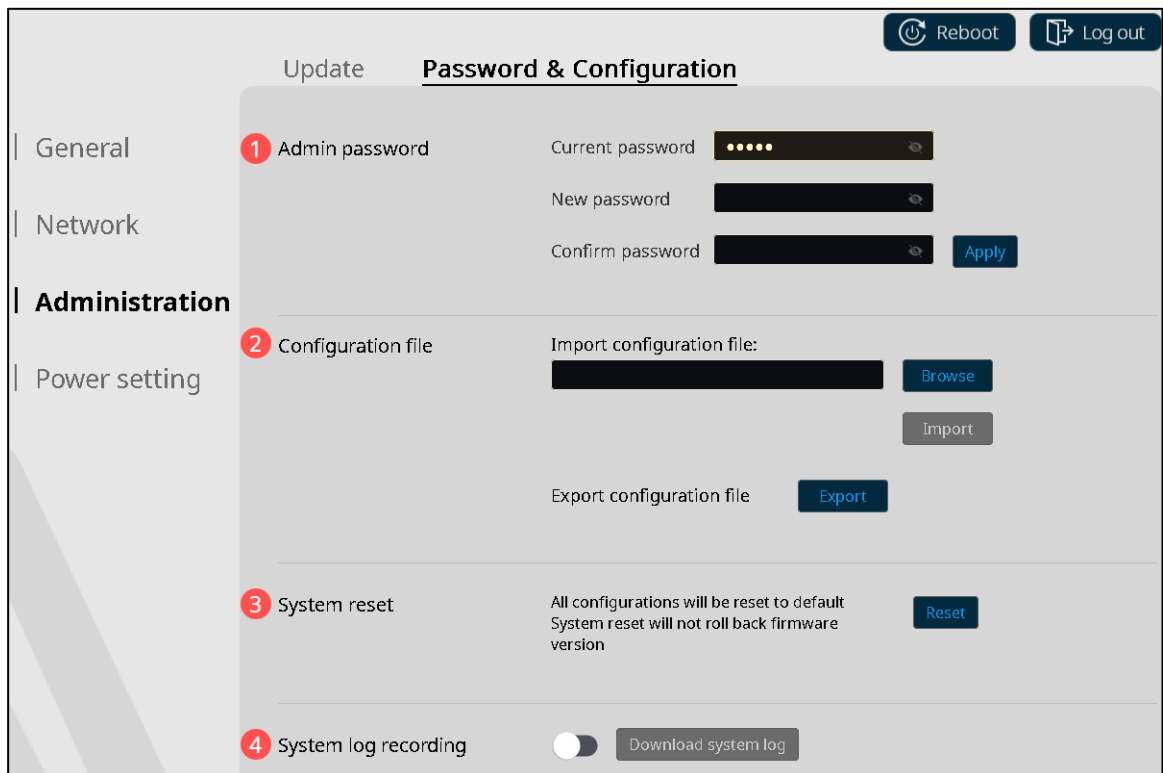


Figure 3.2.13.

- 1 Change configuration page password Format: A to Z, a to z, 0 to 9; up to 16 characters.
- 2 Import or export Station configuration file Format: json
- 3 Perform system reset
- 4 Turn on/off system log recording This feature is used for system or error diagnosis. Only turn on per Astrogate technical support's request.

! It is strongly suggested to change administrator password the first time you configure your AS-201.

Power setting

This page allows you to choose ASTROS Station power button behavior when you press it.

Sleep mode

In Sleep mode, ASTROS Station turn off only the video and audio output. Users can still discover this ASTROS Station and connect.

To enter Sleep mode: short press the power button for 1 second.

To quit Sleep mode: short press the power button for 1 second or any connection attempt.

Enter Sleep mode automatically

When you set power button behavior to Sleep mode, you may set ASTROS Station to automatically enter Sleep mode if no operation is made for a certain period.

Suspend mode

In Suspend mode, ASTROS Station will shut down all functions to decrease power consumption to minimum.

To enter Suspend mode: short press power button for 1 second.

To quit Suspend mode: short press power button for 1 second.

4 Start Screen Sharing

4.1. Download ASTROS App

Windows and macOS:

Go to Astrogate.app website to download the ASTROS App for your device

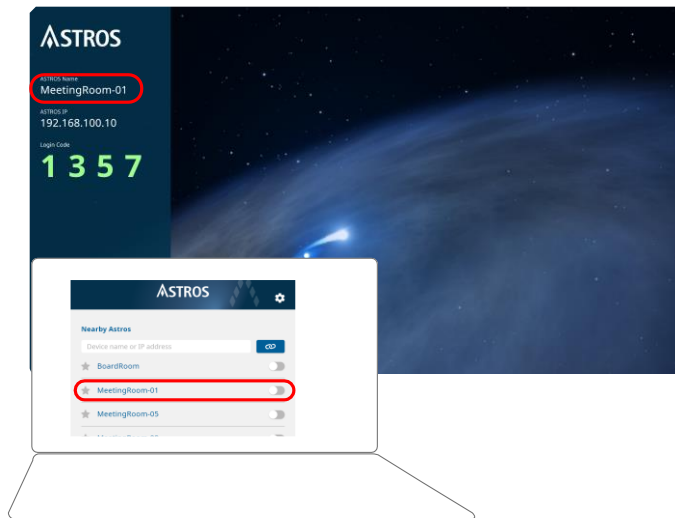
Android and iOS: search for ASTROS App in Google Play or App Store

! Learn more about ASTROS App supported OS and version in the [Specification sheet](#)

4.2. Connect to an ASTROS Station using ASTROS App

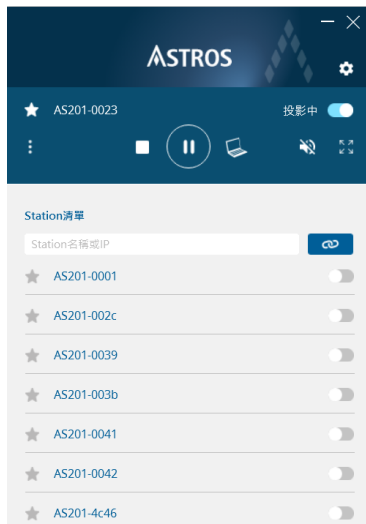
Steps

- (1) Launch the ASTROS App
- (2) On the Station list, find the name same as the “Station name” shown on the information panel of the Standby Screen.
- (3) If the Station name does not appear on the Station list, open your device’s Wi-Fi list and look for the Station name and connect. Then repeat step 1.
! Depending on the ASTROS Station network setup, you may be able to connect to ASTROS via organization network, Wi-Fi direct connection or both. See [Network integration](#) for more information.
- (4) Click the Connect toggle.



Station list (Nearby Stations)

ASTROS App will all the Stations accessible on the network



Search bar

You can use Search bar to:

- (1) Type in key characters to quickly find the ASTROS Station you are looking for.
- (2) Type in IP address to connect to a specific ASTROS Station on the same network as your device

4.3. Operating ASTROS App for Windows/ macOS

Screen sharing

Play/ Pause and Stop button

When you first connect to an ASTROS Station, click the Play button to start projecting your entire screen to the main screen.

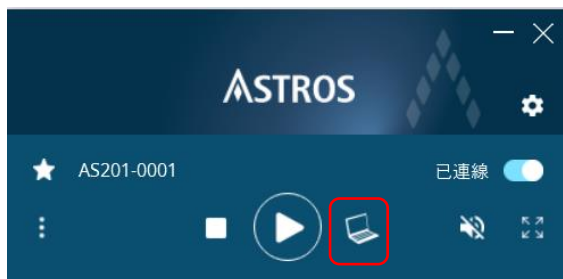
While projecting, click the Pause button will freeze your projection on the last frame.

When clicking the Stop button, the ASTROS App will instantly stop projecting your screen.



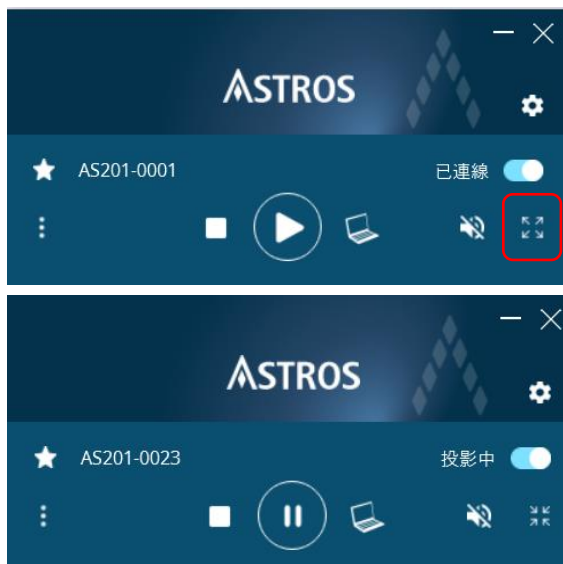
Window Sharing button

You can choose to project only a specific application window or the entire screen. Click Window Sharing button to make your selection then click on the Play button to project.



Full screen button

Click on the “Full screen” button to force your projection to switch between full screen and split screen.



Mute button

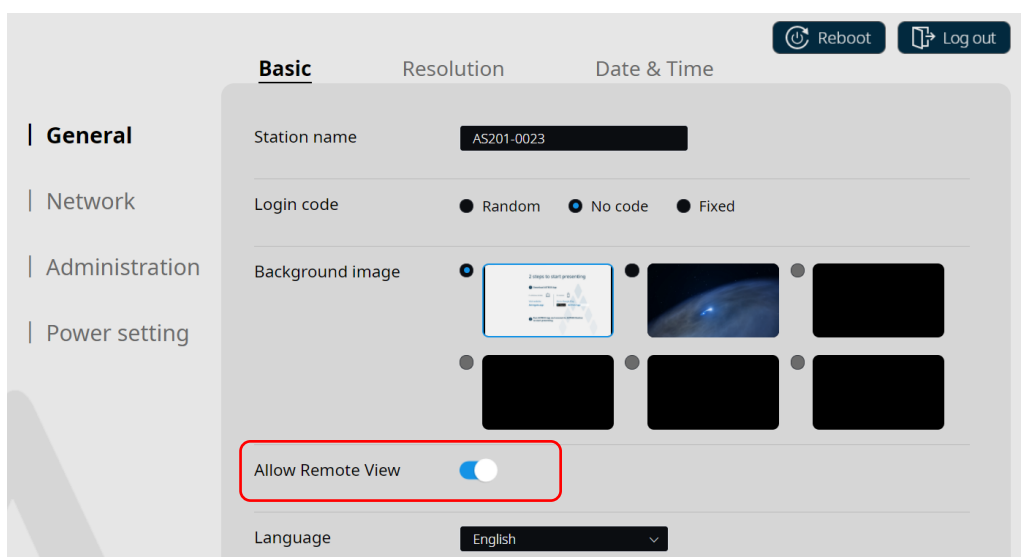
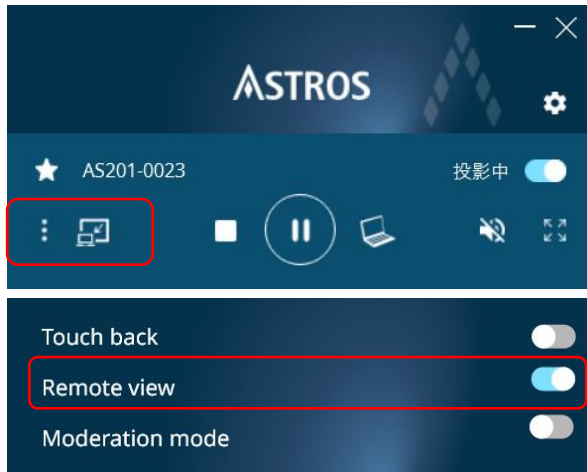
Click on the Mute button to turn on or off the audio of your projection.

Other Features

Remote View

Click the Remote View button to view the main screen with the ASTROS App.

! Enable or disable Remote View on the Control Panel or in the ASTROS configuration page.



One-to-many

ASTROS App for Windows and macOS allows users to connect and project to up to 4 ASTROS Stations simultaneously. Users can choose to project different contents to different ASTROS Stations.



Favorite Stations

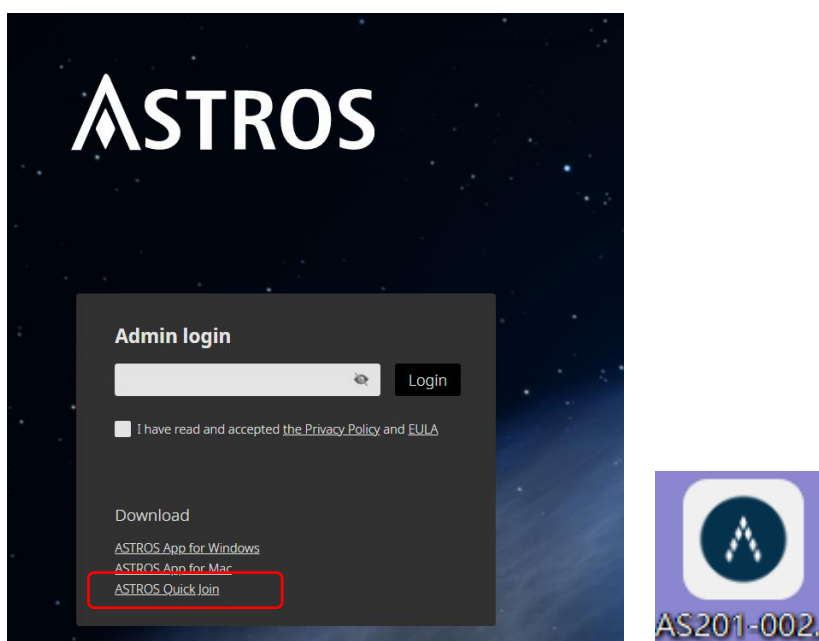
Users can mark frequently used ASTROS Stations as favorites by clicking the star-shaped button next to the Station name. The marked ASTROS Station will always be prioritized on the Station list.

ASTROS Quick Join

ASTROS Quick Join allows users to quickly connect to a pre-determined ASTROS Station.

Download Quick Join file on the configuration landing page of a specific ASTROS Station. The Quick Join file can be renamed and dispatched to other computers.

! ASTROS App must be installed before using this feature.



Collapse and expand connected ASTROS Station

You can click the Station name to collapse the presentation panel. Click again to expand.



Configure ASTROS App

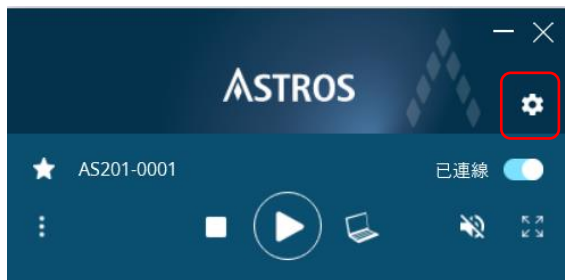
Change displayed name

Change the name displayed on the main screen.

Version and update

See current app version and check for update here.

ASTROS App will check for update automatically every time you launch the app. If an update is available, a yellow exclamation mark will appear on top of the Setting button.





Enable sound for macOS projection

Audio driver is required for ASTROS App to project audio in the macOS environment. A yellow dot will appear on top of the Mute button if audio driver is not installed. To install the driver:

- (1) Install the audio driver during ASTROS App installation, or
- (2) Click the Mute button to trigger the audio driver installation process.

Windows install-free version

Download install-free ASTROS App at: www.Astrogate.com/support.

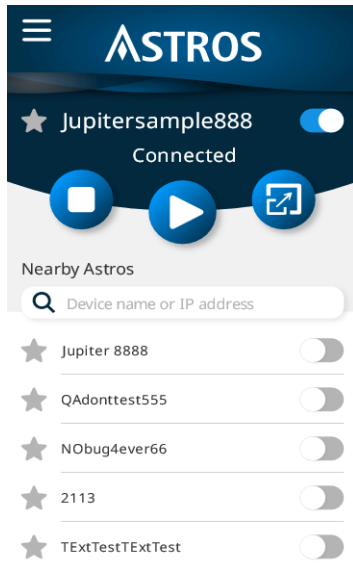
! Install-free version does not support upgrade function nor ASTROS Quick Join.

4.4. Operating ASTROS App for Android or Chrome OS devices

Android and Chrome OS share the same "ASTROSApp.apk"

Screen sharing

Launch ASTROS App, find the Station name same on the main screen and connect it. Press the play button to start sharing.



4.5. Mirroring with native protocols

Support AirPlay and Google Cast

If your device supports AirPlay or Google Cast, you can connect to ASTROS Station and share the screen via it.

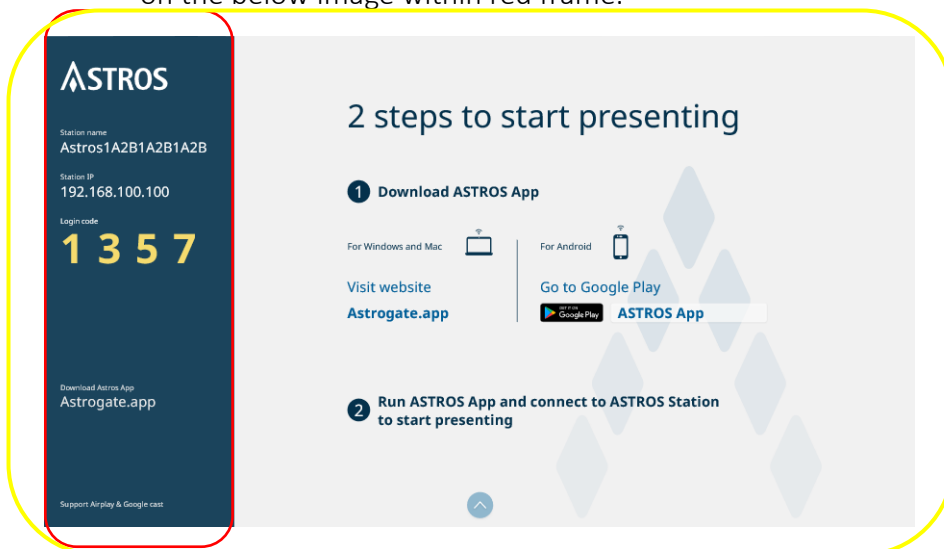
! If login code is required, please input the login code to start sharing.

5 Operating the Standby Screen

5.1. Overview

A Information panel

The information panel is on the left-hand side of the standby screen as the info. shown on the below image within red frame.



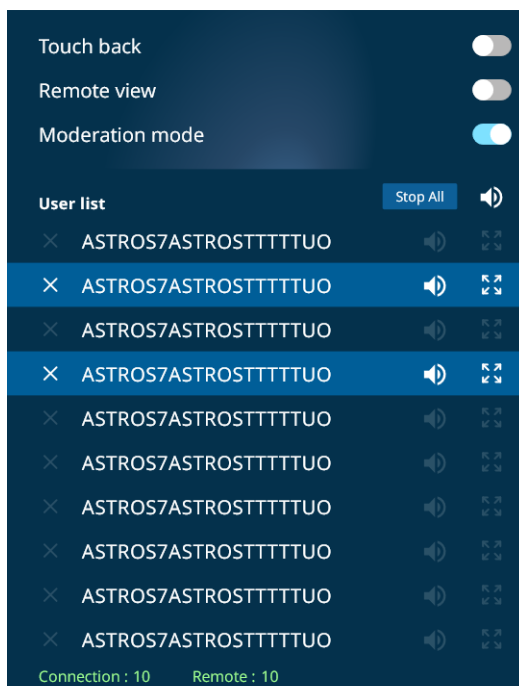
B Background image

The background image is shown as the below image within yellow frame.



C Control Panel

Control Panel will be automatically enabled if a touch display or a mouse is connected to the ASTROS Station.



C1 Touch Back

When Touch Back function is enabled and a touch display is connected to the ASTROS, a user can operate a touch-supported device remotely from a touch display.

C2 User List

On the User List, connected users will be displayed. When Moderation Mode is enabled, you can control users' projection by clicking control button set; when Moderation Mode is disabled, control button set will be disabled.

C3 Moderation Mode (on-screen)

Enabling Moderation Mode on the ASTROS to

- (1) allow the moderator to control what is being displayed to the main screen and
- (2) grant the moderator permission to disconnect a user from a session.

Behavior

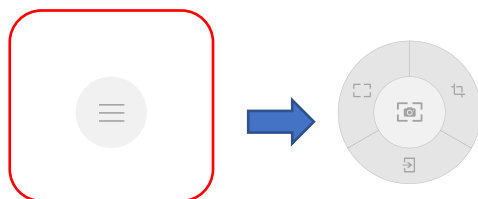
- (1) When Moderation Mode is enabled, ASTROS Station only accept projections from the ASTROS App.
- (2) Enabling the Moderation Mode will cause all current projection to stop.
- (3) When Moderation Mode is enabled, users can still connect to the ASTROS Station, but they cannot project any content to the main screen freely. Window Sharing selection and Remote View are still allowed.

D Floating Menu and Collaboration Features

Floating Menu will be automatically enabled if a touch display or a mouse is connected to the ASTROS Station.

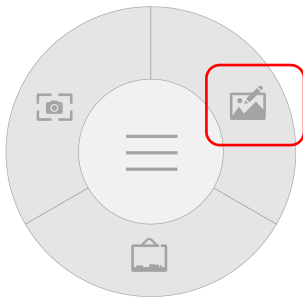
D Floating Menu

Floating Menu allows users to quickly access Whiteboard, Annotation and Screen Capture features. Users can drag and move the Floating Menu to desired locations. Floating Menu will fade to 80% transparency if no operation is made for 15 seconds.



D1 Whiteboard

ASTROS offers an intuitive drawing tool for users to conveniently illustrate their ideas during a session.



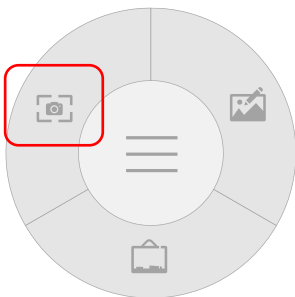
D2 Annotation

The annotation allows users to write or draw their comments on a layer over the main screen.



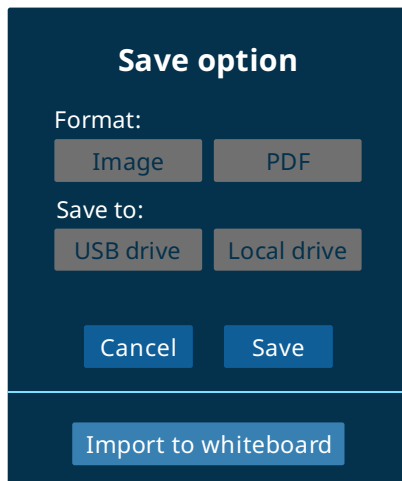
D3 Screen Capture

The users can capture the display screen anytime they want.



Access saved image

You can save the Whiteboard, Annotation or Screen Capture as PDF or image to the ASTROS internal memory or a plugged-in USB drive.

A dark blue dialog box titled "Save option". It contains two sections: "Format:" with "Image" and "PDF" buttons, and "Save to:" with "USB drive" and "Local drive" buttons. At the bottom are "Cancel" and "Save" buttons. Below the dialog box is a separate button labeled "Import to whiteboard".

Save option

Format:

Image PDF

Save to:

USB drive Local drive

Cancel Save

Import to whiteboard

5.2. Content arrangement

Auto layout

The projected contents will be automatically arranged by join order.

Change position

When Touch Back function is disabled and a touch display is connected to the ASTROS, users can drag (press and hold) a projected content to re-assign position.

Federal Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference and
- 2) This device must accept any interference received, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.(For only one antenna)
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

UNII equipment warning statement:

- a. Please avoid affecting the operation of nearby radar systems.
- b. High-gain directional antennas can only be used in fixed point-to-point systems.