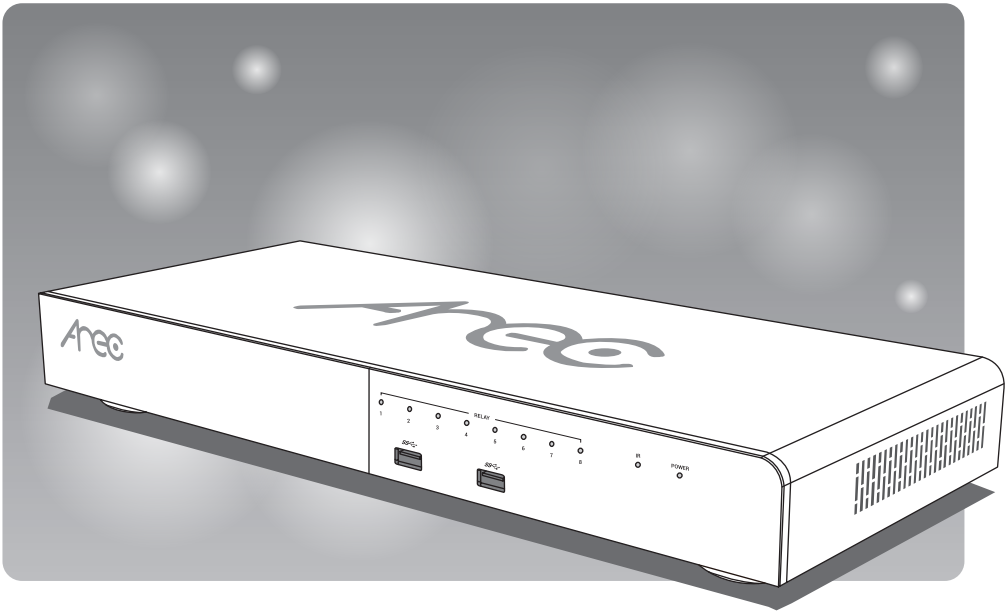
DS-AC1

Control Station

User Manual | English



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Product introduction

AREC DS-AC1 Control Station is a network-based control solution that provides an intelligent and user-friendly graphical control interface in any space. It simplifies workflows for professional audiovisual and other equipment across any space. By connecting devices in all spaces, including audio, video, lighting, and air conditioning systems, DS-AC1 integrates a control station with an intuitive graphical user interface, enhancing usability. With just a single action, you can easily manage and control multiple devices. DS-AC1 also allows you to customize multiple modes to optimize the efficiency of each device.

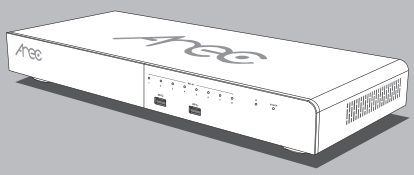
Product function

- A one-touch switch solution, all operations are performed on an intuitive interface.
- Supports over 20 types of devices, including PTZ network cameras, microphone systems, lighting, screens, switches, projectors, and other AV equipment.
- Directly controls devices in the room through built-in RS 232/485, infrared learning and transmitter, relays, digital I/O, differential audio, and USB HID ports.
- Easily switches, plays, and streams HDMI, USB, and local/remote IP video streams.
- Manages and controls via the network using a browser on smartphones, tablets, and laptops.
- Monitors device power usage, generates distribution reports for all device power consumption.

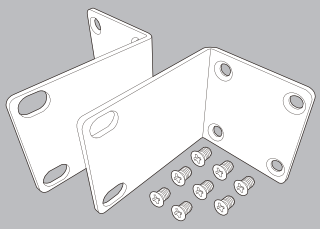
Specifications

Product Name	Control Station
Model	DS-AC1
Dimensions	406.4mm(L) x 183.4mm(W) x 54mm(H)
Weight	2460g
Power Supply	12V/3.33A
Power Consumption	40W (Max.)
Operating Temperature / Humidity	0°C ~ 40°C / 90%
Maximum Input / Output Description	4 HDMI inputs, 2 RJ-45 ports with a maximum of 3 simultaneous streaming video inputs, 1 simultaneous USB video input; 3 video outputs (HDMI x2 + DPx1).

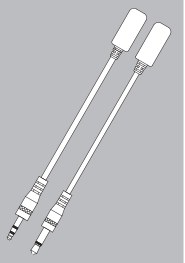
Product packaging



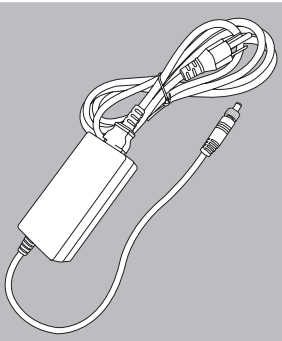
AREC Control Station



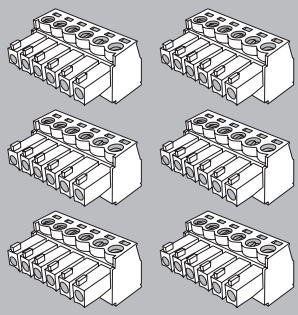
Rack mounting brackets*



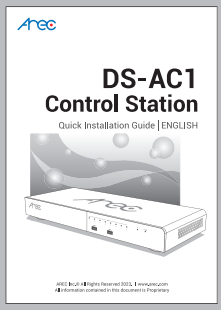
IR cables**



Power cable



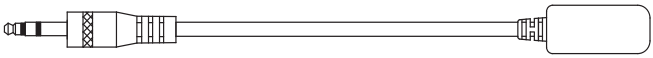
Terminal block *6



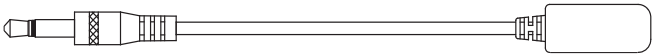
Quick installation guide

* Rack mounting brackets. Enables easy installation of the AREC Control Station in a 19-inch rack.

** IR Receiver

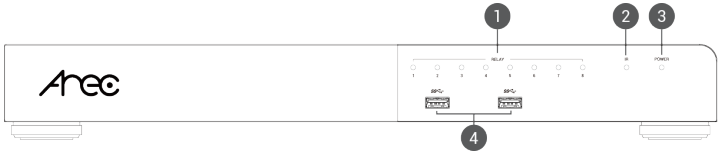


** IR Transmitter

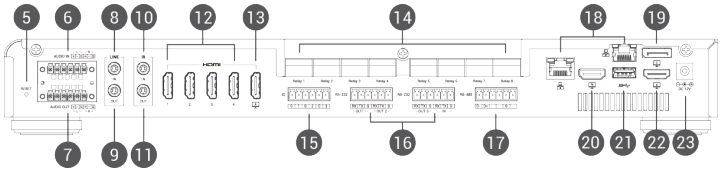


Product appearance

Front View

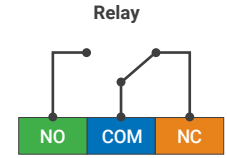


Back View

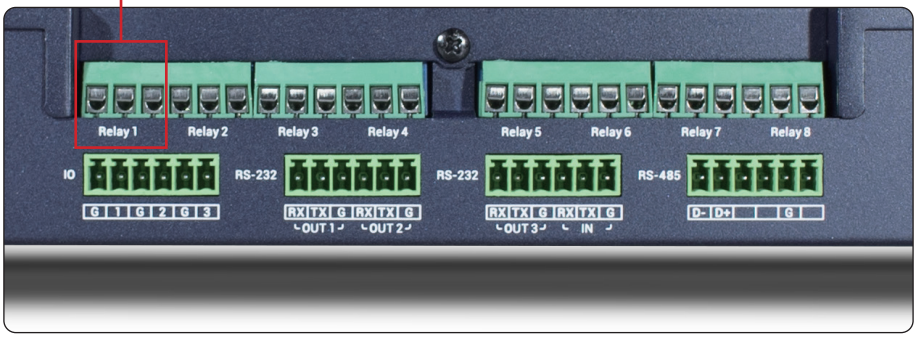


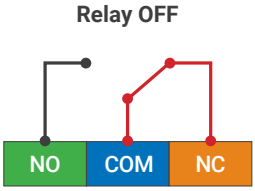
No.	Name	Brief introduction
1	Relay Indicator Lights	There are 8 channels. A solid green light indicates that the COM and NO terminals are connected.
2	IR Receive Indicator Light	The green light remains on when entering IR learning mode.
3	Power Indicator Light	Indicates the device's power status.
4	USB 3.0	1. Mouses or keyboards. 2. USB cameras or USB audio devices (recommended not to use a USB hub to avoid compatibility issues). 3. USB-RS-232 converter.
5	Restore to factory settings	Long press to reset the device to factory settings.
6	Balanced audio input	Analog audio, balanced stereo input (Phoenix connector 1x6).
7	Balanced audio output	Analog audio, balanced stereo output (Phoenix connector 1x6).
8	Line-In	Line audio input
9	Line-Out	Line audio output
10	IR receiver	IR infrared receiver connector (terminal: 3.5mm, 3 pin, 2 ring)
11	IR transmitter	IR infrared transmitter connector (terminal: 3.5mm, 2 pin, 1 ring)
12	HDMI input	HDMI signal source input x4
13	HDMI Loop output	HDMI Passthrough, the signal source is from one of HDMI inputs 1 to 4, controlled by DS-AC1, with video output corresponding to Display A.
14	Relay	8 channels, each with three pins: NO, COM, NC. Normally, COM and NC ports are connected.
15	Digital Output	Digital Output x3, 250mA sink from 5VDC max.
16	RS-232	RS-232 control signal connectors x4, used as follows: - RS-232 OUT: DS-AC1 controls external devices x3 - RS-232 IN: External devices control DS-AC1 x1
17	RS-485	RS-485 control signal connector x1
18	Network Ports (WAN)	Two RJ-45 Ethernet ports, allowing simultaneous connection to two different local area networks.
19	DisplayPort Output	Video output, the content is determined by the control for Display C.
20	HDMI 1 Output	HDMI output for GUI control interface
21	USB 3.0	1. Mouses or keyboards. 2. USB cameras or USB audio devices (recommended not to use USB hubs to avoid compatibility issues) 3. USB-RS-232 converter.
22	HDMI 2 Output	HDMI output, the content is determined by the control for Display B.
23	Power 12V	12V/ 3.34A

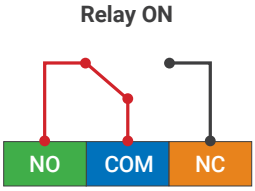
Relay Function Description



The DS-AC1 has a total of 8 sets of relays. Each relay set has 3 pins, arranged from left to right as follows: Normally Open (NO), Common (COM), and Normally Closed (NC).

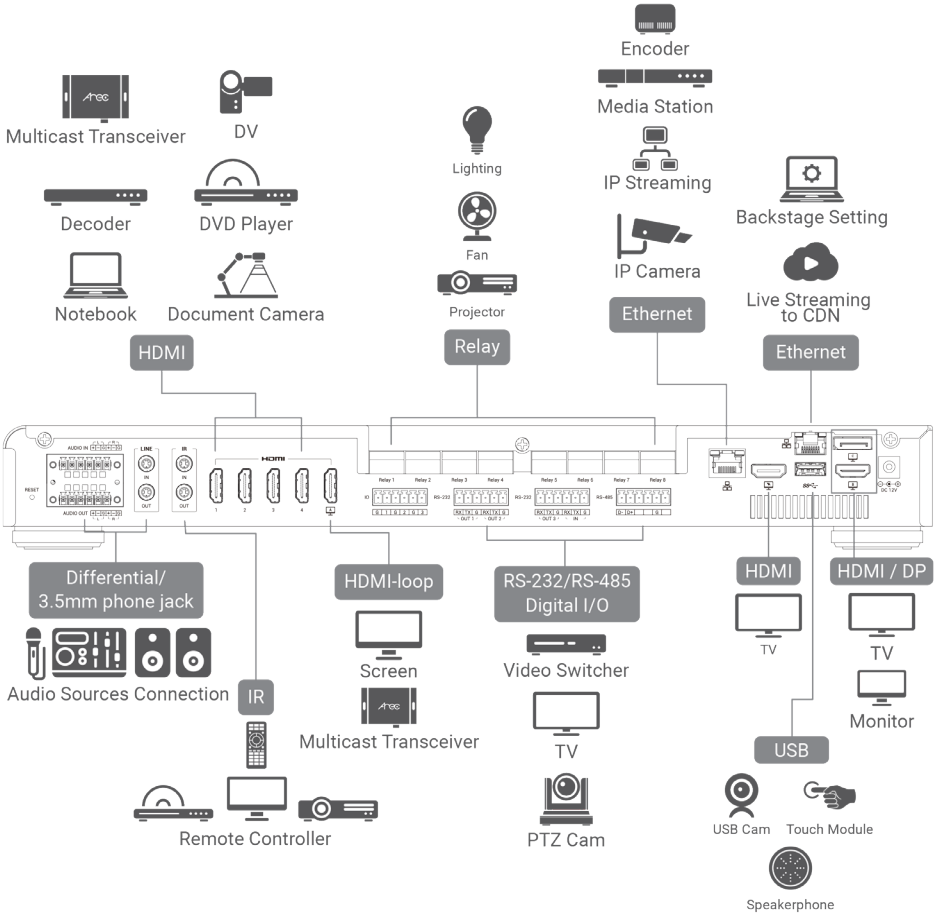






- In the default state when the relay is not activated (Relay OFF), the Common (COM) and Normally Closed (NC) are connected, and Normally Open (NO) is disconnected.
- When the relay is activated (Relay ON), the Common (COM) and Normally Open (NO) are connected, and Normally Closed (NC) is disconnected.

Peripheral connectivity examples



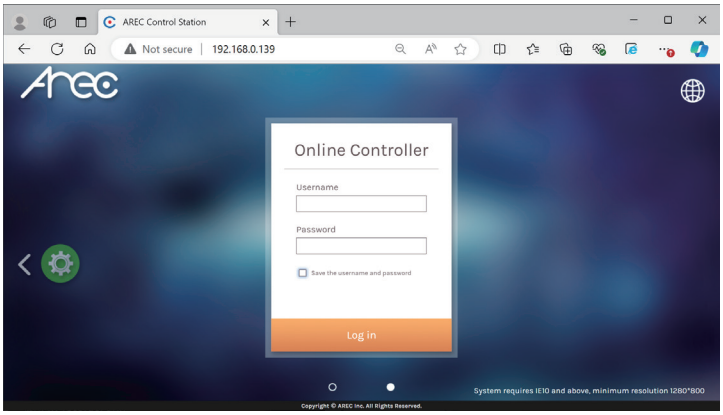
Chapter 1 Administrator

This product provides a web interface for configuration and online control. To connect to the web interface, you will need to find the IP address first.

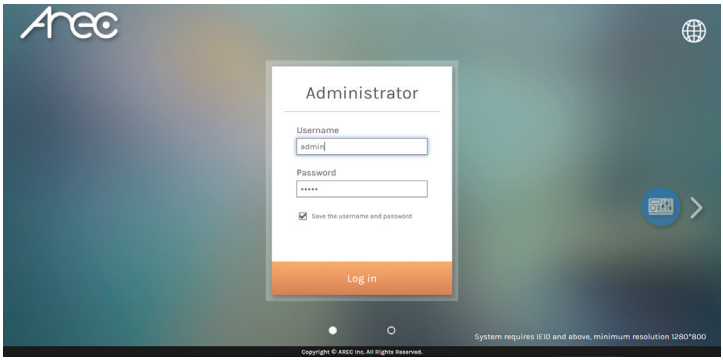
1. Connect the DS-AC1 HDMI output 1 to a display and connect a mouse to the DS-AC1.

2. Click the sidebar menu and then click the info button .

3. Once you have the IP address, enter it into a web browser and press ENTER to access the web interface.

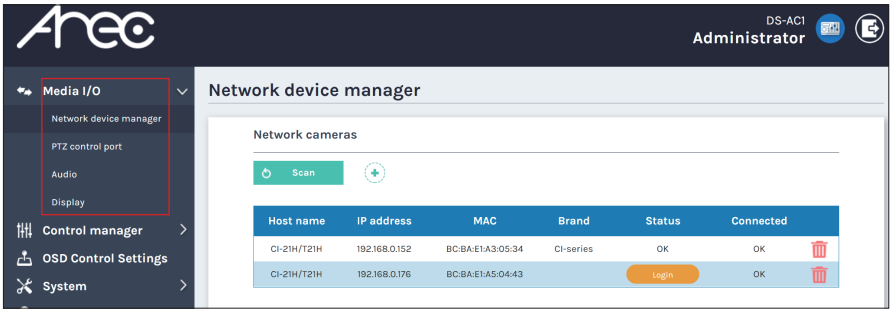


4. Click the Admin button to switch to the administrator login page, and enter the credentials. The default credentials are: admin/admin.



1.1 Media I/O

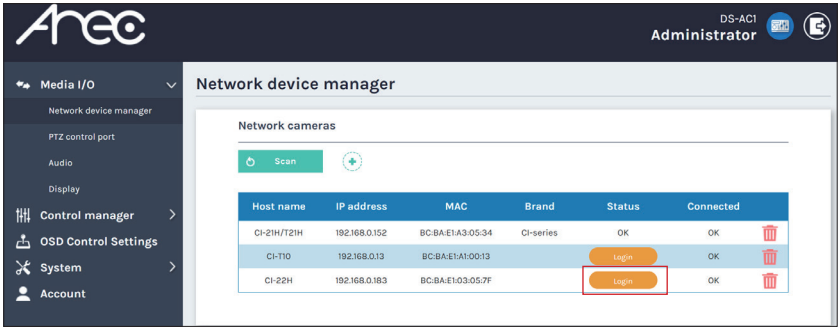
The media interface allows users to add and manage network cameras, configure RS-232 PTZ control ports, configure audio-related settings such as USB Audio (UAC), streaming audio, and output volume control, and OSD menu display rotation. Below is an explanation of how to use and interface information, covering the options available in the media interface.



Network Device Manager	Network camera search and registration.
PTZ Control Port	Utilize the USB-to-RS-232 converter port to configure RS-232 parameters, enabling DS-AC1 to control PTZ cameras using Visca/Pelco-D/Pelco-P protocols.
Audio	Volume adjustment and USB audio input source settings.
Display	Provides adjustment for the rotation angle of the OSD menu.

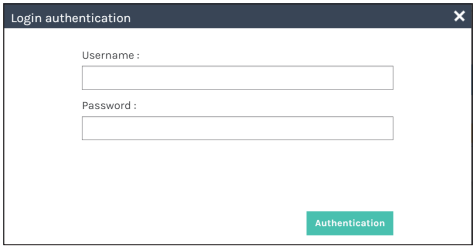
1.1.1 Network device manager

When entering the "Network Device Manager" page, the system will automatically scan and list the network cameras within the local area network where the DS-AC1 is located. You can click the refresh button to rescan the network.

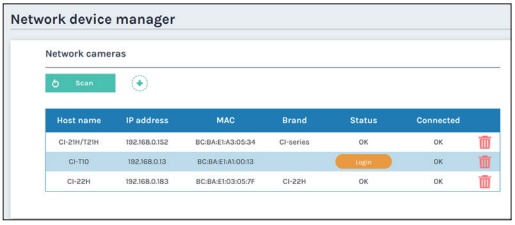


Click the login button, and the login authentication dialog box will pop up. Enter the username and password, then click Authentication to register the camera.

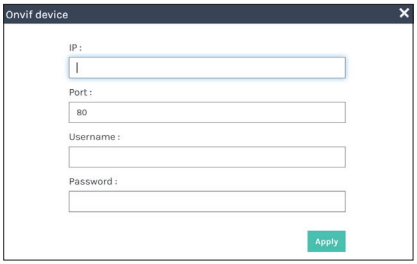
*For AREC network cameras, for example, enter the default account and password (admin/admin).



Once the authentication is completed. The status will then change to "OK", indicating it is available for video input selection.



In addition to using scanning for automatic detection, you can also manually add devices using the
⊕ symbol. Click it and then enter the IP address, port, username, and password to add the device.



1.1.2 Pan-Tilt-Zoom control port

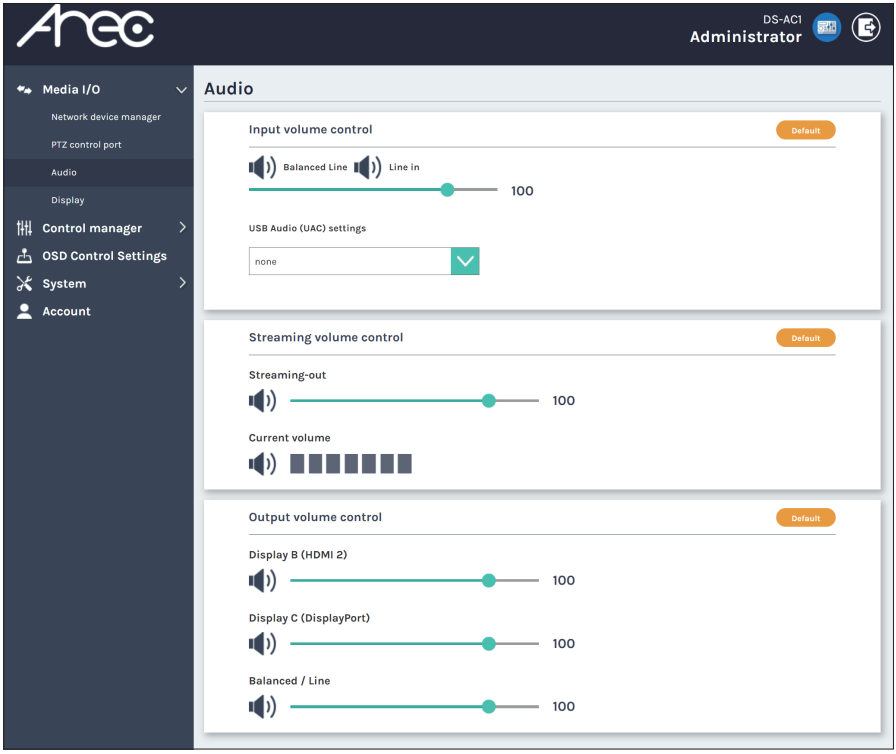
The DS-AC1 offers RS-232 communication protocol for PTZ control. First, insert an USB-to-RS-232 adapter into the USB port on the back of the device. Before making any changes, ensure you have the RS-232 settings for your PTZ camera. The following settings must match those of the external device:

- Protocol: Available protocols include VISCA, Pelco-D, and Pelco-P.
- Address: Set according to the camera's RS-232 communication address. VISCA can be set from 1 to 7, while Pelco-D/P
- can be set from 0 to 255.
  Baud Rate: Options include 2400, 4800, 9600, and 115200.

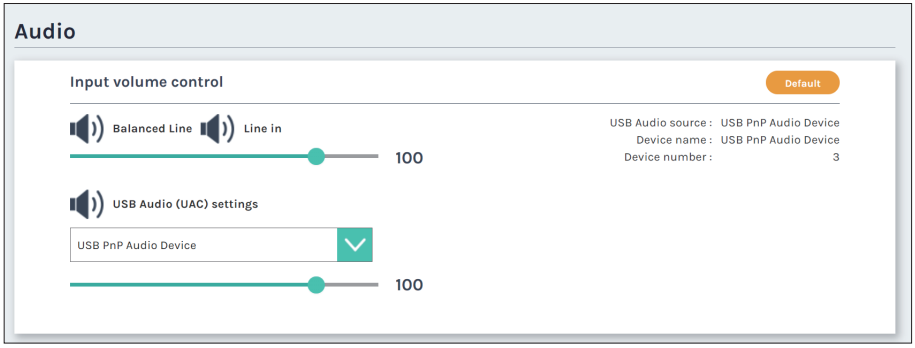
Note: Supports USB-to-RS-232 serial port adapters using PL2303 or FT4232H chips.

1.1.3 Sound settings

Volume adjustment and USB audio input source settings.



Input Volume Control - Users can adjust the volume of the audio inputs, including balanced audio, Line in, and a USB audio input. The configurable volume range is 0-125.
When a USB Audio source is connected, refresh the webpage. You can then select this USB Audio (UAC) source from the dropdown menu under "USB Audio (UAC) Settings" and control its volume.

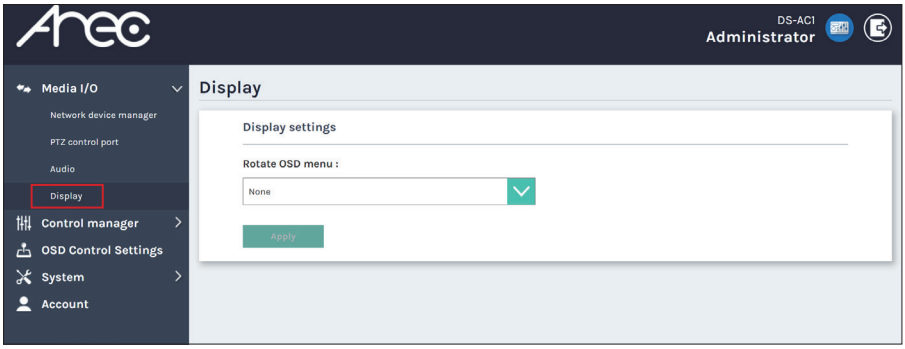


Streaming Volume Control - Adjust the volume of the stream. The volume bar below reflects the current volume changes of all audio sources included in the stream.
Output Volume Control - Adjust the volume of physical output ports: HDMI 2, DisplayPort, and Balanced/Line.

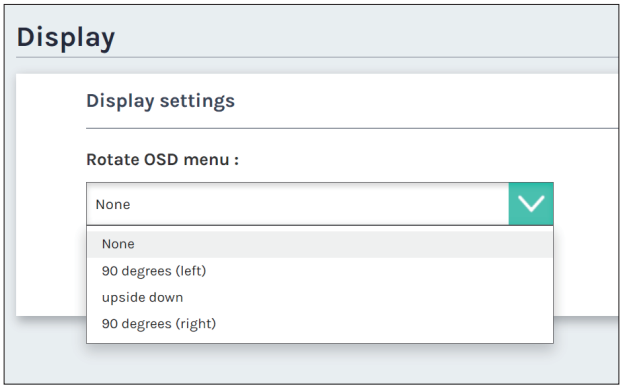
Audio routing table

Output Port / Audio Source	1. Differential output 2. Line-out 3. Display C (DisplayPort)	Display A	1. Display B 2. Streaming out
Selected Source	IP Source	HDMI 1/2/3/4	HDMI 1/2/3/4 or IP Source
Additional Source	-	-	USB + Differential input + Line-in

1.1.4 Display settings

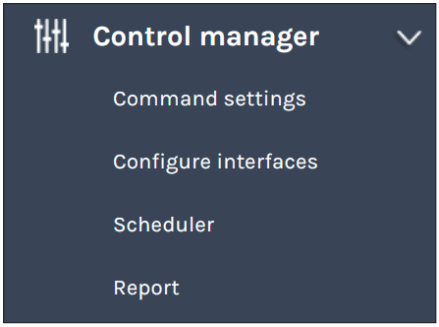


Rotate OSD Menu - Users can adjust the display orientation based on the actual screen orientation. There are four options available: None (no rotation), 90 degrees (left), Upside down, and 90 degrees (right). Please refer to the diagram below for illustration.



1.2 Control manager interface

You can add and define commands and macros here to control other devices.

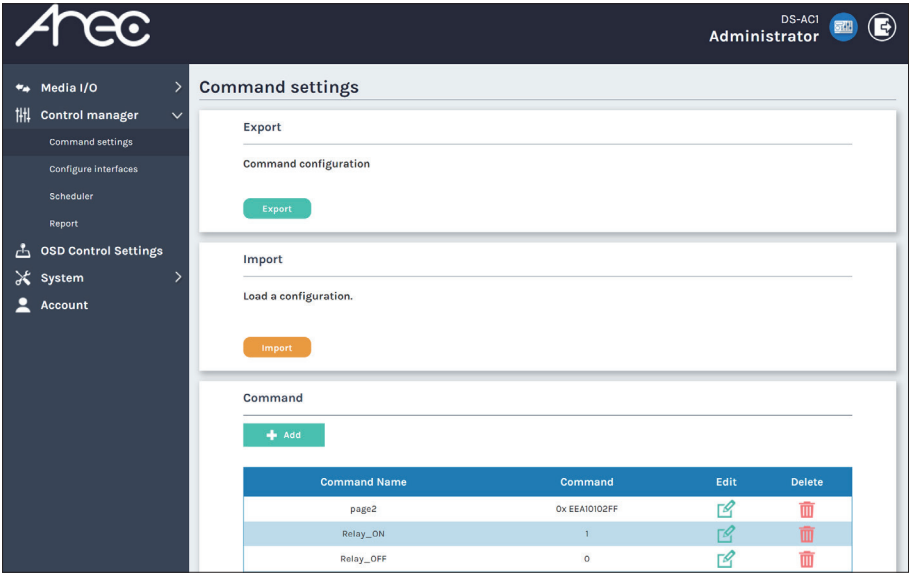


Descriptions of sections in Control manager:

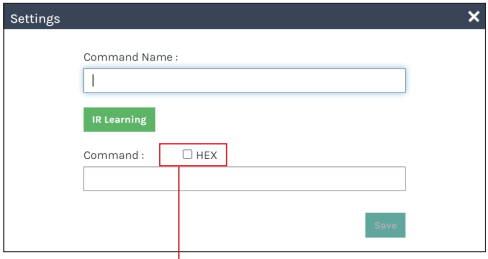
Command Settings	Users can edit control commands for the desired devices to the list here.
Configuration Interfaces	Configure the device's serial port (RS-232/485) settings such as Baud rate, Data Bit, Parity, and Stop Bit, and provide 8 preset TCP/UDP connections for control purposes.
Scheduler	Allows users to preset schedules by importing a calendar or connecting one on the cloud.
Reports	Record power consumption based on the control device's on/off commands and times, and generate energy consumption reports.

1.2.1 Command settings

Scroll down to the "Command"section, and click on the "Add" button to add a command.



In the 'Command Name' field, enter a custom name for the command. Then, in the 'Command' field, enter the command you want to send to the other devices. Then, click the 'Save' button to store the configured command.



Command Name: Name of the command, customizable and does not affect command execution. Command: Command to be executed by the target device, for example:
0: Relay OFF
1: Relay ON
Hexadecimal code
ASCII (pure string code)

* HEX Option – Define command format:
  - Check: Command output format in 'Hexadecimal'.
  - Uncheck: Command output format in 'String' (ASCII).

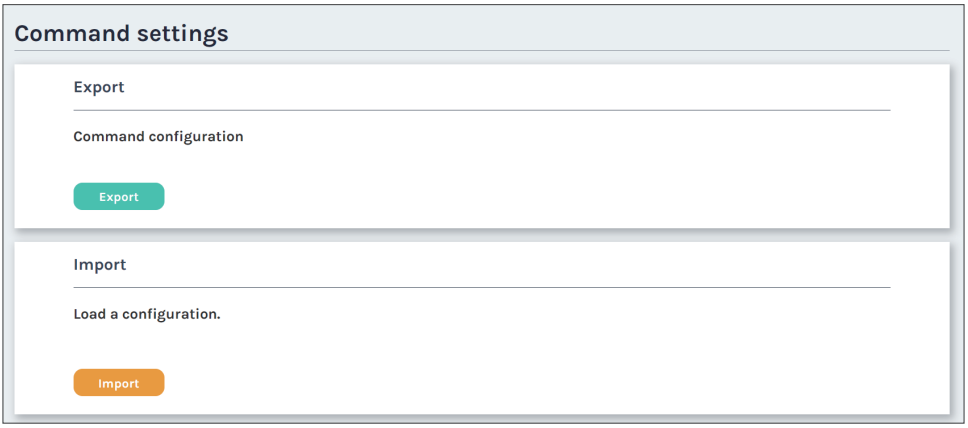
Edit Icon : Modify a saved command.
Delete Icon : Delete a saved command.

IR Learning

IR Learning Function: You can copy control commands from an infrared remote control and use them to control infrared devices. To add a new infrared command, on the screen shown in figure above, enter a Command Name for naming the command. Then, press the button IR Learning to start scanning for the infrared signal. Aim your remote control at the device, press the function you want to copy, and when the DS-AC1 receives the infrared signal from the remote control, it will copy the command and fill it into the Command field.

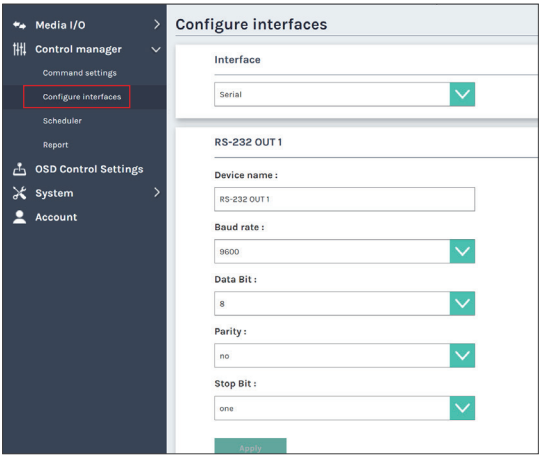
*Note (2024/6/20): The IR learning and sending function currently supports only the NEC Protocol. If the IR remote device you are using does not use the NEC Protocol, you may encounter issues with IR command learning or control via DS-AC1.

You can also use Export and Import to move a list of commands.



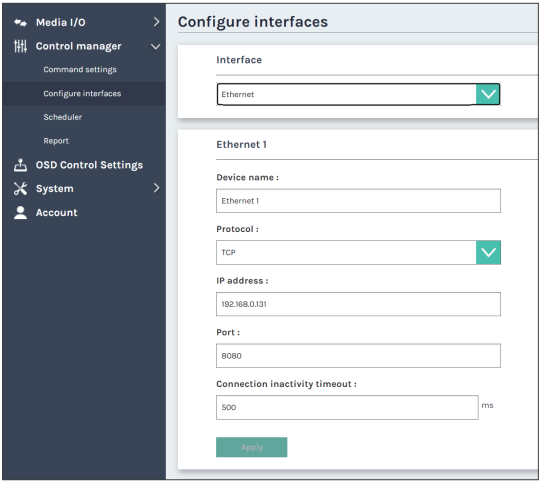
1.2.2 Interface settings

DS-AC1 has six external interfaces: three RS-232, one RS-485, and two Ethernet. Use the dropdown list to switch interface configurations. For serial ports, you can adjust RS-232 and RS-485 settings. For Ethernet, up to 8 UDP/TCP connections can be configured, with DS-AC1 as a client.



Serial Port (RS-232 / RS-485):
Adjust the following parameters as required by the device to be controlled.

- Baud Rate: Adjust the modulation rate of the device to be controlled.
- Data Bits: Number of data bits transmitted in the command.
- Parity: Parity check bit, choose according to device settings.
- Stop Bits: Choose according to device settings.



Ethernet:
DS-AC1 can act as a UDP/TCP Client to connect to 8 UDP/TCP Servers. The configurable parameters are as follows:

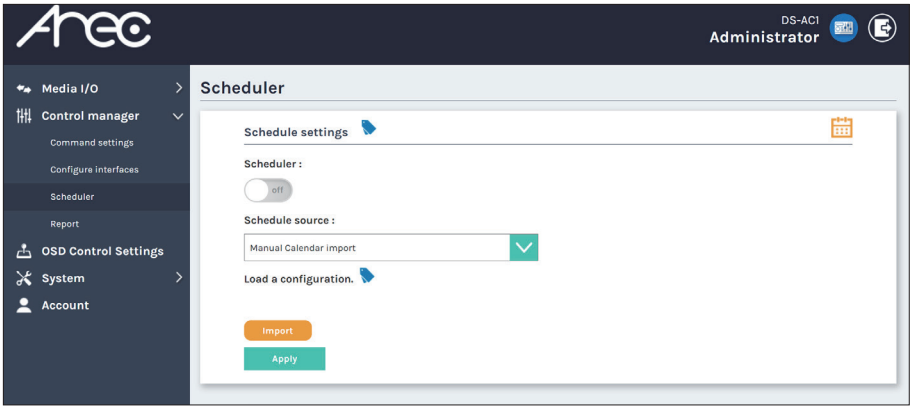
- Protocol: Choose the network connection protocol, either UDP or TCP.
- IP Address: Enter the IP address of the host you want to control.
- Port: Enter the connection port number of the host you want to control.
- Connection Idle Timeout: Disconnect the connection if there is no activity from the target for the set time, in milliseconds.

1.2.3 Scheduling settings

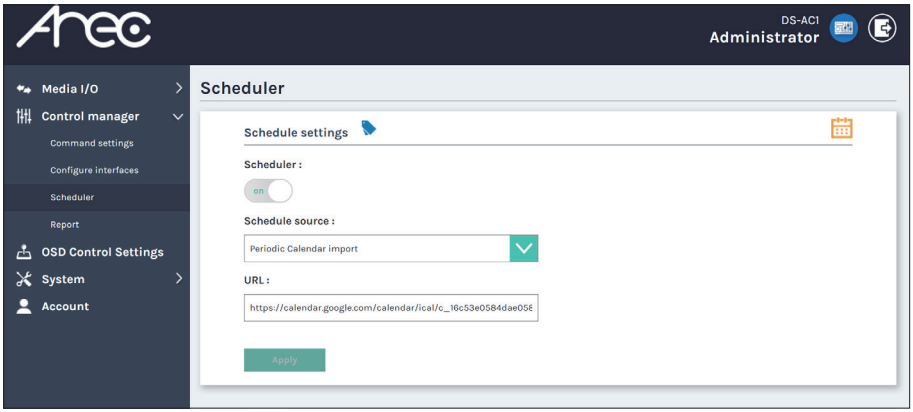
DS-AC1 offers a scheduling function that lets users import an iCalendar file (.ics) or connect to a cloud calendar service to schedule macro controls at specific times.

* Before setting up this feature, you need to configure the relevant control commands for the device.
  Please refer to section 1.3 Display and Control Settings – OSD Control Settings.

Click the ON/OFF toggle switch to enable or disable the feature. You can choose the schedule source as "Manual Calendar Import" or "Periodic Calendar Import". If selecting "Manual Calendar Import", clicking Import to import an iCalendar(.ics) file.

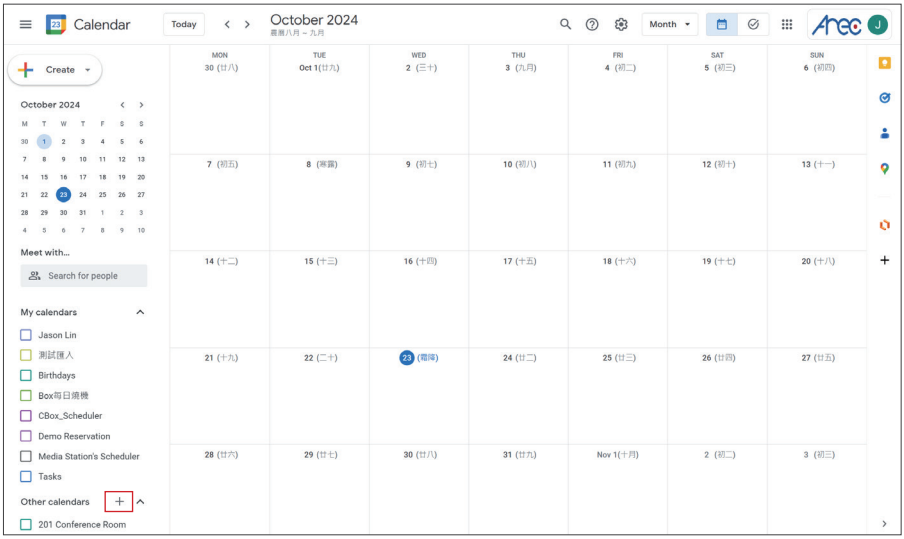


If choosing "Periodic Calendar Import", you can enter a iCalendar URL in the field to fetch schedules from online calendars such as Google Calendar.

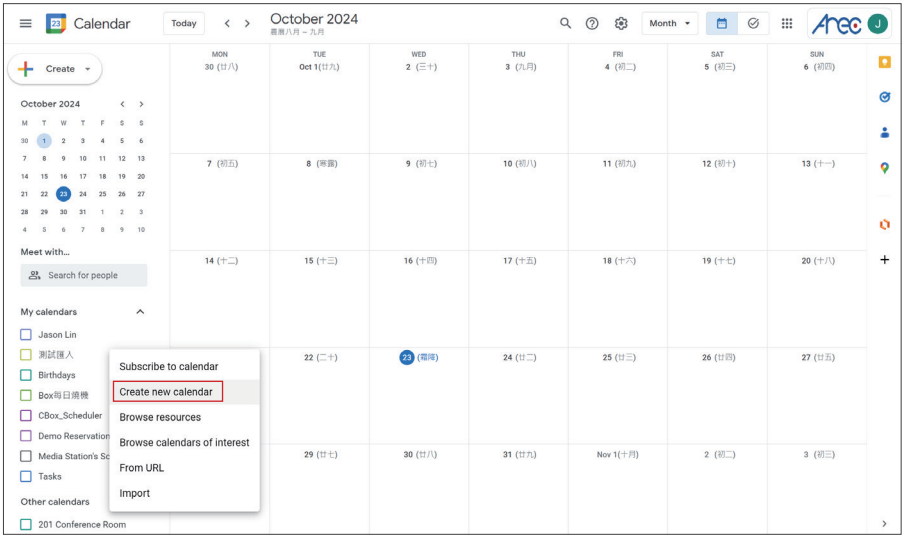


Online Calendar Setup

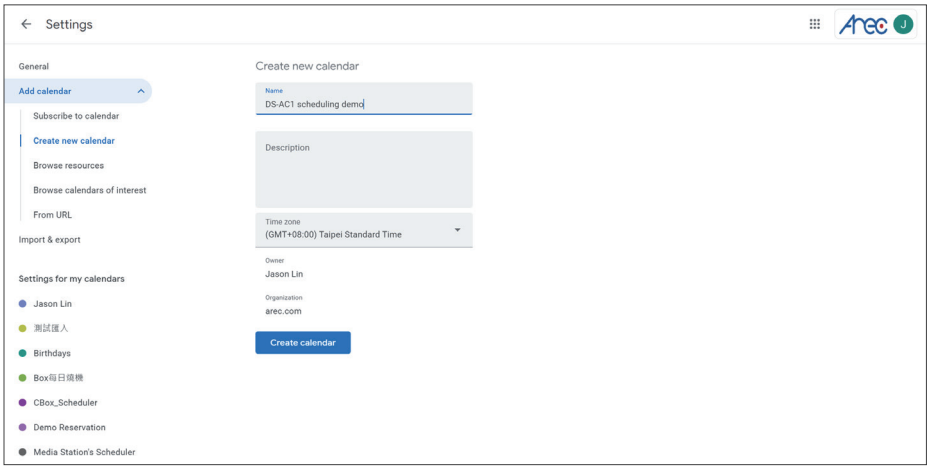
1. First, open Google Calendar and locate "Other calendars" in the left sidebar. Find the bu + .



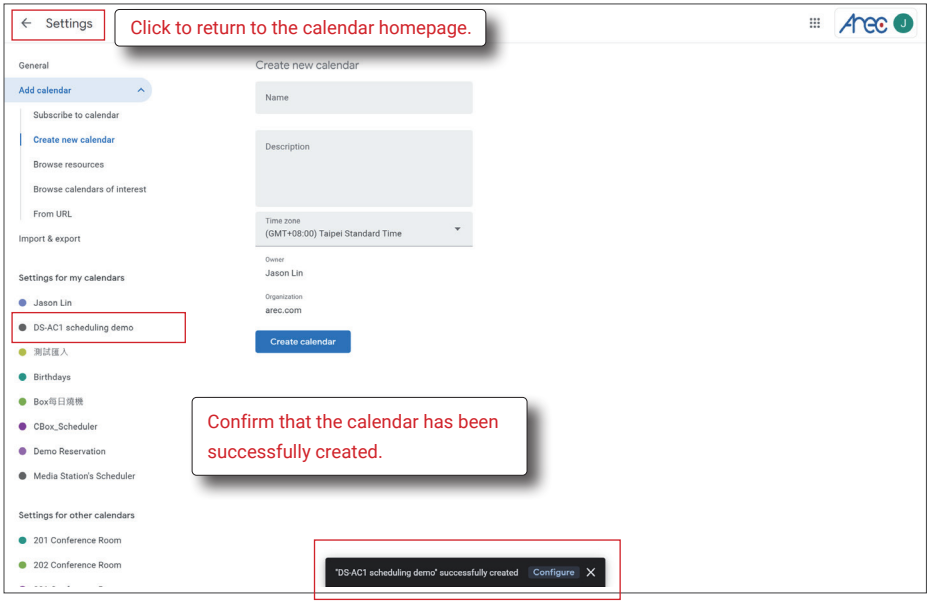
2. Click + the button will expand options. Choose the "Create new calendar" option.



3. After entering the calendar name and description, click the "Create calendar" button below to create the calendar.

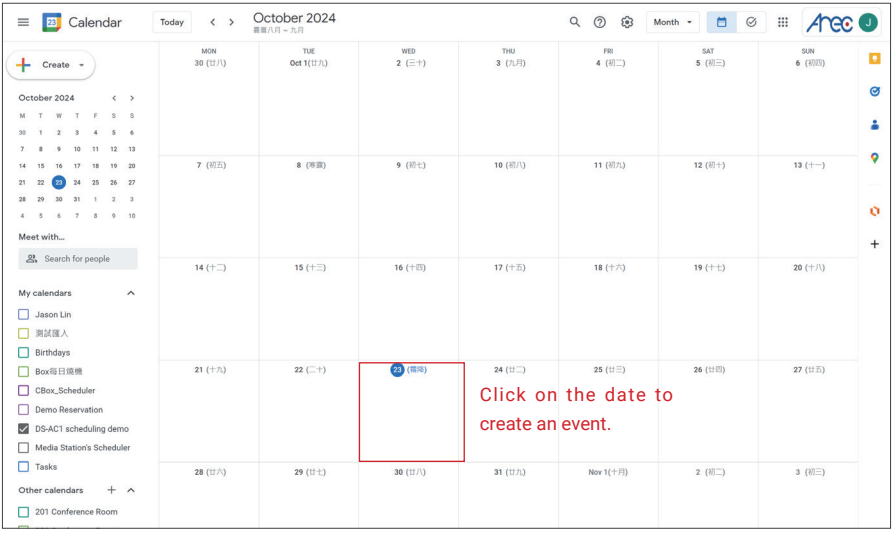


4. After successfully creating the calendar, you will be able to see the newly created calendar name on the left side. Next, click the arrow in the top left corner to return to the previous page.

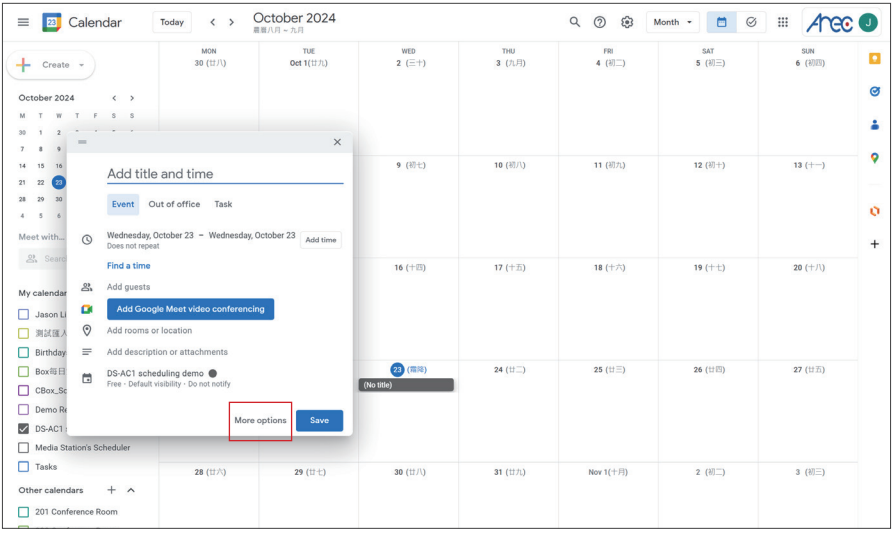


Add Schedule

1. Return to the calendar homepage. Click on the date you want to schedule an event. This will allow you to create a new event for that date.

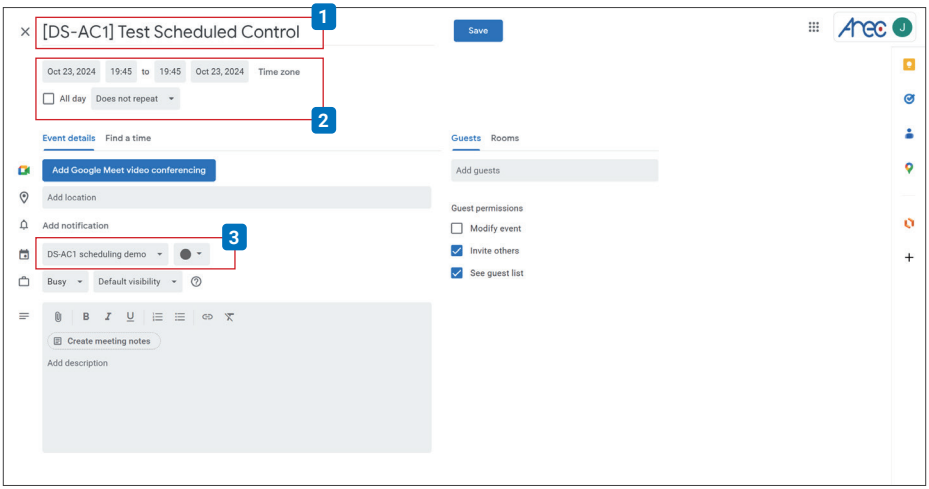


2. Click on "More options" to set details for the schedule.



3. Enter the schedule name, start time, end time, and ensure the calendar selected matches the one you previously created.

   * Note: The start and end times of the schedule can be the same. DS-AC1 will execute macro control only once at the scheduled "start" time.



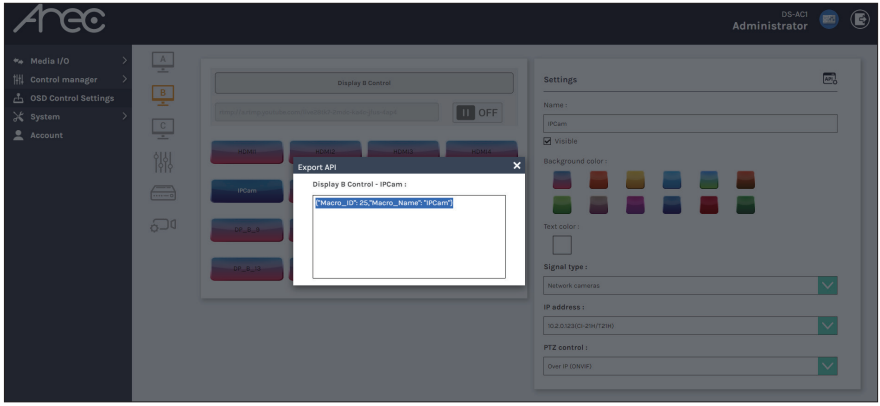
Calendar Command Setup

Next, configure the macro control commands to be executed for the schedule.
Each schedule can include multiple macro commands to execute. The system will begin executing the pre-scheduled commands at the scheduled start time.
Command format:

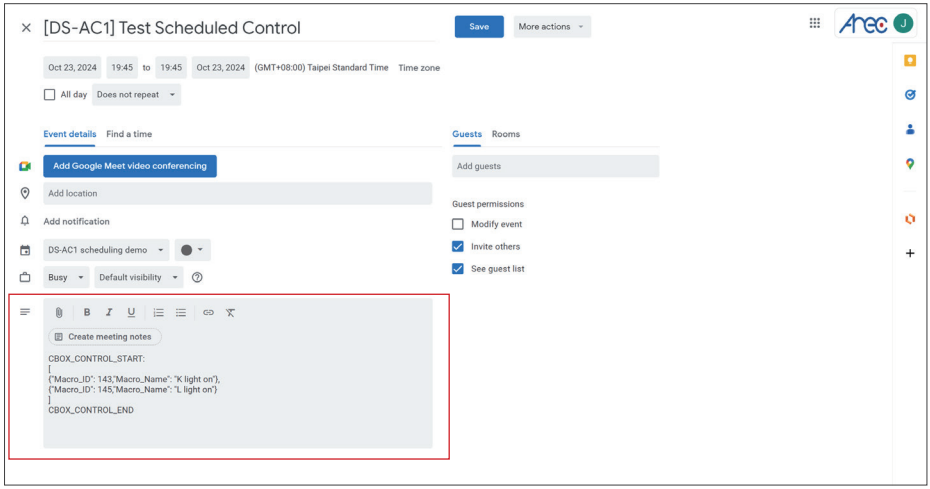
```
CBOX_CONTROL_START:                                    #Command Format
[
{"Macro_ID":21,"Macro_Name":"HDMI1"},                  #Macro 1 (if multiple macros, separate with commas)
{"Macro_ID":22,"Macro_Name":"HDMI2"}                   #Macro 2 (no comma at the end of the last macro)
]
CBOX_CONTROL_END                                       #End of Commands
```

1. First, go to the OSD Control Settings in the DS-AC1 management page and select the key (macro) you want to execute. Click on the API icon.

2. Copy the text inside the window.



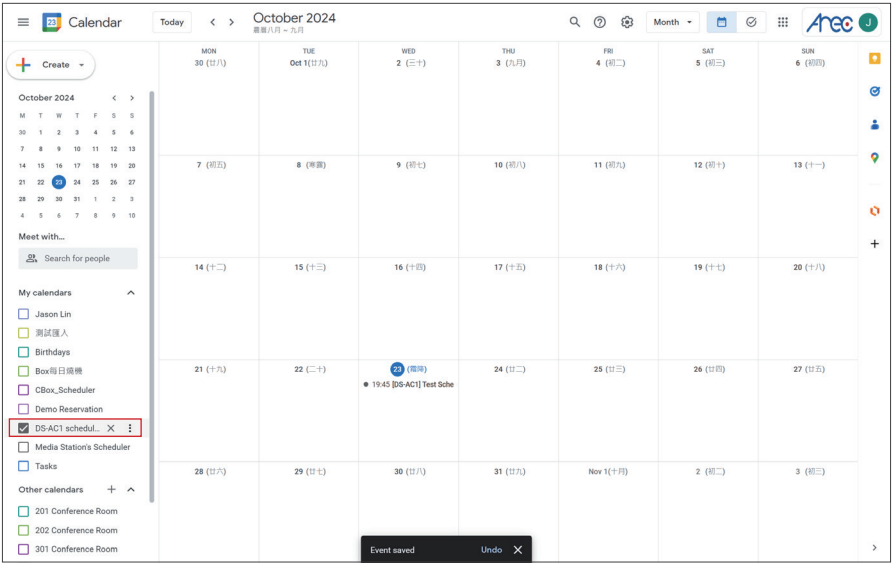
3. If there are multiple macros to control, repeat the above two steps to copy all API strings from the API window.
4. Return to the event setup page and enter the description of the event according to the macro control format.



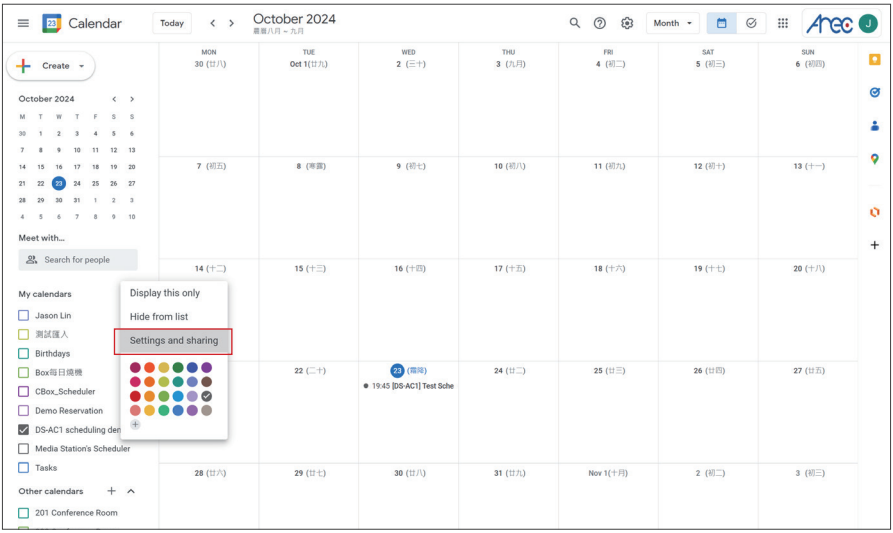
5. Click "Save".

To connect DS-AC1 with Google Calendar

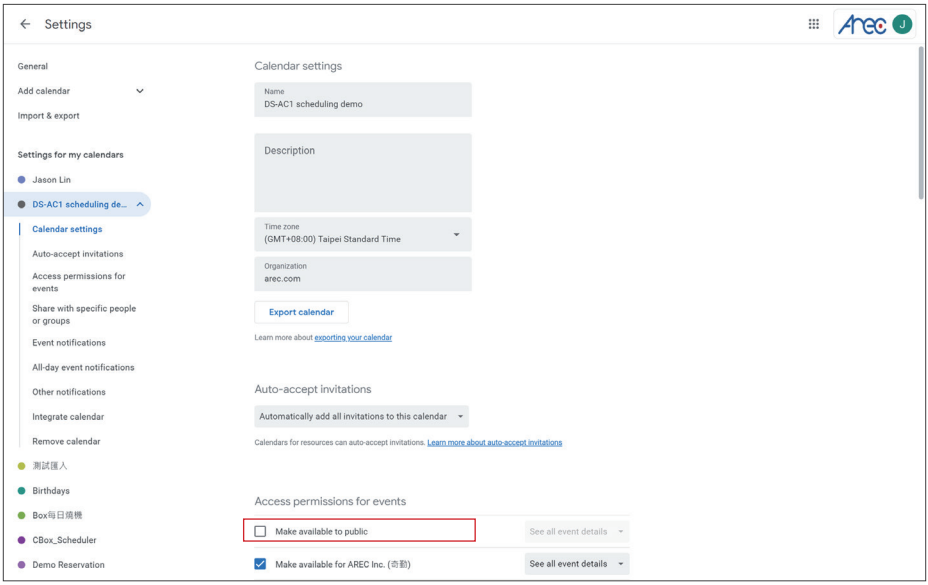
1. After returning to the Google Calendar homepage, move the mouse cursor over the calendar at the top.

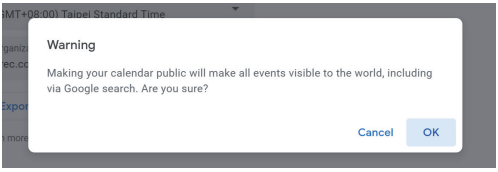


2. Click ⋮ on the button, and select "Settings and sharing".

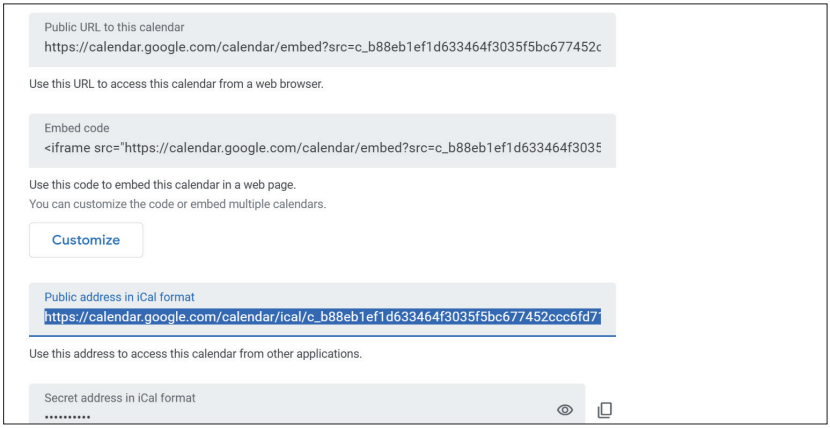


3. Find "Access permissions" and check "Make this calendar public".

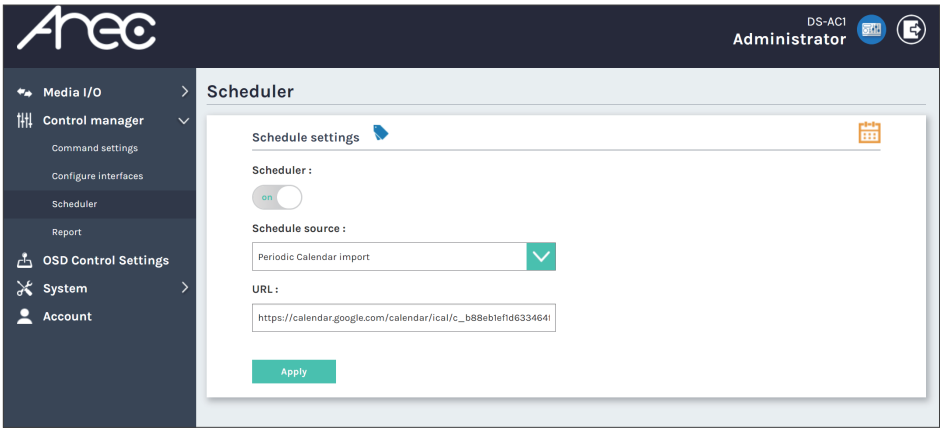




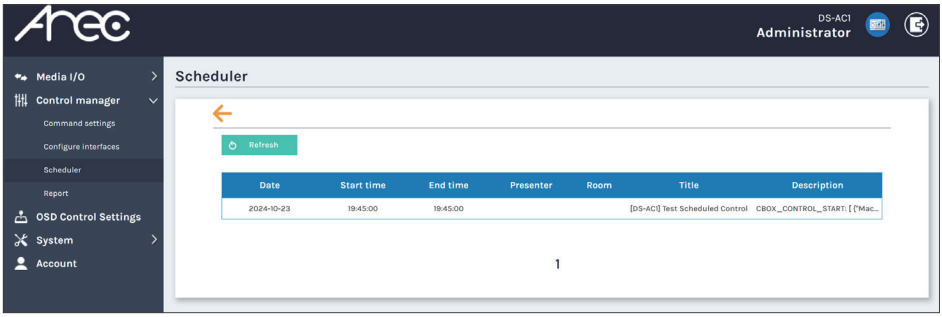
4. Once the calendar is public, scroll down to find "Public address in iCal format," and copy the complete URL.



5. Go to DS-AC1 System Management → Control manager → Schedule Settings. Open the schedule settings, select 'Periodic Calendar Import,' paste the calendar's URL, and apply

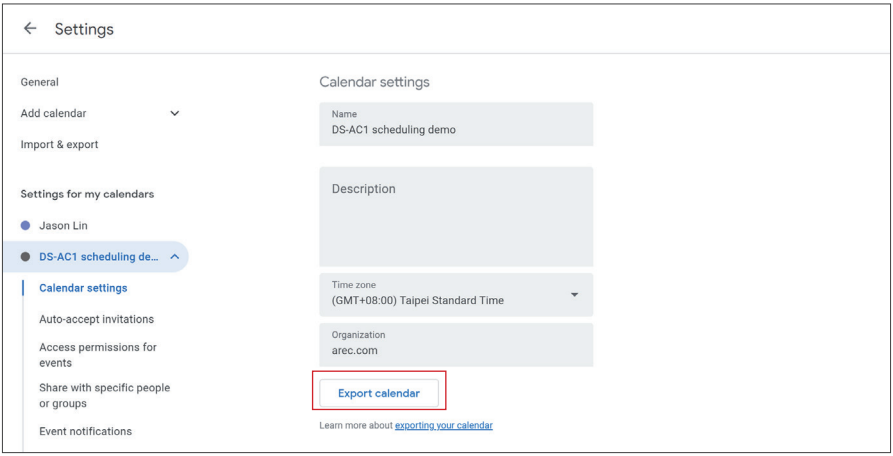


6. After applying, click the button in the top right corner to view the current schedules read by DS-AC1.

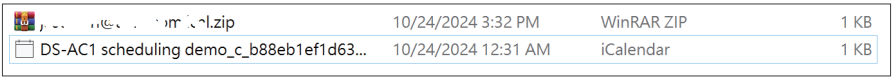


Manual Import of Calendar (Google Calendar Example)

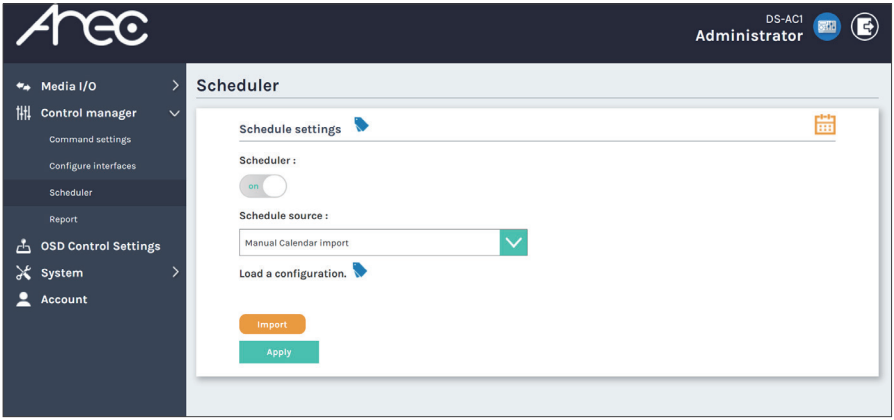
1. To manually import a calendar, go to the calendar settings page in Google Calendar and click on "Export Calendar".



2. The file will be downloaded in zip format. After extraction, you will get a .ics file.



3. In the scheduling settings, select the option "Manual Calendar Import" under the scheduling source. Import the .ics file and click on Apply.



1.2.4 Report

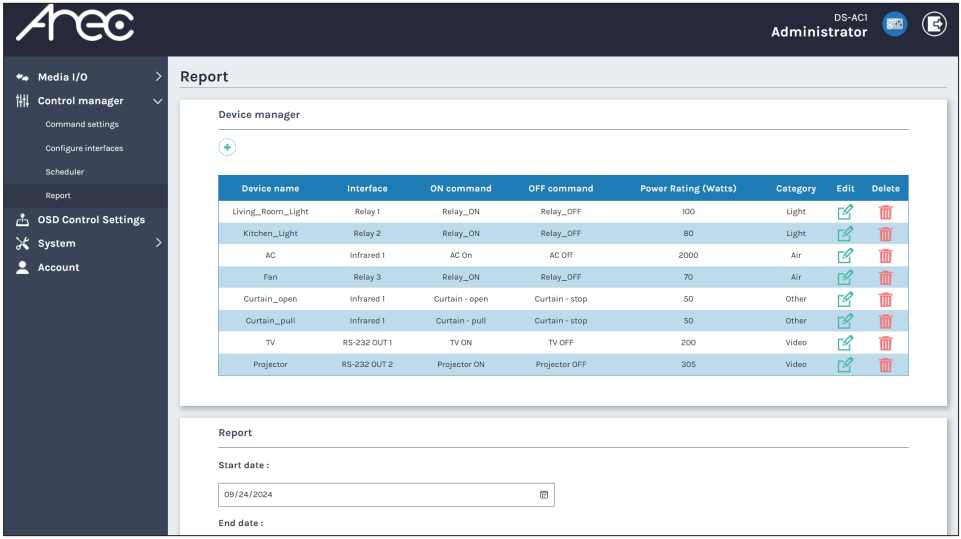
On the Report page, users can register devices in a device list to track power usage and generate reports for specified periods.

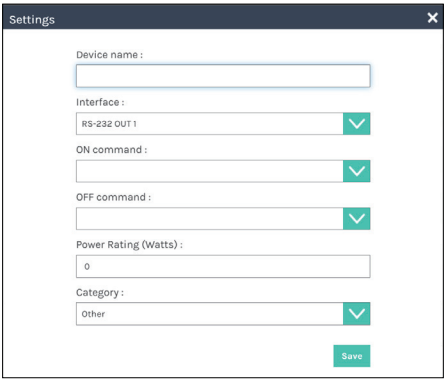
To add a device to the Device manager list, click on the ⊕ button and enter the following information:

- Device Name
- Interface
- ON Command
- OFF Command
- Power Rating (Watts)

  Category

* Note: Before you can select these options, you must first configure the macros as outlined in section 1.3.2 Device Control and Macros.





- Device Name: Name of the device.
- Interface: Control interface used to control power on/off for the device, such as Relay, RS-232, etc.
- Open Command / Close Command: Commands used to power on (open) or power off (close) the device. These commands should be predefined in the earlier section 1.2.1 Command Settings and will only be available in this dropdown list after being configured in any macro in section 1.3.2 Device Control and Macros.
- Rated Power (Watts): Average power consumption of the device during normal operation.

  Category: Used to classify the device. Options include "Light," "AIR," "Video," and "Other."

You can also edit the existing devices by clicking or delete them by clicking .

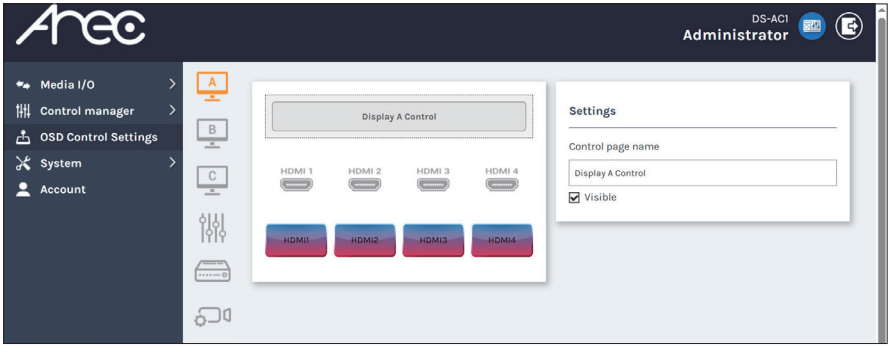
Device name	Interface	ON command	OFF command	Power Rating (Watts)	Category	Edit	Delete
Living_Room_Light	Relay 1	Relay_ON	Relay_OFF	100	Light		
Kitchen_Light	Relay 2	Relay_ON	Relay_OFF	80	Light		
AC	Infrared 1	AC On	AC Off	2000	Air		
Fan	Relay 3	Relay_ON	Relay_OFF	70	Air		
Curtain_open	Infrared 1	Curtain - open	Curtain - stop	50	Other		
Curtain_pull	Infrared 1	Curtain - pull	Curtain - stop	50	Other		
TV	RS-232 OUT 1	TV ON	TV OFF	200	Video		
Projector	RS-232 OUT 2	Projector ON	Projector OFF	305	Video		

Once you have configured and saved the parameters above, go to the "Report" section. Choose a time interval to obtain usage status and power consumption reports for that period. You can export the file for use.

Click on 'Start date' to set the start time and 'End date' to set the end time. Then, click the Export Export button to download a CSV file, or click the Open Open button to create chart reports as shown below.:

1.3 Display and Control Settings – OSD Control Settings

After completing the settings in the previous sections, "Media Interface" and "Control Manager," users can proceed to configure control macros for devices. On this page, you can set switching options for video signals across three display output sources: "Display A," "Display B," and "Display C (DisplayPort)." Video signals include HDMI inputs, network cameras, USB video, IP streaming, and more.
Additionally, you can send commands to other devices via different interfaces such as RS-232 or TCP connections, as well as scripting commands. Click on "OSD Control Settings" to access the display and control settings.

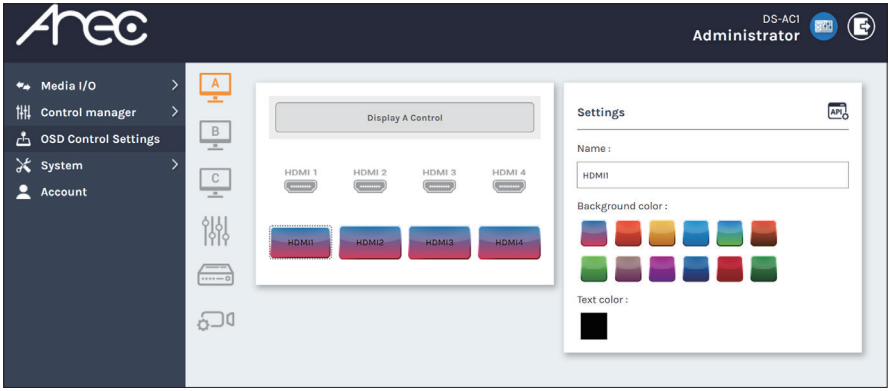


In the OSD Control Settings, there are four main settings representing: Display A - C, Macros, Recorder Control, and PTZ Camera Control.

1.3.1 Display Output Control

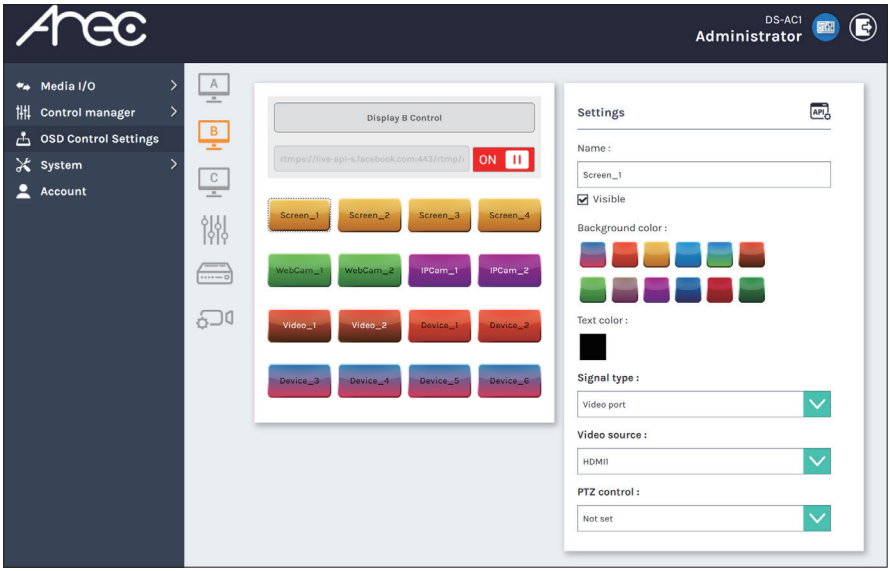
- **Display A Output Port Settings**

Click the icon  to configure HDMI_A output port. HDMI_A provides four input options: "HDMI_1", "HDMI_2", "HDMI_3", "HDMI_4".
After clicking one of the HDMI 1~4 buttons, you can customize the text and color on the button as shown below.



- **Display B Output Port Settings**

Click the icon B to configure the HDMI_B output port. Possible video sources for HDMI_B include HDMI input 1–4, network cameras, IP sources, and USB videos. Each button can be assigned a video source, allowing users to switch between them. Up to 16 buttons can be configured.



1. Click any button to start configuring the video source. You will see the available settings of the button on the right side of the page.
2. Select an input source type under the "Signal Type" and configure the remaining settings.

* For example, selecting "Network Camera" as the source requires settings like "IP address" and "PTZ control source". If "IP Source" is selected, additional settings like "Protocol", "Primary URL", "PTZ control source" need to be configured.

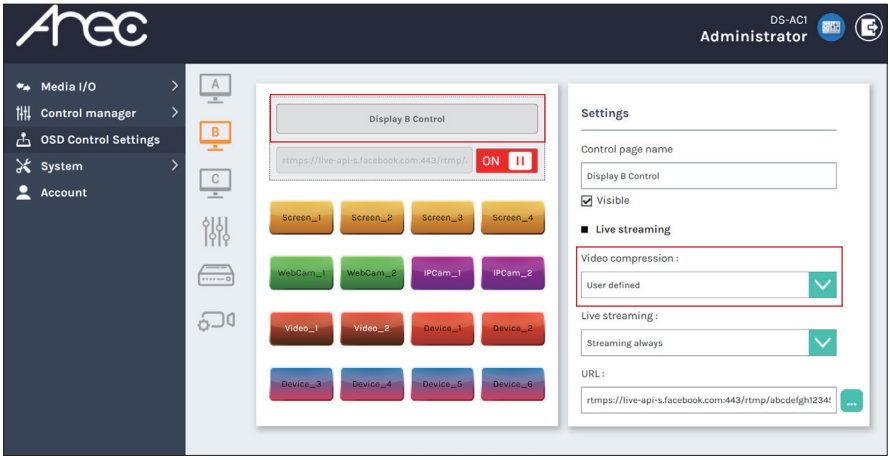
If you want to select a Network Camera as the input source, it must first be added to the list following the instructions in section 1.1.1 Network Device Manager, and this camera must be registered.

If you want to select USB Video, please first insert the USB device and refresh the webpage to update the device list.

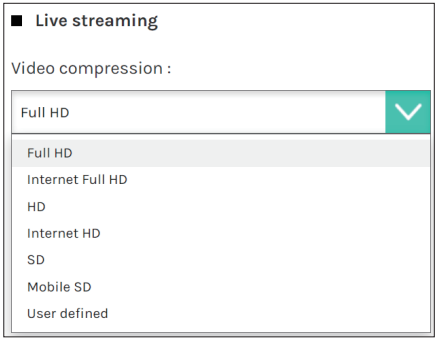
* Note: USB devices do not support hot-plugging. After configuring the USB device, ensure it is connected before powering on each time to receive the video source properly.

- **Streaming Settings**

Click the icon B to enter HDMI_B settings, then click on the block highlighted in red in the image below to configure streaming services, including video compression, live streaming(on/off), and streaming server URL.

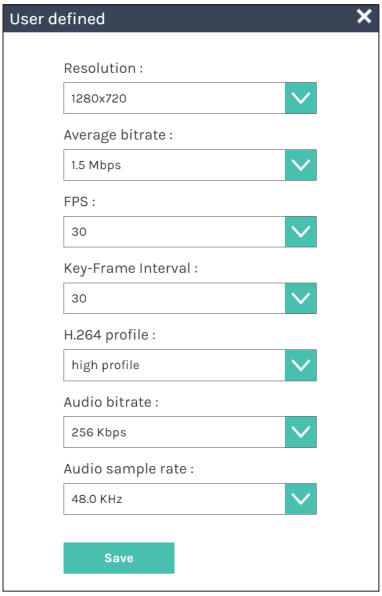


Video compression: Provides 7 video streaming compression profiles to choose from, suitable for different resolutions and bitrates.



If you choose the "User defined" option, you can define your own profile settings.

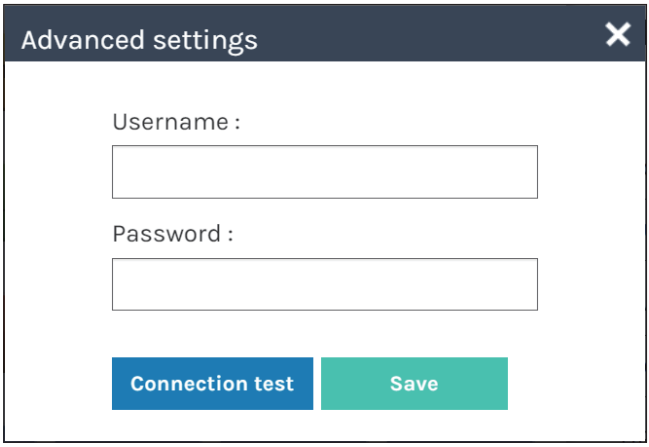
Click ... the button on the right to open the streaming properties window. Edit your streaming settings profile and click the Save button to apply the settings.



Live streaming: You can choose to set it as "Off" or "Always Live".
URL: DS-AC1 supports protocols such as RTP and RTMP. The URL format is as follows:

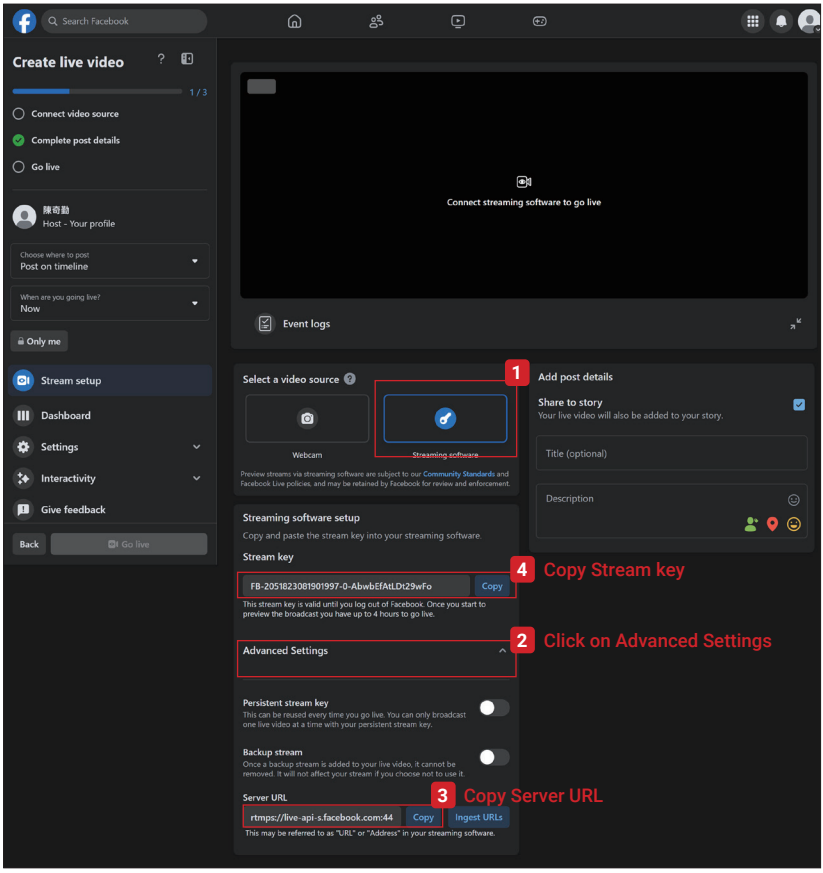
RTMP	Enter the streaming URL and stream name provided by your streaming service, in the format: rtmp://serverURL/stream_name
RTP	Enter the destination IP address and port number for RTP streaming in the format: rtp://destinationIP:port For example, rtp://226.10.24.32:7000

Click the button on the right ... for advanced settings.
Note: Usernames and passwords are optional and are only necessary if the server supports them. If the server does not support usernames and passwords, setting them may cause streaming issues or failures. Use connection testing to confirm if the current streaming settings are correct.



Here are some common streaming setup examples.

- **Stream to Facebook Live**



Select "Streaming Software" as the video source.

Copy the Server URL and Stream Key, combine them, and enter them into the DS-AC1's streaming setup URL field.

For example:

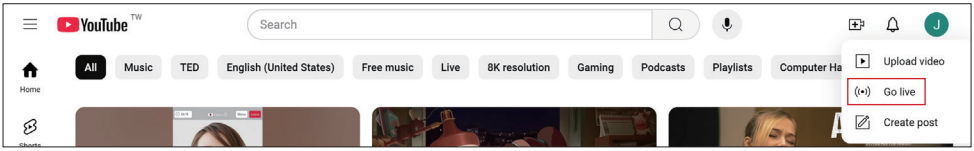
- Server URL= rtmps://live-api-s.facebook.com:443/rtmp/
- Stream Key = abcdefgh12345678

Enter the following into the DS-AC1's streaming URL field:

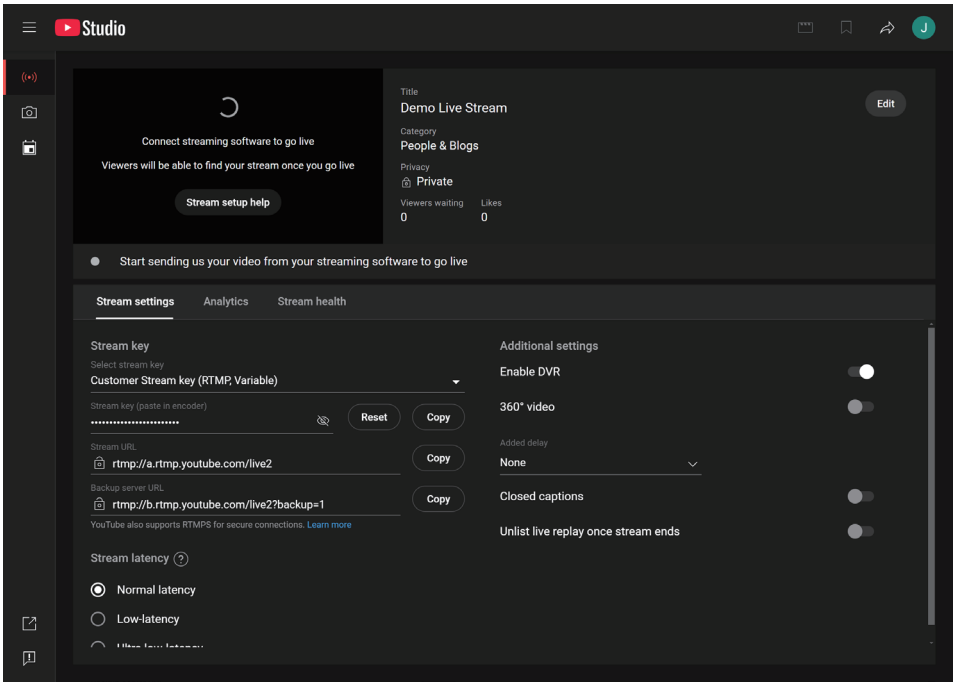
rtmps://live-api-s.facebook.com:443/rtmp/abcdefgh12345678 , as shown in the image below.

- **Streaming to YouTube Live**

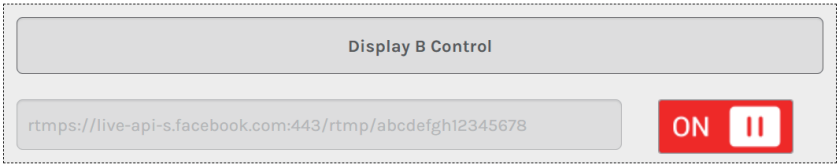
Go to YouTube and click on the live streaming icon at the top right to enter YouTube Studio.



Navigate to YouTube Studio → Streaming page. Combine the "Stream URL" and "Stream key" by inserting "/" between them. Paste this combined string into the streaming URL field of DS-AC1.
Ex. rtmp://a.rtmp.youtube.com/live2/abcd-efgh-1234-5678

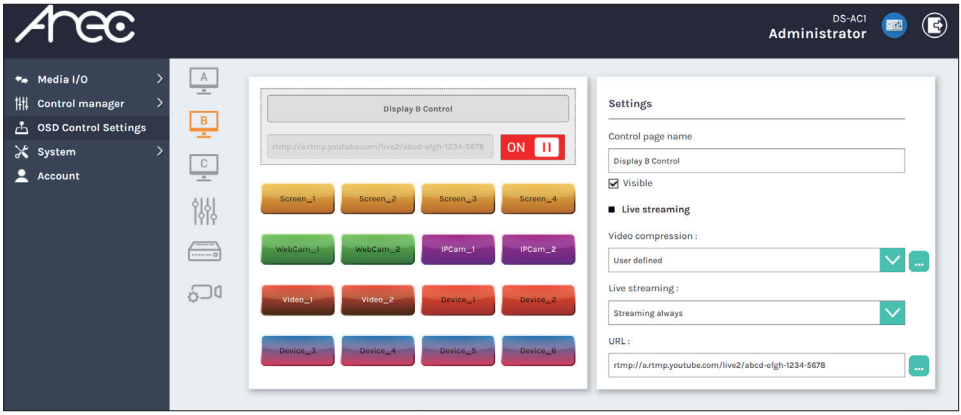


After configuring, use the button OFF to start or stop the streaming service, as shown below.

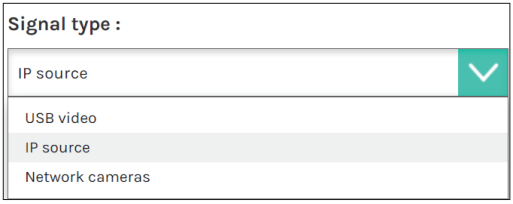


• Display C Output Port Settings

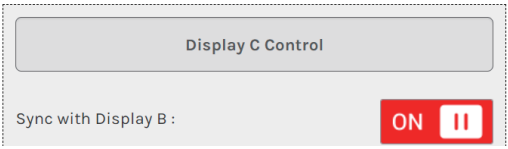
Click the icon C to configure the Display C output port(DisplayPort).



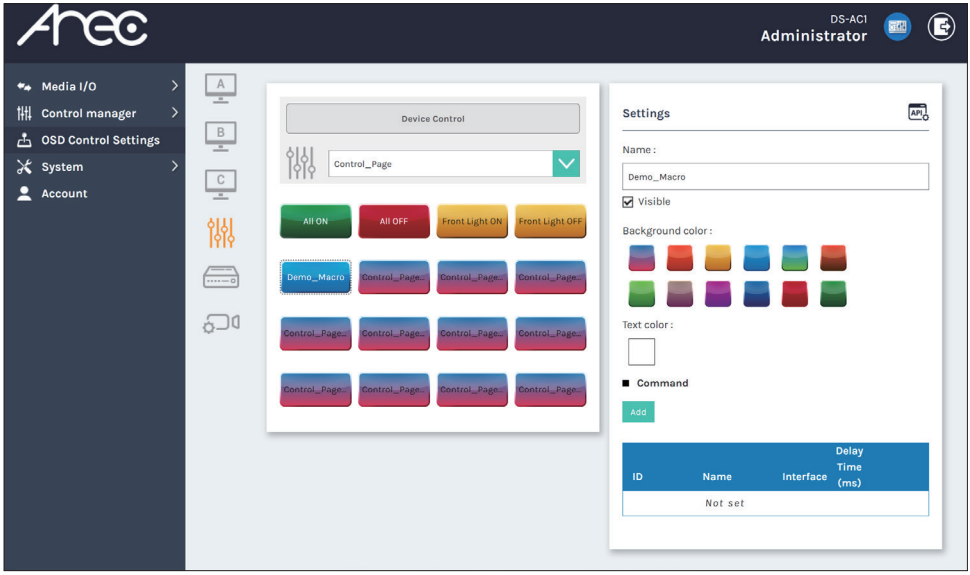
In Display C, available video sources types are the same as Display B except for HDMI sources.



Additionally, you can enable Sync with Display B to synchronize Display C output (DisplayPort) with HDMI_B output sources, so Display C will mirror Display B.

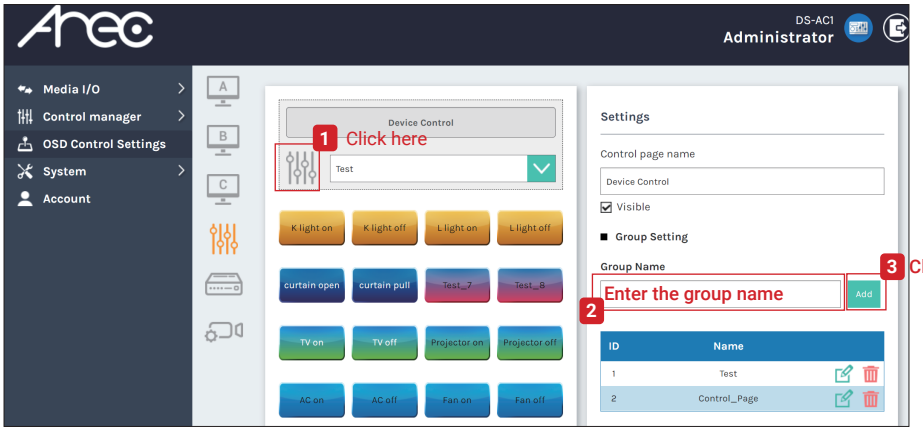


1.3.2 Device Control and Macros

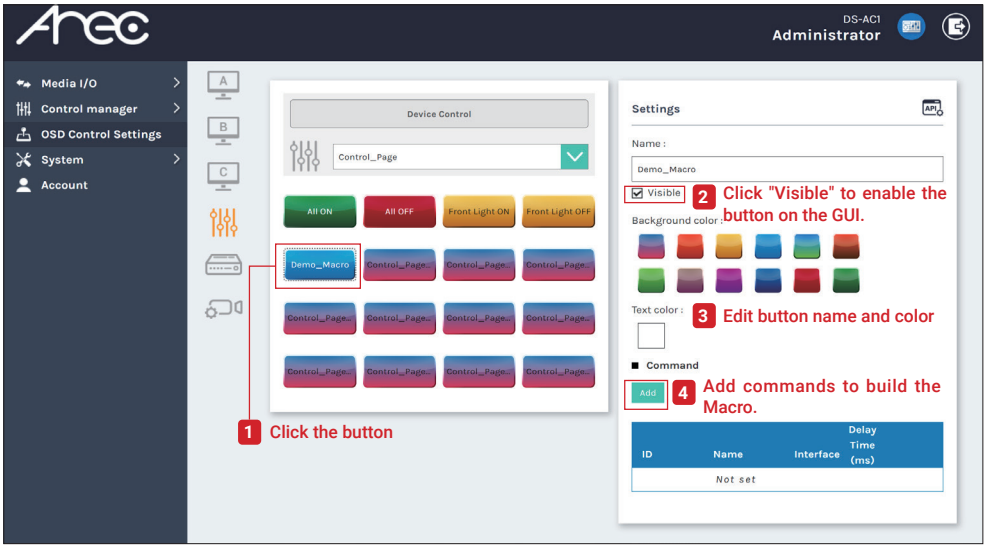


Here, you can set macro buttons so that the DS-AC1 can send commands to multiple devices with a single click. Each page of the macro button group can contain up to 16 macro buttons, and you can add as many pages as needed. Below are the steps for creating a macro button group page and setting a macro button.

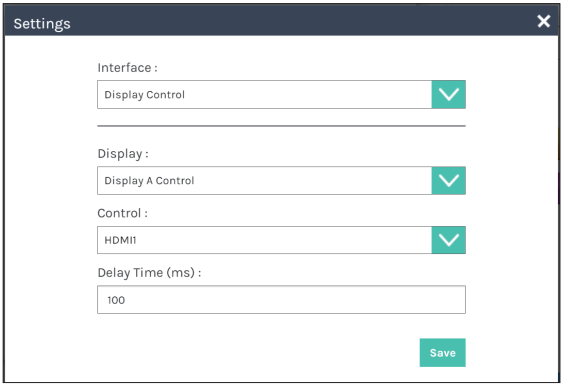
1. Click on the icon  to enter the macro button settings page.
2. Click on the gray box of Device Control, enter a group name for the page on the right column, and click Add to add a new page.



3. Click the button to edit the button style and configure the macros.



4. Enter the text in the Name section to determine what appears on the button, and select a color for the text and the button. Click Add to add commands for control.

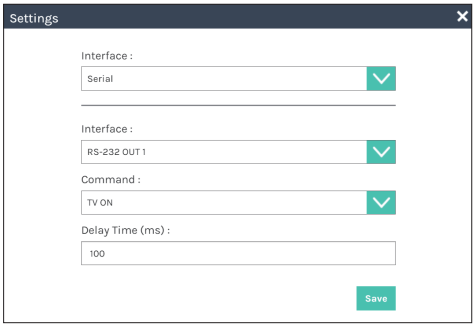


The options for control interface are as follows:

- Display Control
- Serial Port
- Digital Output (DO)
- Relay
- IR (Infrared) Remote Control
- Ethernet

Settings of Display Control:

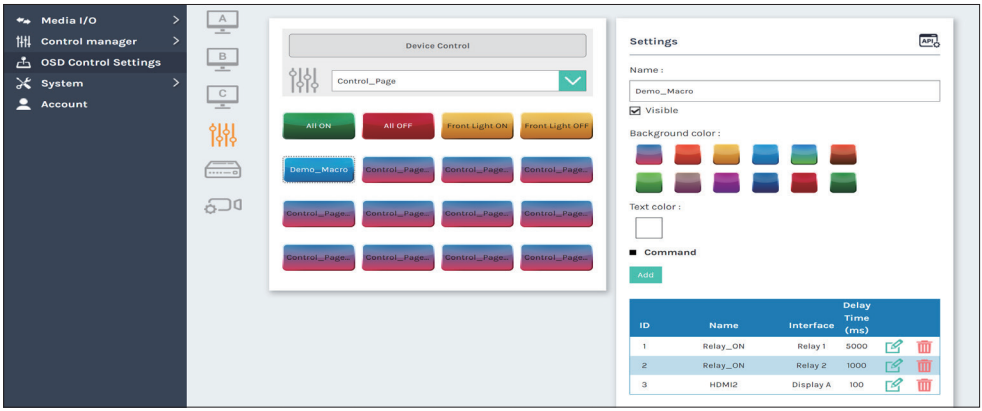
- Display: Select the output display port. There are three options: Display A, Display B, and Display C.
- Control: Select the video source to use on the display. Options are configured in section 1.3.1 Display Output Control, including up to 4 HDMI inputs for Display A and up to 16 sources for Displays B and C.
- Delay Time: The amount of time to wait before executing the next command.



Settings of serial port, digital output (DO), relay, IR infrared, and Ethernet:

- Interface: Select the corresponding interface number.
- Command: The command to be executed. Refer to the previous section 1.2.1 Command Settings for the configuration method.
- Delay Time: The amount of time to wait before executing the next command.

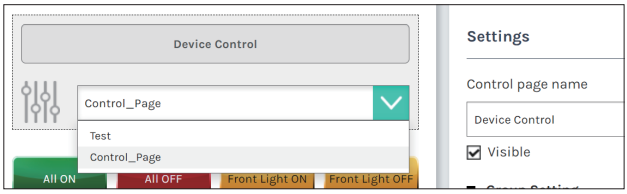
5. Click Add again to continue adding commands. When the macro button is clicked, the commands will be executed in sequence according to their ID order.



6. To add a new macro tab, click the icon on the left to switch to the macro page settings interface.

Enter the desired macro page name in the "Group Name" field, then click Add on the right to add the macro page.

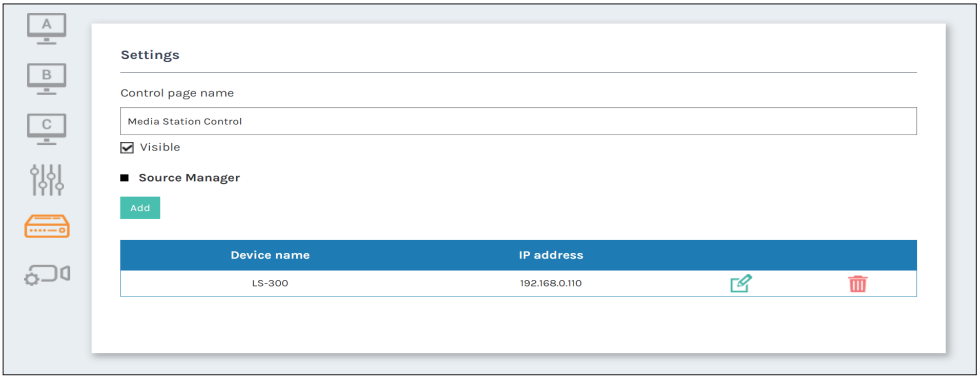
7. Once added, you will see the new macro page in the dropdown menu, as shown in the image below.



1.3.3 Media Station Control Settings

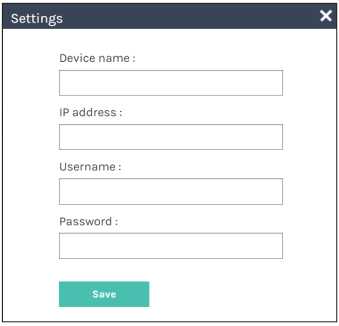
The DS-AC1 has a built-in Online Director for media stations, allowing you to control the AREC media stations. This makes it easy to apply overlays, recording templates, backgrounds, and theme styles, as well as adjust audio source volume and other controls.

Click the button  to enter the media station control settings.

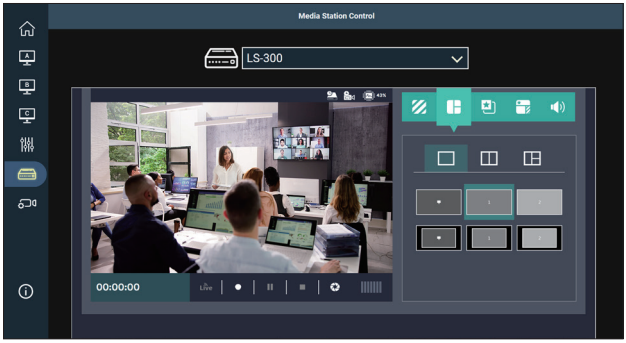


Click Add to add a media station. The settings include:

- Device Name: Customizable device name.
- IP Address: Media station's IP address.
- Username: Media station's username, default is admin.
- Password: Media station's password, default is admin.



The media station director control interface is shown in the image below. For detailed functions and related information, please refer to the media station's manual.



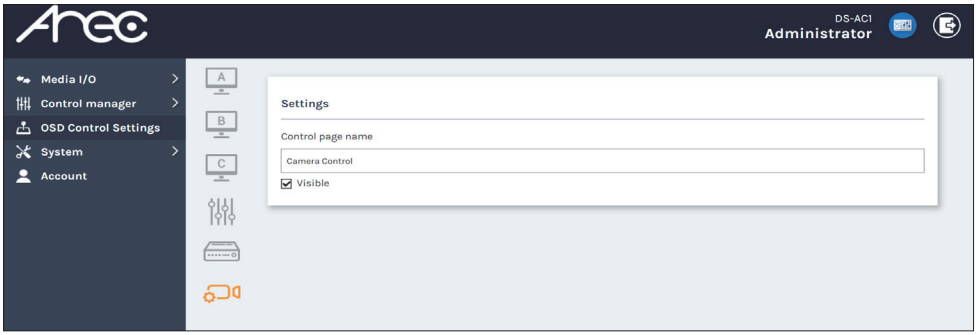
1.3.4 Network Camera Setting

Click the button to enter the network camera settings. Users can modify the network camera control page name in the control page name field.

The "Visible" option determines whether the network camera control field is shown in the control menu on the left side of the GUI interface.

When Display B source is selected as a network camera, the control page will display the camera control options.

Note: When setting Display B source to a network camera, make sure to set the PTZ (pan-tilt-zoom) control source for the camera.

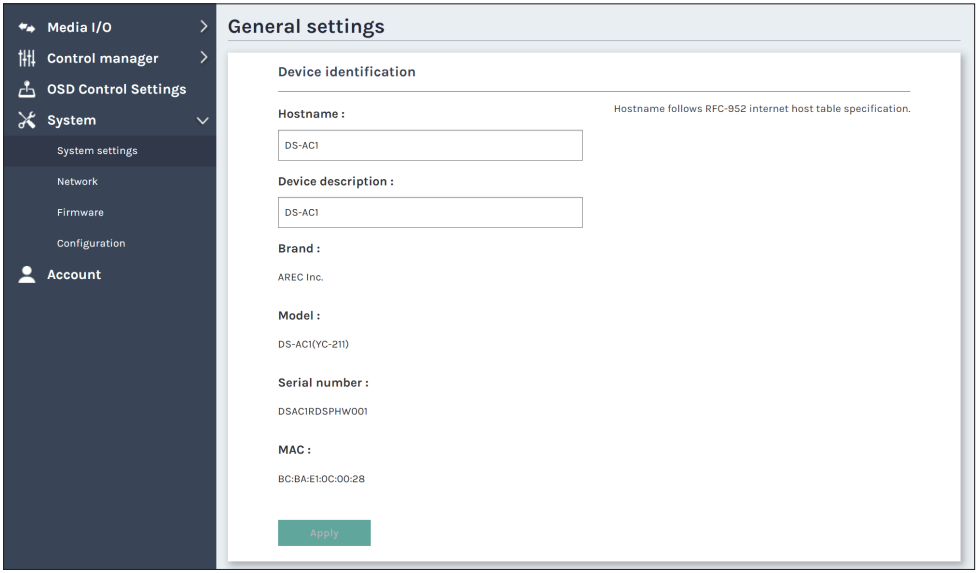


1.4 System

This section introduces the system settings of this machine, including options for system settings, network settings, firmware settings, and configuration files.

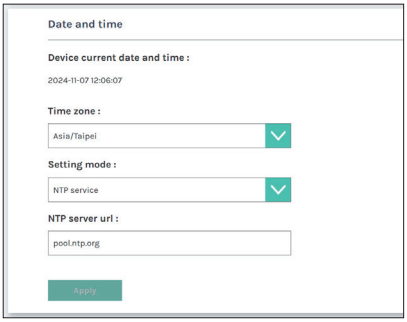
1.4.1 System Settings

The first part, Device Identification, includes the following information:
Hostname: Users can customize the machine name. The default is DS-AC1, and it can be modified according to the RFC-952 internet host table specification.
Device Description: Provides a description and notes for the machine, which can be customized.
After making these changes, click Apply to save.
The Brand, Model, Serial Number, and MAC Address are factory settings and cannot be changed.

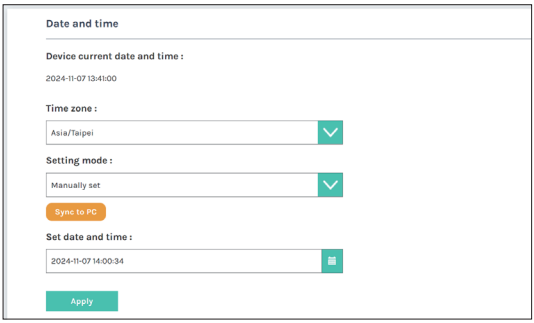


Date and Time: Configure the date and time for the machine with the following options:

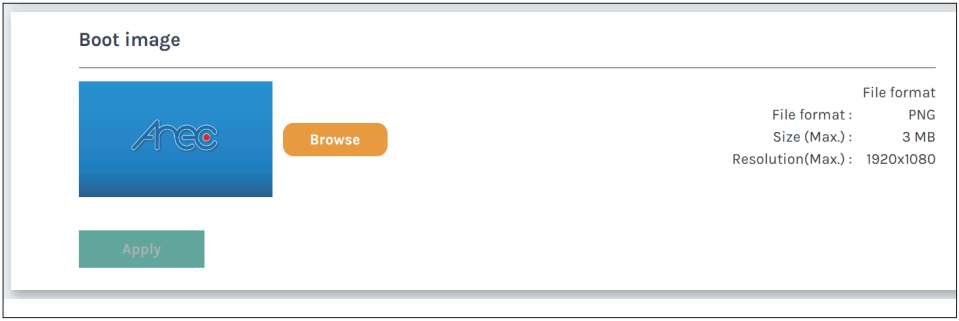
- Time Zone: Select the time zone for your country or location.
- Setting Mode: Choose between “NTP Service” for automatic time synchronization or “Manual Set” for manual configuration.
- NTP Server URL: If using an NTP server for automatic time synchronization, enter the server’s URL.



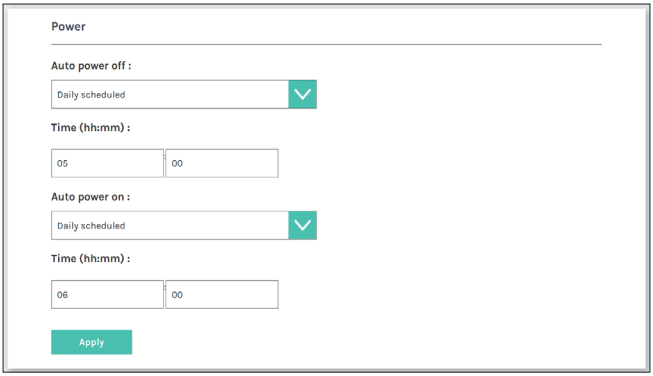
If you choose "Manual set", you can either synchronize with the computer's time directly or manually set the time.



Boot Image: Users can customize the startup image of the machine. Click Browse to select an image to upload, then click Apply to upload and apply it. On the right, the file format, size, and resolution will be displayed.



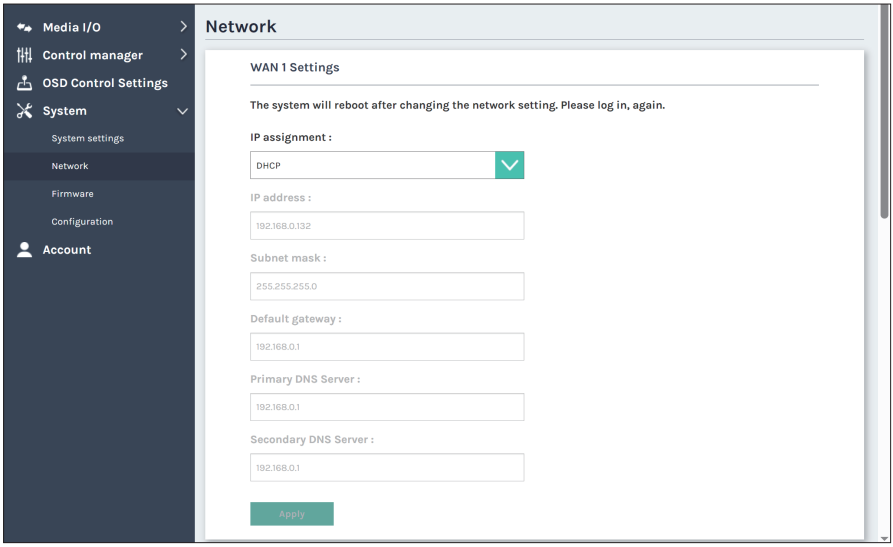
Power: Users can set up scheduled power on/off functions or choose to disable this feature. If automatic power on/off is enabled, additional settings for power on and off times are required.
It is recommended to configure the date and time in a previous section before using this feature.

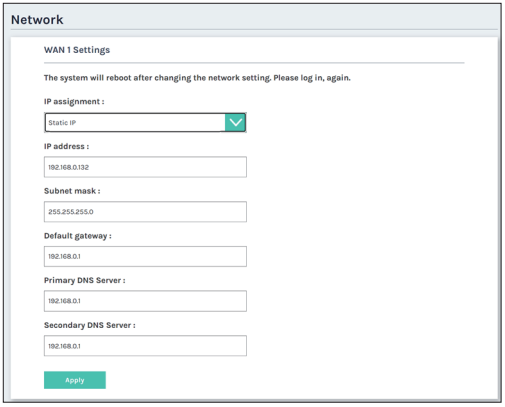


If you need to restart the device, you can click Browse the button to restart the device.

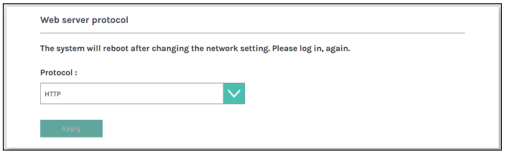
1.4.2 Network Settings

The DS-AC1 provides two sets of WAN settings for controlling devices on two different network segments.





WAN Settings: To configure the IP address, select DHCP for automatic configuration from the local network router, or choose Static IP to manually enter network details (IP Address, Subnet Mask, Default Gateway, Preferred DNS, Alternate DNS). Once complete, click Apply , then confirm by selecting OK in the prompt window.
Note: The system will restart after network settings are changed. Please reconnect and log in again.

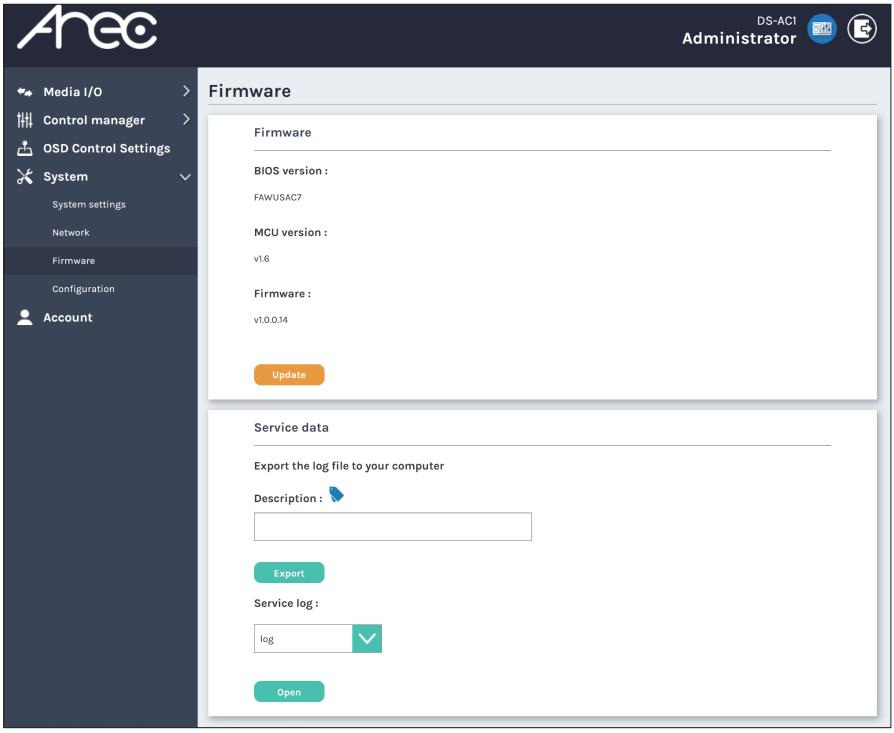


Web Server Protocol: Users can select either HTTP or HTTPS as the protocol for the DS-AC1 web interface

1.4.3 Firmware Settings

Firmware: Shows the current firmware version information. To update, click Update to select the firmware file, then click Apply to start the update.

Note: The system will automatically restart after the update, which may take several minutes. Do not power off the system during this time.



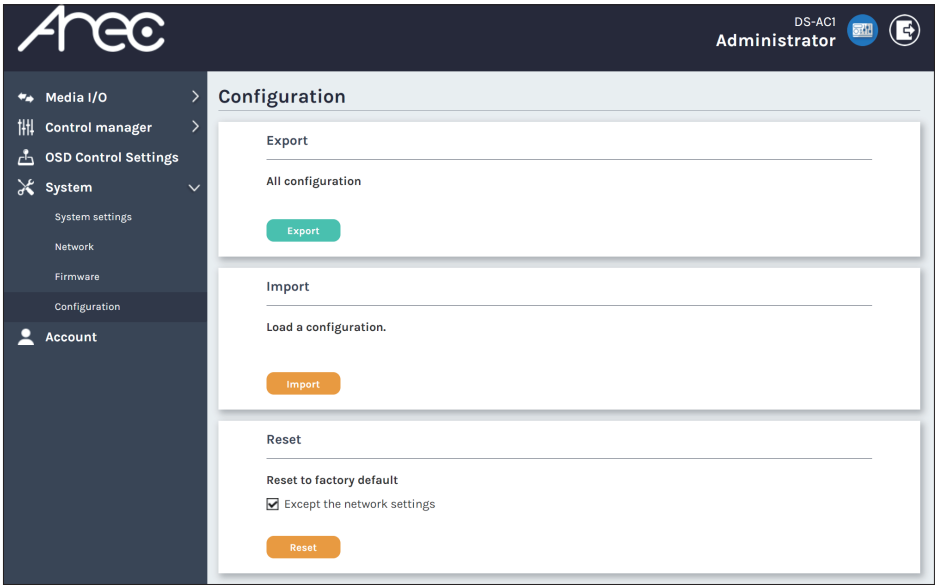
Service Data: Export files to your computer for analysis by AREC customer service. You can add a brief description or leave it blank, then click Export to download the log.

Three files will be available for download: .dat, .tar, and .config.

Note: The description must be 0-16 characters long and can include uppercase and lowercase letters, numbers, and the symbols (~!@$%^&*-+_). This service-related information is recommended for return to your dealer for assistance in diagnosis and resolution.

1.4.4 Configuration File

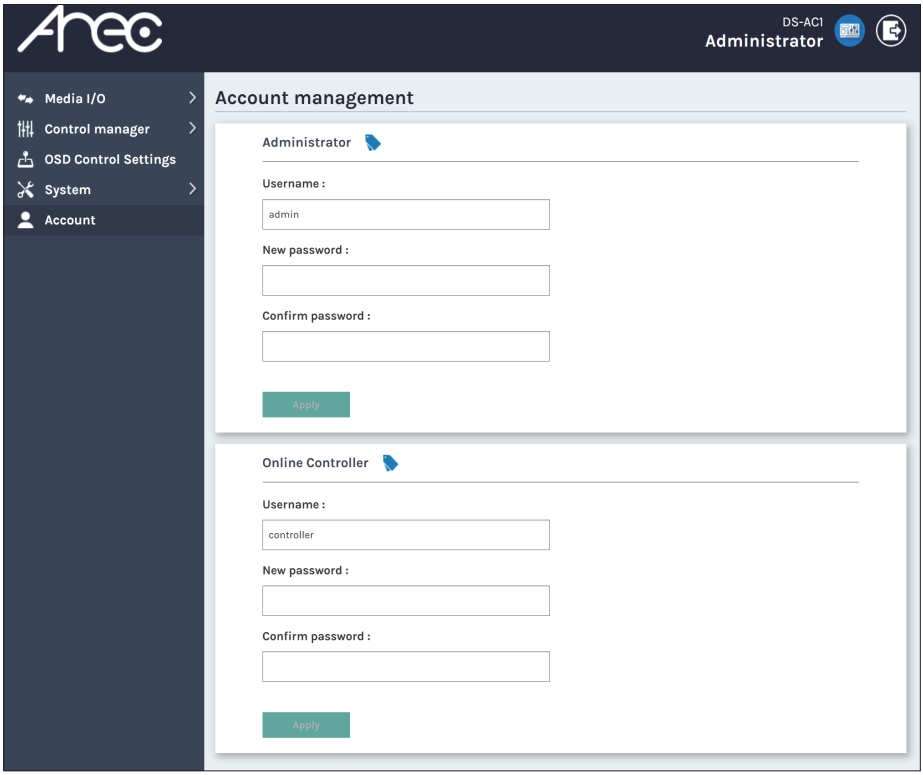
Users can export the DS-AC1 configuration file to their computer and then import it into another DS-AC1 to apply the same settings.



Reset: Restore factory settings. Choose whether to retain network settings, then click Update .

1.5 Account Management

This page allows account management for two user accounts: System Administration and Online Controller. You can modify the usernames and passwords for these accounts here.

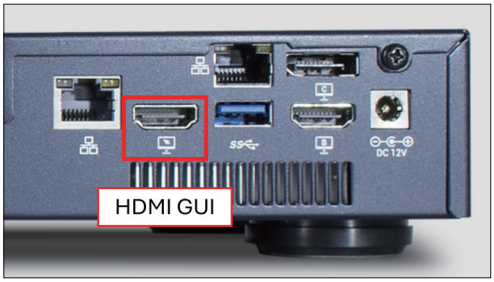


Chapter 2 User Interface

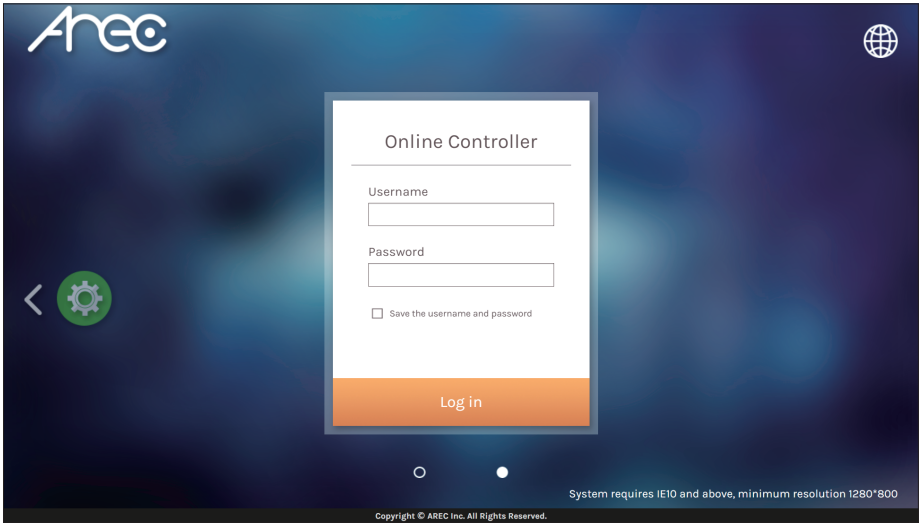
2.1 Control Panel and Preview

This section explains how to control the previously configured options through the user interface after completing the initial user setup.
There are two ways to access the DS-AC1 control panel:

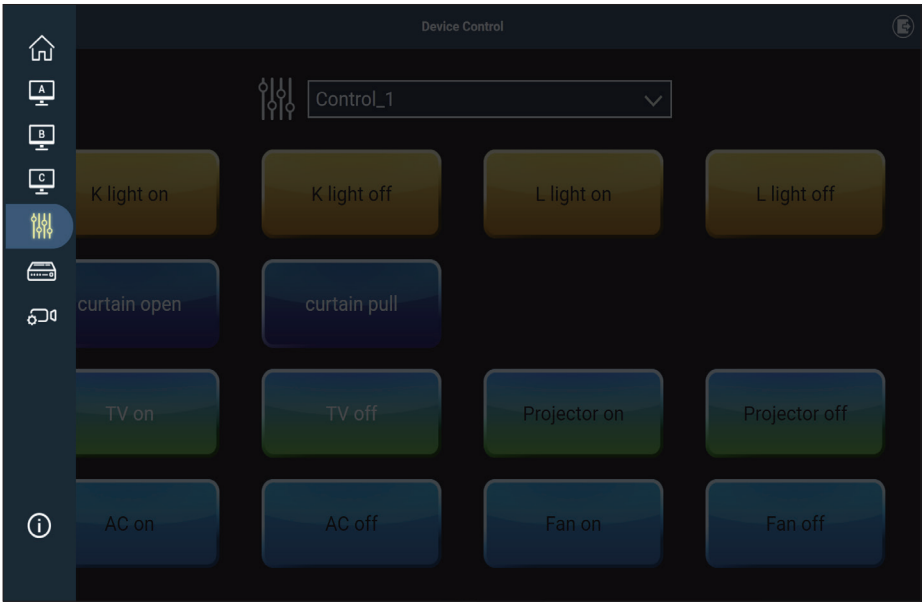
1. Using HDMI GUI port with USB mouse control



2. Through the web interface: Log in to the online controller using the default account/password: controller/controller. Alternatively, you can log in to the management page using the administrator account (default: admin/admin) and click the button  to switch to the Online Controller page.

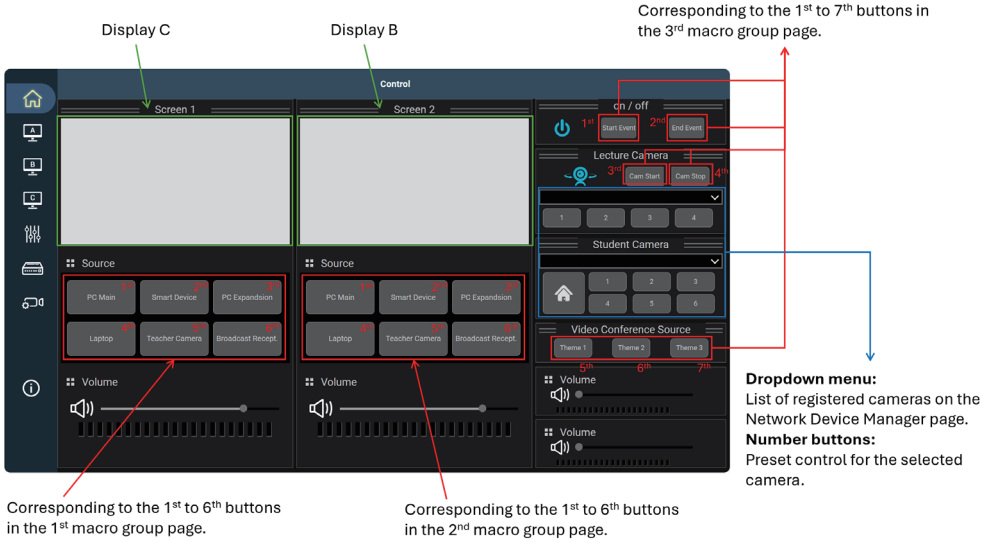


Once you enter the control panel, you can then switch between different control pages by clicking the sidebar menu and clicking a page.



2.1.1 Display Port Selection and Preview

Upon entering the user interface, you will first arrive at the home page, as shown in the figure below. Click the symbol to access the main control panel. On this page, you can view and control the contents of Display B and Display C, as well as perform additional controls.



Screen 1:The left preview window shows the content of Display C.
Below, the "Source" area will display control buttons configured in the following section 1.3.2 Device Control and Macros for device control and macros, defaulting to showing the first six buttons of the first macro page. "Volume" adjusts the output volume for that Display.

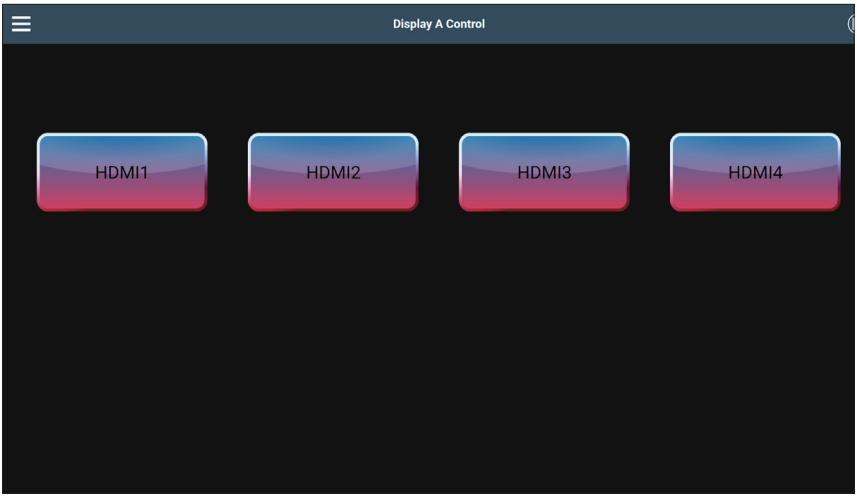
Screen 2:The right preview window shows the content of Display B.
Below, the "Source" defaults to displaying the first six buttons of the second macro page.
"Volume" adjusts the output volume for that Display.

Button Control Panel on the Right:
On/Off Section: Includes the 1st and 2nd buttons of the third macro page.
Lecture Camera: Defaults to the 3rd and 4th buttons of the third macro page.
Video Conference Source: Functions as the 5th, 6th, and 7th buttons of the third macro page.

Camera List: Displayed in the blue box section as shown in the diagram. It shows all registered network cameras. Refer to section 1.1.1 Network device manager. Numeric keys control Camera Presets.

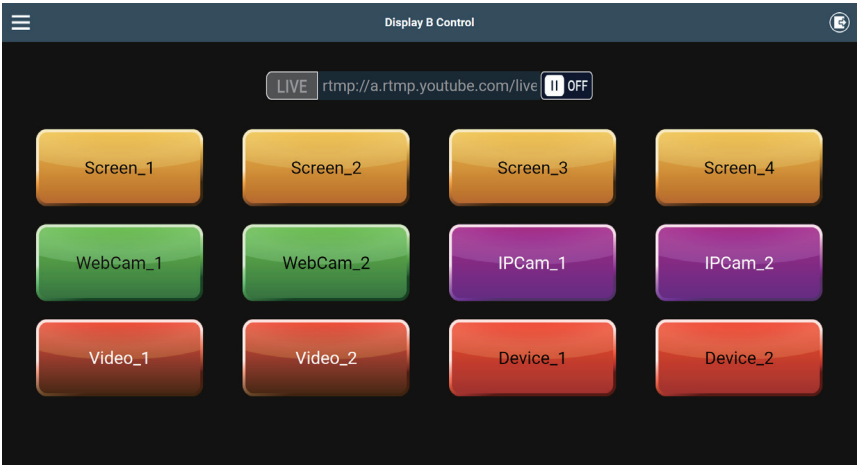
- **Display A Control**

Click the button  in the left sidebar to switch to the Display A control interface. User can choose between four HDMI sources. The button's design can be changed, refer to previous section 1.3.1 Display Output Control. Click the pre-set buttons to switch sources.



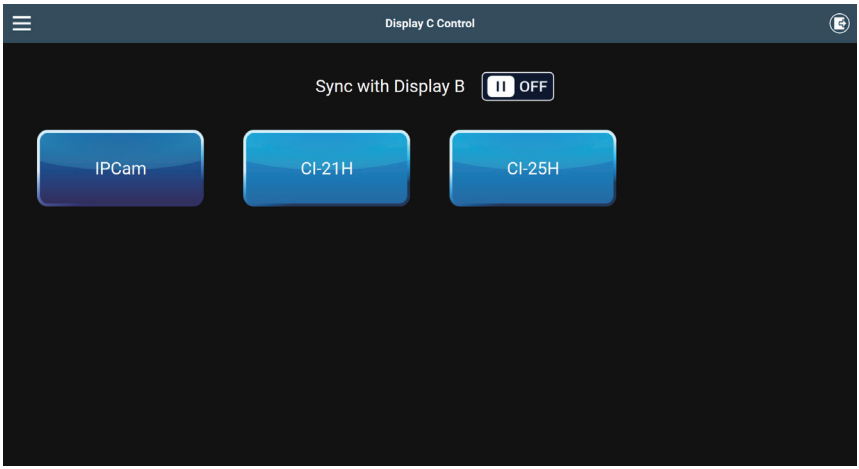
- **Display B Control**

Click the button  in the left sidebar to switch to the Display B control page. Control buttons are configured as set in previous sections, with a maximum of 16 buttons per page. Switch sources by clicking the buttons.

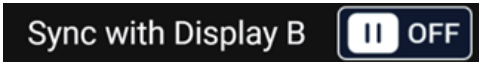


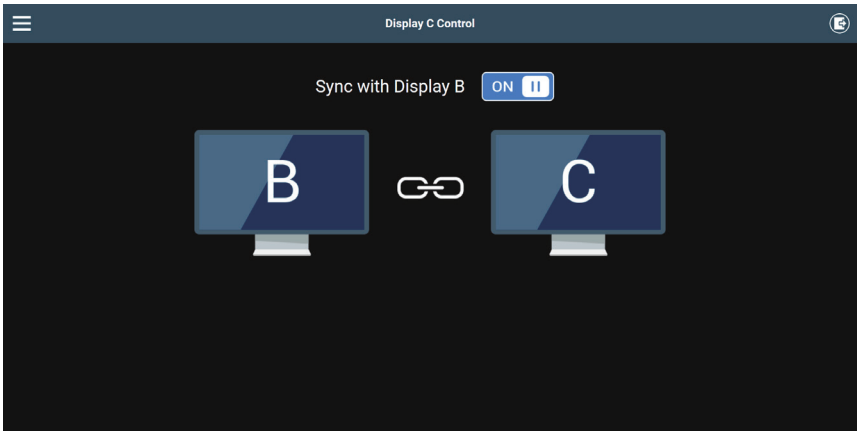
- **Display C Control**

Click the button C on the left sidebar to switch to the Display C control page. Control buttons are configured as set in previous sections, with a maximum of 16 buttons per page. Switch sources by clicking the buttons.



Users can use the "Sync with Display B" option to synchronize Display C with Display B. When "Sync with Display B" is enabled, Display C outputs the same content as Display B. During this time, direct switching for Display C is disabled, as shown in the diagram below.



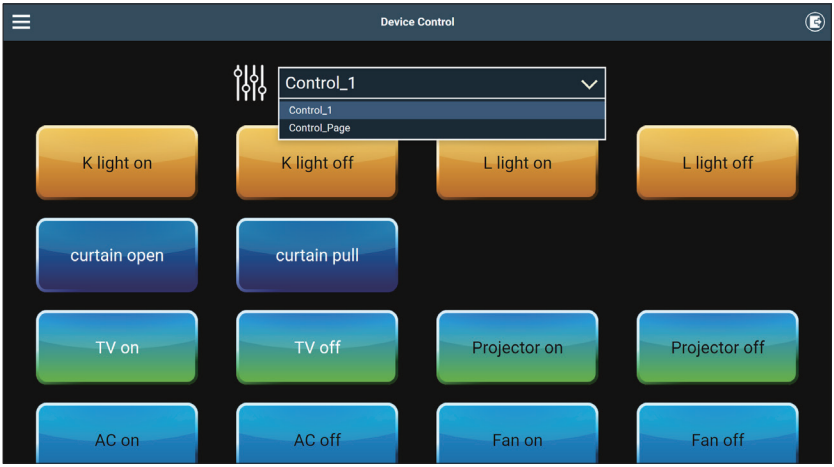


2.1.2 Macro Control Panel

Click the button in the sidebar to switch to the macro control panel.

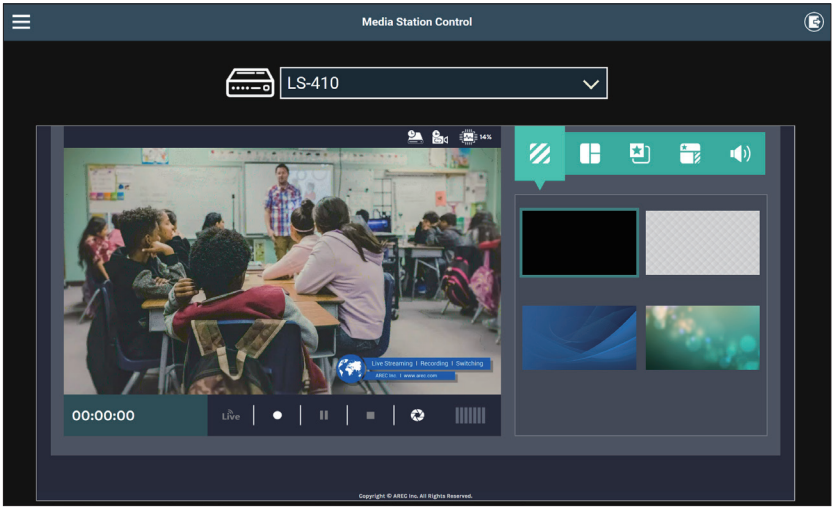
In this section, you can use the macro buttons configured in section 1.3.2 Device Control and Macros to control external devices.

You can also switch between macro group pages using the dropdown menu.



2.1.3 Media Station Control

Click the button on the left to switch to the Media Station control page. Select a Media Station from the dropdown list, and its director control page will be shown as the diagram below. For detailed functions, please refer to the Media Station manual.



2.1.4 Network Camera Monitoring and Control

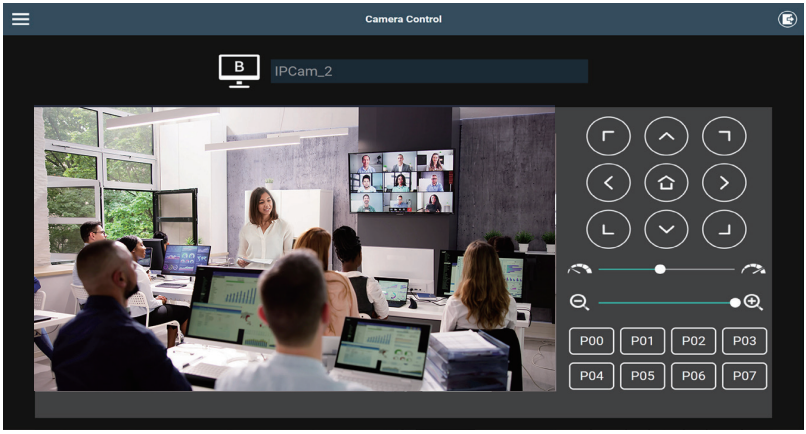
Click the button on the left to enter the network camera monitoring and control page. The left section displays the live preview of the camera, which depends on the image source currently applied to Display B. You can switch the screen by going to .

If the selected source of Display B is a camera without PTZ control functionality or another non-camera video source, you cannot use the directional buttons in the right section. The buttons will appear grayed out , as shown in the diagram below.

[Video source with no PTZ Control]

If the camera supports PTZ control, the directional buttons in the right section can control the pan/tilt of the camera. Clicking the middle button returns the camera to its initial position. The first row below the directional buttons adjusts the camera's movement speed, while the second row adjusts the camera zoom level. The buttons labeled P00-P07 at the bottom right are presets set for the camera.

Please refer to the camera manual for more details.



[PTZ-enabled camera]

Made in Taiwan
Date : 2024.9.1

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