SC-100

# Smart AVIoT Controller

## User Manual




Publication Date: July 2023 | Firmware: V1.0.0

# Contents


Connection Diagram ---- 4
Physical Description ---- 5
Log In ---- 6
Device Setting ---- 8
IO Setting ---- 15
Situation Setting ---- 19
Monitor Setting ---- 43
Environment Setting ---- 50
Dashboard ---- 67
Schedule Setting ---- 75
Account ---- 85
System Setting ---- 88
Appendix ---- 96



© Copyright 2024 BXB Electronics Co., Ltd.
Reproduced or transmitted in any form or by any means without the prior written permission of BXB is prohibited.
We make no representations or warranties, either expressed or implied, with respect to the contents of this manual, its merchantability or fitness for any particular purpose.
The contents in this manual may vary depending on the product / software version. BXB reserves the right to alter the information of this manual at any time. At all times, BXB will try to give correct and complete information. However, no responsibility is assumed for inaccuracies.

# Safety Instruction

1. Read the instruction manual carefully before installing and using this unit and keep this manual properly preserved.
2. Please follow the instructions and be aware of warning indications.
3. Do not use any spare parts without the recommendation of your dealer. Please use the fixing accessories offered by BXB. If the system is broken due to the improper fixing, BXB would not bear the responsibility for compensation.
4. Make sure the power cord has been fixed properly. Do not use any extension cords as this would result in fire or short circuit.
5. Do not stuff anything or spill liquid of any kind onto or into this unit.
6. Contact maintenance technicians if the conditions occur: A. Power cord or plug is damaged; B. Liquid has been spilled into the unit; C. The product does not work normally; D. The unit has been dropped or the cover has been damaged; E. The function cannot work completely.
7. Install this unit carefully. Impacting and fierce shaking should be avoided.
8. Do not disassemble or remodel this unit:

    A. High voltage and sensitive electrical circuit are inside of the unit. Do not disassemble it to prevent electric shock.

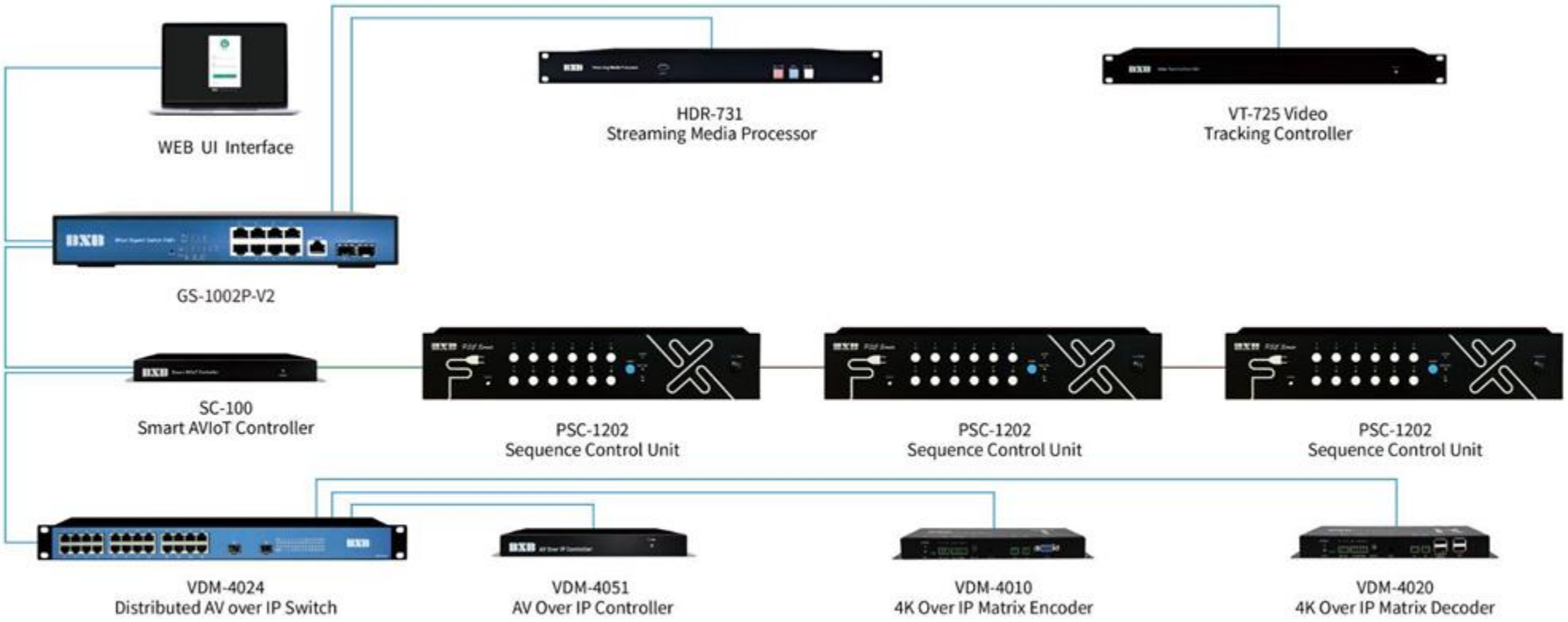
    B. The specification of any replaced spare part should be validated by manufacturer, or it may cause fire and short circuit.

1. Do not use this unit in the environment with improper temperature, moisture, and power level to avoid component damage. The adequate operation temperature is 0°C ~ 40°C (32 °F ~ 104 °F); relative humidity below 90%.
2. Do not expose the apparatus to rain and moisture. Please put it at a dry location to avoid any damage of the inside components. Adequate coverage is requisite if the unit is used outside.
3. Do not clean this unit and its accessories with liquid or chemical detergent. Just use a damp cloth for cleaning.
4. Do not switch on/off the power rapidly no matter it's operating or off. It can avoid the operation problem from the sensitive electronic circuit.

Caution: The static electricity treatment of printed circuit boards should follow ESD safety measure. Ground connection should be done well.

Caution: Please be aware of the voltage accordance with that in your country.

# Connection Diagram




CAT.6 RS-232 RS-485

# Physical Description

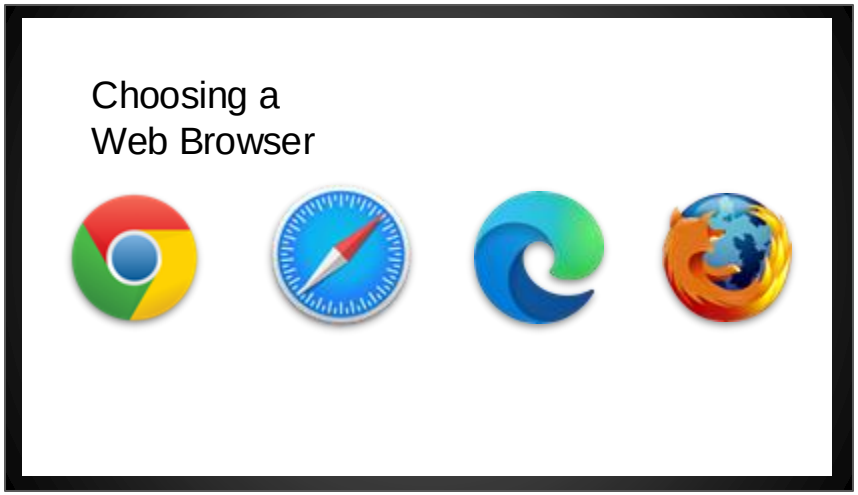



**Port Descriptions**

1. **Status Indicator Light**: Shows the device's operational status.
2. **VDM Network Port**: Connects to the **VDM** network and integrates with **VDM-4010** and **VDM-4020**. The **SC-100-P**model supports **PoE** network switches, eliminating the need for a separate power source.
3. **LAN Port**: Links to the local network and works with **VT-725**, **HDR-731**, **VDM-4051**, and other **TCP**-compatible devices.
4. **RS-485 Port**: Supports **RS-485** communication devices.
5. **RS-232 Port**: Interfaces with a **PSC** power controller or other **RS-232**-enabled devices.
6. **Network Reset Button**: Resets network settings to factory defaults.
7. **Power Indicator Light**: Displays power status.
8. **Power Input Port**: Connects to a **DC 5V/3A** adapter for power supply.

# Log In

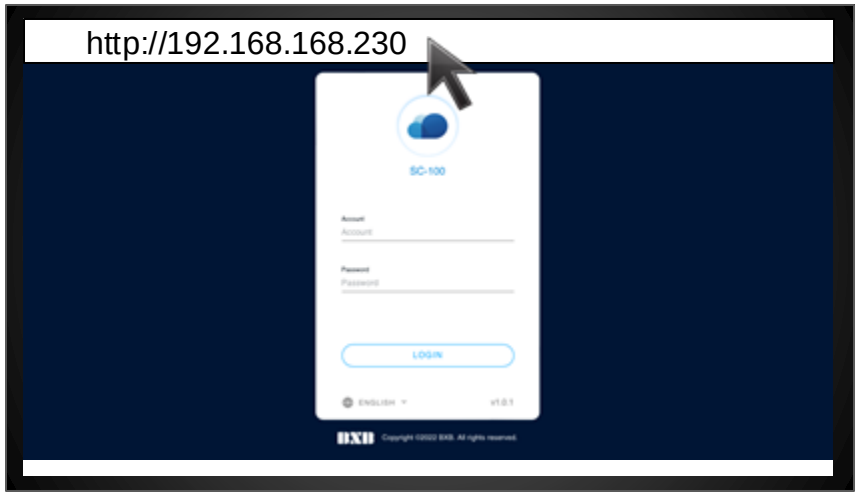
1




SC-100 can be edited, configured, and operated using today's mainstream web browsers such as Chrome, Safari, Microsoft Edge, and Firefox.

The following demonstration uses the Chrome browser.

2



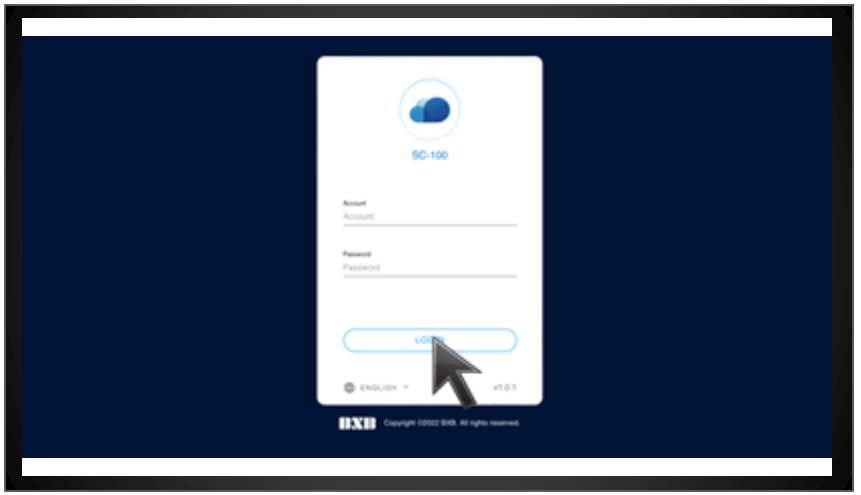

Enter the SC-100 IP address in the browser's address bar.(default is 192.168.168.230 )

3




The display language on SC-100 can be selected as English, Simplified Chinese or Traditional Chinese.

4




Enter the username and password to log in. The default username is "admin," and the default password is "00000."

For additional features such as adding or modifying user accounts, you can log in with the admin account, then click on "Account" for related functions (refer to page 85 for instructions).

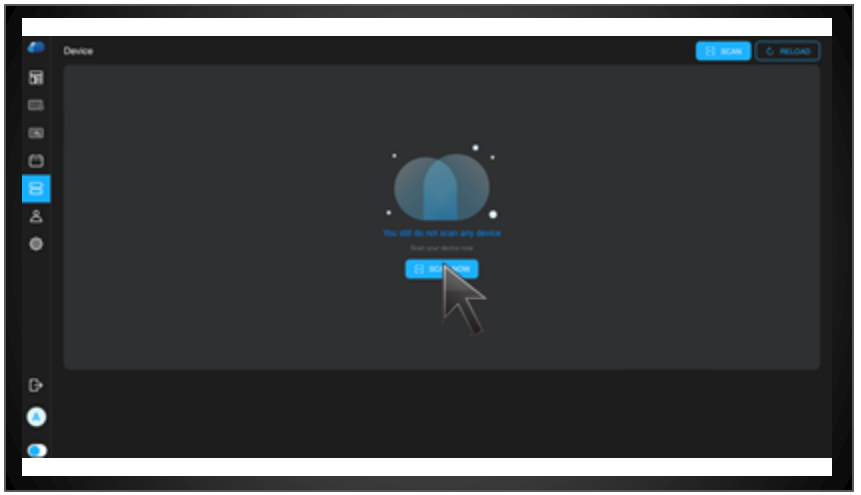
# Device Settings

1




For the initial login, you need to configure the relevant settings. Click 'Go to Device Settings' to access the device management page.

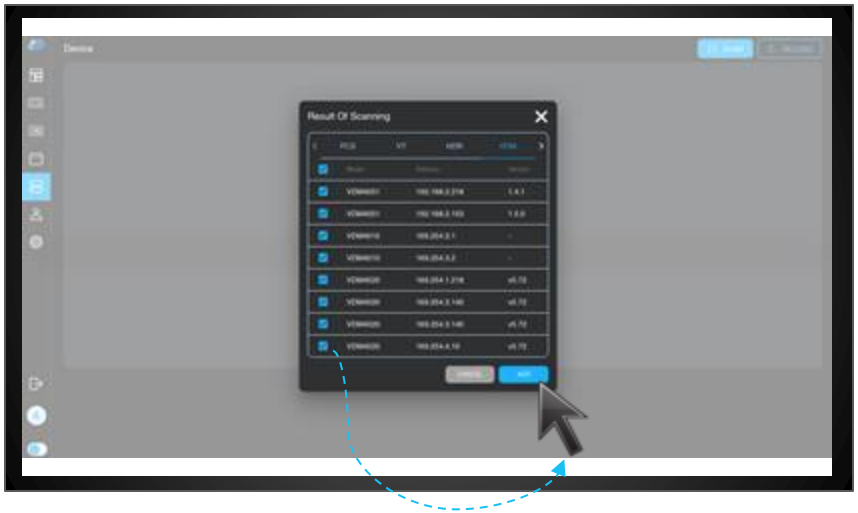
2




Click 'Scan' to perform an online device scan.

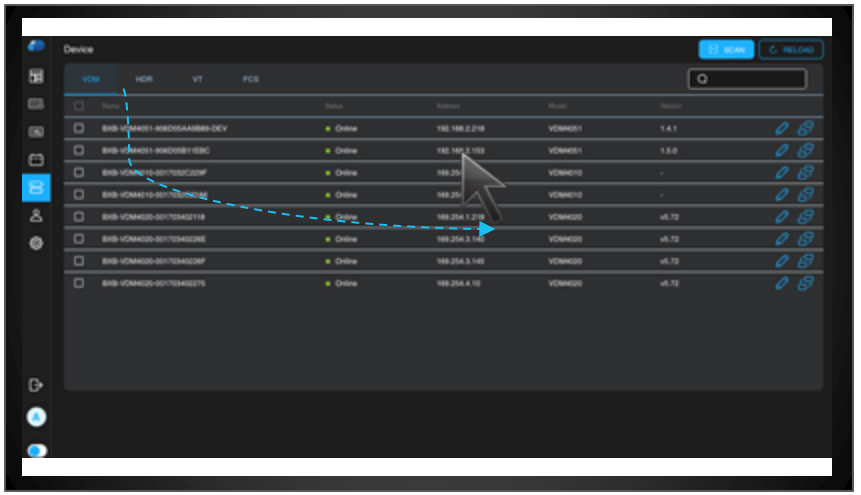
※ If you cannot scan the relevant devices, please check if the devices have normal power supply and network connections.

3



In the list of scanned devices, check the desired interlinked devices, then click 'Add' to add the relevant devices to the device list.

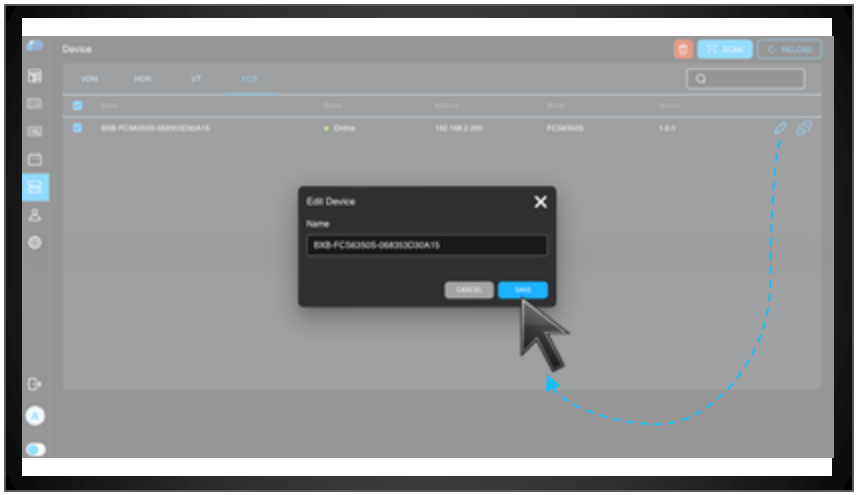
4



Click on the 'Device Tab' to switch between device lists and view related information such as device names, connection status, IP addresses, and product models

※ If the device status shows 'Disconnected,' please ensure that the device has power and the relevant connections are correct.

5



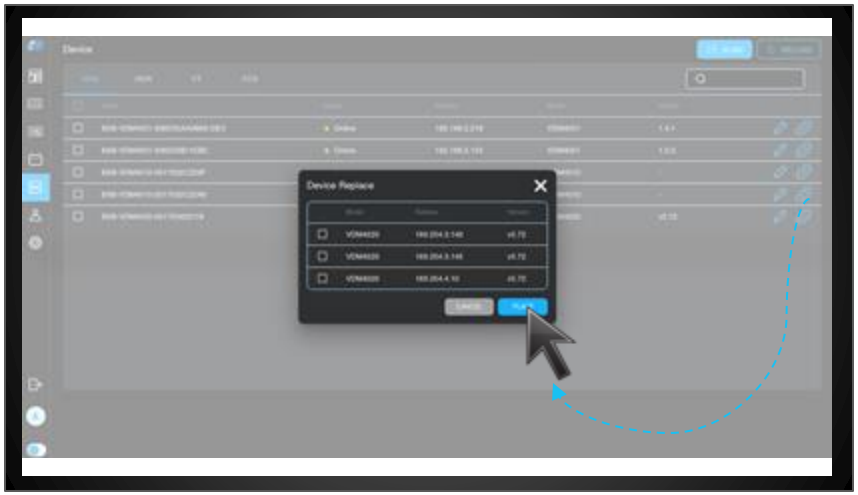

Click on the 'Edit' icon to modify the device name.

6



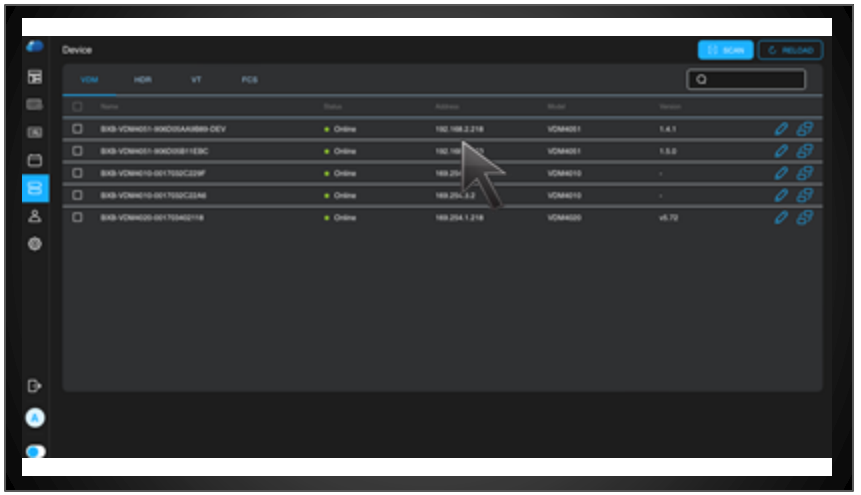

After the modification is completed, the device list information will be displayed according to the updated name.

7



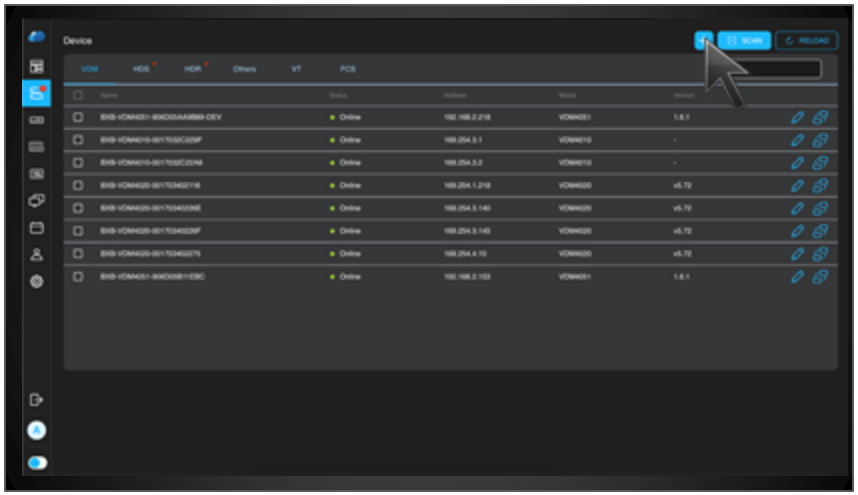

If there is a need to replace a device, click on the 'Place' icon to bring up the device list. Check the device you want to replace, then click 'Place' to directly replace the device.

8




After replacement, the device list will be synchronized and updated with the information of the replaced device.

9



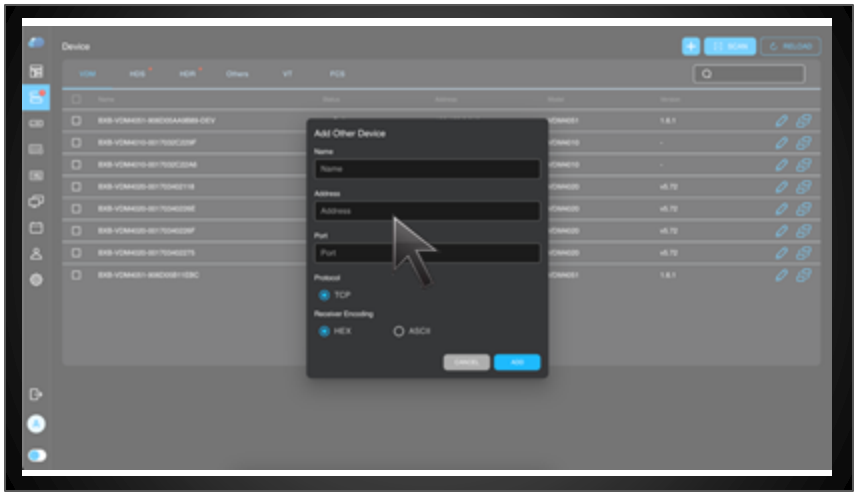
Click **"Add"** to register a new device in the list.

10



Assign a device name for easier identification and management.

11



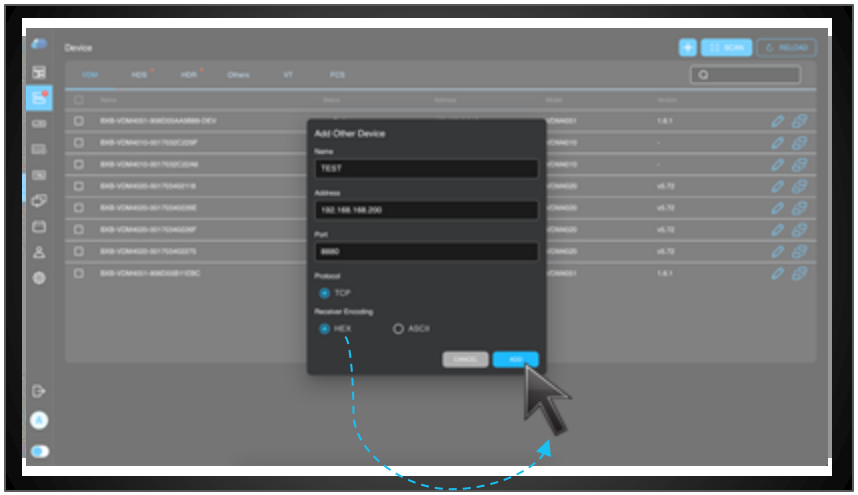

Enter the device’s **IP address**.

12




Enter the device’s communication port.

13




Choose the appropriate command type, then click **"Add"** to finalize the process.

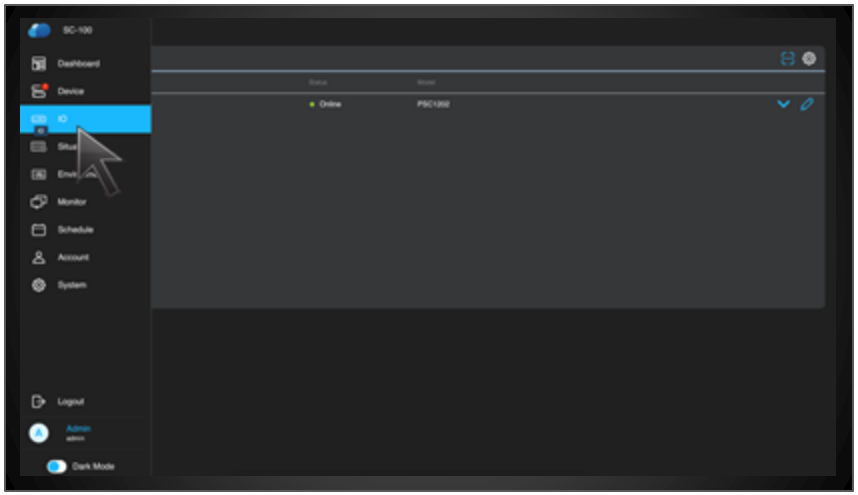
14




To update device details, select **"Edit"** and make the necessary changes.

# IO Setting

1



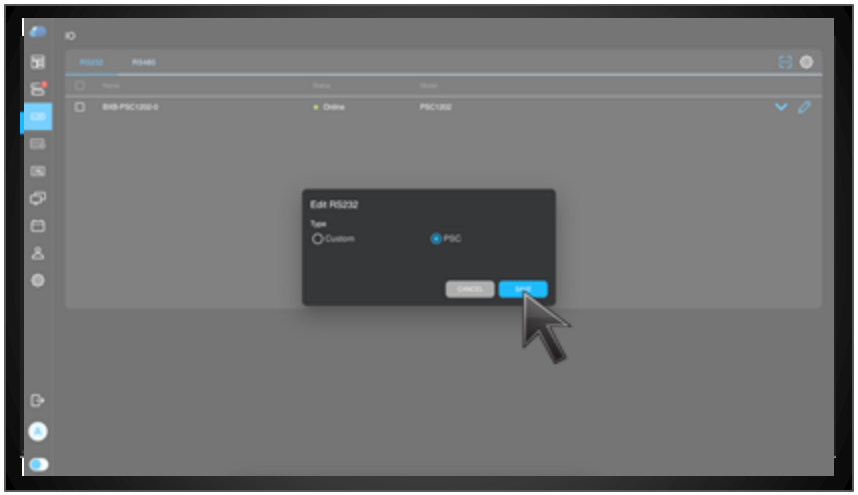
Navigate to the **IO Management** page by clicking **"IO"**.

2



Click **"Settings"** to configure **RS-232** communication parameters.

3



The **RS-232** interface supports integration with the **PSC-1202** main power controller for further configuration.

4



Click **"Scan"**—if the **SC-100** Smart AVIoT Controller is properly connected to the **PSC-1202**, it will be detected and added to the device list.

5




Use the **"Edit"** icon to rename the **PSC-1202**.

6



Open the **PSC-1202** port settings menu to customize each port's name individually.

7



Switch to the **RS-485 Port** settings page for **SC-100** by clicking the corresponding tab.

8




Click **"Edit"** to adjust communication settings.

# Environment Setting

1




Click 'Environmental' to create a new environmental control page.

2




Click on 'New Environmental' to go to the management settings page.

3



Click on 'Name' to give a name to this environmental control page.

4



Select the desired image file on the computer for upload.

※ File size must not exceed 5MB.

5




Select Image and click **"SELECT"** to add it to the **Environment Control** page.

6




Click the image on the **Environment** page to reposition or resize it.

7



Use the **top-left panel** to fine-tune the image's position and size. Click the **"Lock"** icon to toggle aspect ratio locking while resizing.

8



Click an image to manage imported files, or switch to **"Delete Mode"** to remove it.

9



Use the information panel in the upper left corner to adjust the image's position and size. Click the **"Lock"** icon to enable or disable the aspect ratio constraint when resizing by dragging.

10



Click **"Image"** to manage imported images. Click **"Delete Mode"** to remove an image.

11



Click **"Text"** to insert a text box.

12



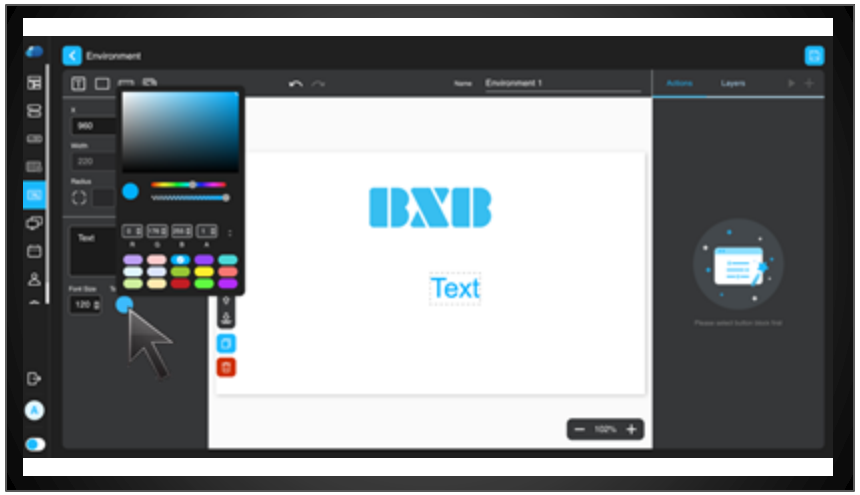

Drag the **text box** to reposition it or resize it as necessary.

13




Click on the text modification field to edit the desired display text.

14



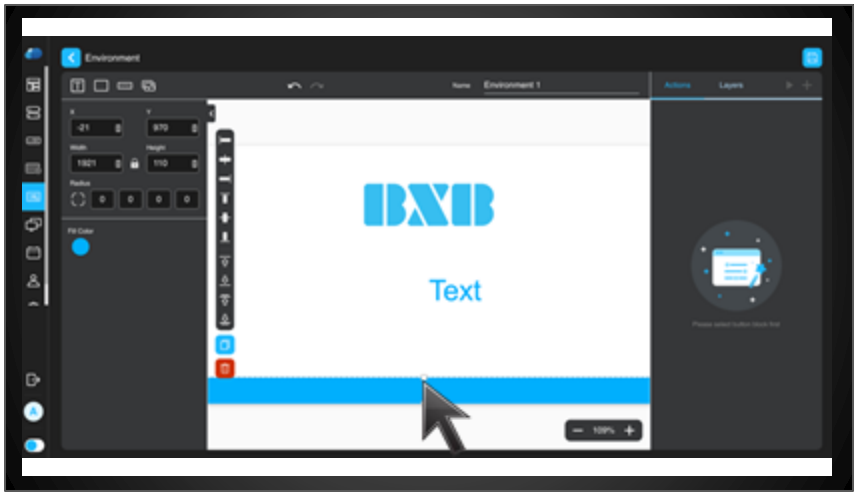

You can sequentially adjust the text size and color settings.

15




Click **"Rectangle"** to insert a rectangular shape.

16




Drag the **rectangle** to reposition it or resize it manually. You can also fine-tune its dimensions and corner radius by entering specific values.

17




You can adjust the order of related objects in "Layer."

18




Clicking "Lock" will lock the object, and the locked object cannot be edited.

19




Click "Button" to add a button object.

20




Click on the "Button object" to drag and move it for position adjustment or drag the border to resize it.

21




In the **Button Object** panel, customize the text, color, size, and corner radius.

22




In the **"Action Group"**, click **"Add"** to create a control action. This example illustrates configuring an action for the **PSC Main Power Controller**.

※ The system will display only actions applicable to the listed devices. If a device is missing from the list, its corresponding actions will not be available.

23




Assign a **name** to the action for easier tracking and management.

24



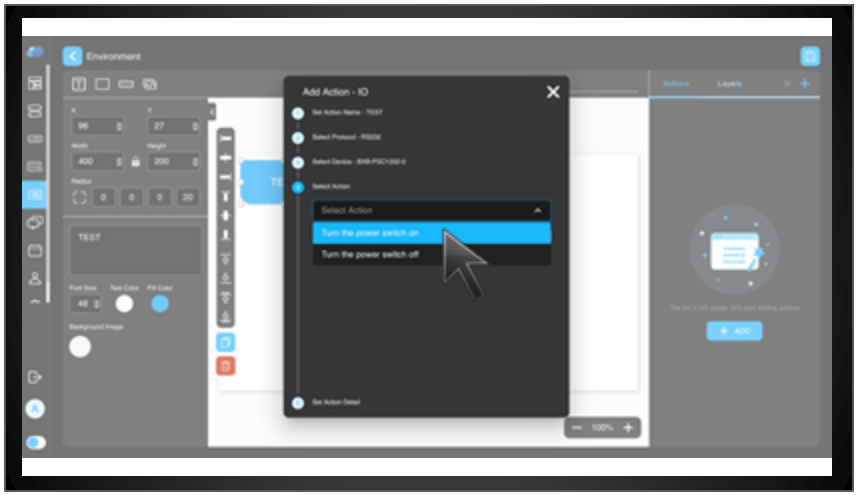

Click the corresponding **communication setting** for the device.

25




Select the devices to be controlled.

26



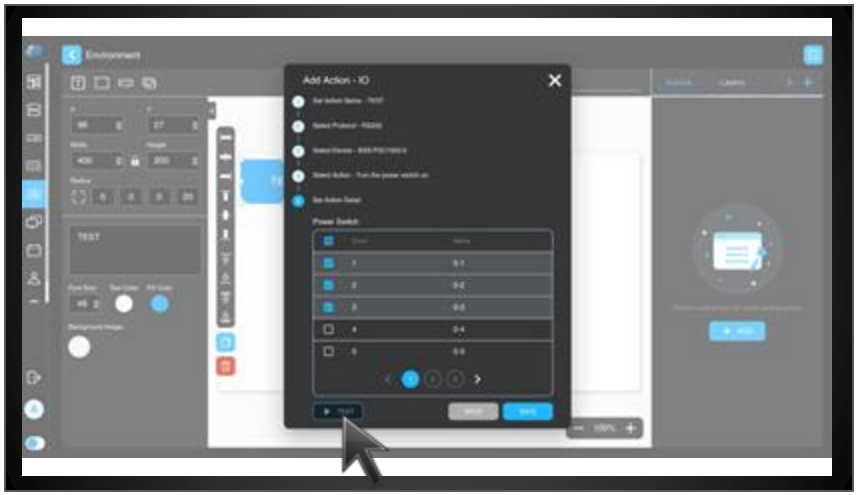

Open the **Action List** and choose the desired control action.

27



Assign the control port for the selected action.

28



Click **"Test"** to run the configured action instantly.

※ Ensure the device responds as expected. If it does not, check the wiring and connections.

29




Click **"Save"** to apply and save the action settings.

30




Click **"Add Action"** to assign additional actions to the **Button Object**.

31




Use the **"Wait"** function to introduce a delay between actions. Once the previous action finishes, the system will pause for the set duration before proceeding.

32




Click **"Test Action"** to run the **Button Object's** sequence and verify its functionality.

※ Ensure the device responds correctly. If it doesn't, check the wiring and connections.

33



Click **"Test Action"** again to confirm that the action sequence executes as expected.

※ If the device does not function properly, inspect the wiring and setup.

34



Add **"Press & Release Buttons"** to the **Button Object** as needed.

35



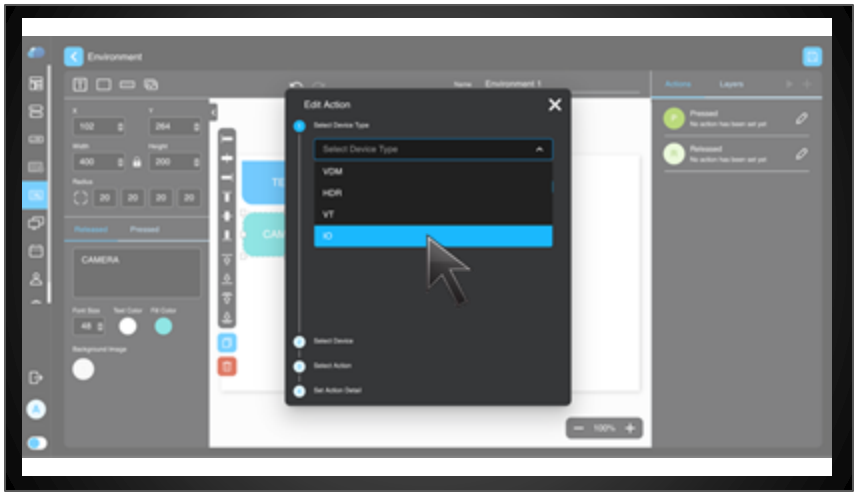

Customize the button’s **text and color** for both **pressed** and **released** states.

36




Click **"Press"** to configure the action triggered when the button is pressed.

37




In the **Action Settings List**, select the target device. For example, here we configure an **HAC-701 camera** connected via **RS-485**.

※ The available actions depend on the listed devices. If no relevant device is detected, no actions will be available.

38




Select the device or communication method from the list.

39




Choose the command type to be sent.

40




Enter the desired control command.

41




After setting up the action, click **"Test"** to ensure it functions correctly, then click **"Save"** to apply the configuration.

42




Click **"Release"** to configure the action triggered when the button is released.

43




Choose the appropriate device and configure its actions step by step.

44




Click **"Release"** to define the action triggered when the button is released.

45




To duplicate an object, select it and click **"Copy"**.

46




To delete an object, select it and click **"Delete"**.

47




Click **"Undo"** to revert the most recent edit.

48




When editing is complete, click **"Save"** to store the settings for the environment control page.

# Monitor Setting

1




Click **"Monitoring"** to access the settings page.

2




Click **"Add"** to create a new **management folder**.

3



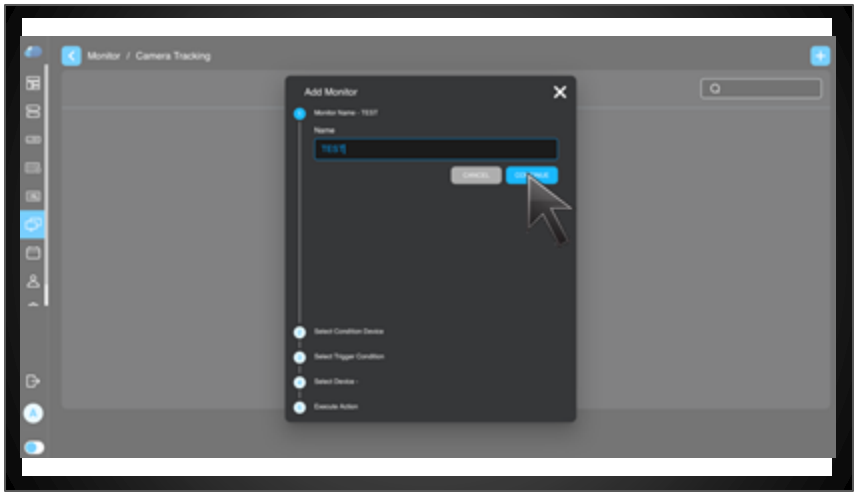

Enter a **folder name**, then click **"Save"** to complete the setup.

4



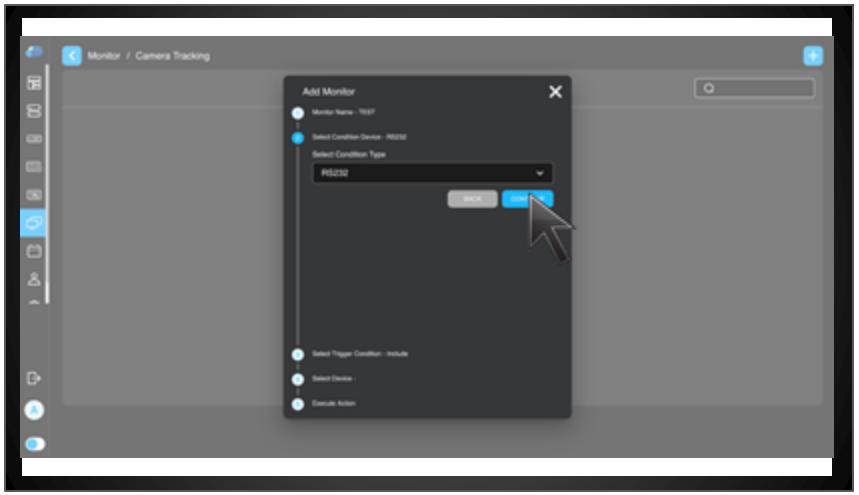

Click **"Add Monitor"** to configure a new monitoring action.

5



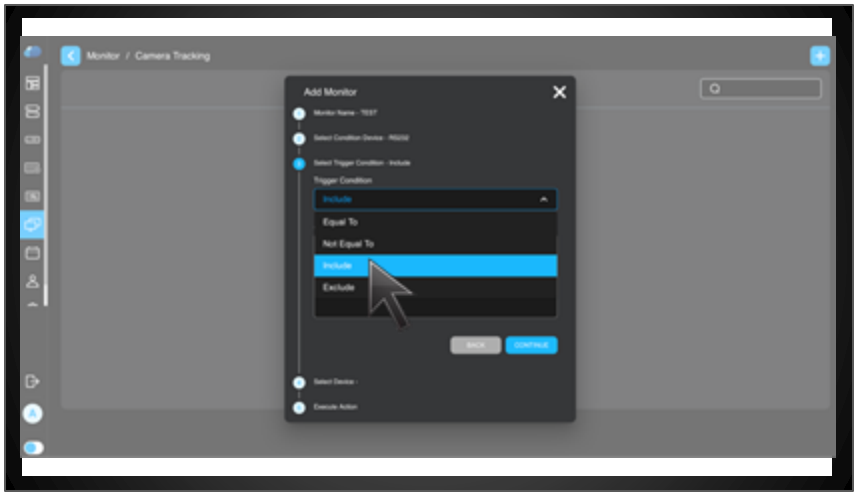

Enter a **name** for the monitoring action and click **"Continue"**.

6

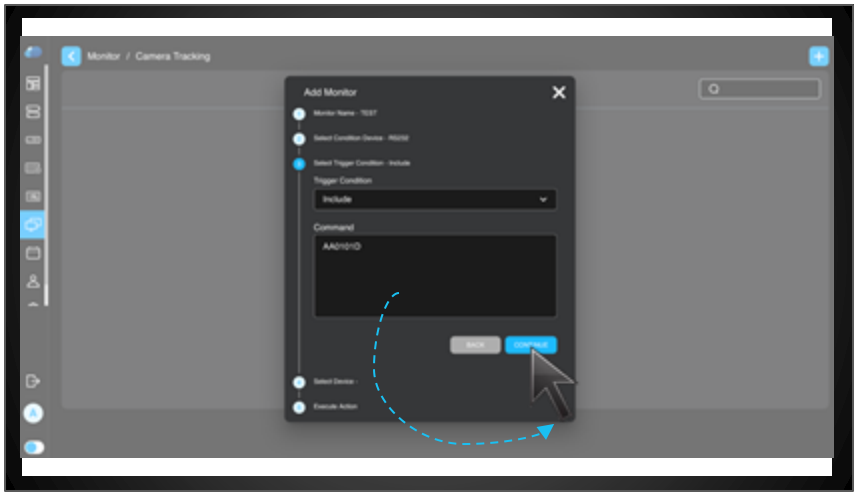



Select the **device** as the command source and proceed by clicking **"Continue"**.

7




8




Define a **trigger condition**:

- **"Equals"**: Triggers when the received command exactly matches the specified one.
- **"Not Equals"**: Triggers when the received command differs from the specified one.
- **"Includes"**: Triggers when the received command contains the specified content.
- **"Excludes"**: Triggers when the received command is anything except the specified content.

In the **"Command"** field, enter the relevant command. When SC-100 receives this command, it will execute the assigned action.

Click **"Continue"** to proceed.

9




elect the **target device** that will be controlled upon receiving the command.

10



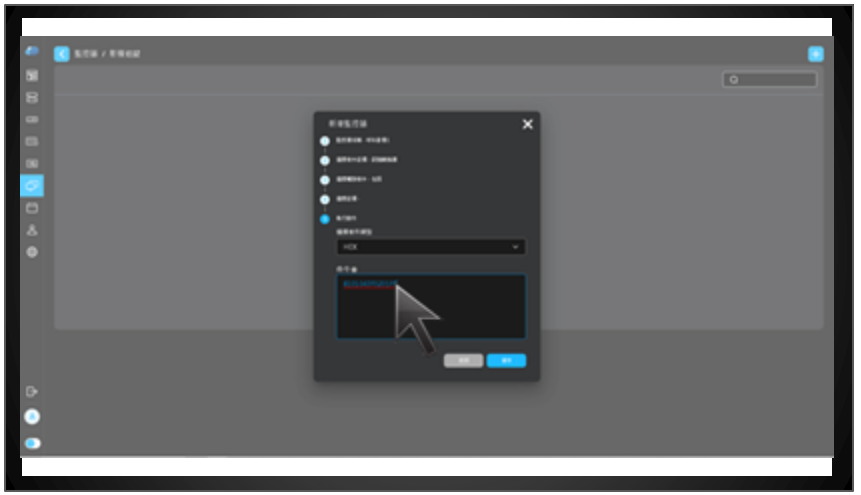

Choose the appropriate **command type** for the selected device.

11



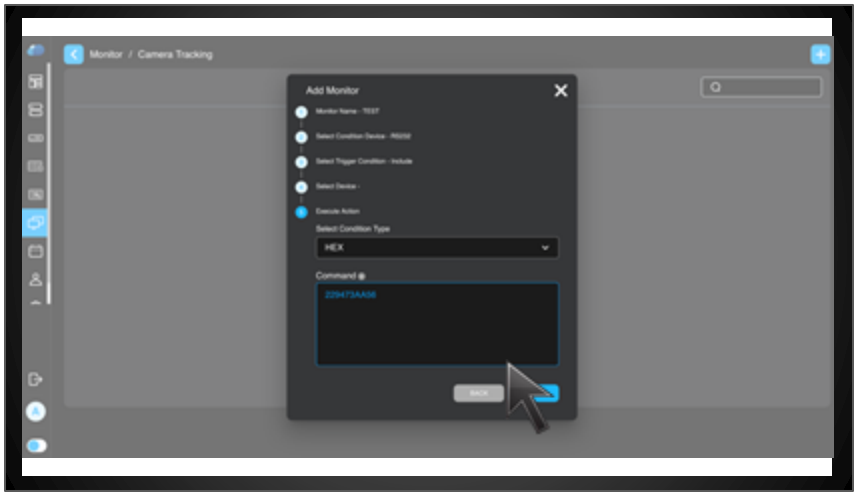
Choose the device that will be controlled when a command is received.

12



Enter the control command for the selected device.

13




Click "Save" to finalize the monitoring action configuration.

14




Click "Edit" to adjust the monitoring action settings if needed.

# Situation Setting

1



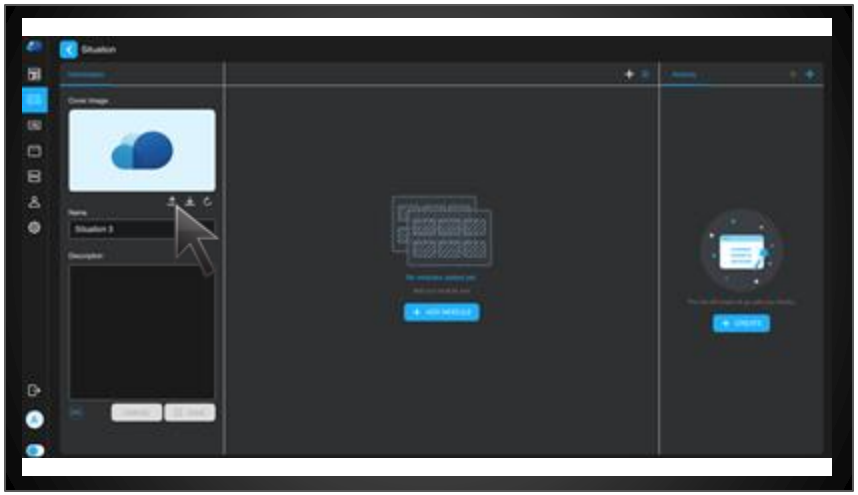
Click 'Situation' to go to the management settings page.

2



Click 'New Situation' to create a new scenario page.

3



Click 'Upload' to upload an image file as the situation cover.

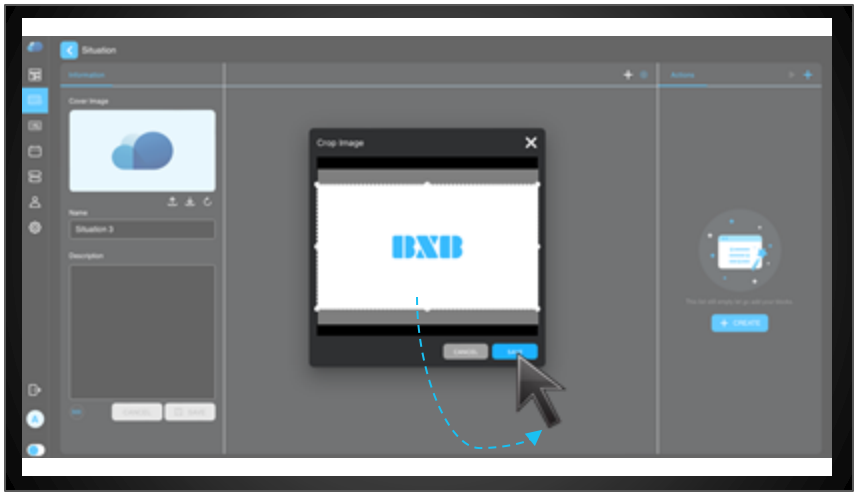
4



Select the desired image file from your computer to upload.

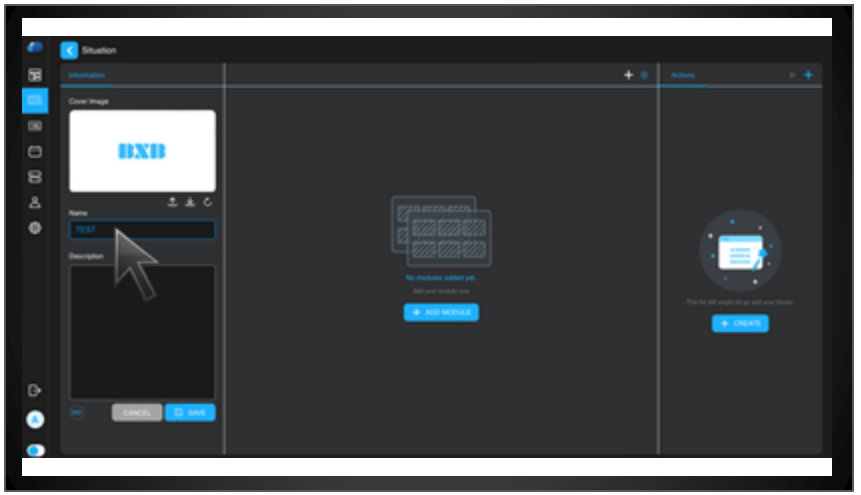
※ The file size must not exceed 5MB.

5




After adjusting the display area of the uploaded image, click 'Save' to complete the cover setting.

6



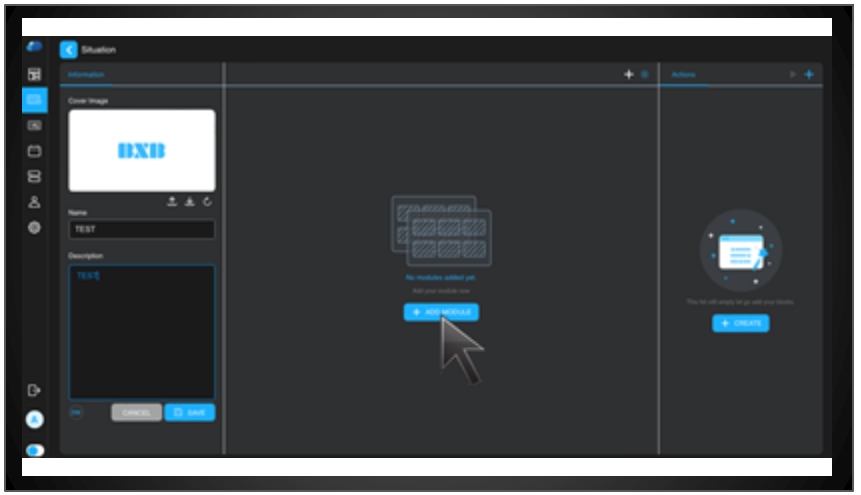

Click 'Name' to edit and add a situation name.

7



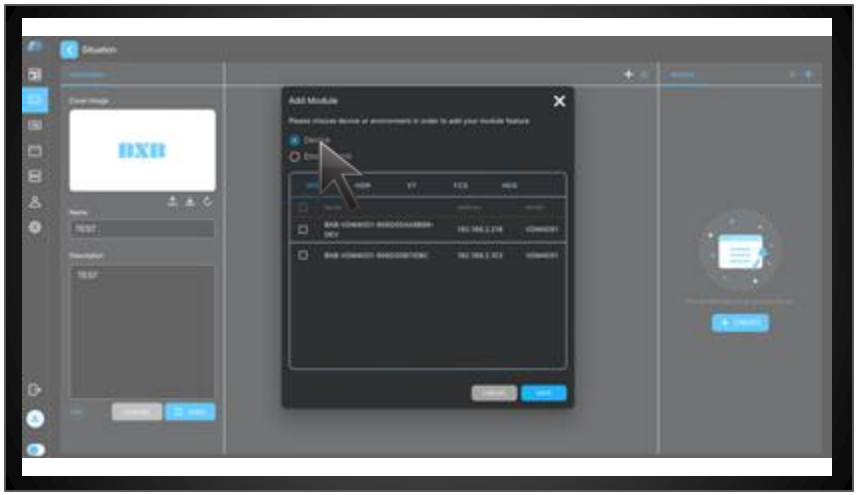
Click 'Description' to edit the usage instructions related to this situation for easier identification and use later.

8



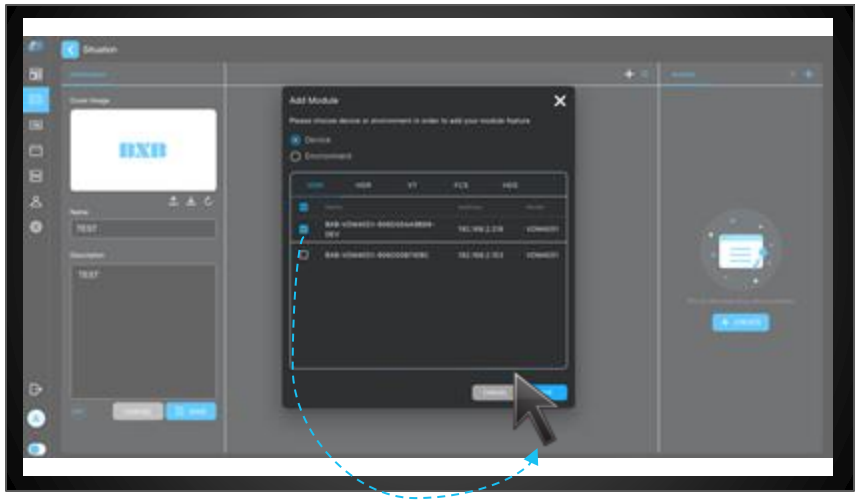
Click 'Add Module' to create a new module page.

9



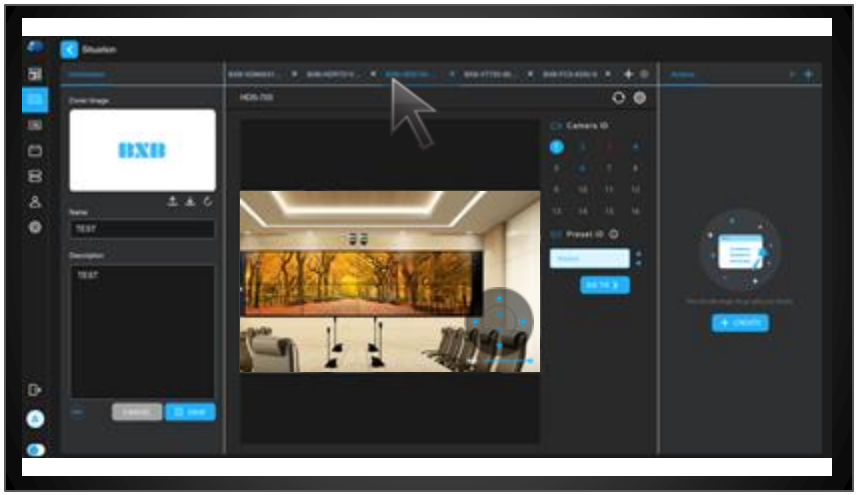
Click 'Device' to select a device from the device menu and add the corresponding control module page.

10



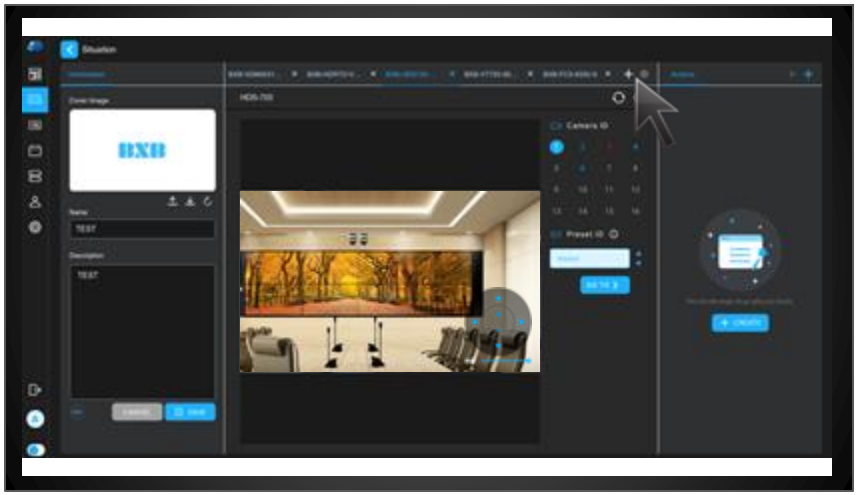
After selecting the control module from the device list, click 'Save' to complete the addition.

11



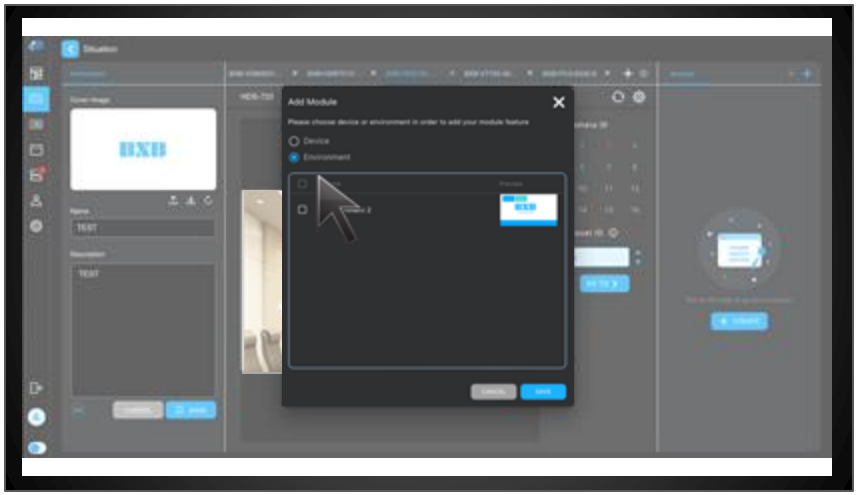
The newly added device control module pages can be viewed by clicking on the device tabs to switch between them. If you need to delete a control module page, click 'Delete' to remove it.

12



Click 'Add' to create another control page.

13



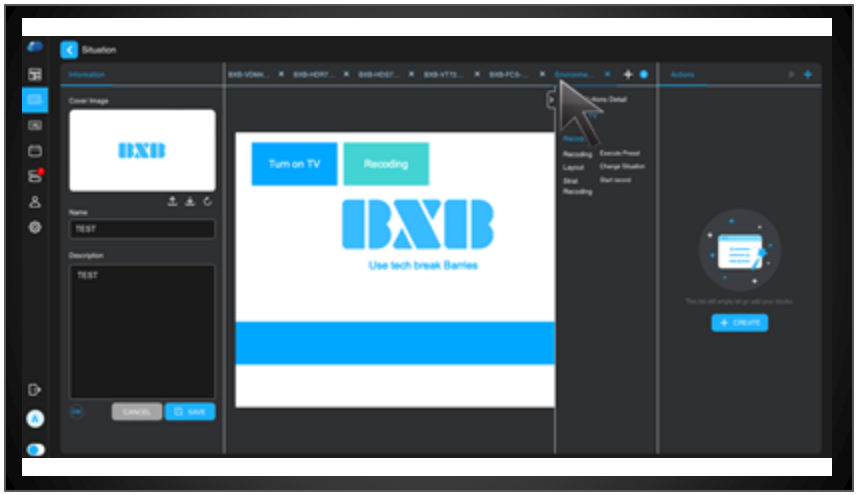
Select 'Environment' to add a new environment control page.

14



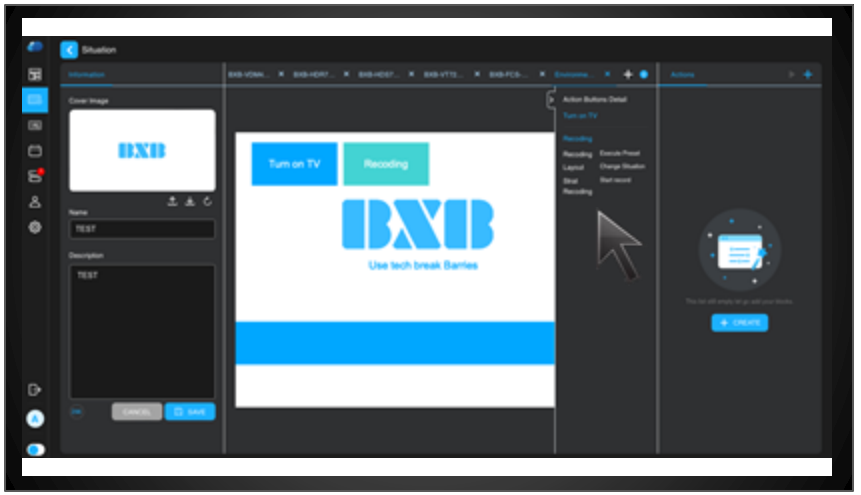
Check the desired environment control page and click 'Save' to complete the addition.

15



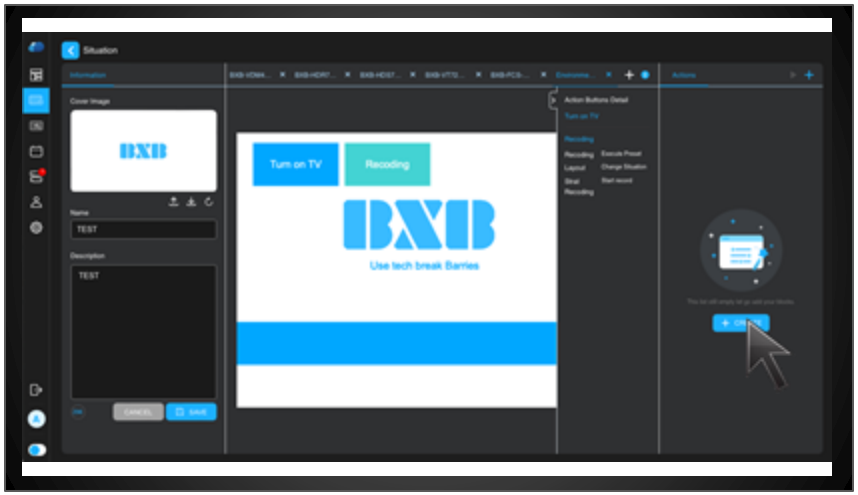

Click the tab to navigate to the newly added environment control page.

16



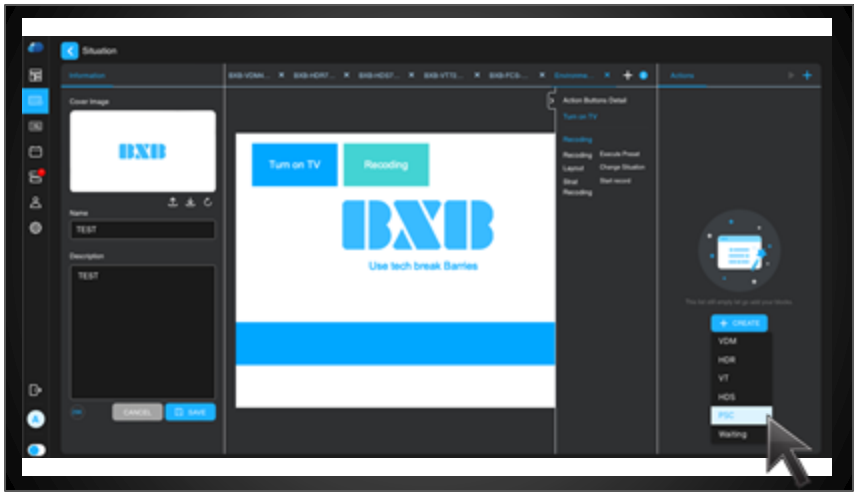

Review the content of the environment control page.

17



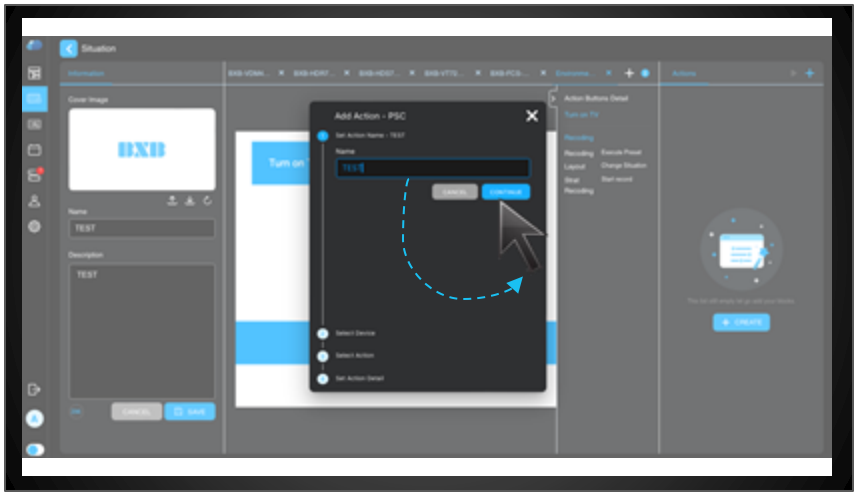

Click "Add" to set up scenario-based actions.

18



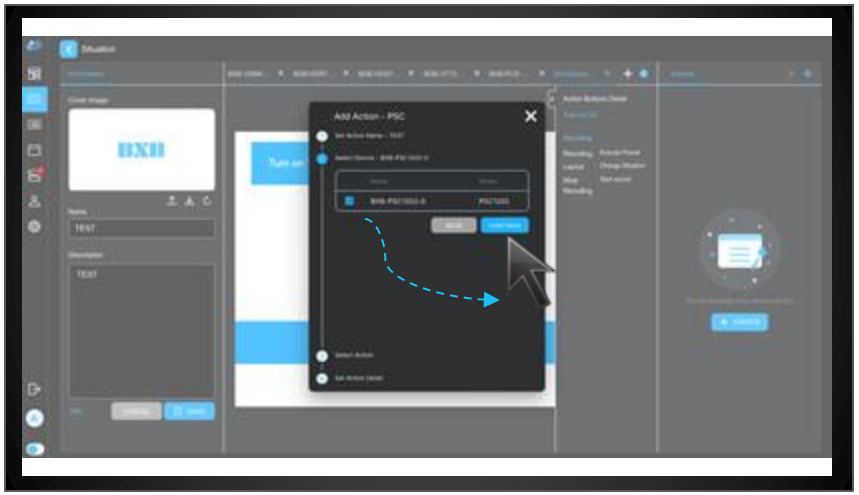

Select the device you want to control.

19



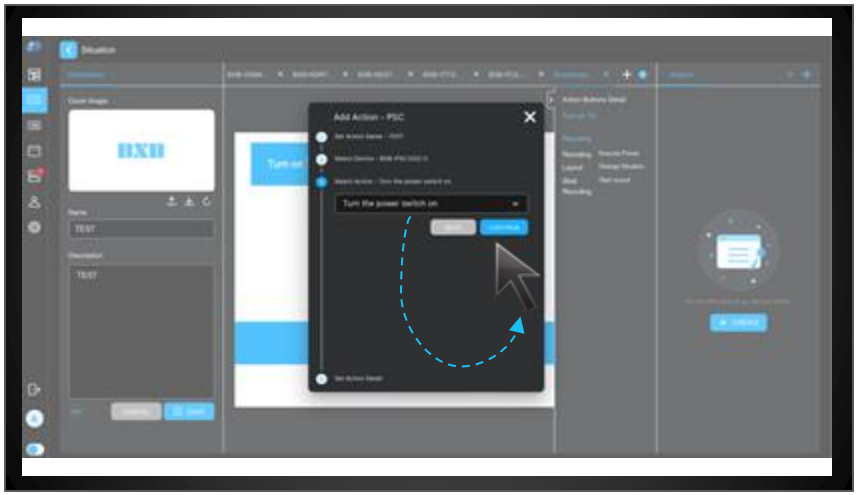

Enter a name for the action, then click "Continue" to proceed.

20



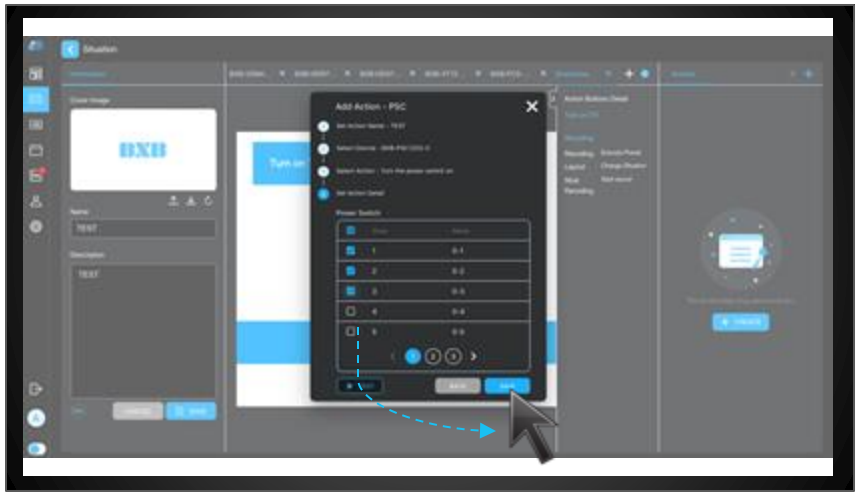

Choose the target device from the list and click "Continue" to confirm.

21



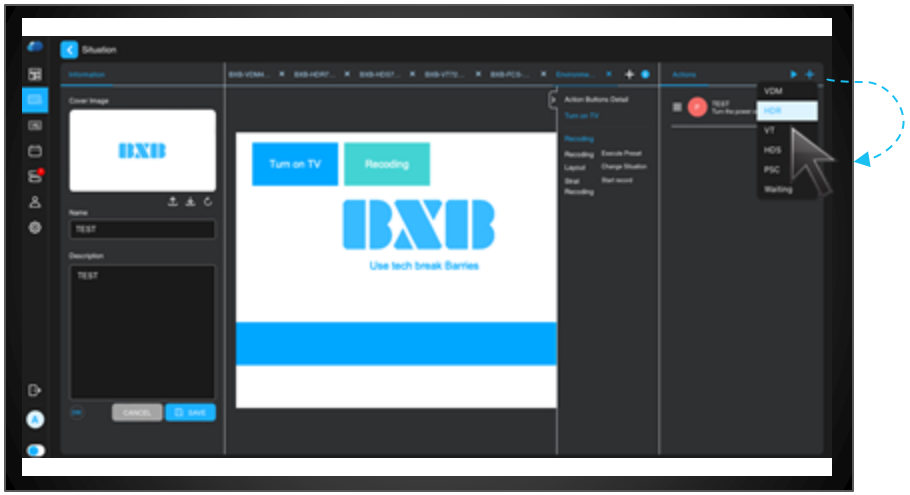
Choose the action you need to execute and click 'Continue.'

22



Check the corresponding ports you want to control, then click 'Test' to perform an action test, or click 'Save' to complete adding the action.

23



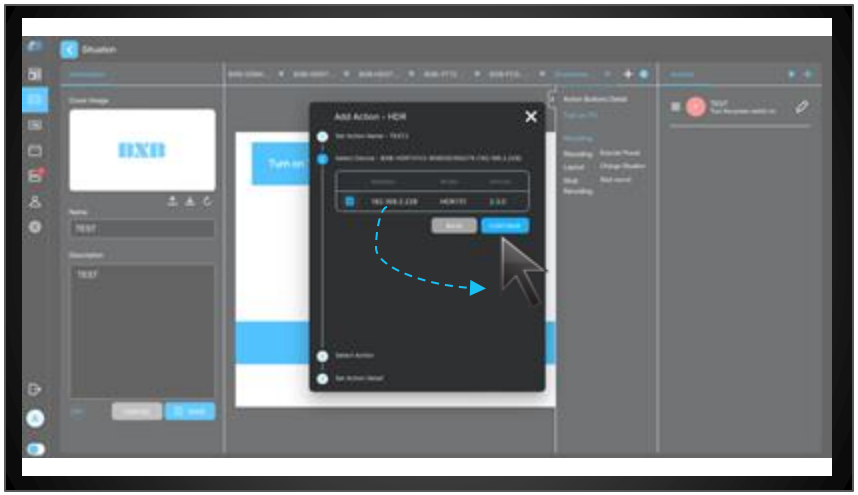

You can click 'Add' and select the device you want to control to continue adding background actions.

24



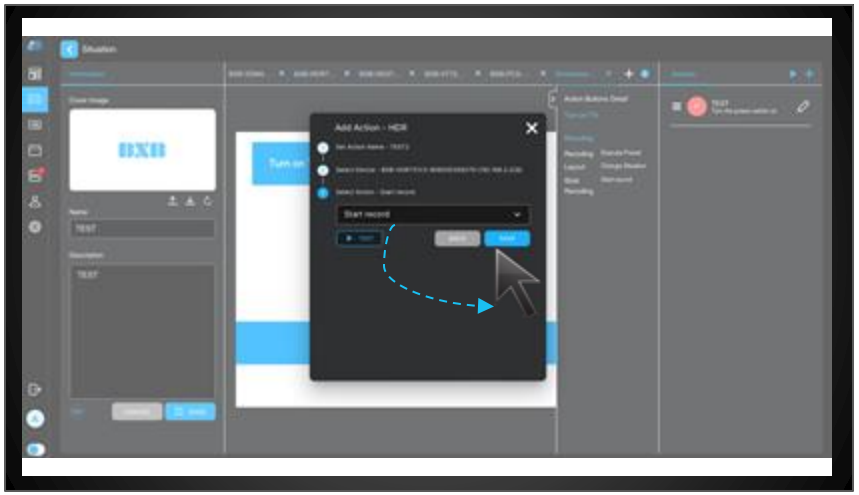

Enter the 'Name' and click 'Continue' to proceed with the action name setup.

25



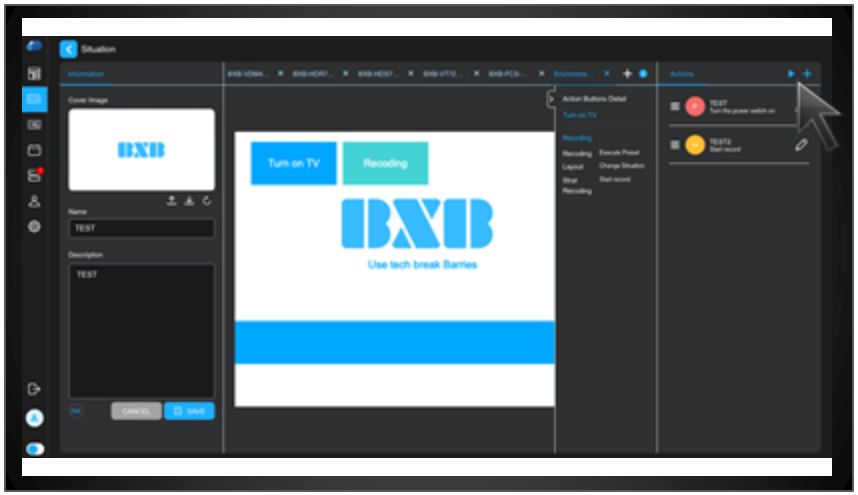
Select the device you want to control from the device list and click 'Continue.'

26



Choose the action you need to execute, then click 'Save' to complete adding the action.

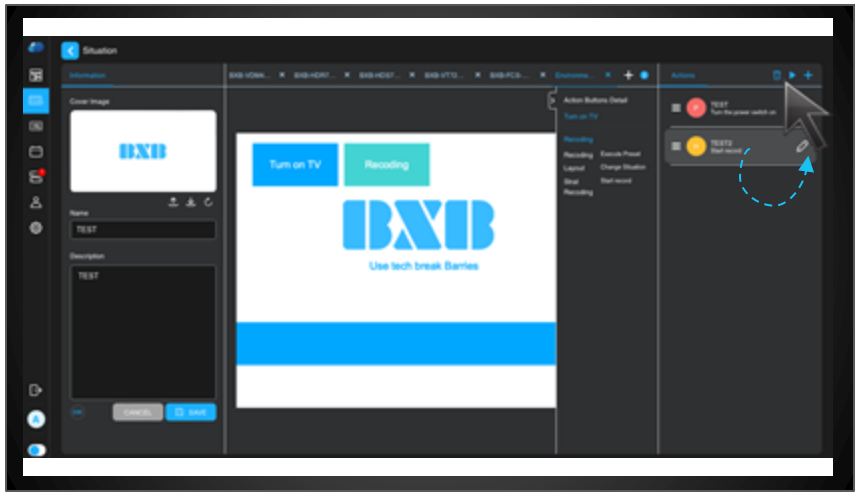
27




Click 'Action' to execute the action group settings.

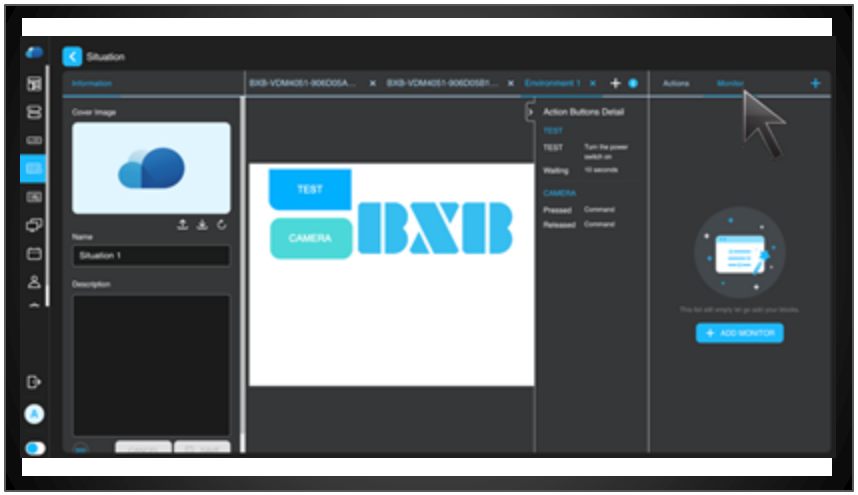
※ Observe whether the devices operate as configured. If they do not function correctly, please check whether the device wiring and connections are correct.

28



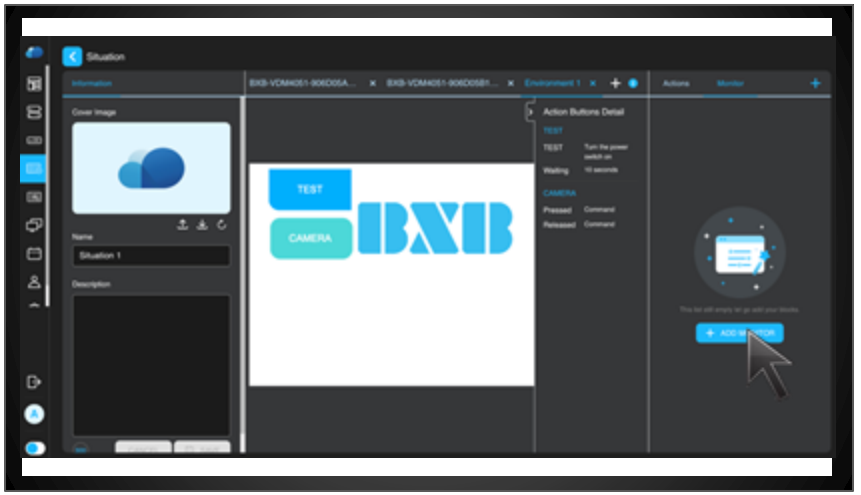

To delete an unnecessary control action, select the action and then click 'Delete.'

29




Click "Monitor" to switch to the monitoring action setup page.

30




Select "Add Monitor" to create a new monitoring action.

31




From the "Monitoring List," choose the action you need.

32



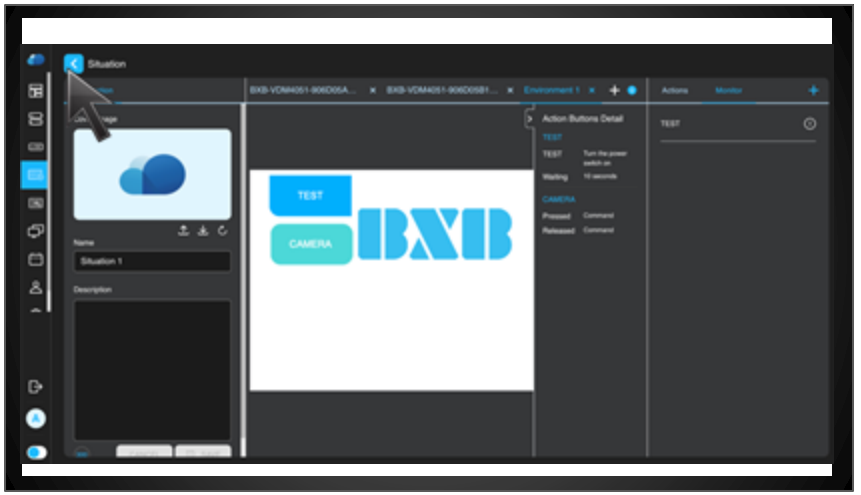

Click "Add" to include it in the action list.

33




Click on a monitoring action’s description to view its settings.

34




Click "Back" to exit scenario editing.

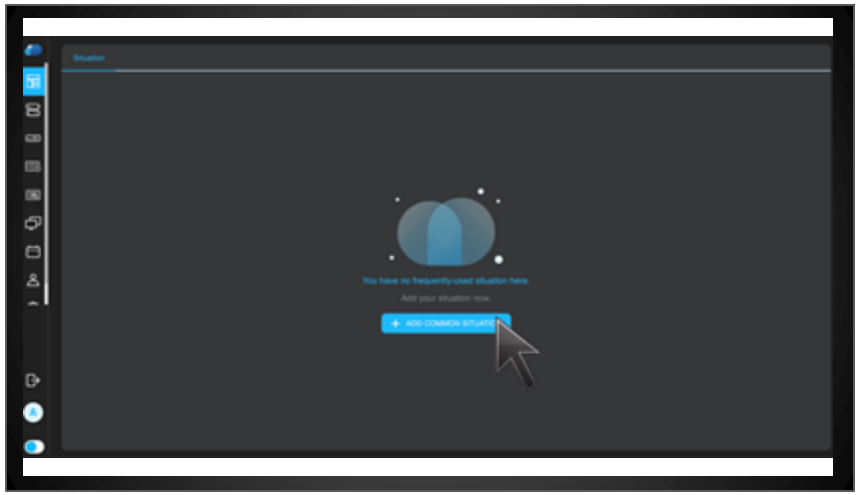
# Dashboard

1




Click 'Dashboard' to go to the operation page.

2




Click 'Add Common Situation' to select the desired situation.

3



Click to select or drag the newly added situation to the workspace on the dashboard.

4



Click 'Save' to complete the favorite situation setup.

5



Click 'Customize' to reopen the favorite situation settings.

6



Click 'Save' to finalize the favorite situation settings.

7



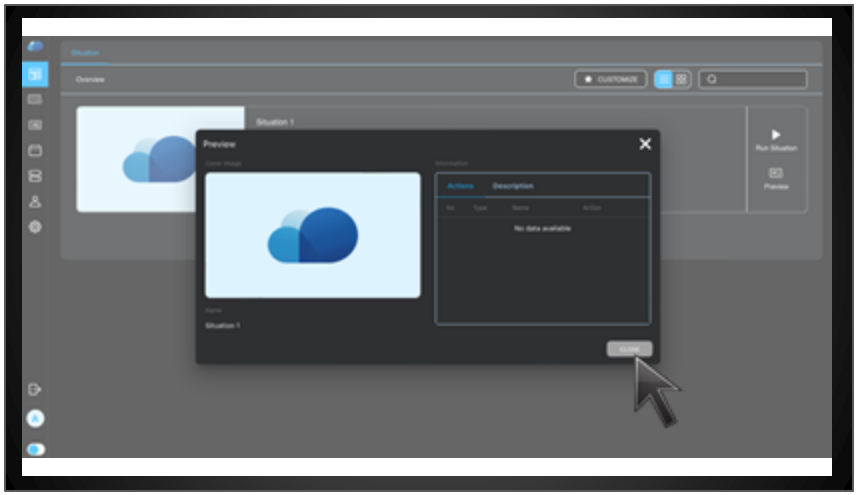
Click 'Display' to switch the display mode.

8



Click 'Preview' to view the situation content.

9



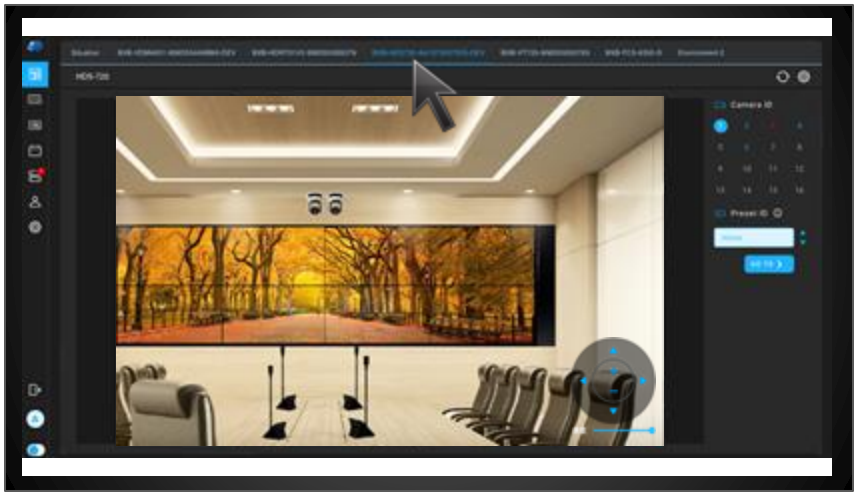
Click 'Close' to end the situation content preview.

10



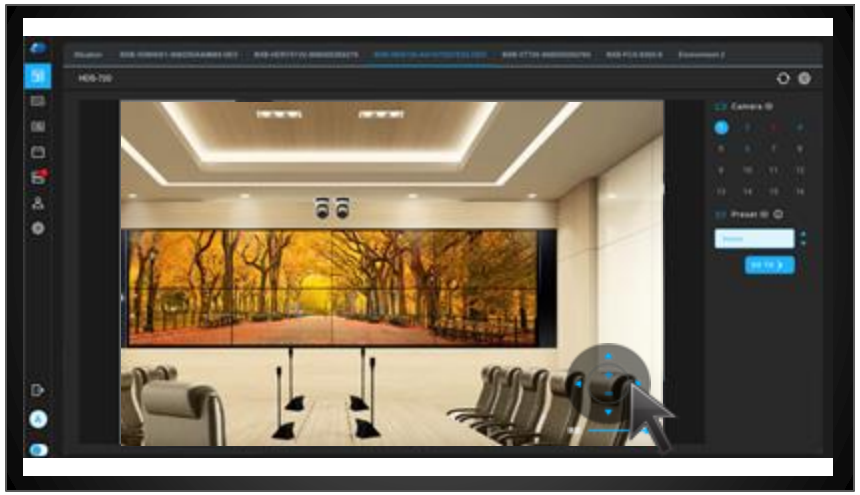
Click 'Situation' to immediately apply the situation settings and execute the background action group configured for the situation.

11



Click 'Module Tab' to switch between the operation module pages.

12



The 'VT-725 Video Tracking Controller' module page allows for camera preview, camera control, and preset point calls.

13



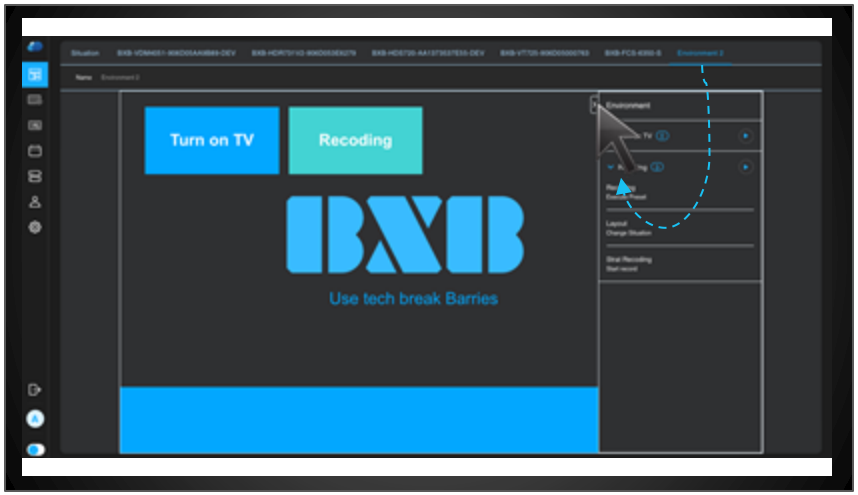

The 'VDM-4051 AV over IP Controller' module page allows you to preview the current situation applied on the VDM-4051 and perform related situation and source switching operations.

14



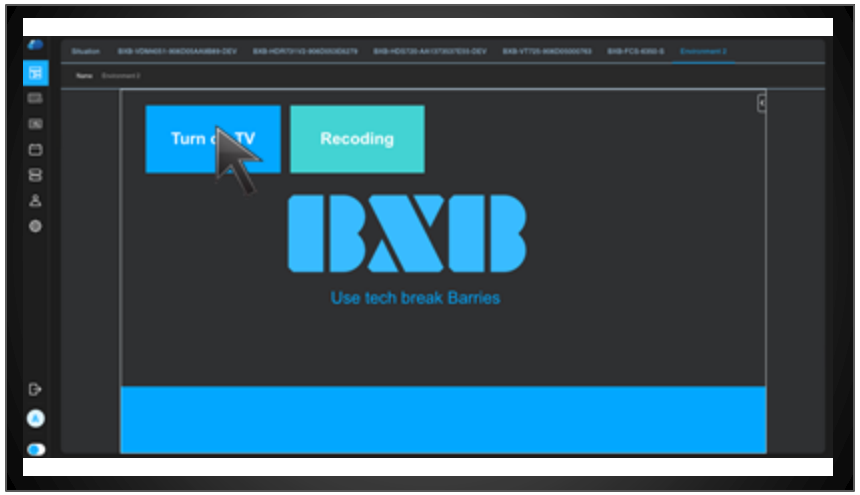

The 'HDR-731 Streaming Media Processor' module page allows you to preview the current layout applied on the HDR-731 and perform related recording, streaming, and layout switching operations.

15




The 'Environment' module displays according to previous edits, and you can click the 'Help Menu' to view the contents of the action groups set for the related button objects.

16




In the 'Environment' module page, you can click the 'Button' objects to control the connected equipment.

# Schedule Setting

1




Click 'Schedule' to go to the schedule management page.

2



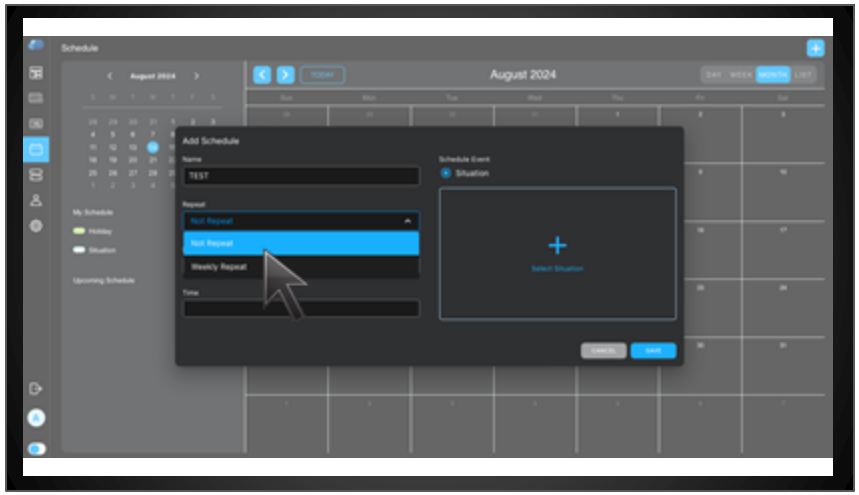

Click 'Add Schedule' to open the new schedule page.

3



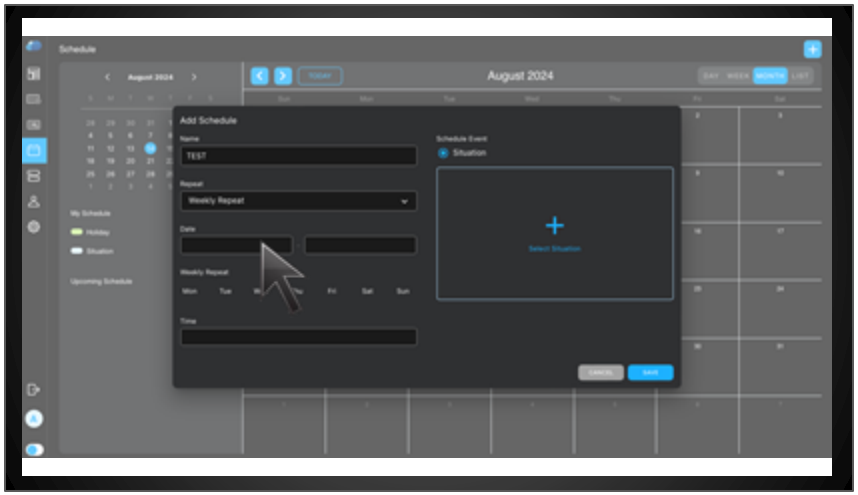

Enter the schedule name in the 'Name' field for easy identification later.

4




In 'Repeat,' you can choose between 'Weekly Repeat' or 'No Repeat.' Selecting 'Weekly Repeat' allows you to add a schedule that repeats on specific days of the week; selecting 'No Repeat' lets you add a schedule that runs on a single specified date.

5



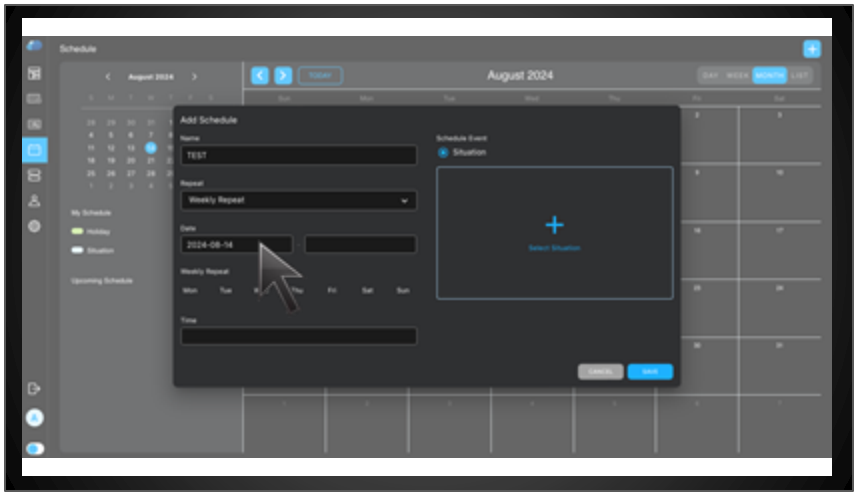

If 'Weekly Repeat' is selected, choose the date range within which the schedule will repeat according to the settings. If 'No Repeat' is selected, simply choose the specific date when the schedule will execute.

6




After selecting the start date for the weekly cycle schedule, click 'Save' to set it. For a 'No Repeat' schedule, just choose the specific date the schedule will execute.

7




Click the end date field to open the settings page. If 'No Repeat' is selected, this field will not be available.

8



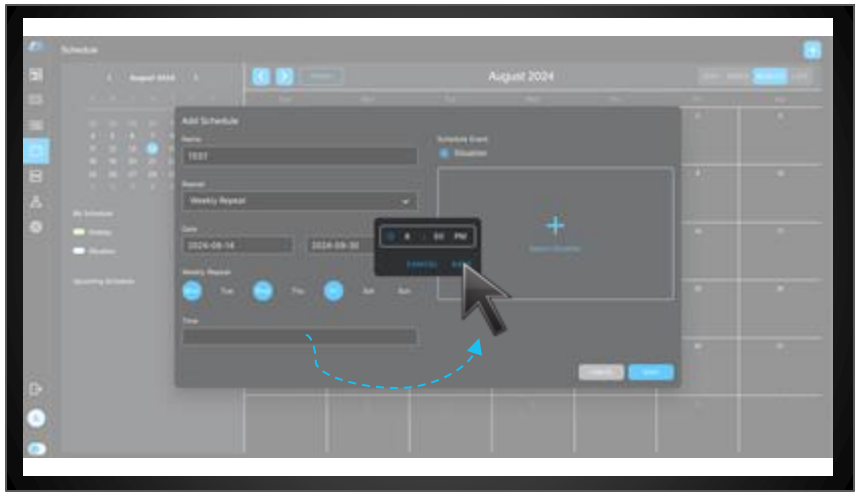

After selecting the date, click 'Save' to complete the end date setting.

9




In 'Weekly Repeat,' select the days of the week you want the schedule to run, as shown in the example image with the schedule set to run every Monday, Wednesday, and Friday. If 'No Repeat' is selected, this field will not be available.

10




Click on the 'Time' field to open the execution time setting page and set the time according to the schedule requirements. In the example image above, the schedule is set to run at 08:50.

11




In 'Schedule Event,' click 'Select Situation' to open the situation list.

12



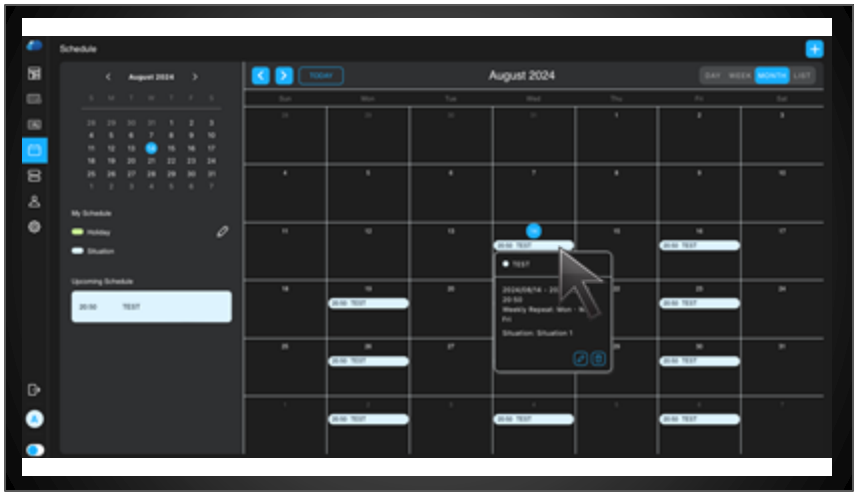

In the 'Situation List,' check the situation you want to execute within the schedule. The schedule will switch to the selected situation according to the settings.

13




After completing the edits, click 'Save' to finish adding the schedule.

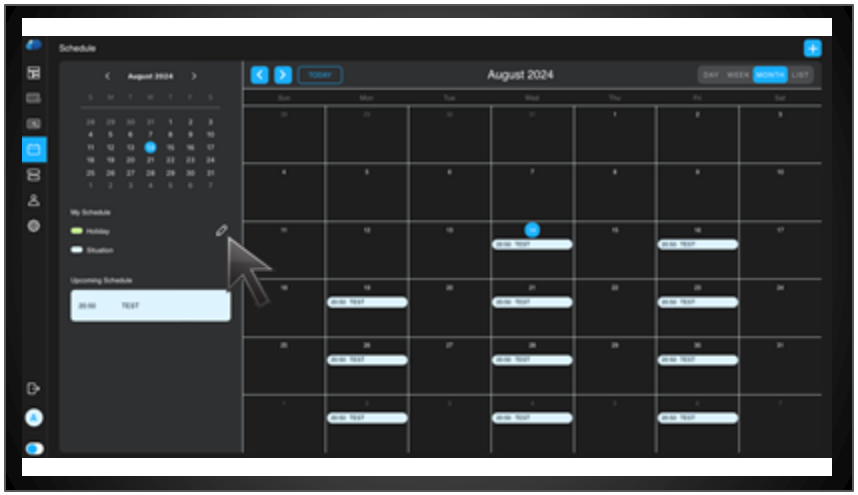
14



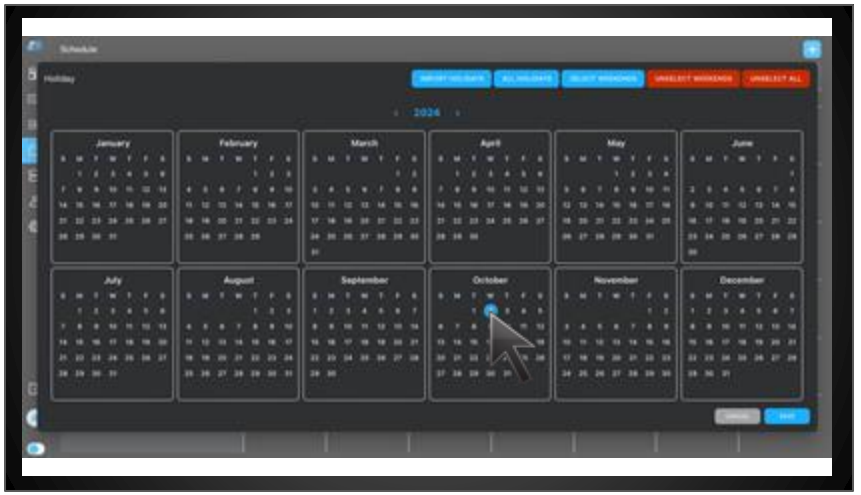

Once the schedule is added, it will appear on the calendar. You can click on the schedule to view its settings, click 'Edit' to modify the schedule, or click 'Delete' to remove the schedule.

※ Deleting a Weekly Repeat schedule will also delete all other dates added in the same entry.

15



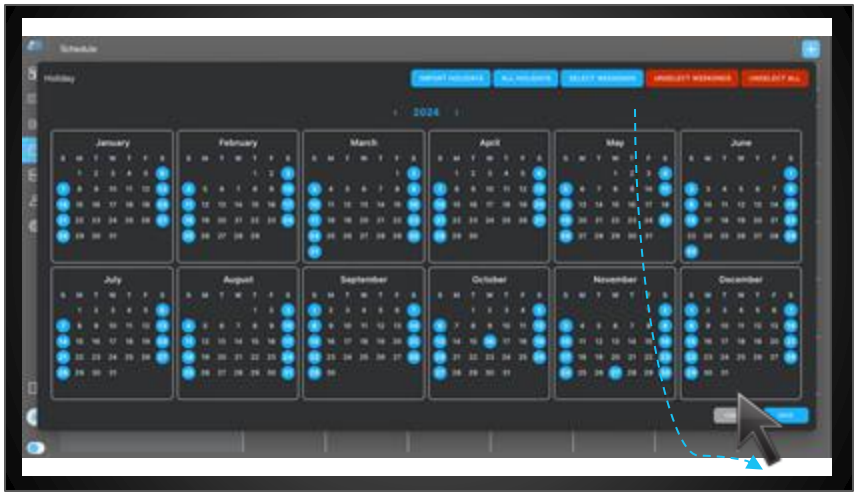

16




Click 'Holiday to open the holiday calendar page and set dates where the schedule will not run.

Select the dates on which you don't want the schedule to run, and on those days, SC-100 will not execute the pre-scheduled events.

17



In addition to manually selecting non-execution dates, you can also click options like 'All Weekends' or 'National Holidays' to apply related holiday information. After setting the holidays, click 'Save' to complete the non-execution schedule settings.

18



Once a date is marked as a 'Holiday,' the pre-scheduled events for that day will not be displayed or executed.

19




Check the upcoming schedules under "Nearby Schedule."

20




Prior to the scheduled execution, you'll receive a notification about the upcoming schedule. Once the scheduled time arrives, the SC-100 will execute the specified operations as per the schedule settings.

# Account

1




Click "Account" to go to the account management page.

2



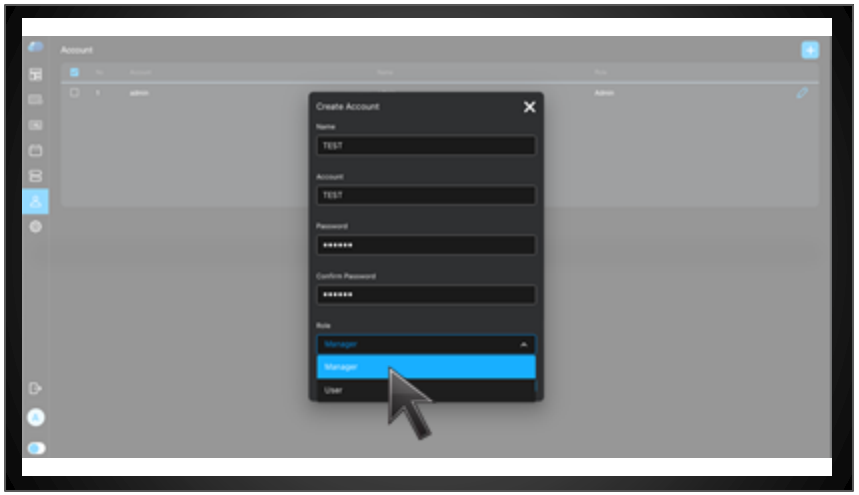

Click "Add Account" to open the settings page.

3



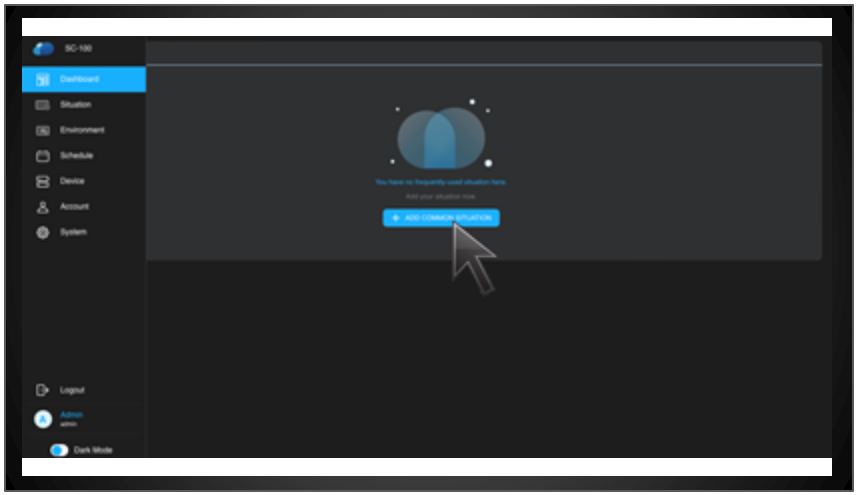

Enter the username, account, and password.

4



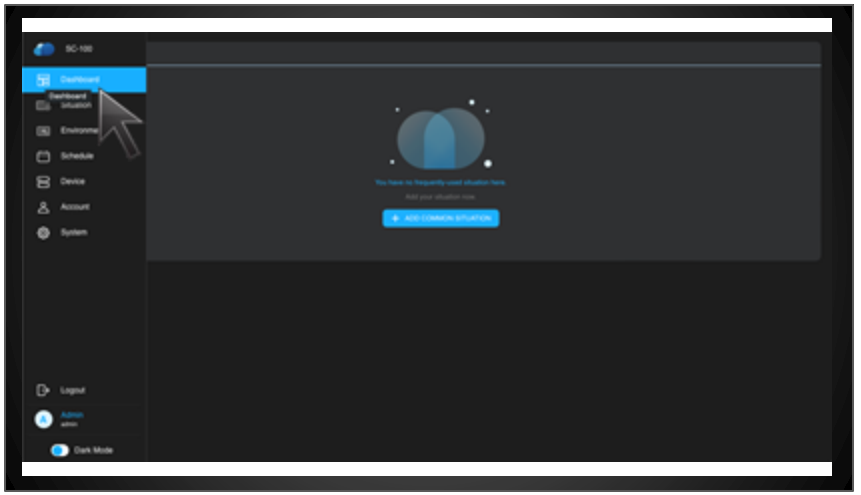

You have the option to select either "Manager" or "User" as the role. User role accounts are restricted to operating on the "Dashbord" and are unable to perform actions or configurations on other pages.

5



When logging in for the first time with a newly created account, you'll need to set up your preferred scenarios.
Please note that user accounts are limited to accessing the "Dashboard" only.

6



Upon the initial login with a newly created account, you'll need to set up your preferred scenarios.
Please note that administrator accounts have the privilege to perform operations and settings on all pages.

# System Setting

1



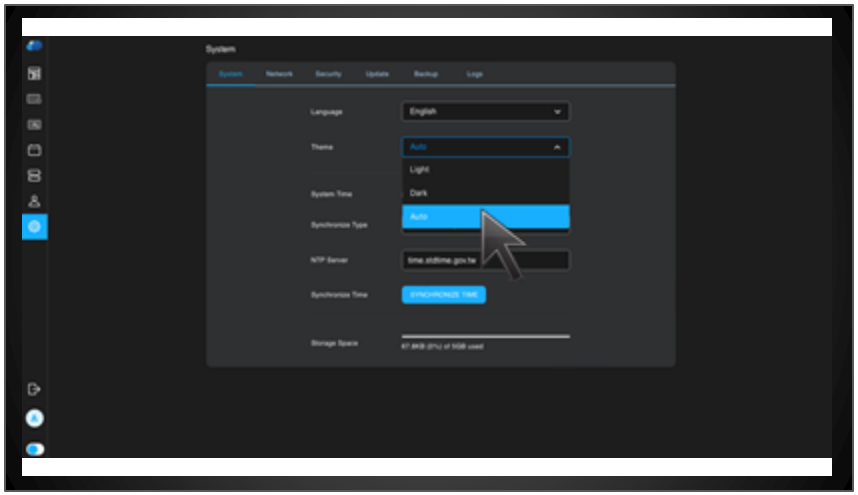

2




Go to "System" to configure system settings.

Under "Language," select "English," "Traditional Chinese," or "Simplified Chinese" as the display language.

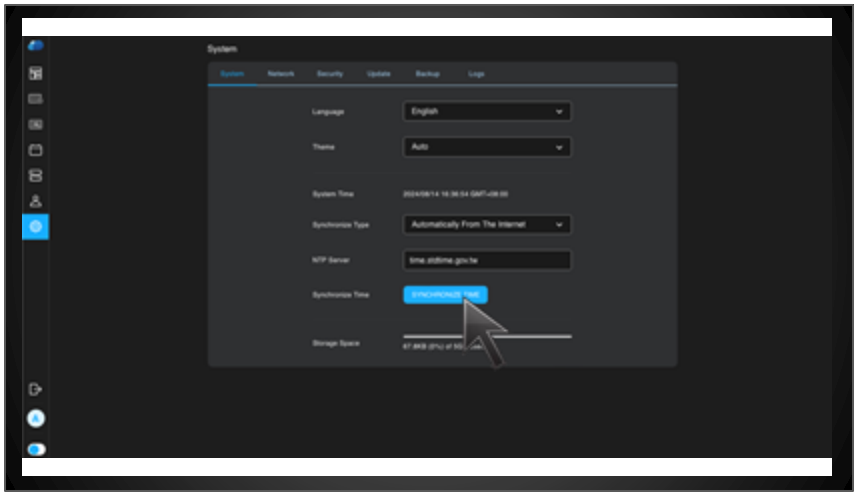
3



"Theme" allows you to choose between "Light," "Dark," or "Auto" for the display style.

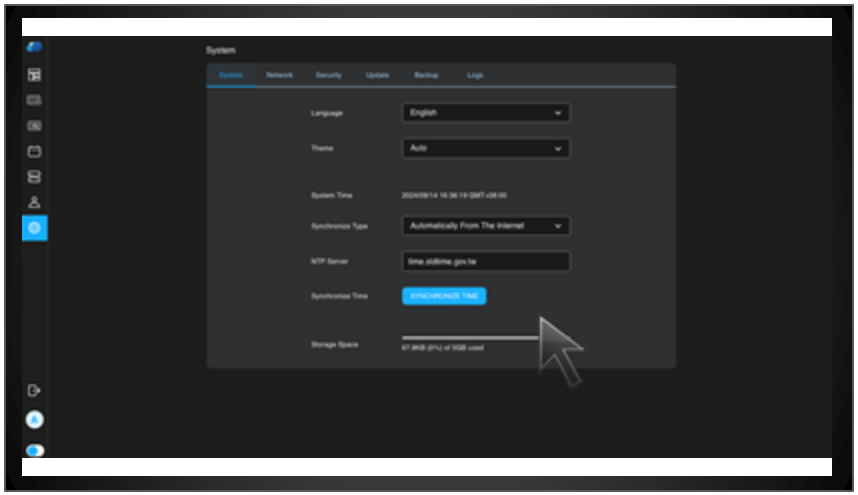
※ Choosing "Auto" will automatically switch between "Light" or "Dark" based on the current operating system display settings.

4



"System Time" displays the current SC-100 system time, and you can set it to "Automatically From The Internet" or "Synchronize With Computer Time".

5



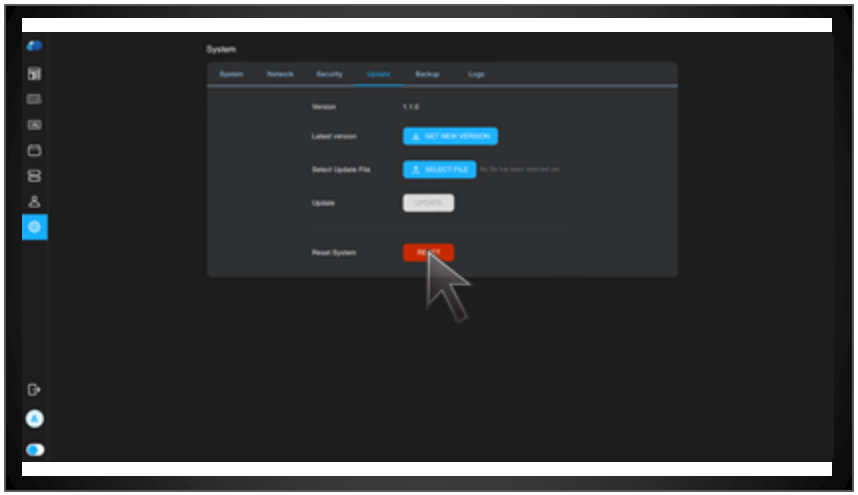
“Storage Space" displays the SC-100 system's storage status.

6



Under the "Startup" tab, the "Boot Scenario" feature allows the **SC-100 Smart AVIoT Controller** to execute a predefined automation when powered on.

7



Click "Restart" to reboot the **SC-100 Smart AVIoT Controller**.

8



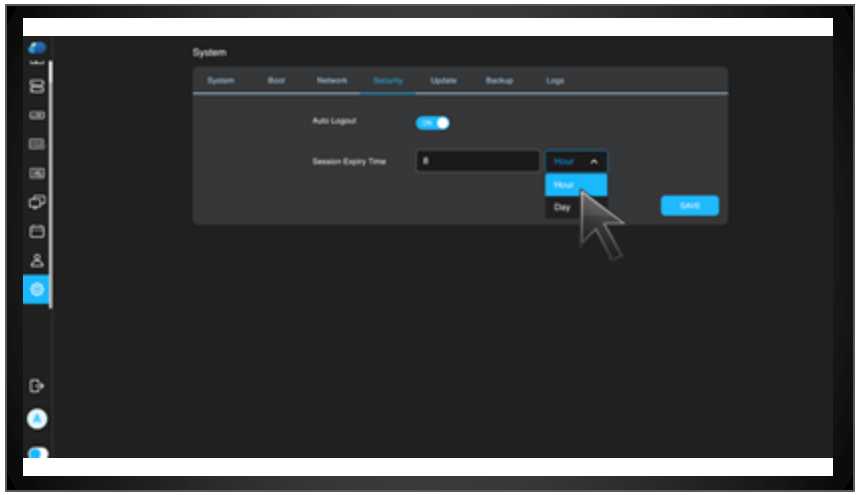
In "Network," you can view and adjust network configurations. **Network 1** (LAN port) has a default static IP of **192.168.168.230**, while **Network 2** (System port) defaults to **169.254.1.230**.

9




The "Security" tab includes an "Auto Logout" option, which manages session timeouts. When enabled, users will be automatically logged out after the specified duration. When disabled, login sessions remain active unless the **SC-100** is rebooted or browser cookies are cleared.

10




The "Session Timeout" setting allows users to define auto-logout durations in hours or days.

11




12

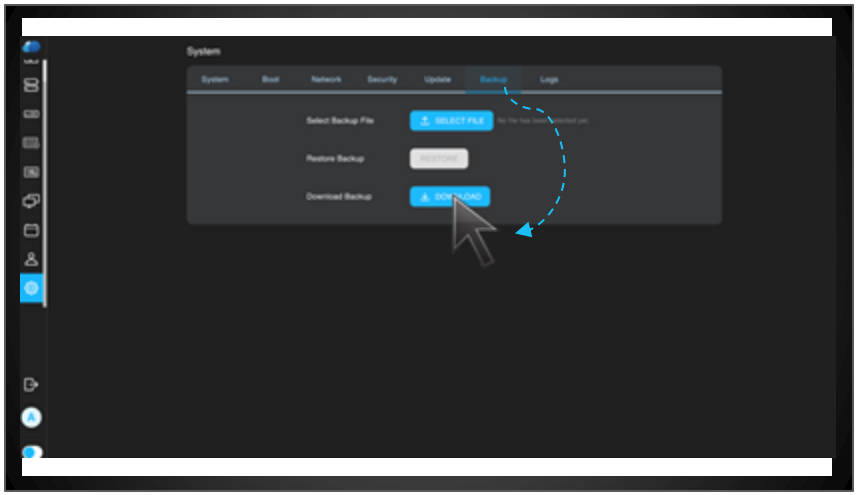



In the "Update" section:

- The "Version" field shows the current **SC-100** firmware version.
- "Latest Version" retrieves the most recent firmware available online.
- Click "Get New Version" to download the latest update package.
- Use "Select Update File" to upload the package to **SC-100**.
- Click "Update" to install the new firmware.

The "Reset" function wipes all settings and restores the **SC-100** to factory defaults.

13




The "Backup" feature lets you download and store all **SC-100** configuration data.

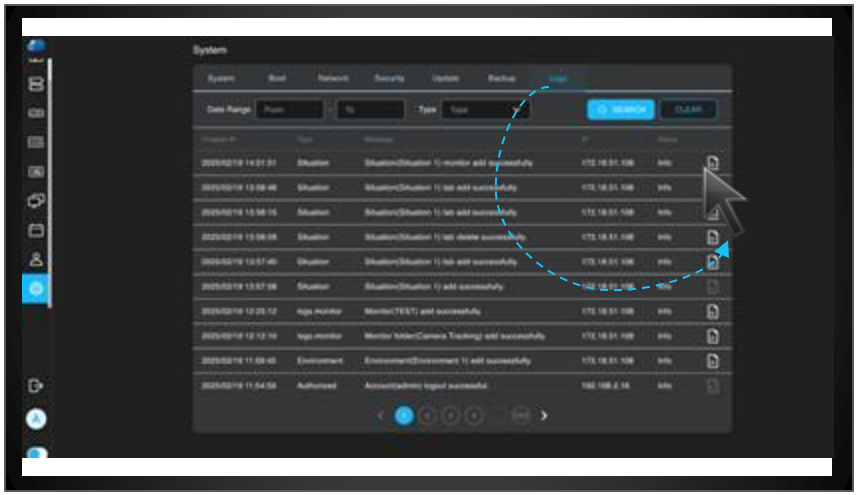
※ Regular backups are recommended to ensure quick recovery when replacing devices or troubleshooting system issues.

14




With "Select File," you can upload a previously saved backup file from your computer. Click "Restore" to revert **SC-100** to the saved settings.

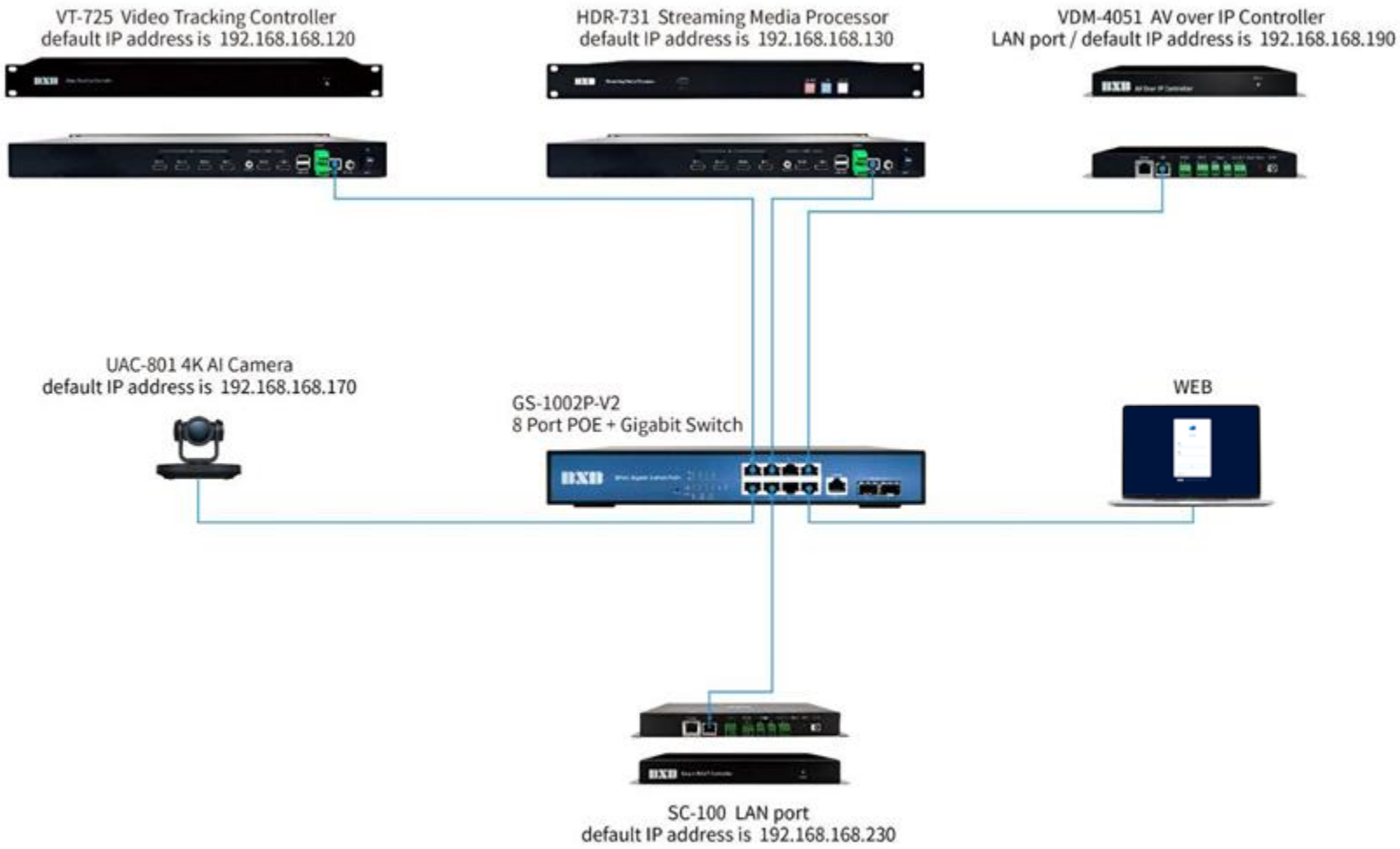
13




The "Logs" section provides access to system activity records.

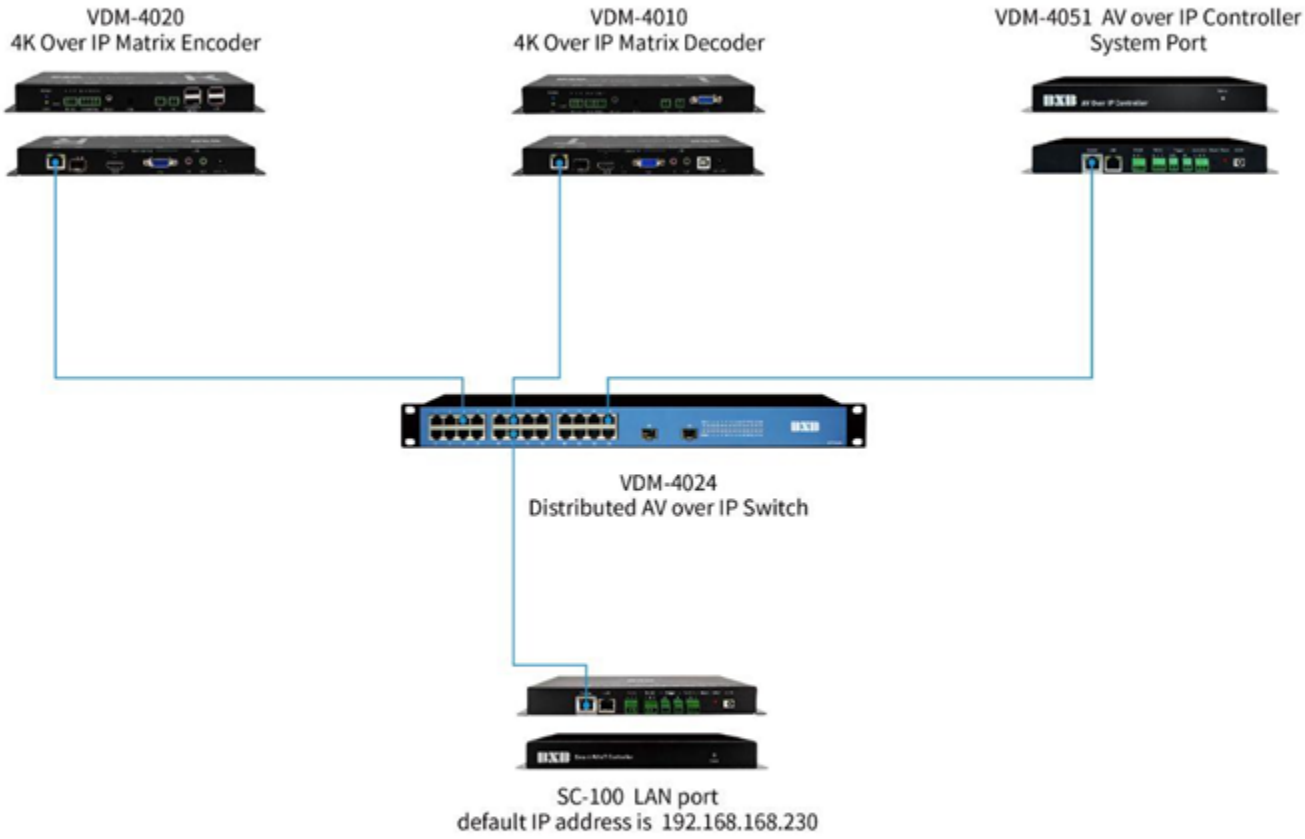
# Appendix

## SC-100,VT-725,HDR-731 and VDM-4051 Connect



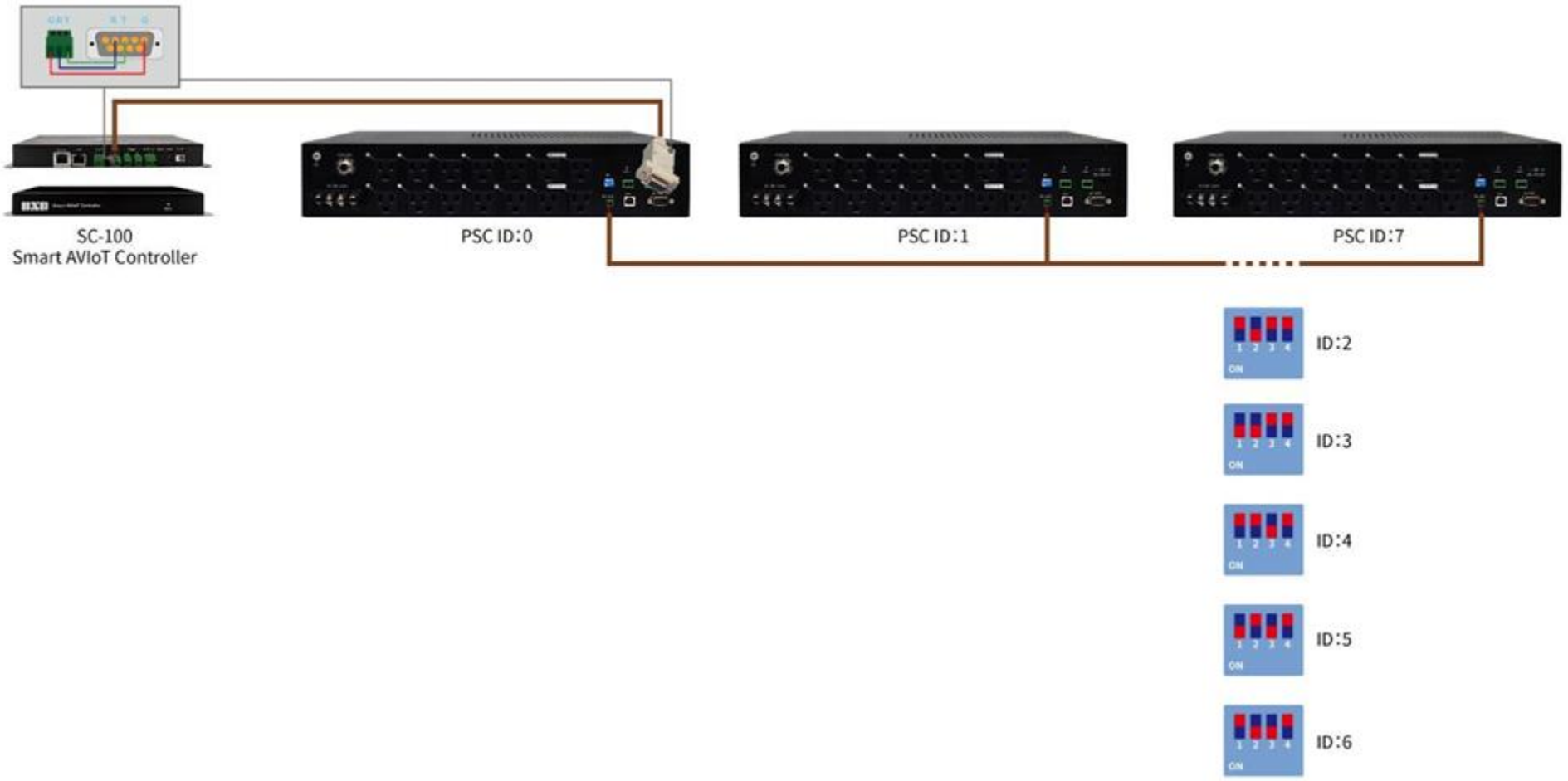
# Appendix

## SC-100,VDM-4051,VDM-4010 and VDM-4020 Connect



# Appendix

## SC-100 and PSC Smart AVIoT Controller Connect






## BXB Electronics Co., Ltd.

6F-1, No.288-5, Xinya Rd., Qianzhen Dist., Kaohsiung City 80673, Taiwan

TEL/ +886(7)9703838

FAX/ +886(7)9703883

Website/ www.bxbsystem.com


© Copyright 2024 BXB Electronics Co., Ltd.