High Definition Video Decoder User Manual

Manual Version: V1.01

Disclaimer and Safety Warnings

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Network Security

Please take all necessary measures to enhance network security for your device.

The following are necessary measures for the network security of your device:

• Change default password and set strong password: You are strongly recommended to change the default password after your first login and set a strong password of at least nine characters including all three elements: digits, letters and special characters.

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• Keep firmware up to date: It is recommended that your device is always upgraded to the latest version for the latest functions and better security. Visit Uniview's official website or contact your local dealer for the latest firmware.

The following are recommendations for enhancing network security of your device:

- Change password regularly: Change your device password on a regular basis and keep the password safe. Make sure only the authorized user can log in to the device.
- Enable HTTPS/SSL: Use SSL certificate to encrypt HTTP communications and ensure data security.
- Enable IP address filtering: Allow access only from the specified IP addresses.
- Minimum port mapping: Configure your router or firewall to open a minimum set of ports to the WAN and keep only the necessary port mappings. Never set the device as the DMZ host or configure a full cone NAT.
- Disable the automatic login and save password features: If multiple users have access to your computer, it is recommended that you disable these features to prevent unauthorized access.
- Choose username and password discretely: Avoid using the username and password of your social media, bank, email account, etc, as the username and password of your device, in case your social media, bank and email account information is leaked.
- Restrict user permissions: If more than one user needs access to your system, make sure each user is granted only the necessary permissions.
- **Disable UPnP:** When UPnP is enabled, the router will automatically map internal ports, and the system will automatically forward port data, which results in the risks of data leakage. Therefore, it is recommended to disable UPnP if HTTP and TCP port mapping have been enabled manually on your router.
- SNMP: Disable SNMP if you do not use it. If you do use it, then SNMPv3 is recommended.
- Multicast: Multicast is intended to transmit video to multiple devices. If you do not use this function, it is recommended you disable multicast on your network.
- Check logs: Check your device logs regularly to detect unauthorized access or abnormal operations.
- Physical protection: Keep the device in a locked room or cabinet to prevent unauthorized physical access.
- Isolate video surveillance network: Isolating your video surveillance network with other service networks helps prevent unauthorized access to devices in your security system from other service networks.

Learn More

You may also obtain security information under Security Response Center at Uniview's official website.

Safety Warnings

The device must be installed, serviced and maintained by a trained professional with necessary safety knowledge and skills. Before you start using the device, please read through this guide carefully and make sure all applicable requirements are met to avoid danger and loss of property.

Storage, Transportation, and Use

- Store or use the device in a proper environment that meets environmental requirements, including and not limited to, temperature, humidity, dust, corrosive gases, electromagnetic radiation, etc.
- Make sure the device is securely installed or placed on a flat surface to prevent falling.
- Unless otherwise specified, do not stack devices.
- Ensure good ventilation in the operating environment. Do not cover the vents on the device. Allow adequate space for ventilation.
- Protect the device from liquid of any kind.
- Make sure the power supply provides a stable voltage that meets the power requirements of the device. Make sure
 the power supply's output power exceeds the total maximum power of all the connected devices.
- Verify that the device is properly installed before connecting it to power.
- Do not remove the seal from the device body without consulting Uniview first. Do not attempt to service the product yourself. Contact a trained professional for maintenance.
- Always disconnect the device from power before attempting to move the device.
- Take proper waterproof measures in accordance with requirements before using the device outdoors.

Power Requirements

- Install and use the device in strict accordance with your local electrical safety regulations.
- Use a UL certified power supply that meets LPS requirements if an adapter is used.
- Use the recommended cordset (power cord) in accordance with the specified ratings.
- Only use the power adapter supplied with your device.
- Use a mains socket outlet with a protective earthing (grounding) connection.
- Ground your device properly if the device is intended to be grounded.

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1 Introduction

The high-definition video decoder (hereinafter referred to as "device") is a new generation of integrated software and hardware product designed and developed by our company for large-scale video wall applications. It is a compatible decoding component in the overall solution of the video management system. It supports real-time and high-definition video display, and live sound play, applicable for security, traffic, and other real-time monitoring environments.

This manual mainly introduces Web interface operations to help you understand how to use the device.



NOTE!

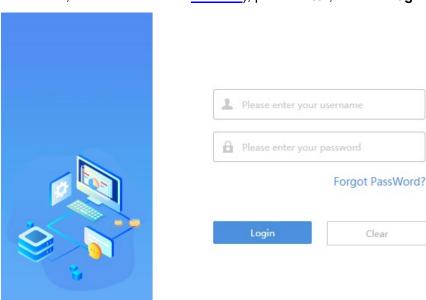
This manual is available to various device models. The interface and function operations may vary with the device model or function settings.

2 Web Login

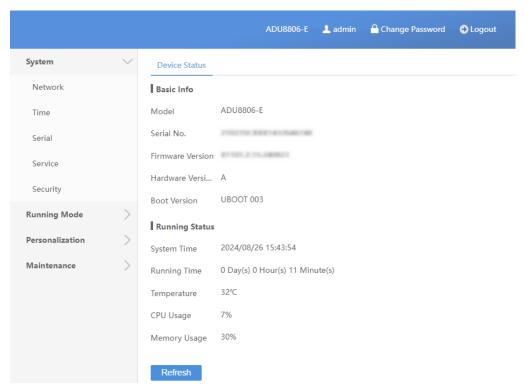
Before login, make sure that the device is operating properly and has a network connection to the PC.

2.1 Web Login

1. Open a browser on your PC, enter the device IP address in the address bar (192.168.1.14 by default, can be modified in Network), press Enter, and the Login page appears.



2. Enter the username and password (admin/123456 by default), and click Login to enter the device's Web interface.



3. The **Email** window appears at the first login. Select **Email** and enter your email address used to receive a security code in case you need to reset the password, and click **Confirm**.





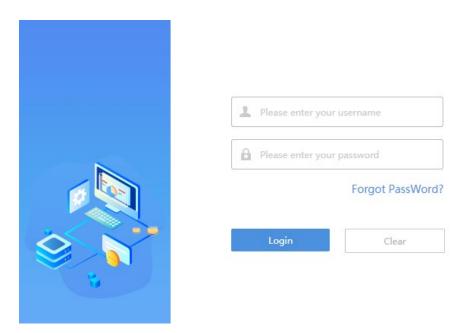
NOTE!

To ensure security, please change the default password after your first login and keep the new password secure. See Change Password for details. If you forgot the password, you can retrieve the password via the following two ways.

- Click Forgot Password on the login page, and retrieve the password via the reserved email address. See Forgot Password for details.
- Press and hold the reset button for over 5 seconds (alarm indicator is flashing) to restore factory settings, and then the device will restart (alarm indicator is off). Then, you can use the default password to log in.

2.2 Interface Introduction

2.2.1 Login Interface

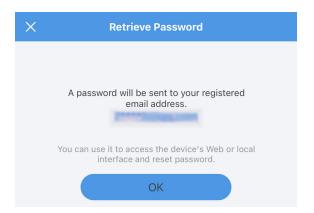


1. Forgot Password

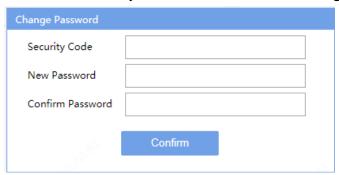
1. If you forgot the password, click **Forgot Password** on the login page, and the **Retrieve Password** page appears.



- 2. Follow the instructions on the screen to scan the QR code and obtain the security code.
 - With a reserved email address: Scan the QR code with the EZView app, tap **OK** on the **Retrieve Password** page, and the security code will be sent to the reserved address.

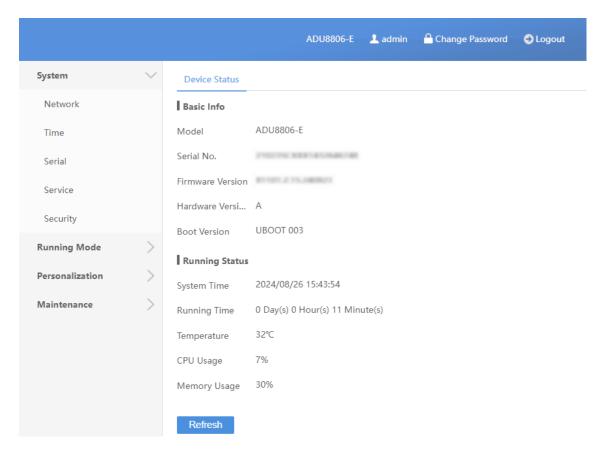


- With no reserved email address: Please contact our technical support to obtain the security code.
- 3. Enter the security code, click **Next**, and the **Change Password** page appears.



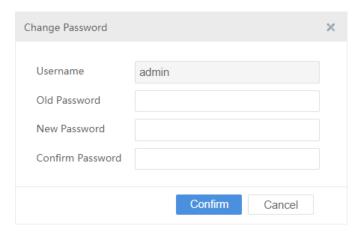
4. Enter the security code again, enter the password, confirm the password, and then click **Confirm**. Then you can log in to the Web interface with the new password.

2.2.2 **Device Interface**



1. Change Password

If you want to change the device password, click **Change Password** in the upper-right corner of the interface, set the new password based on the prompts, and click **Confirm**.



2. Logout

Click **Logout** in the upper-right corner of the interface, and click **Confirm** on the pup-up window.

3 System

3.1 Network

Go to **System > Network**, view and edit the network information to ensure that the device can communicate with other devices properly, and click **Save**.

Network	
IPv4 Address	172 20 152 41
IPv4 Subnet M	298-256-252-0
IPv4 Default Ga	172 20 152 1
MAC Address	22-09-64-17-28-40
Network Port R	1000M FULL
Save	

Item	Description
	View or change the IP address. It is used to log in to the device's Web interface.
IPv4 Address	Note:
ii va / idal 033	If the current password is a weak one consisting only of digits or letters, you cannot change the IP address across the network segments.
IPv4 Subnet Mask	Set the IPv4 subnet mask, which divides an IP into the network address and host address and determines the host subnet size.
IPv4 Default Gateway	Set the IPv4 default gateway for the host of the local subnet to connect and communicate with the external network.
MAC Address	MAC address, a unique identifier assigned to network interfaces for communications on a physical network.
Network Port Rate	Actual network speed of the device.

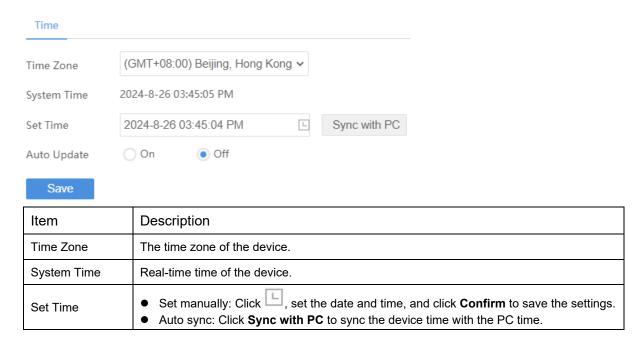
3.2 **Time**

Go to **System > Time**, set the device time, and click **Save**.



NOTE!

If the device is a replica device cascaded with the primary device (see <u>Running Mode</u> for details), its time zone and time will be synced with the primary device and cannot be set separately.

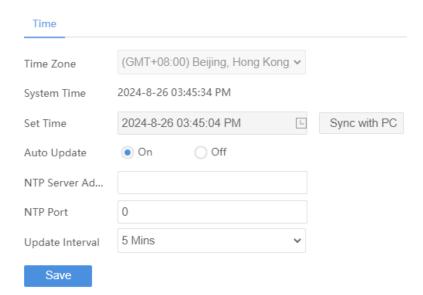


If there is a Network Time Protocol (NTP) server in the system, you can enable **Auto Update** and configure the NTP server to sync the device time with the standard time. At the same time, the parameters in **Time Zone** and **Set Time** are invalid.



NOTE!

Network Time Protocol (NTP) server provides accurate time synchronization service.



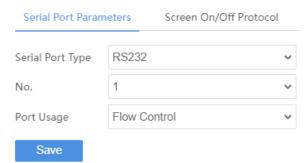
Item	Description
NTP Server Address	The IP address of the NTP server.
NTP Port	The port number of the NTP server.
Update Interval	An interval for automatic time synchronization.

3.3 Serial

Connect the device to the LCD screen, LED screen, or central control device via the serial cable, and configure the serial port parameters on the device's Web interface. Then the device can turn on/off the screens on its connected visualization intelligent control platform or VM's Web interface, or be remotely controlled on the central control device.

1. Screen Control

1. Go to **System > Serial > Serial Port Parameters**, set the serial port used to connect the device to the screen, and set the port usage to **Screen Control**.



Item	Description
Serial Port Type	 The serial port type used to connect the device to the screen. The LCD splicing screens should be connected to the device via the RS232 serial port. The LED power distribution box connected to the LED screen should be connected to the device via the RS485 serial port.
No.	Check the serial port silk screen on the device to confirm the used serial port.

2. Go to **System > Serial > Screen On/Off Protocol**, choose an existing protocol or customize the protocol, and set the related protocol parameters and screen control parameters, which should be consistent with those of the screen, and then click **Save**.



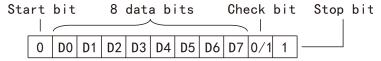
2. Center Control

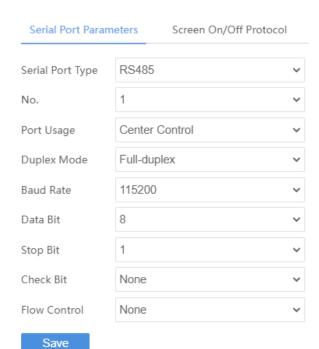
Go to **System > Serial > Serial Port Parameters**, select the serial port type used to connect the device to the center control device, set the port usage to **Center Control**, set the communication parameters (consistent to the parameters of the central control device), and click **Save**.



NOTE!

The transmitted data should conform to the data format including start bit, data bit, check bit, and stop bit.





Item	Description
Serial Port Type	The serial port type used by the device to connect to the central control device.
No.	Check the serial port silk screen on the device to confirm the used serial port.
Duplex Mode	 Full-duplex: Allows data to be transmitted simultaneously in both directions. Half-duplex: Allows data to be transmitted only in one direction at a time. Note: The duplex mode is only available when the serial port type is set to RS485.
Baud Rate	Data transmission speed. The greater the value, the faster the transmission speed.
Data Bit	The actual number of data bits in a group of data packets.
Stop Bit	Indicates the end of transmission of a group of data.
Check Bit	Check if the transmitted data are erroneous. Even: Check if the number of "1" bits in the data is even. Odd: Check if the number of "1" bits in the data is odd.

Item	Description
Flow Control	Used to control data transmission to prevent data loss. When the data buffer at the receiving end is full, a no longer receiving signal is sent and the sender stops sending until it receives a signal to resume sending. Software: Send control signal via the software. Hardware: Send control signal via the hardware cable. The actual cable is required for
	connection.

3.4 Service

Go to **System > Service > Media Stream**, set the media stream parameters so as to play the video based on the setting on the screen, and click **Save**.



NOTE!

This function is unavailable when the device is connected to other platforms (see <u>Platform</u> for details.) To configure the screen display on the **Service** page, clear all video wall configurations and delete the device from other platforms.



Item	Description
Channel	Choose an output channel.
Split Type	The number of windows. The layout displays the corresponding number of splicing screens.
Standard	The image resolution and refresh rate.
Layout	Click the split window box(es), or enable Stream Address of the window(s) you want to set, and set the detailed parameters.
Stream Address	Set the window display, including stream receiving mode, source IP, etc.

3.5 **Security**

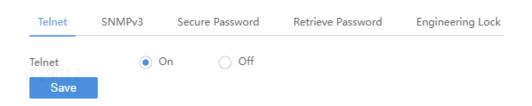
3.5.1 **Telnet**

Go to **System > Security > Telnet**. Enable or disable **Telnet** as needed, and then click **Save**. When enabled, Telnet establishes a remote connection with the device, allowing you to access the device remotely, which helps with troubleshooting and device upgrades.



NOTE!

- Telnet is a network protocol commonly used for remote login service on the Internet, which allows you to remotely access the device on the computer.
- Telnet's username/password is root/123456.



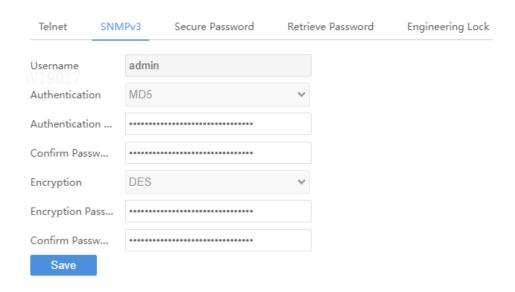
3.5.2 **SNMPv3**

Go to **System > Security > SNMPv3**. The parameters have been set and you can use the default values. When the device is connected to the VM, the VM can manage the device through this protocol.



NOTE!

- This function is unavailable when the device connects to the platform via the ONVIF protocol.
- The Simple Network Management Protocol (SNMP) is mainly used to manage network devices. It provides a standardized management interface to manage network devices of different types and brands uniformly. SNMPv3 is the third generation version with greater security.
- Authentication: Add identity authentication to the transmitted information to confirm the identity
 of the sender. MD5 and SHA are two digest algorithms used to generate the message digest,
 that is, check value. SHA provides longer length and higher security than MD5, but has lower
 execution speed than MD5.
- Encryption: Encrypt the transmitted information to prevent it from being tampered during transmission. AES and DES are two encryption algorithms. AES password provides longer length, higher security, and faster execution speed than DES.



3.5.3 Secure Password

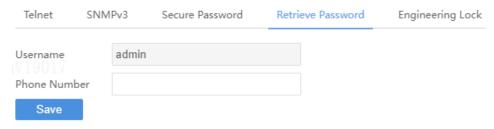
Go to **System > Security > Secure Password**, set the password mode, and click **Save**.

If the current password is a weak one consisting only of digits or letters, you can set the password mode to **Enhanced Password**, and change the password to a strong one as prompted.



3.5.4 Retrieve Password

Go to **System > Security > Retrieve Password**, and enter the email address, which can be used to receive the security code when you retrieve the password. See Forgot Password for details.



3.5.5 Engineering Lock

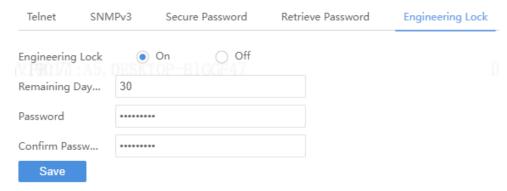
Go to **System > Security > Engineering Lock**. Through the engineering lock, you can set a usage period for the device. Within this period, the device can be used normally. Once the period expires, the device will stop video output.



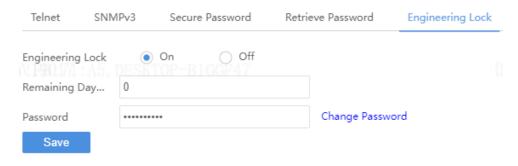
1. Lock

1. Select **On**, input the remaining days that the device is usable, input a password, and then click **Save**.

You can click **Change Password** to change the password.

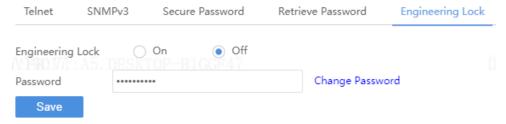


When the set time expires, the remaining days is 0, and the device stops video output.
 You can change the remaining days, input the password, and then click **Save** to resume video output.



2. Unlock

Select Off, enter the password, and then click Save to unlock the device.



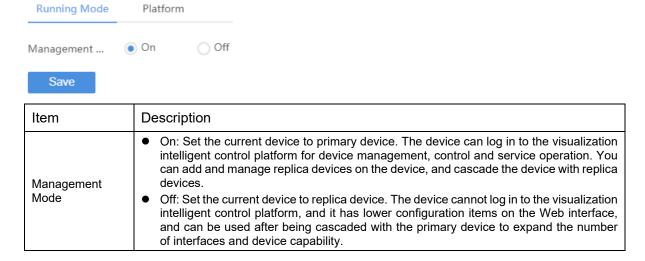
4

Running Mode

4.1 Running Mode

4.1.1 Running Mode

Go to **Running Mode > Running Mode**, set the device management mode, and click **Save**. Multiple devices can be cascaded.



To change the management mode, please pay attention to the following matters:

When the primary device A connects to the replica device B, if you want to change the device
 B to the primary device and disconnect it from the device A, please cancel the cascading

between devices A and B on the visualization intelligent control platform, and then enable the management mode on the Web interface of the device B.

- When the primary device A is cascaded with multiple replica devices, if you want to change the device A to a replica device and cascade it with the other primary device B, you can disable the management mode on the Web interface of the device A, and cascade the device A with device B on the visualization intelligent control platform. At this time, the original services (such as, bound devices, added video walls, etc.) of the device A will be deleted, and the services of the device B will be synced to the device A.
- For the primary device A that has been changed to a replica device and is not cascaded with any primary device, if it is changed back to the primary device, its original services will still be retained.



NOTE!

Up to 10 devices can be cascaded (1 primary device + 9 replica devices).

4.1.2 Platform

Go to **Running Mode** > **Running Mode** > **Platform**, set the communication protocol and parameters for the device to connect to other platforms, and click **Save**. You can manage and control the device via other platform, for example, configure the video wall display corresponding to the device.

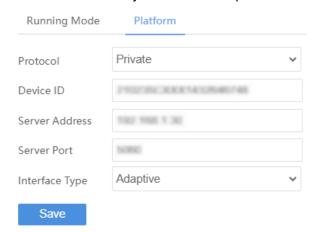
1. ONVIF Protocol

The device can connect to the platforms that comply with the ONVIF protocol. Set the protocol to ONVIF, and the device can be controlled through the visualization intelligent control platform, EZStation software, or VMS software. The device can connect to the third-party platform via SDK.



2. Private Protocol

The device can only connect to the platforms that comply with our private protocol, such as VM.



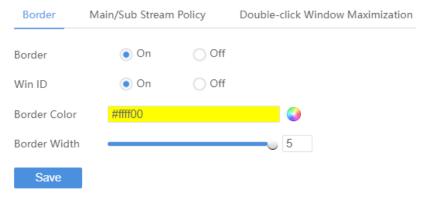
Item	Description
Device ID	It is the same as the device serial number by default.
Server Address	The IP address of the server to be connected.
Server Port	The port number of the server to be connected.
Interface Type	 Adaptive: Adaptive signal. The default interface type is HDMI. DVI: Convert the connection signal to DVI. Note: The device supports connecting to VM with the version VM3329 or later. Versions VM3329 to VM3336 do not support HDMI signal, so the interface type should be set to DVI. The VM3337 or later versions support HDMI signal, so the interface type should be set to Adaptive.

5 Personalization

5.1 Window

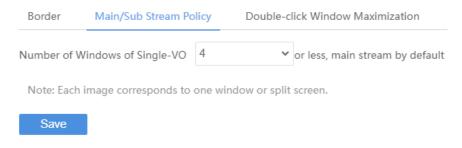
5.1.1 Border

Go to **Personalization > Window > Border**, set the border style for the image display, and click **Save**.



5.1.2 Main/Sub Stream Policy

Go to **Personalization** > **Window** > **Main/Sub Stream Policy**, set the image number threshold on the output channel, and click **Save**. When the image number on the output channel is less than or equal to the threshold, the images are output from the main stream, otherwise, the images are output from the sub stream.

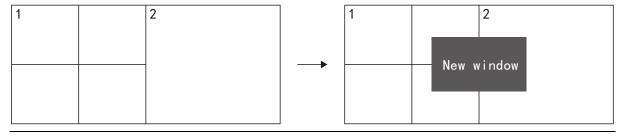




NOTE!

- The main/sub stream policy is only available when the device connects to the visualization intelligent control platform. You can set the media stream type on the visualization intelligent control platform (main stream, sub stream, and third stream, with a decrease in image quality in that order), and the stream threshold will not be affected.
- When a window covers multiple channels, the number of output channels covered by this window is increased by 1. When a new window covers multiple channels, the stream type will be determined based on the maximum image number of the channels.

For example, the threshold is set to 3, and the new window covers channel 1 (4 images) and channel 2 (1 image), and the maximum image number is 5, which exceeds the threshold 3, so the new window will play the sub stream.



5.1.3 **Double-click Window Maximization**

Main/Sub Stream Policy

Go to **Personalization** > **Window** > **Double-click Window Maximization**, set the window maximization mode, and click **Save**. On the visualization intelligent control platform, you can double-click the window to magnify the image.

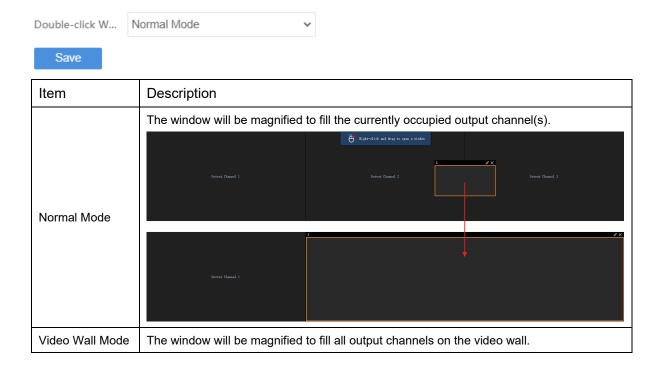


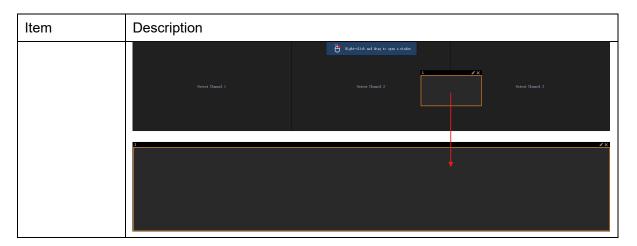
NOTE!

Border

This function is available when the device connects to the visualization intelligent control platform.

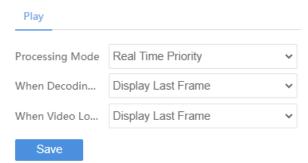
Double-click Window Maximization





5.2 **Play**

Go to **Personalization > Play**, set the image display mode, and click **Save**.

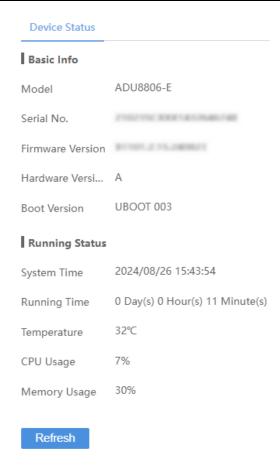


Item	Description
Processing Mode	 Real Time Priority: Display real-time video, no delay or low delay (requires high network condition). Fluency Priority: Display smooth video, but with a certain delay (requires low network condition).
When Decoding Stops	 Display Last Frame: Display the last frame before stopping decoding. Display Black Screen: Display black screen.
When Video Lost	 Display Last Frame: Display the last frame of the video before it is lost. Display Video Loss Message: Display the message of video loss.

6 Maintenance

6.1 Device Status

Go to **Maintenance** > **Device Status**, and you can view the basic information and operation status of the device and click **Refresh** to update the latest information.



6.2 Packet Capture

Go to **Maintenance** > **Packet Capture**, and capture data packets of the interaction between the device and other devices so as to troubleshoot the problem.



1. Enter the IP address and port number of other device.



NOTE!

When the IP address is empty, the system captures all packets..

2. Click **Start** to start capturing packets, click **Stop** to stop capturing packets, and the system will capture data from the start time to end time.

6.3 Decode Info

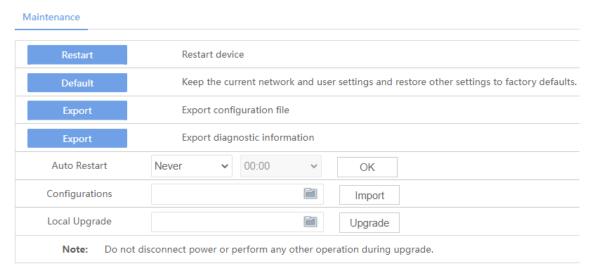
Go to **Maintenance** > **Decode Info**, and you can view the device decoding information to check if the current stream is normal and if there is packet loss.

Click the refresh icon in the **Operation** column to refresh a decoding information. Click **Refresh** to refresh all decoding information.



6.4 Maintenance

Go to **Maintenance** > **Maintenance**, and you can perform system maintenance and upgrade.



Item	Description
Restart	Restart the device.
Default	Restore all settings to defaults except current network and user settings, and then restart the device.
Export Configuration	Export configuration information. Allows to view and save configuration information.
Export Diagnosis Information	Export diagnosis information. Allows to view and save diagnosis information.
Auto Restart	Set the time and repetition period for auto restart, click OK , and the device will automatically restart at the set time.
Import Configuration	Click , select the local configuration file, and click Import to import configuration and restart the device.
Local Upgrade	Click , select the local upgrade file, and click Upgrade to upgrade the system and restart the device.
	Note:
	The system can only be upgraded to a newer version, not an older one.

$\overline{\mathbf{i}}$

CAUTION!

Do not disconnect the device from power or perform other operations during system maintenance and upgrade.