SCIENCE IMAGE®

Make better

USER MANUAL

FLOW 4K

SCIENCE IMAGE®

READING BEFORE USE

If you find that some functions are unavailable in future use, you need to check the following to find out whether it is caused by improper operation or settings:

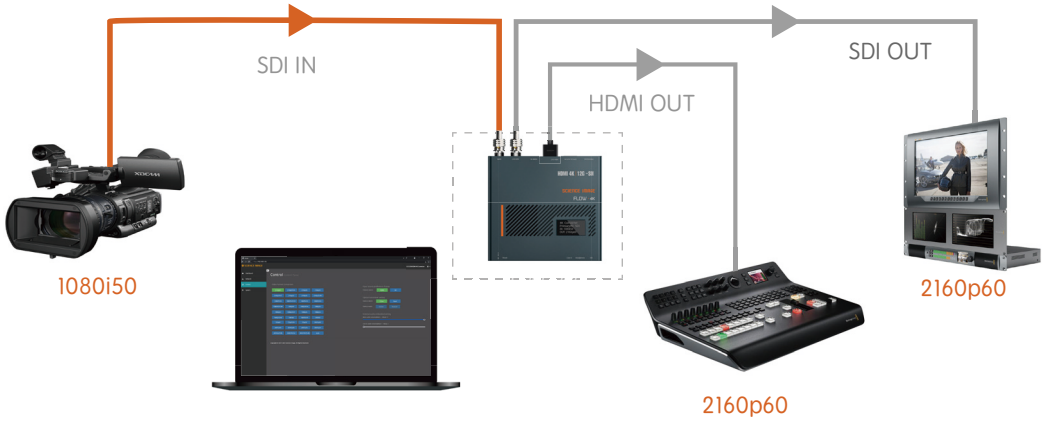
1. If the device fails to start, check whether the power indicator and startup indicator of the device are normal and
2. whether an official power adapter is used. Whether to close the upgrade page or power off the device during the upgrade.
3. If you fail to log in to the WebUI, check whether the IP address of the device is on the same network segment as that of the PC, and whether the IP address of the device conflicts with that of other devices in the network segment.
4. If the IP address of the discovered device is 192.168.8.8, log in to the WebUI, set the IP address mode in I network Settings to manual, and enter the REQUIRED IP address, subnet mask, and gateway.
5. If the login fails due to the upgrade, clear the browser cache, refresh the page, and log in again.
6. If a video jam occurs, check whether the CPU temperature is too high. Generally, the TEMPERATURE should not exceed 70 ° C. Check whether the device is connected to a GIGABit network port. Alternatively, disable the multicast mode on the WebUI.
7. If the video output from the device is abnormal in color, sound, or screen, restart the device in the Web UI system or manually restart the device.

CONTENTS

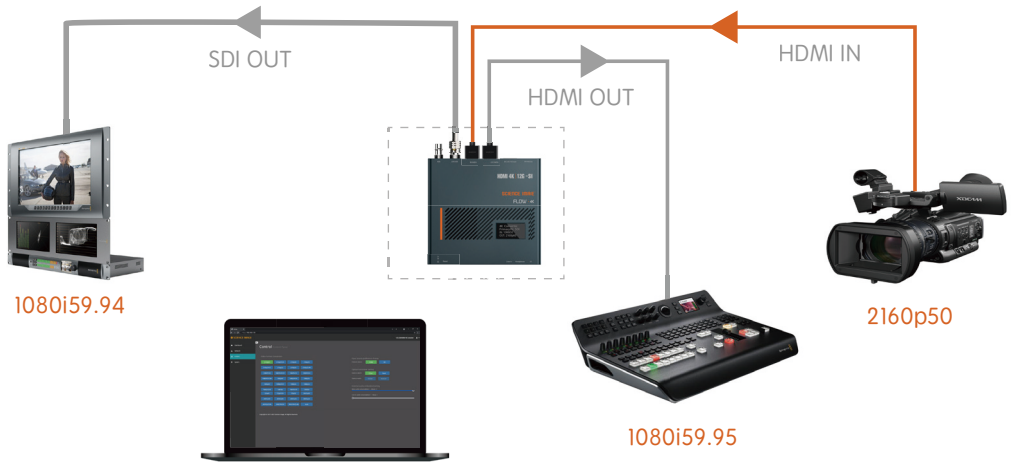
1. FLOW 4K application topology

UpDown conversion Application Topology

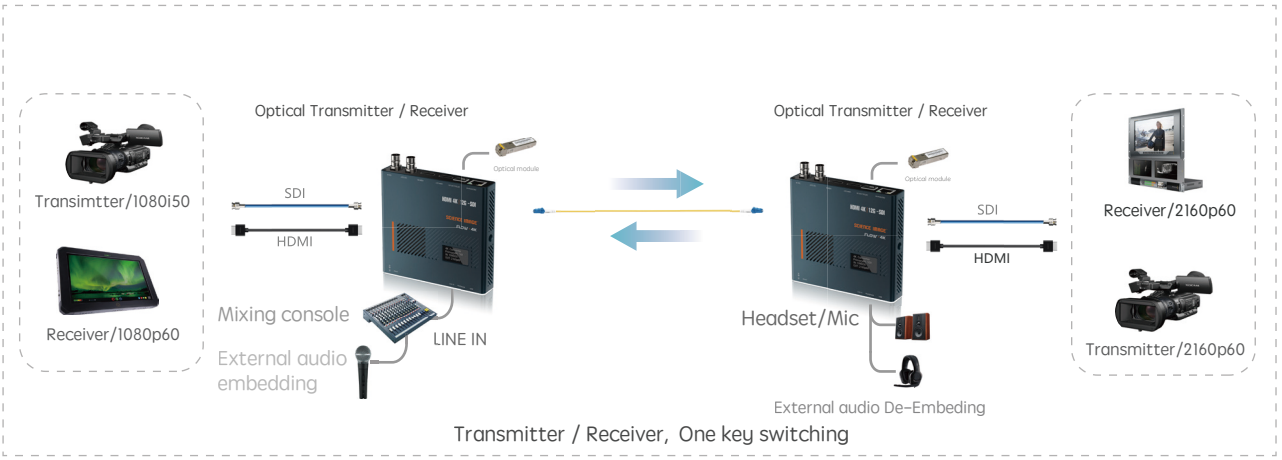
SDI to HDMI Up conversion



HDMI to SDI Down conversion



Optical Transceiver Application Topology



2. FLOW 4K interface and indicator introduction

1. SDI IN: SDI signal input interface
2. SDI LINE LED: When the SDI input signal is detected, the SDI indicator is steady on
3. SDI OUT: SDI output port
4. HDMI LINE LED: When the HDMI input signal is detected, the HDMI indicator is steady on
5. HDMI IN: HDMI input port
6. HDMI OUT: HDMI output port
7. Optical fiber input/output: SMPTE Optical fiber SFP ports, used to connect different types of GIGABit/Gigabit /12G-SDI optical fiber modules
8. Network port /POE: Network connection/Power Over Ethernet (POE) switches connect to the LAN and Power on the LAN
9. 12V dc-in: provides 12V DC power input
10. Reset: Hold down the Reset button to power the device and restore factory Settings five seconds later
11. LINE IN: 3.5mm audio input port for external analog audio embedding
12. Headset or Mic: headphone jack, using American standard; Also can be used as Mic
13. USB: You can use the USB RNDIS function to directly enter the management address and access the Web UI
14. 1/4 inch screw hole: fixed connection hole with imaging equipment
15. Power LED

3. Two ways to power on and connect to LAN

For FLOW 4K series, you can choose two power supply modes: DC input and POE

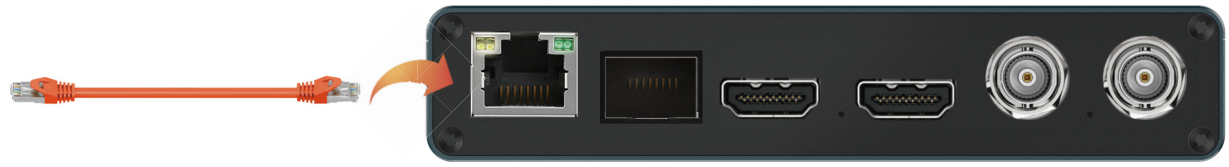
1. DC-12V Input

Power on with the SCIENCE IMAGE original standard 12V power supply

Always use genuine SCIENCE IMAGE power adapters, 3rd party products perhaps can cause permanent damage.

2. POE Power supplier

Power up through the network cable connecting the POE (power over Ethernet) with Gigabit network switch



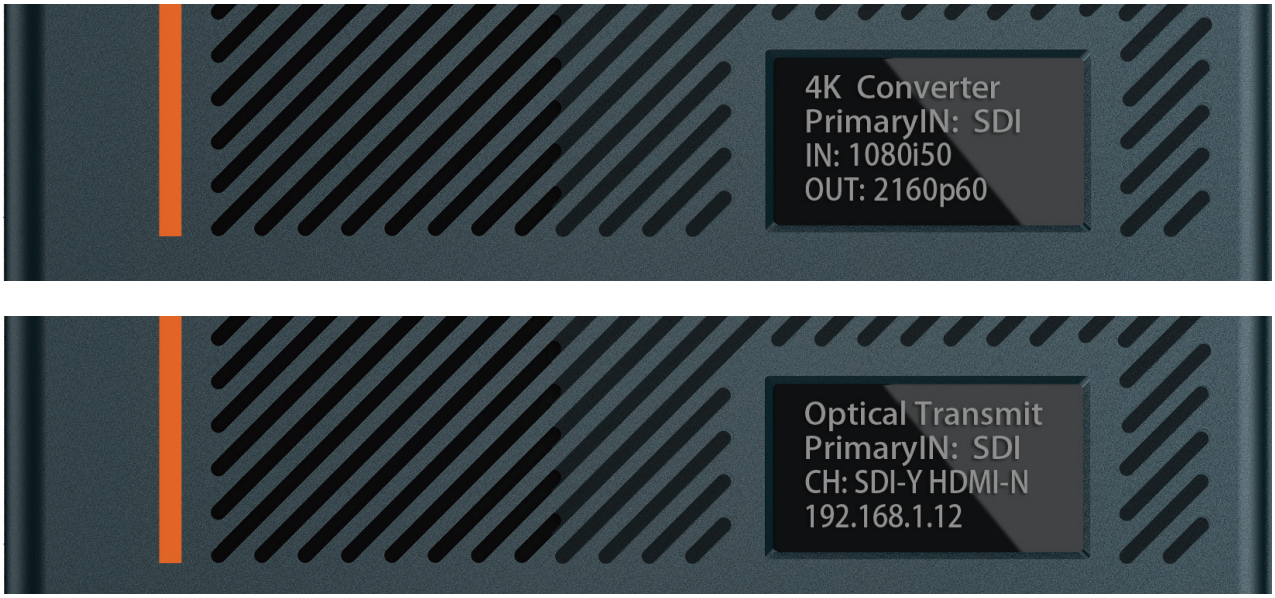
PoE Power over Ethernet(802.11af/at) support
Always use a certified 802.11 af/at with minimum 10W port power capacity and it's a gigabit network switch.

After startup, you will find that the character SCIENCE IMAGE Tech begins to appear on the OLED screen, and the power light on the right starts to light up.
At this time, the device is powered up successfully.

4. OLED screen display instructions

After the device is started, the current status and parameters will be displayed alternately on lines 1, 3 and 4 of the screen

It takes about 30 seconds for the system to work properly. It takes a while for the Linux system to start.



- The first line -- 4K Converter/ Optical Transmit
  Display the name of the current device and the status of the Optical Receiver (the Optical transmitter by default, and the Optical Receiver by default).

- The second line -- PrimaryIN: SDI
  Displays which input, SDI or HDMI, is recognized by the current device.

- Line 3 -- IN: 1080I50 / CH: SDI-Y HDMI-N
  Displays the video format of the current input source of the device (when the device serves as an optical receiver, the video format of the optical input is displayed) and whether the SDI and HDMI inputs are detected (Y indicates that there is an input and N indicates that there is no input).

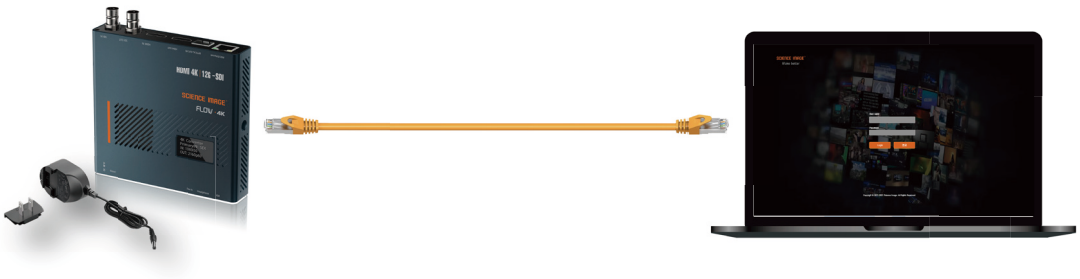
- Line 4 -- OUT: 2160p60/192.168.3.166
  Displays the output video format (the format selected in the video Format conversion list) and the current IP address of the device.

5. Login Web UI

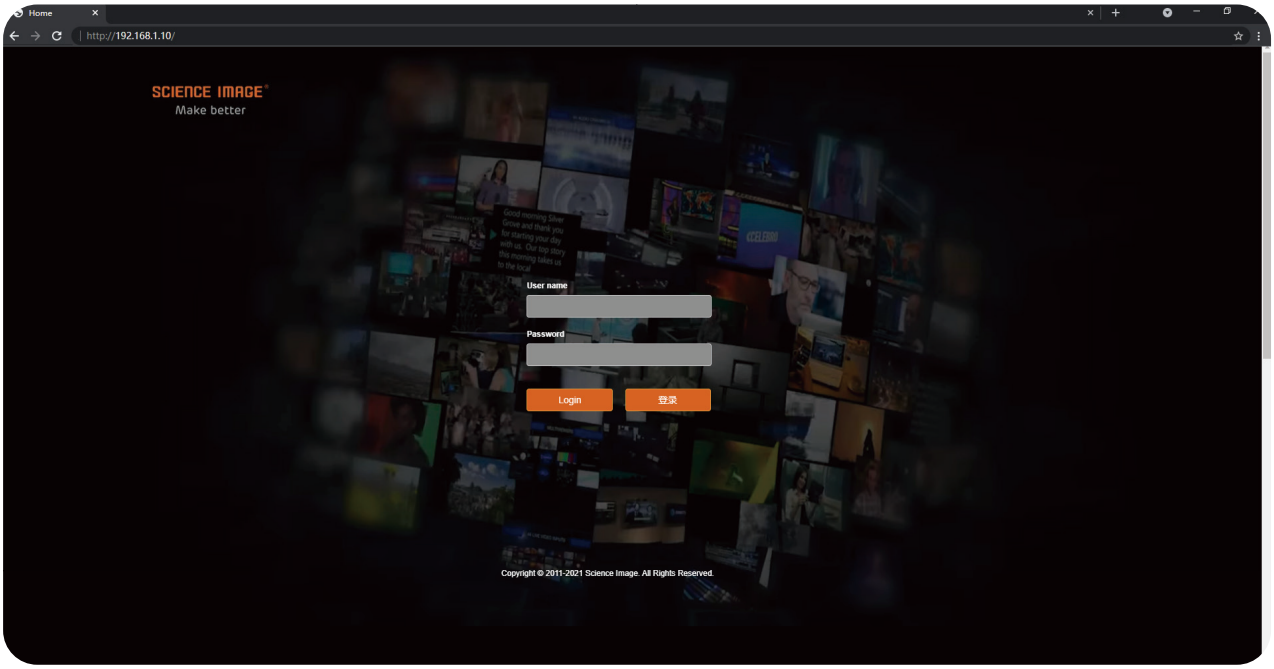
Log in to the WebUI using a network cable, power on the device using the original power adapter, and connect the device to the PC using a network cable. Or connect the device and computer to the same router or switch.

If 192.168.8.8 is displayed, the device cannot automatically obtain an IP address. You need to manually set the IP address of the PC to the same network segment, that is, 192.168.8.*, to log in to the WebUI.

Example 1:



Example 2:

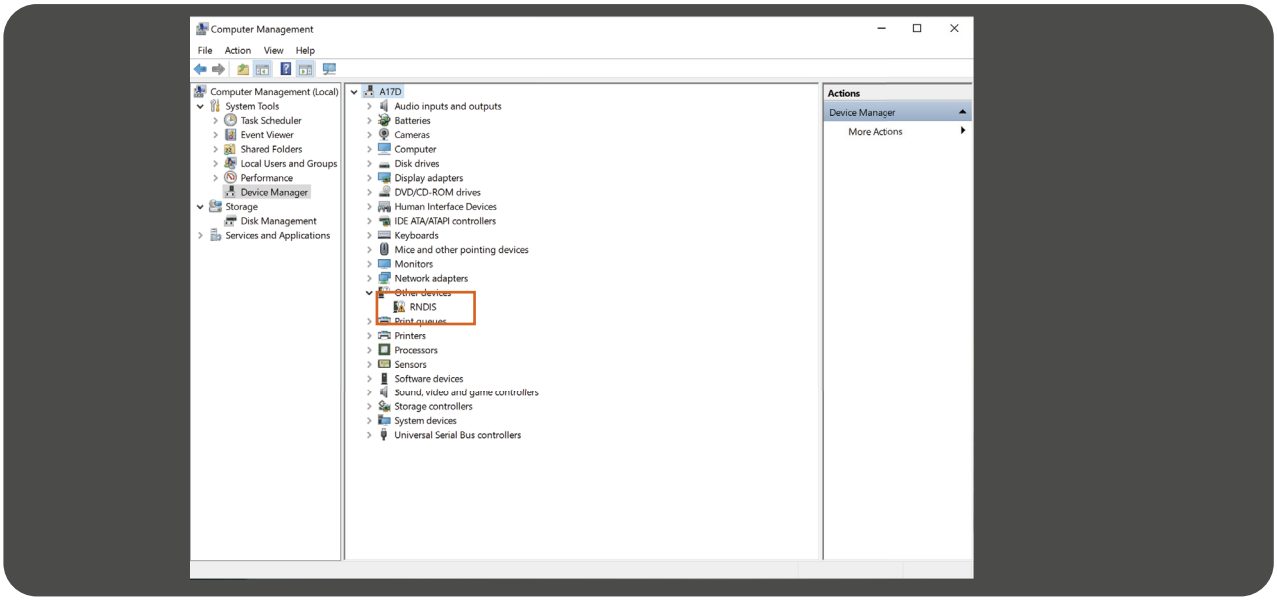


Open the IE browser, enter the IP address on the OLED screen and enter the Web UI home page Default user name: admin Password: admin

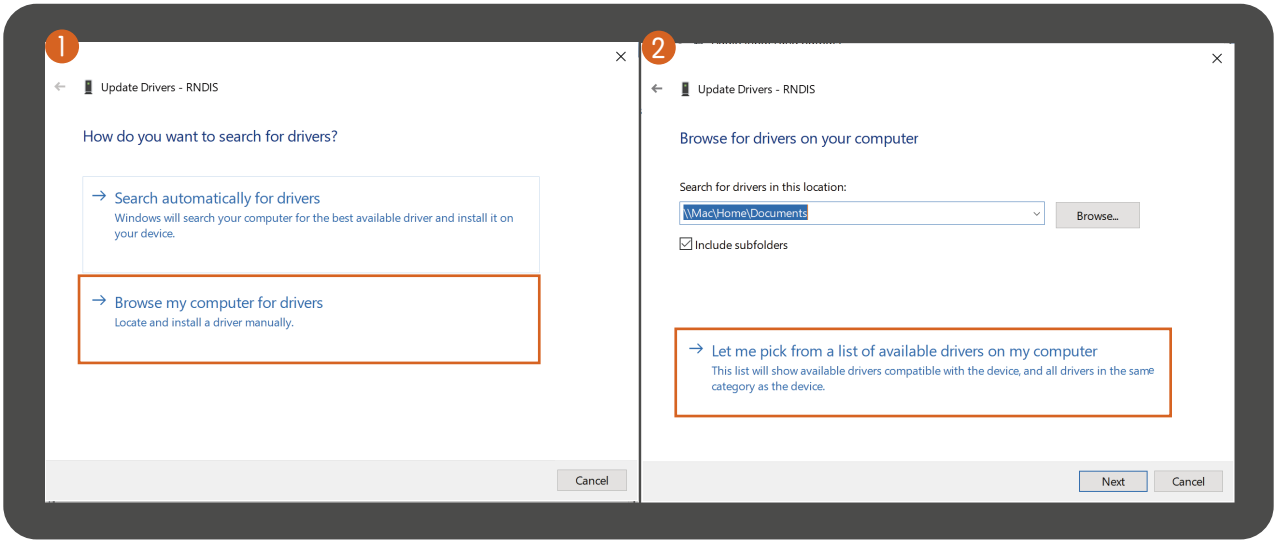
Log in to the WebUI using the USB RNDIS function, power on the device using the original power adapter, and connect the device to the PC using a USB cable.

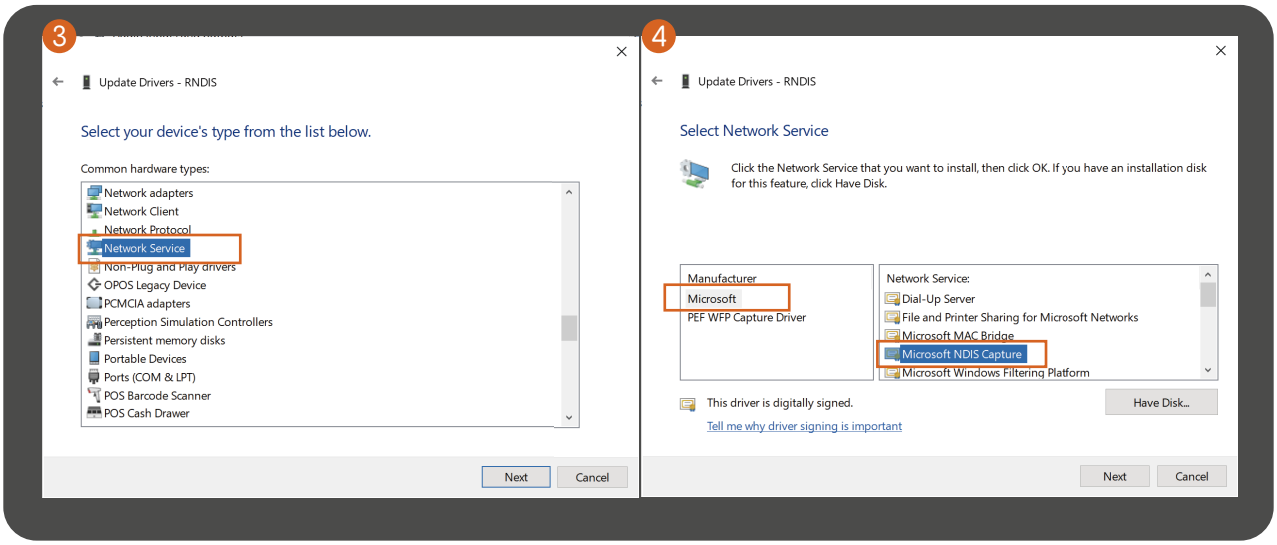
You may need to install the RNDIS driver when you log in to the WebUI for the first time. If the driver has been installed, enter the management address 192.168.88 to log in to the WebUI.

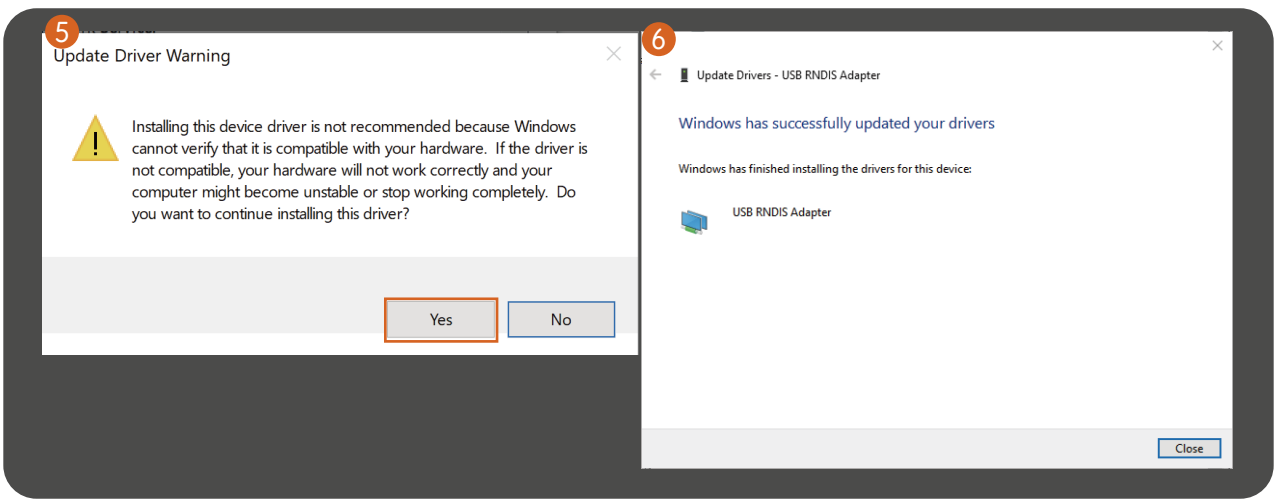
Next, right-click My computer – Manage – Device Manager on the desktop. An unknown device RNDIS appears in device Manager.

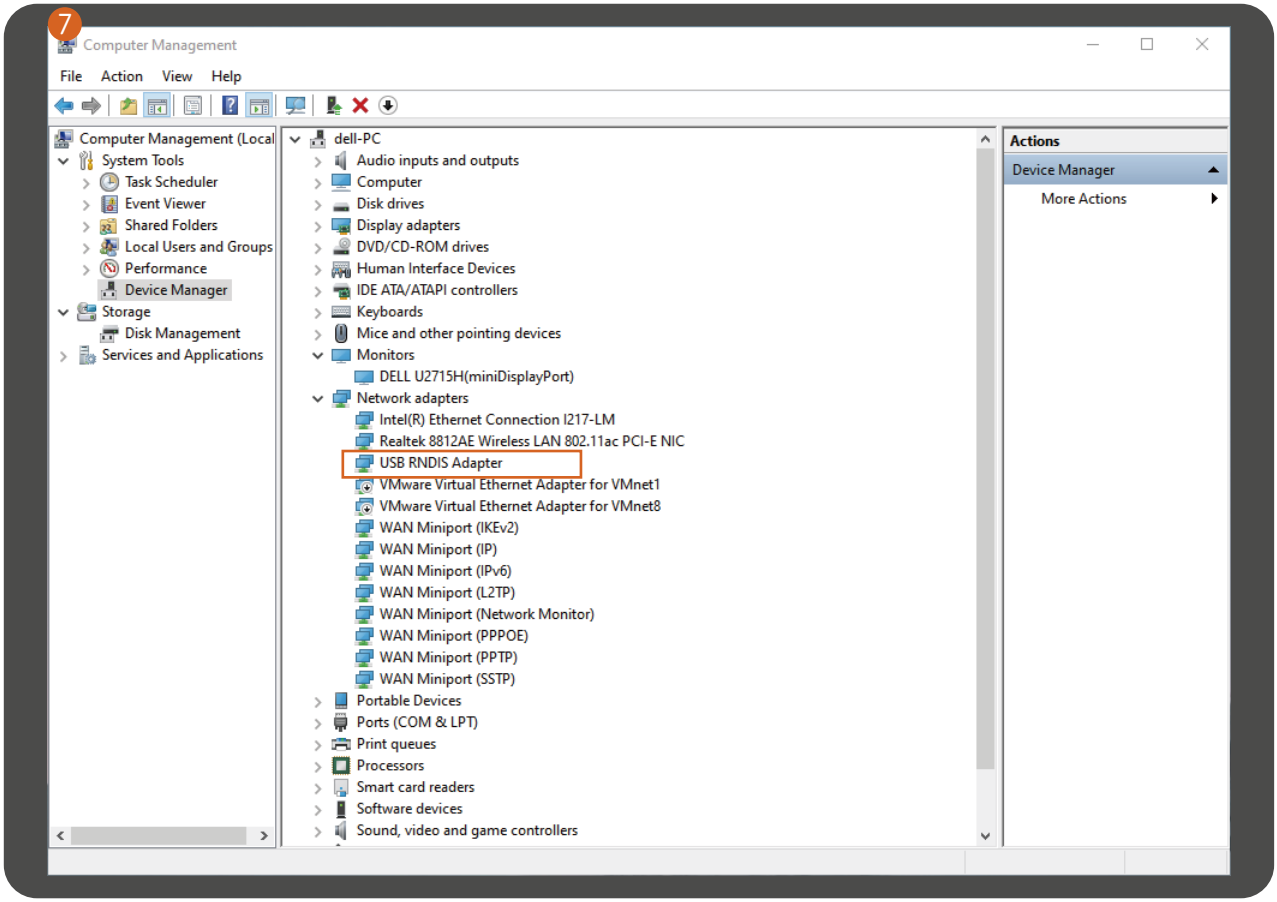


Then, right-click RNDIS and select Update Driver -- browse my computer to find a new driver -- let me select from the list of drivers available on my computer -- Network Adapters -- Microsoft -- Remote NDIS compatible devices.


1
Update Drivers - RNDIS
How do you want to search for drivers?
Search automatically for drivers
Windows will search your computer for the best available driver and install it on your device.
Browse my computer for drivers
Locate and install a driver manually.
Cancel
2
Update Drivers - RNDIS
Browse for drivers on your computer
Search for drivers in this location:
\\Mac\Home\Documents
Browse...
Include subfolders
Let me pick from a list of available drivers on my computer
This list will show available drivers compatible with the device, and all drivers in the same category as the device.
Next
Cancel

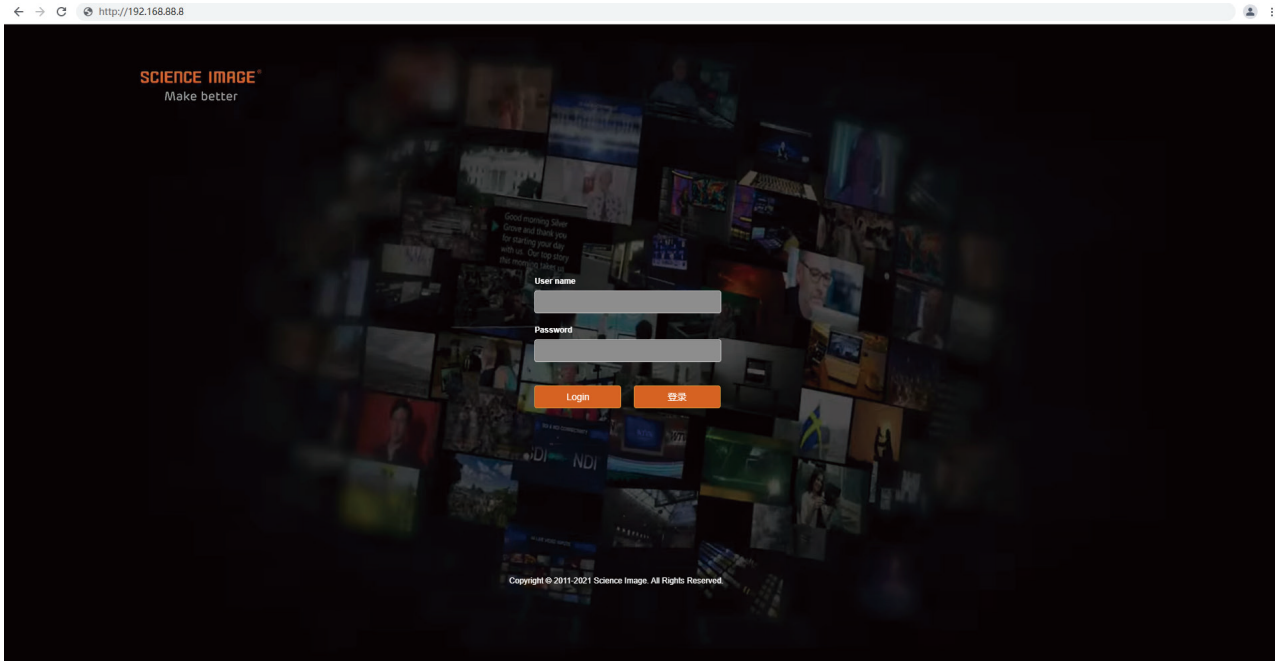

3
Update Drivers - RNDIS
Select your device's type from the list below.
Common hardware types:
Network adapters
Network Client
Network Protocol
Network Service
Non-Plug and Play drivers
OPOS Legacy Device
PCMCIA adapters
Perception Simulation Controllers
Persistent memory disks
Portable Devices
Ports (COM & LPT)
POS Barcode Scanner
POS Cash Drawer
Next
Cancel
4
Update Drivers - RNDIS
Select Network Service
Click the Network Service that you want to install, then click OK. If you have an installation disk for this feature, click Have Disk.
Manufacturer
Microsoft
PEF WFP Capture Driver
Network Service:
Dial-Up Server
File and Printer Sharing for Microsoft Networks
Microsoft MAC Bridge
Microsoft NDIS Capture
Microsoft Windows Filtering Platform
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
Next
Cancel


5
Update Driver Warning
Installing this device driver is not recommended because Windows cannot verify that it is compatible with your hardware. If the driver is not compatible, your hardware will not work correctly and your computer might become unstable or stop working completely. Do you want to continue installing this driver?
Yes
No
6
Update Drivers - USB RNDIS Adapter
Windows has successfully updated your drivers
Windows has finished installing the drivers for this device:
USB RNDIS Adapter
Close

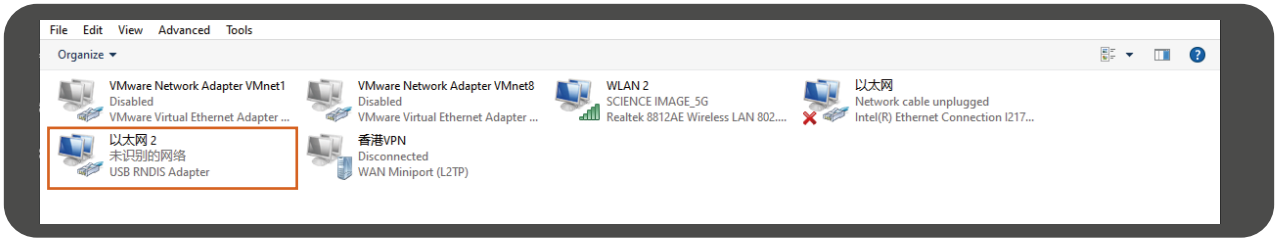


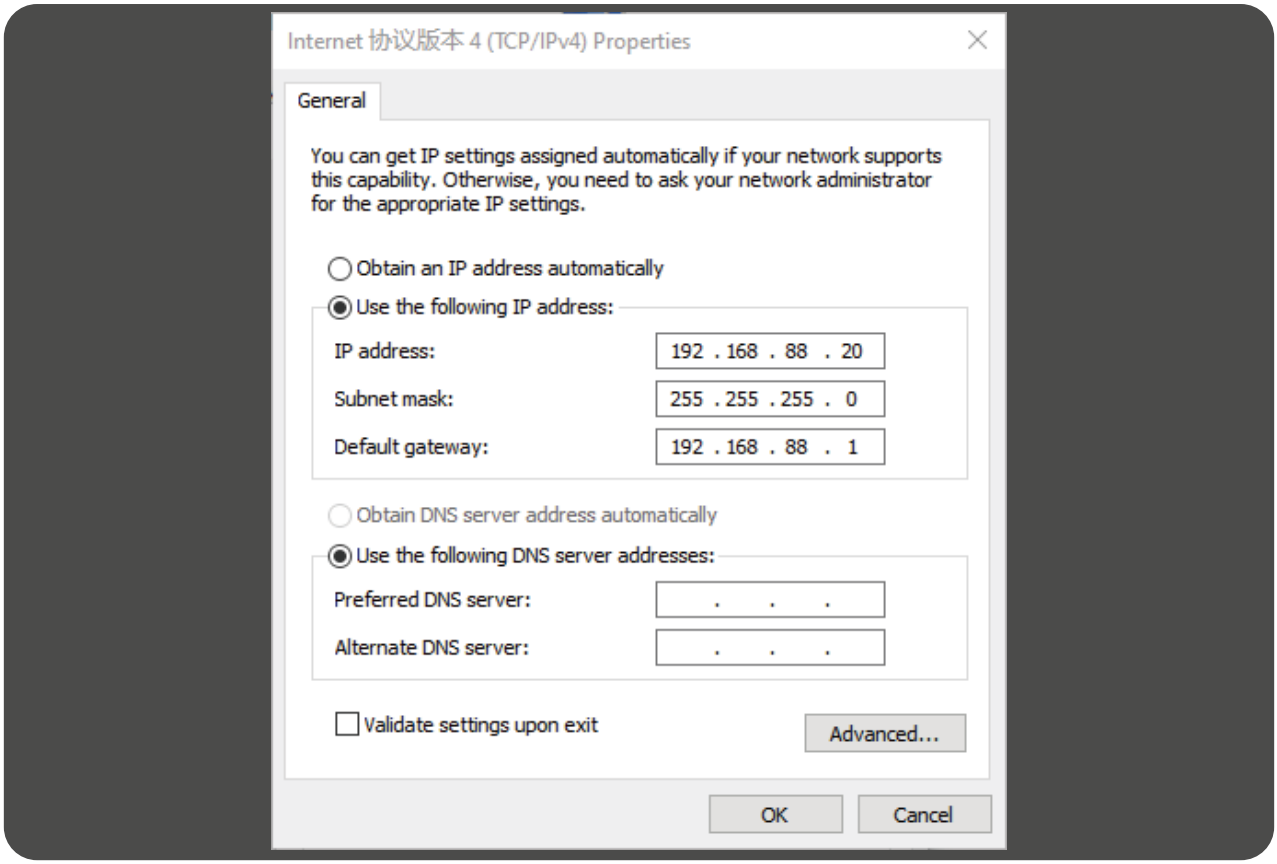
After the driver is installed, open a browser and enter the device management address 192.168.88.8 to log in.

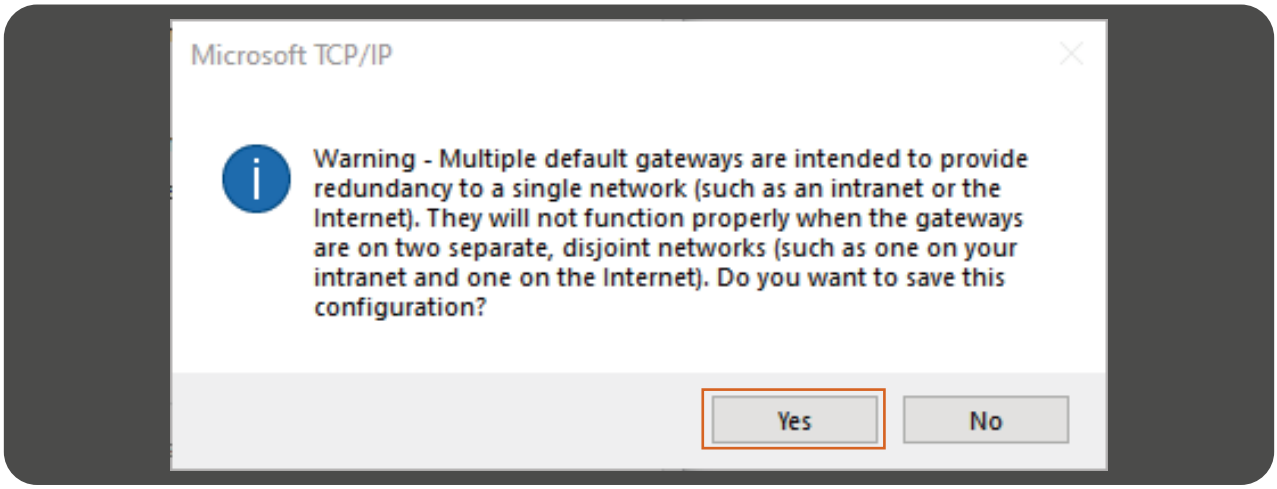
The default user name: admin Password: admin



Note: If you fail to log in, you can change the IP address of the new NDIS network adapter to 192.168.88.* in the network connection. The IP address is in the same network segment as that of the device, but the IP address of the device in the LAN cannot be the same.

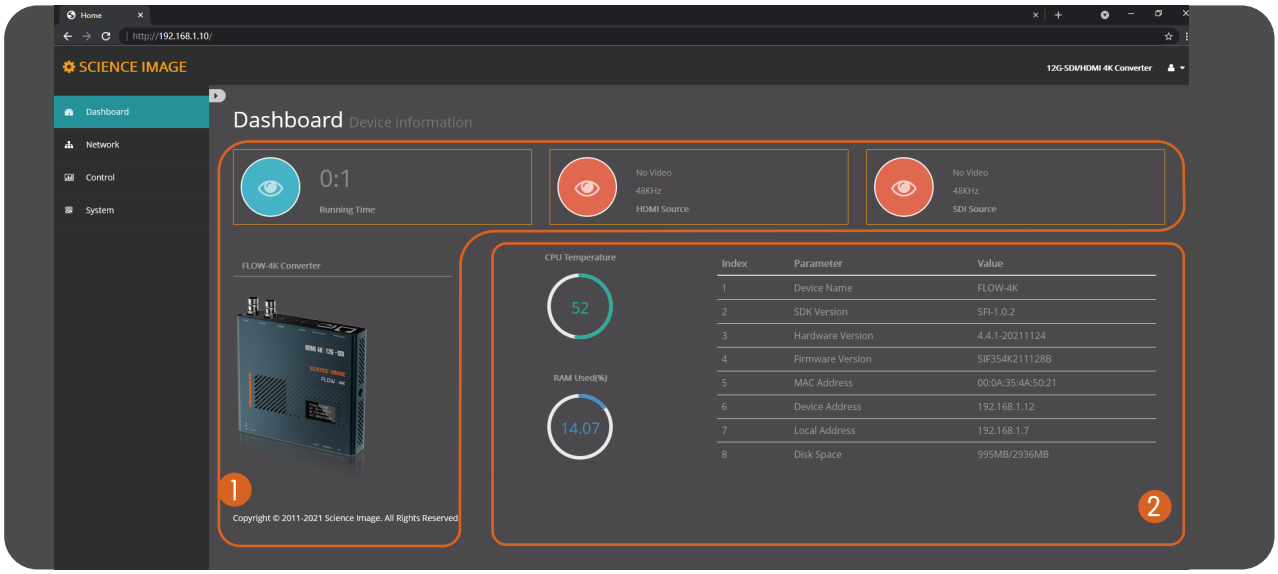






6. Device Information

This page is the FLOW 4K device information page, which contains the following information:



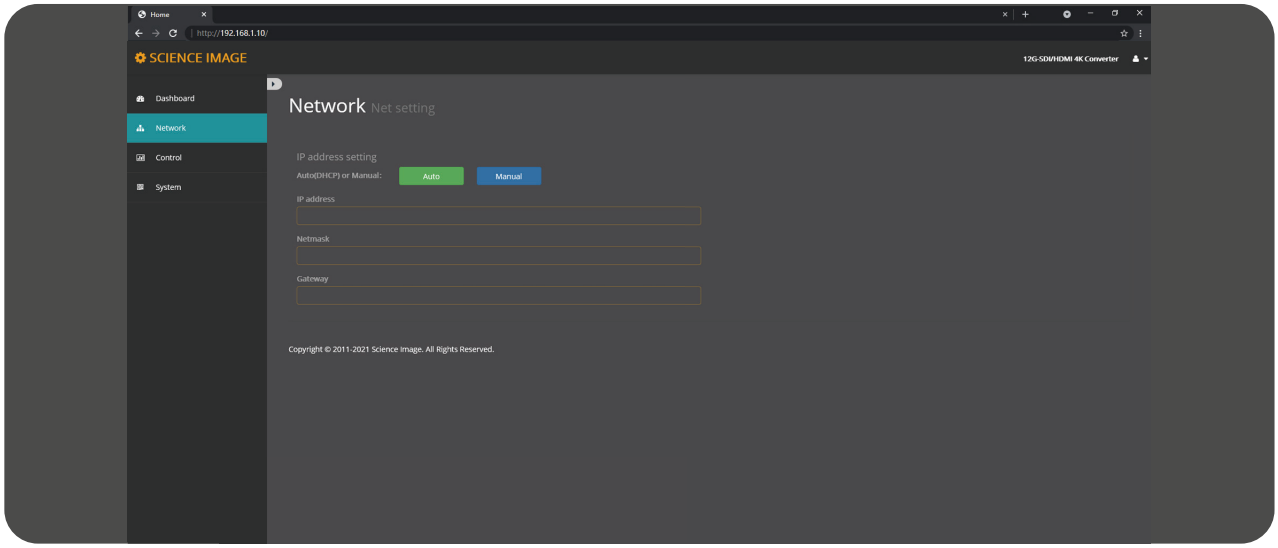
1. Device running time (after startup), currently input HDMI or SDI source video resolution and audio, real-time main chip temperature, and detailed device parameter information.

2. The device information includes:
   Device name (can display the current codec mode of the device), device serial number, hardware version, firmware version (can be upgraded on the system page with the version update), MAC address (unique and unmodifiable), device IP address (can be Modify at any time on the web page), local IP address (the IP address of the local PC or mobile phone), and disk space (usage of hardware flash disk space).

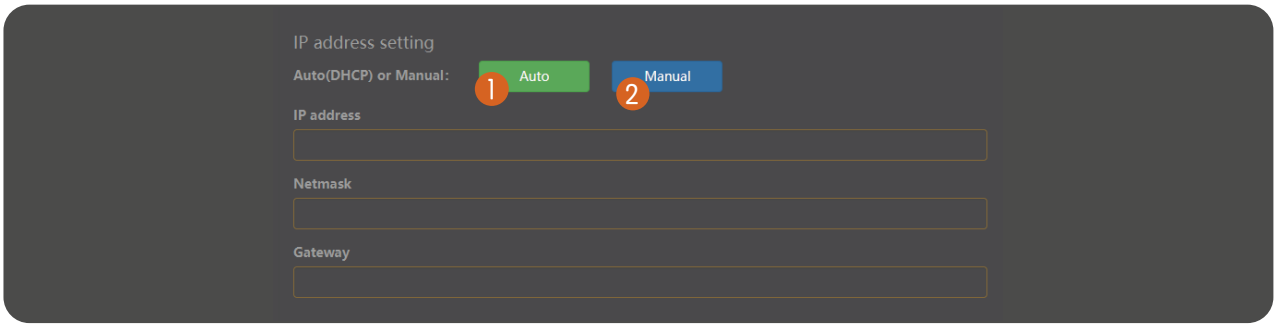
7. Network settings

6.1 Modify IP

Click [Network] to enter the network setting page



There are two modes for device IP address setting: DHCP and manual.

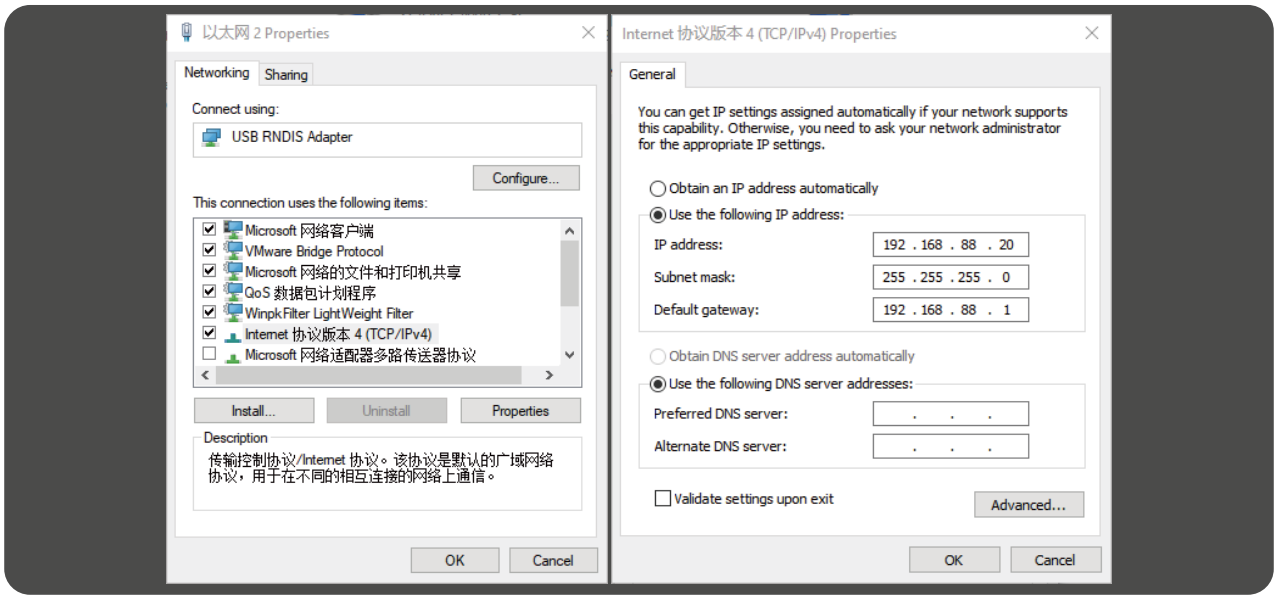


7.1.1 DHCP mode

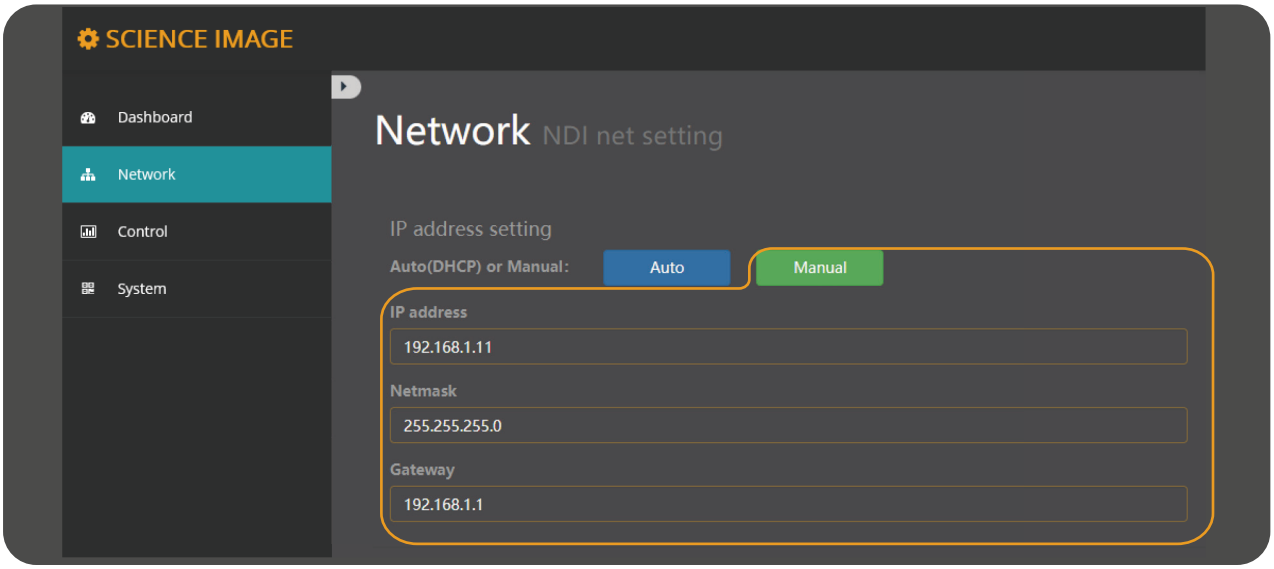
1 Automatic mode (DHCP) needs to be used in the link connecting to the router. The router dynamically assigns the IP address tothe device in real time. An IP address will be randomly assigned to the device every time the power is turned on.You can log in to the webpage according to the IP address assigned by the router and modify the corresponding information (if there is no IP address assigned by the router in the link, the default IP of the device is 192.168.8.8). When the pattern is selectedThere is no need to fill in the IP address information on the page, just click the "Apply" button below, and then the device willautomatically restart and get the IP address assigned by the router in the link (this process is long)(30 seconds), to be displayed on the screen of the device after the newIP address in the browser input IP login can be.

7.1.2 Manual mode

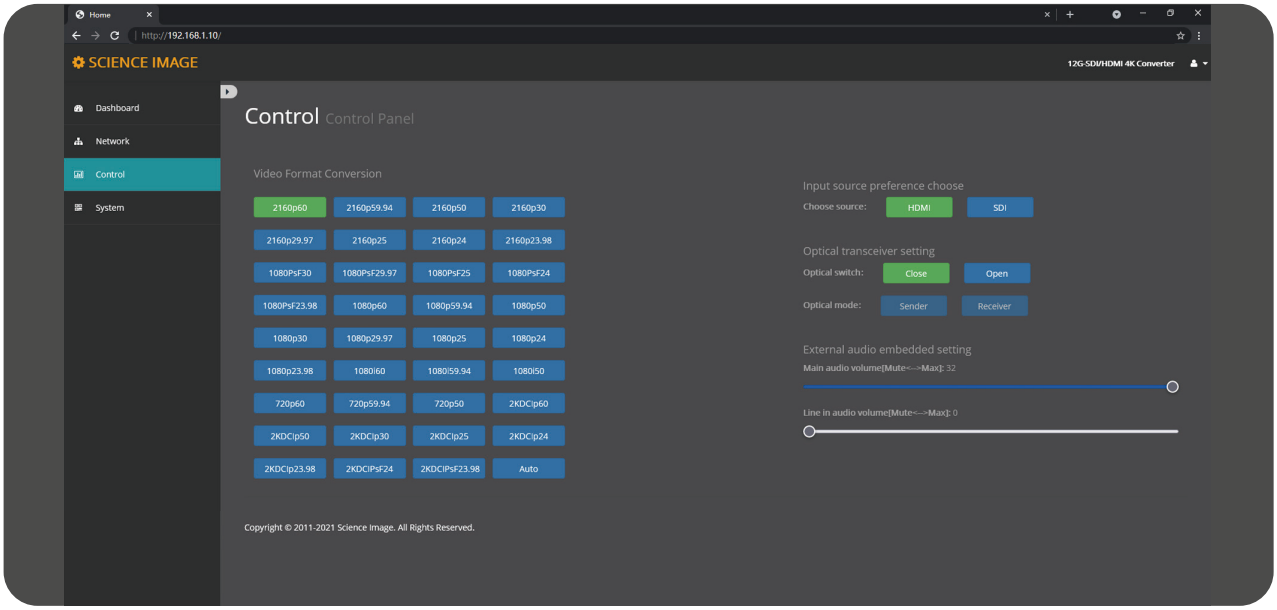
2 If this mode is selected, the user needs to set the IP address information of the device to be in the same network segment as the IP address information of the local PC or mobile phone.For example: View the local computer's Ethernet IPv4 information as "IP address: 192.168.1.144 Subnet mask: 255.255.255.0 Default gateway: 192.168.1.1", then you can set the device IP address as: "IP address: 192.168.1.142 gateway : 192.168.1.1 Subnet mask: 255.255.255.0 "The gateway and subnet mask are the same as the local computer or mobilephone, and the IP address does not conflict with other addresses in this network segment



After filling in the IP address, click the [apply] button below, and then the system willcomplete the modifica-tion of the IP address and automatically restart the equipment.The network page will also automatically enter the modified IP address page (there isno need to enter the new IP again). This process takes about 30s.

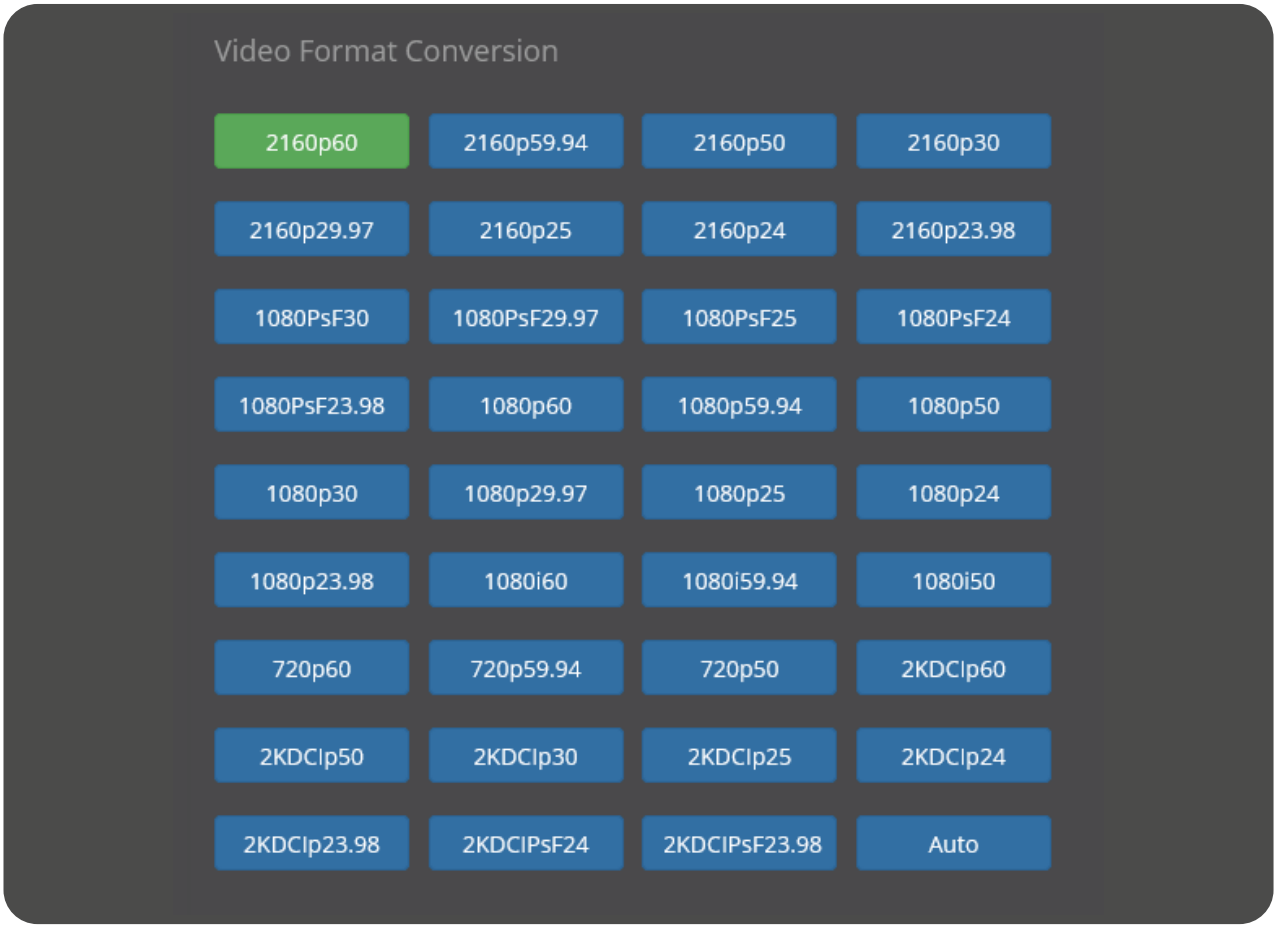


8. Control settings



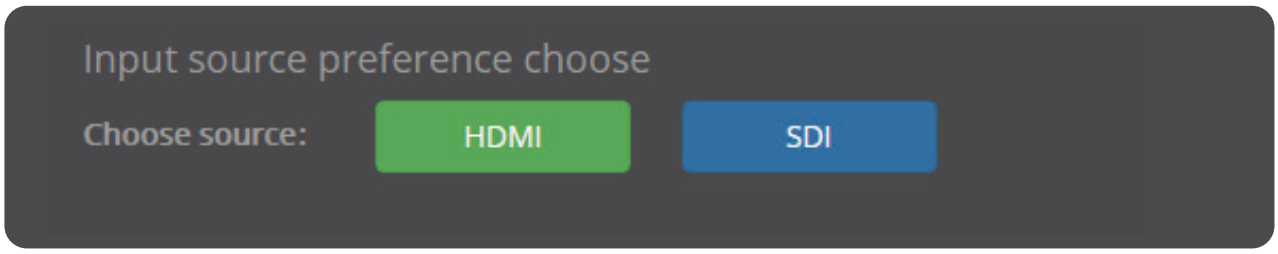
8.1 Video format conversion

No matter what the input format is, you can convert the output to the corresponding format by clicking the following format. Such conversion will not change the image quality. After selecting the format, it will be green. If no transformation is required,select auto, which is the same as the input source format.



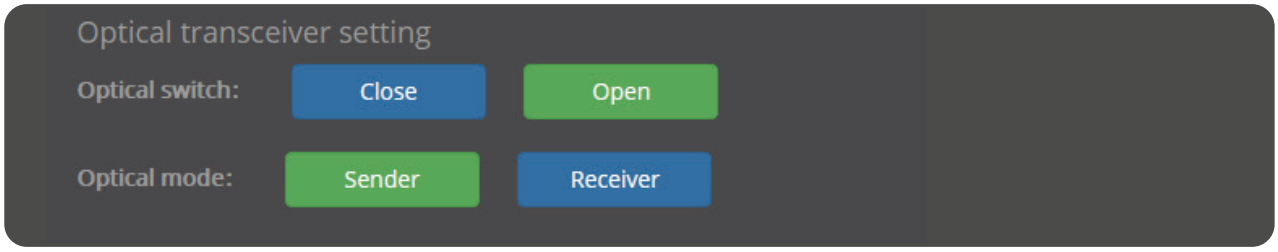
8.2 Input source priority selection

When both SDI and HDMI sources are input at the same time, the HDMI source is preferred by default. If you want to select the preferred SDI source, click SDI application. When there is only one source, it will be automatically recognized and will not be affected by this setting.

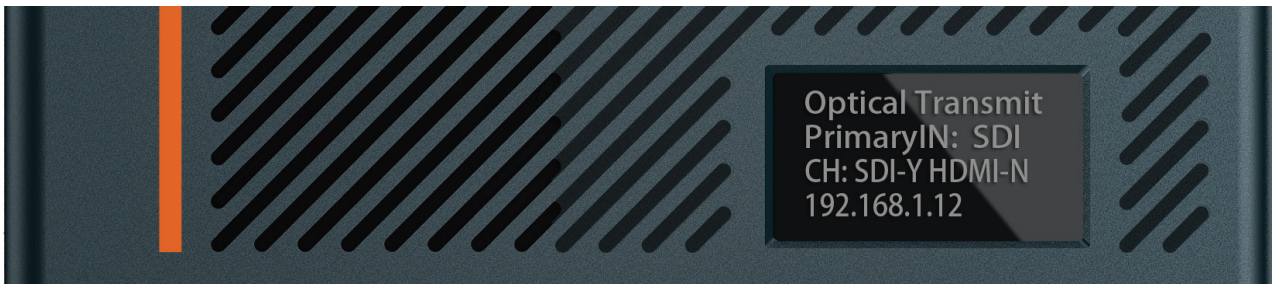


8.3 Optical transceiver settings

Optical module The device is regarded as an optical module and uses optical fibers for data transmission. You need to send one transmission to both devices and receive one transmission. First, select the sending device, log in to the web UI, locate the optical device on the coding page, and select Select Sending Mode. Video format conversion and input Source Preferentially select the frequency conversion and signal source for optical signal transmission. Select another device as the receiving device, log in to the web UI of the receiving device, enable Settings for the optical device, and select the receiving mode. SDI OUT and HDMI OUT output optical signals. The same light output can also be converted to video format, but selecting AUTO will fix the output to 1080p60.



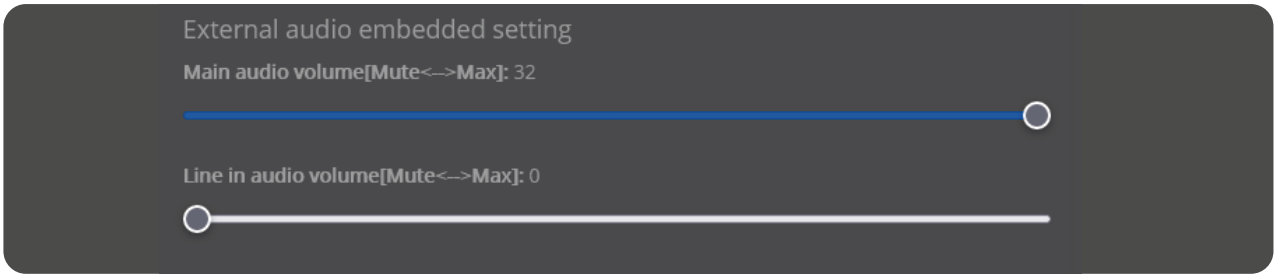
The Sender and Receiver of the Optical end machine can also be seen in the first line of the OLED. The Transmit is shown as an Optical Transmit and the Receiver as an Optical Receiver. When the optical terminal is turned on, IN, the third line of the OLED at the optical receiver, displays the format of the optical input.



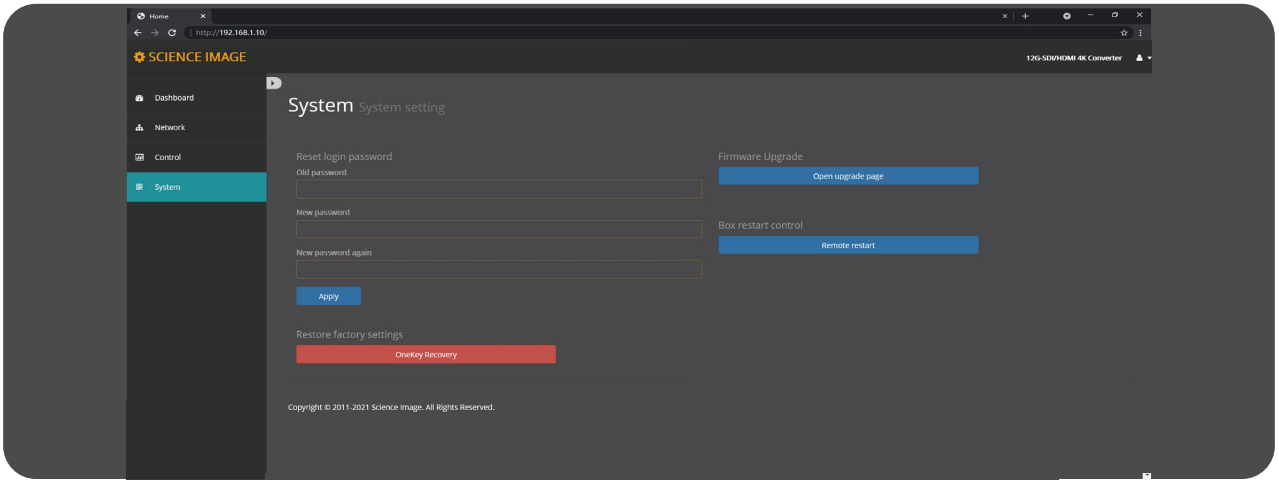
The frame rate of the video format conversion of both sender and receiver should be integer or decimal! Otherwise, the transmission fails. For example, if the transmitting end converts 2160p60, the receiving end must select 2160p50, 1080p50, and 1080p23.98. Similarly, if the sending end is a decimal, the receiving end must also be in decimal format.

8.4 External audio embedding settings

To turn off this mode is to output the sound of the video source through the headphone hole, which is off by default. If you want to add new audio to the output video, select toturn on this mode and input the audio through the line in port.

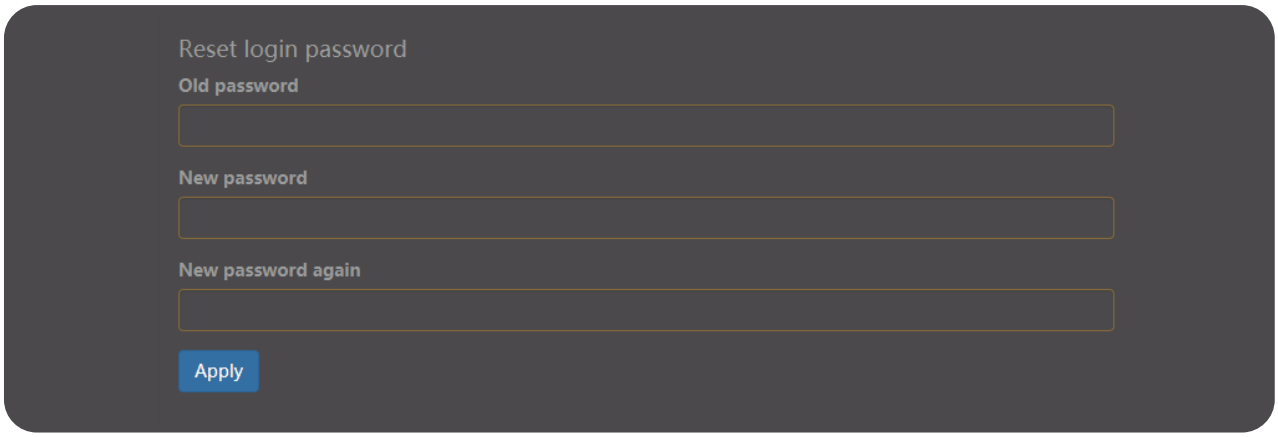


9. System settings



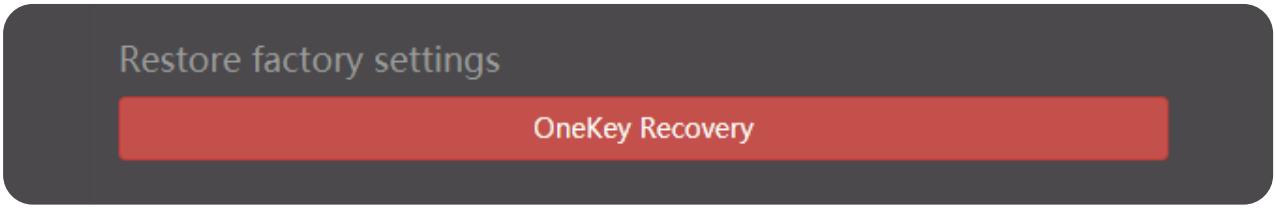
9.1 Reset login password

Modify the login password and click apply. After the password is modified, it will take effect at the next login.



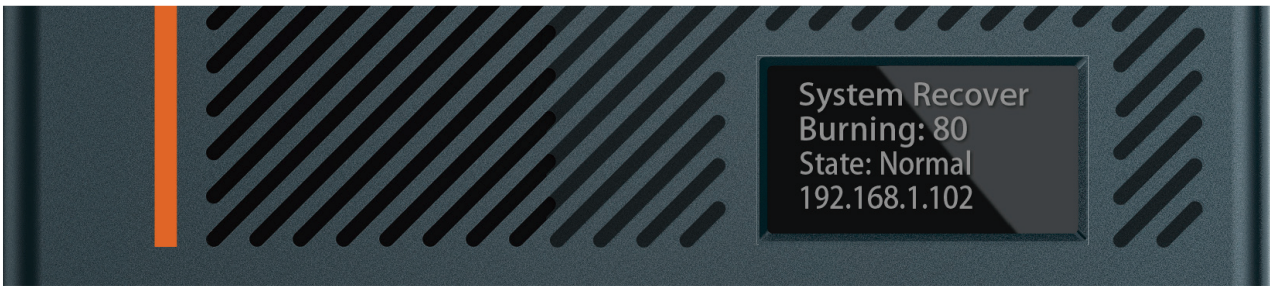
9.2 Restore factory settings

Restoring factory settings can restore the device to its initial state, but the firmware version will not be restored (the factory default IP address of the device is DHCP manual mode. If there is no router that automatically assigns IP addresses in the LAN, the device IPwill change to 192.168.8.8).



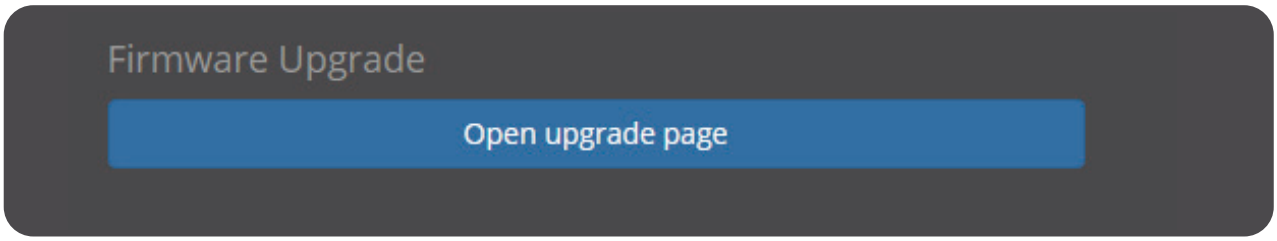
The second is to restore all the settings on the firmware version and WebUI to the factory.To restore the factory settings, you need to power off the device, press and hold the reset key on the device from the small hole, and power on the device at the same time. Whenyou see system recover on the first line of the device screen, you can release the reset key.During the process of restoring the factory settings, tally lights up the red light and starts flashing, When "burning: 100" is displayed on the second line of the screen, tally always lights up in green, and the whole process takes about 20 minutes to complete. At this time,power on the equipment again.

The second way is to restore the factory settings. Once it starts, the original system will not start. Please use this function carefully.

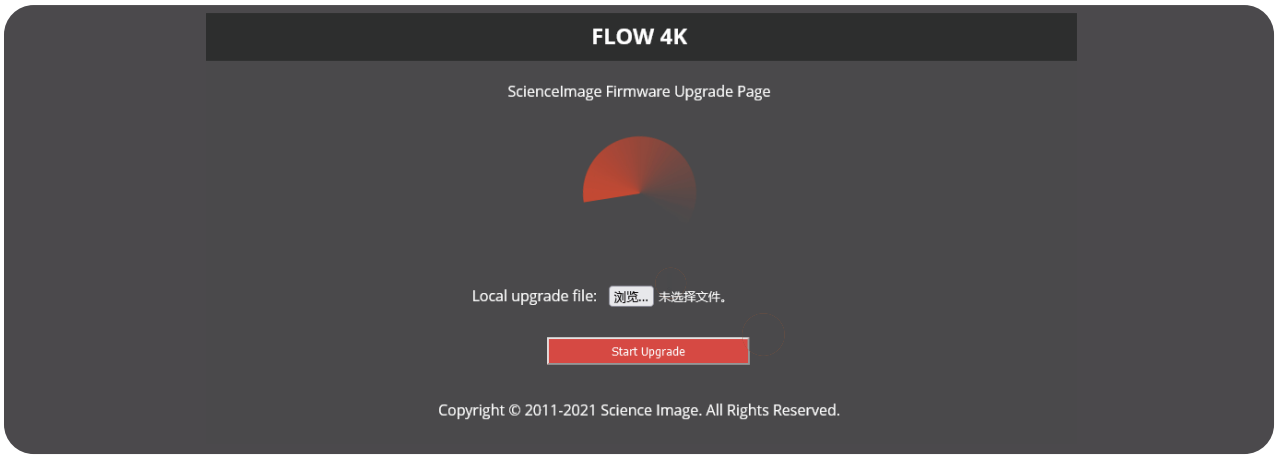


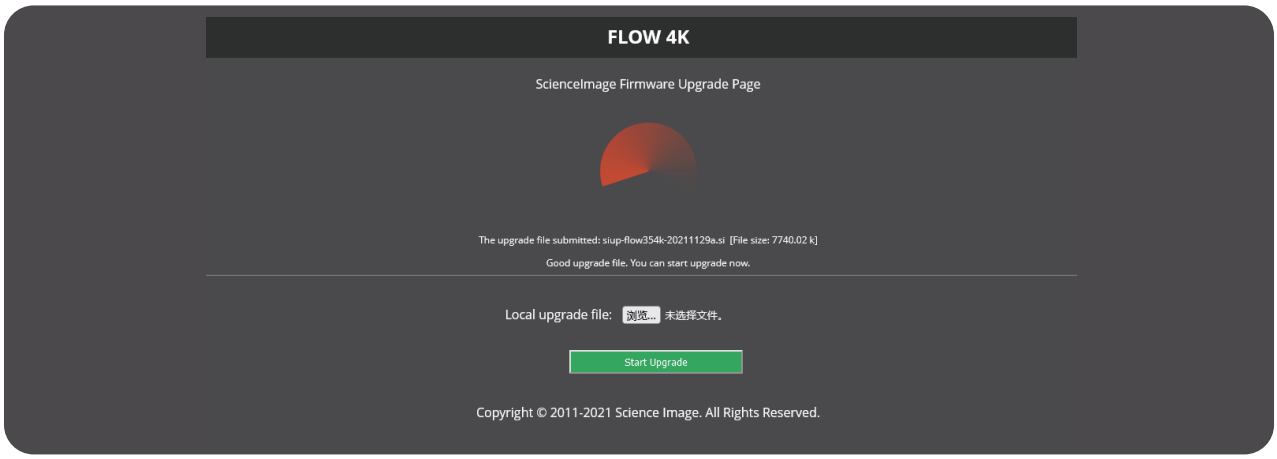
9.3 Firmware upgrade

New firmware upgrades will be released regularly on the company's official website. Users can download the latest firmware to upgrade as needed. Download address:" http://www.science-image.com/cn/-file-123084-92200.html "After downloading, you canclick the [open upgrade page] button on the [system] page to enter the upgrade page, orclick the figure icon in the upper right corner, and then click the [firmware upgrade] button Just push the button.

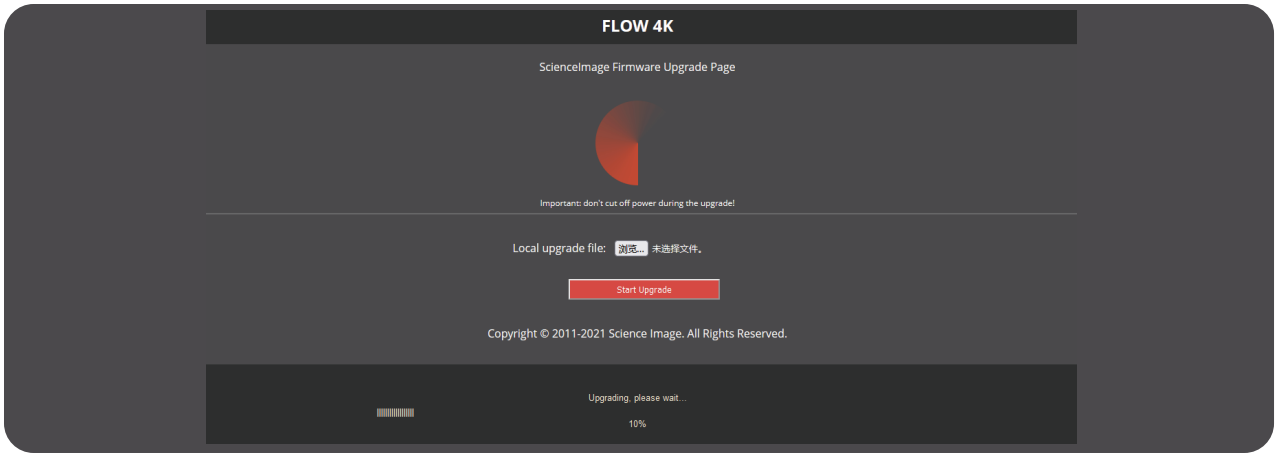


After entering the page, click the [select file] button at ❶ , select the firmware to be upgraded,such as siup-flow354k-20201220a.si, and open it. At this time, there will be a progress prompt in the lower left corner of the browser. When the progress is completed, the uploaded file information will be displayed. The buttonw ❷ will also change from red to green, and then click to start upgrading. As shown in the figure below:





Do not cut off the power during the upgrade process, otherwise the system files may be damaged and the system will not start normally.

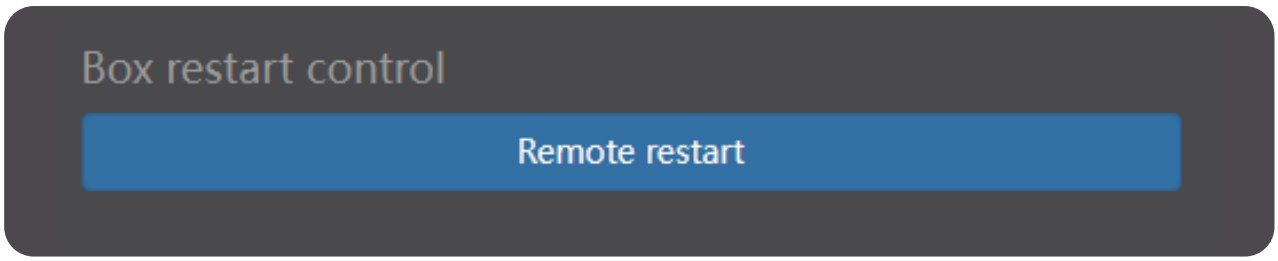


After the progress bar reaches 100%, the upgrade page is closed and the device restarts. Then, log in to the WebUI again and check the firmware version to check whether the upgrade is successful.

Do not cut off the power during the upgrade process, otherwise the system files may be damaged and the system will not start normally.

9.4 Device restart

Click the restart device button under the box restart control to restart the controlled device.



FAQ

Q. Why can't the device start?

A. Check whether the device power indicator (located on the right side of the chassis) and OLED screen are on, and restart again with the official power adapter;
Do not turn off the upgrade page and power during device upgrade!!

Q. Why not log in to the Web UI?

A. Check whether the IP address of the device and the IP address of the computer are in the same network segment, and whether the IP address of the device conflicts with the IP address of other devices in the network segment; Check whether the network environment is good; Attempt to power down and restart the device.

Q. Why does the device IP address display 192.168.8.8?

A. This is because the device is in the automatic IP acquisition mode in the network settings of the webui, but there is no router in the LAN connected to the device to assign an IP address to the device. At this time, change the computer IP to 192.168.8. * *, then log in to the Web UI, change the device to manually obtain the IP, fill in the address, subnet mask and gateway, and click [apply].

Q. Why is the image output from the device to the display device abnormal in color, sound or picture?

A. Try to restart the device in the Web UI system, or manually power off and restart.

Q. Why is the device output to the white screen of the display device in decoding mode?

A. This is because the decoding device does not select which NDI source to solve. Try to log in to the Web UI, check whether the correct coding source is selected under the decoding column, click refresh list and select again.

Q. NDI decoding is stuck and not smooth

If the NDI decoding picture is not smooth and jammed, please turn multicast on or off to test the fluency of NDI under the condition of ensuring a good network environment.

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