SOUKA

SKD7170 User Manual

(DVB Gateway)

Dingshengwei Electronics Co., Ltd.

The final interpretation right of this document belongs to our company

Preface

Thank you for choosing our product.

This manual details the performance, installation and operation of the product. Please read this manual before use.

Our company, Ding Sheng Wei Electronics Co., Ltd., does not assume any responsibility for any losses caused by violation of safety regulations.

1. Incoming inspection

(1) Open the equipment box and check the contents against the product packing list.

(2) If the packing list does not match the actual item, please contact us.

2. Read the instruction manual

Please read the instructions and follow all instructions.

(1) Power

The power supply used with this device must comply with the indicated power supply and be grounded. When not using the machine for a long time, please unplug the power cord.

(2) Working environment

Keep the equipment working in a ventilated and dry place. Avoid excessive heat, moisture, dust and heat.

(3) Equipment cleaning

Before cleaning the device, unplug the power cord. Do not use liquid or spray cleaners.

(4) Power cable protection

Pay special attention to the safety protection of plugs, sockets and power cords

(5) Overload

Be careful not to overload the power supply at the outlet. Use caution when using extension cords or integrated sockets as this may result in electric shock and fire.

(6)Lightning

To prevent damage caused by lightning, please use this device in a lightning protection device, which can effectively prevent damage caused by lightning or power grid fluctuations.

(7) Foreign matter or liquid intrusion

Do not insert foreign objects into the machine or spill any liquid into the machine.

(8) Attachments

Do not use accessories not recommended by the manufacturer, as this may cause danger

(9)Transportation

When transporting the machine, the original packaging of the product should be used to avoid damage. Do not place heavy objects on the machine or step on it. Otherwise, personal injury may occur and the machine may be damaged.

(10)Maintenance

Do not open the box and repair by yourself to avoid personal injury or serious damage to the machine.

During the warranty period, if the product is damaged due to natural causes and is disassembled without authorization, free warranty will not be provided.

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1. Product description

1.1. Product overview

SKD7170 is a platform product for centralized processing of small IP TV front-end services. The installation method is flexible and can be installed in rack, wall-mounted or desktop.

Device parameters can be configured through local network operations. The WEB page is beautiful, easy to understand, and easy to operate. It has intelligent functions such as parameter batch import, export. It is a configurable, customized, highly integrated, and cost-effective IP TV front-end signal comprehensive processing equipment.

1.2. Picture

1.3. Features

- A device supports up to 2 cards
- Support DVB-C(J83A)/DVB-T/T2 input
- Support UDP/RTP protocol output, support SPTS/MPTS stream processing

- Supports optional MPTS or SPTS output. For MPTS, the maximum supported is 8 IP addresses; for SPTS, the maximum supported is 256 IP addresses.
- 1 Gigabit port and 1 management port
- Operated through PC (WEB)

1.4. Application scenarios

- Business travel hotel
- Clubhouse
- Hospital
- Spa
- School
- Leisure and entertainment clubs
- Prison

1.5. Parameter

SKD7170 base unit parameter	
Size	318(L)*260(W)*44(H)mm
Installation Method	1U19 inch chassis、wall-mounted、desktop
Working temperature, humidity	-10℃-45℃、40%-70%

Storage temperature and humidity	-40℃-70℃、40%-95%	
Power parameters	**Supply voltage**	DC12V
	Maximum current	7000mA
Conector parameter of input module	**Total number of slots**	2
	Each slot can support modules	1 air signal port and 1 test port
IP output parameter	**IP output conector**	1 Gigabit RJ45 network port
	Output format	Support MPTS with 8 IP address or SPTS with 256 IP address.

2. Structure diagram

2.1. Frontal panel

No.	Function	
1	PER	This indicator light lights up when the device is powered on
	RUN	This indicator light lights up when the device is running
2	CH1	When the No. 1 port receive the signal, the indicator light lights up.
	CH2	
	CH3	
	CH4	
	CH5	When the No. 2 port receive the signal, the indicator light lights up.
	CH6	
	CH7	
	CH8	
3	DATA OUT	Gigabit output network port
4	NMS	Management
5	DUFAULT	Restore factory settings button. If you need to restore factory settings, you need to press and hold for 15 seconds.

2.2. Rear panel

Number	Function	
1	RF INPUT	Air signal input connector
	TEST	Test port
2	RF INPUT	Air signal input connector
	TEST	Test port
3	Hollow squares with solid markings indicate the input formats supported by the current device.	
4	Switch	
5	Power inlet	
6	Ground	

3. Installation guide

3.1. Preparation

When installing the device, follow these steps:

- Check for possible loss or damage of equipment during transportation;

- Prepare a suitable environment for installation;
- Install the required input and output cables;

Each detail of the equipment installation is described in the remainder of this chapter, using the rear panel diagram as a reference for specific locations.

3.2. Equipment installation process

Step 1:Unpacking and inspecting goods

Step 2:Fixed equipment

Step 3:Connect power and ground wires

Step 4:Connect signal cable

Step 5:Connect signal cable

Step 6:Set device parameters

Step 7:Set device parameters

Step 8:Equipment operation

3.3. Environmental conditions requirements

Project	Requirement
Control room space	When installing multiple rows of cabinets, the distance between the front and rear doors of the cabinet is 1.2~1.5m and the distance from the wall is 0.8m.

Control room floor	Non-conductive and dust-free. The volume resistivity of the ground anti-static material is 1X107~1X1010, and the grounding current limiting resistance is 1M. The floor load-bearing should be greater than 450Kg/m2.
Ambient temperature	For long-term work in an environment of 5~40ºC, and for short-term work in an environment of 0~45ºC, it is best to install air conditioners in places to facilitate heat dissipation.
Relative humidity	Work long-term in the 20% to 95% environment and short-term in the 10% to 97% environment.
Ambient air pressure	86kPa~106kPa。
Windows	Dust-proof rubber strips must be added for sealing. It is recommended that windows be installed with double-glazing and strictly sealed.
Wall	Wallpaper can be applied or matte paint can be applied, but paint that is easily powdered should not be applied.
Fire protection requirements	The control room should be equipped with an automatic fire alarm system and a portable fixed fire extinguishing system.
Power requirements	Three independent power supply systems are required for equipment power supply, air conditioning power supply, and lighting power supply. The equipment is powered by AC power supply. The

	AC power supply adopts 220V±20% 50/60Hz. Please check carefully before operating the equipment.

3.4. Grounding requirements

- The good ground wire design of each functional module is the basis for the stable and reliable operation of the whole machine, and is the primary guarantee for lightning protection and anti-interference. Therefore, system grounding must follow the following principles;
- The ground conductor must use copper conductor to reduce high-frequency impedance, and the ground wire should be as thick and short as possible;
- The connection points at both ends of the grounding wire should be confirmed to have good electrical contact and should be treated with anti-corrosion treatment;
- It is strictly prohibited to use other equipment as part of the electrical connection of the ground wire;
- The cross-sectional area of the ground wire connecting the cabinet to the lightning protection unit must be greater than or equal to 25mm^2.

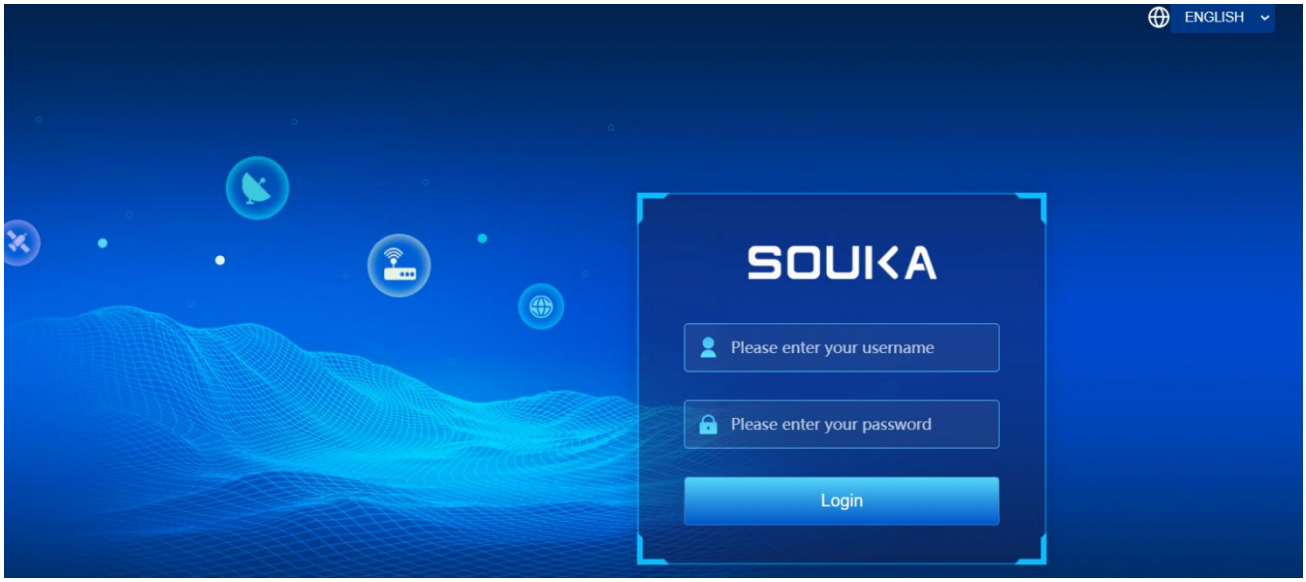
4. Built-in web management terminal operation

4.1. Preparation

- The NMS network port of the device is connected to the PC network port;
- Power the equipment;

4.2. Login page

- You can check the IP address of the device through the operation panel.
- Open IE browser/Firefox browser/Google Chrome/Opera browser/Maxthon browser, enter the device IP address in the address bar (generally default: 192.168.1.30), and after confirmation, the login interface will be displayed as follows:
- Enter username and password, the default is: user
- Click to log in



Notice:

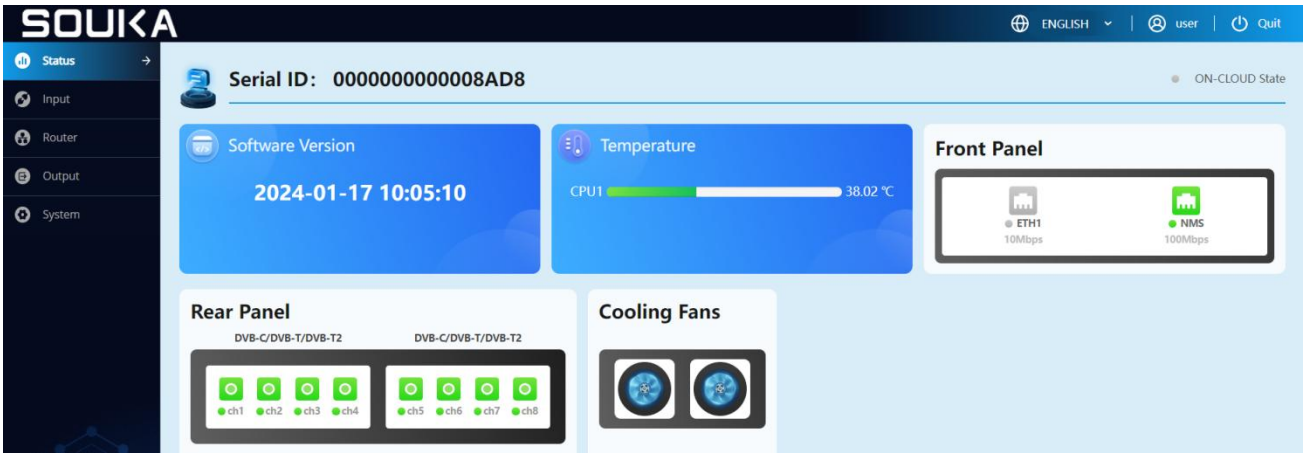
1. If the connection cannot be made, please check whether the PC and the device are on the same network segment. If not, please add a new network segment in the advanced TCP/IP settings of the PC. For example: the PC's IP address is 192.168.99.252, which can be changed to 192.168.1.xxx (xxx can be any value from "1" to "254" except "252" to avoid IP conflicts).

2. If you still cannot connect after the above operations, or you forgot to log in to the

IP address, please operate the front panel of the device to restore the factory default values.

3. If you need to change the language, please change it in the upper right corner of the page. Select ENGLISH/简体中文.

4.3. Status

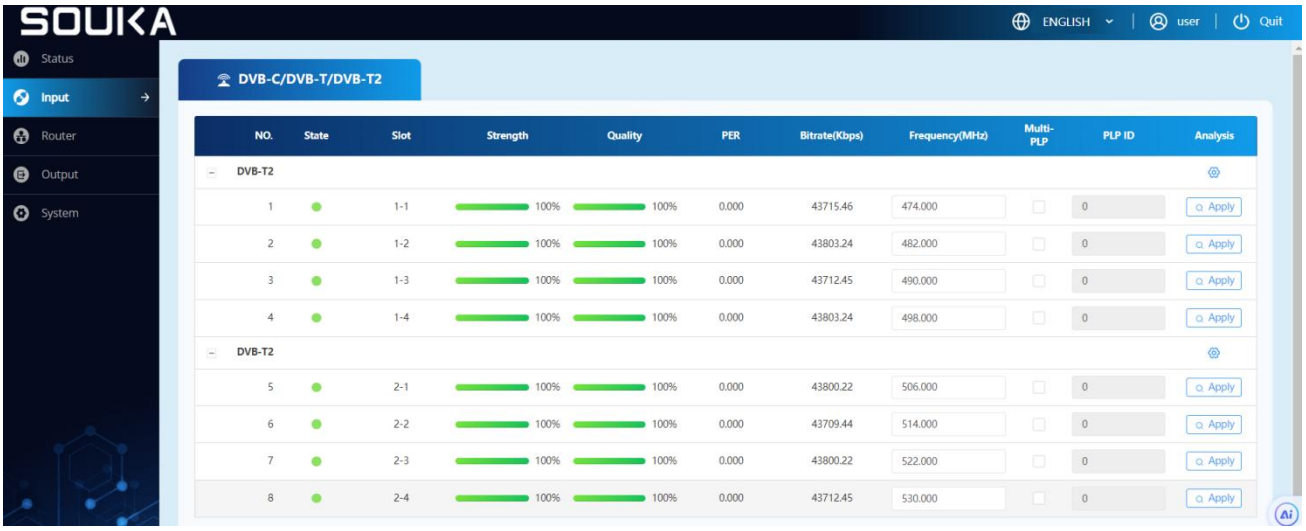


Serial ID	Display device serial number
Software version	Display the current software version number of the device
Temperature	Display the temperature of the device's core board, and display the number of temperature progress bars based on the number of core boards.
Front panel	Displays the current access status of the front panel. Green: connected; gray: not connected

Rear panel	Display the current access status of the rear panel. Green: connected; gray: not connected
Cooling fans	Display the operating status of the fans in the device. Under normal conditions, all fans will rotate. Blue: running; black: stopped; the fan stops running and a yellow triangle warning appears⚠
Language settings	简体中文/ENGLISH
User name	Display the user name currently logged in to the device backend
Quit	Exit the device background management terminal
Cloud network management binding status	Displays the binding status of the device on souka cloud. Green: bound; gray: unbound

4.4. Input

Each card of SKD7170 support air signal with 4 frequencies. During actual use, you can add the corresponding quantity of cards according to your own needs, up to 2 cards.

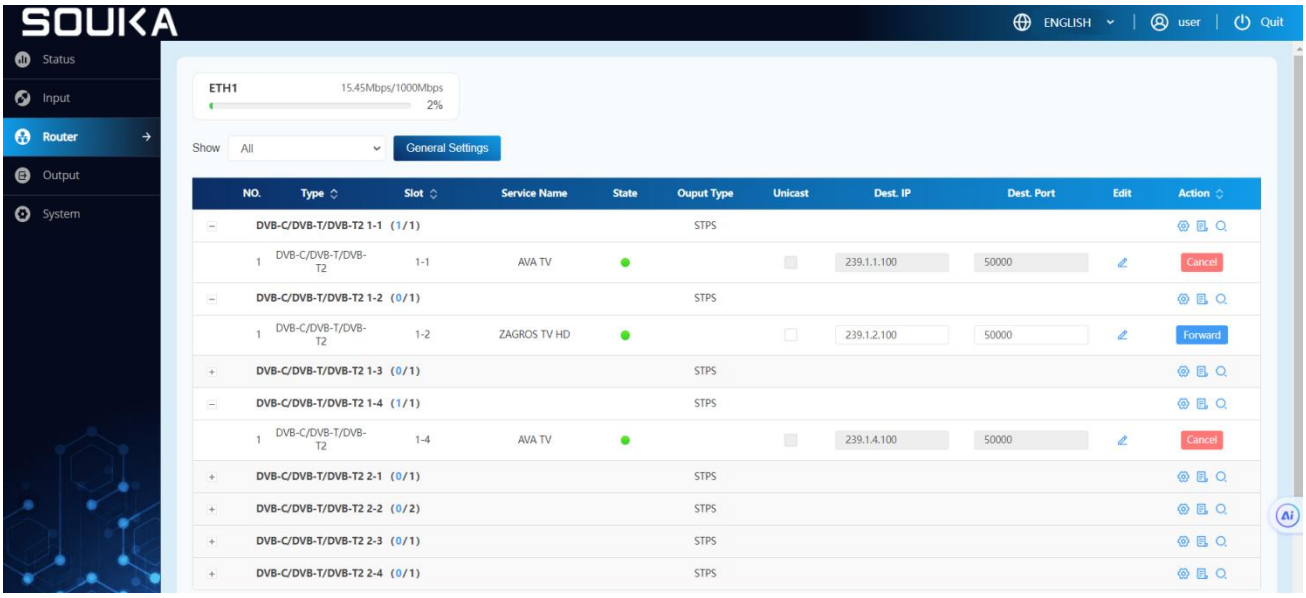


No.	Display the serial number of the channel number to visually display the number of channels
State	Display the signal status of the channel. ·Gray: Not connected; ·Green: The signal is locked and analyzed successfully;
Slot	Display the card and corresponding channel number. For example: 1-1 represents the first channel of card 1.
Strength	Displays the signal strength of each channel, the higher the signal strength, the better
Quality	Displays the signal quality of each channel. Orange indicates poor signal quality. The higher the signal quality, the better.
PER	Displays the bit errors of the signal for each channel
Bitrate (Kbps)	Display the code rate of the signal of each channel
Frequency	Unit: MHz Set according to actual needs. Value range: 50-999.999
Analysis	After clicking the Apply button, the signal of the channel is

	analyzed.		
	Setting	Modulation	DVB-C、DVB-T、DVB-T2 optional
		Symbol rate	Range 4.000-7.000
		Bandwidth	6M、7M、8M optional
	Apply	After clicking the Apply button, the signal of the channel is analyzed.	

4.5. Router

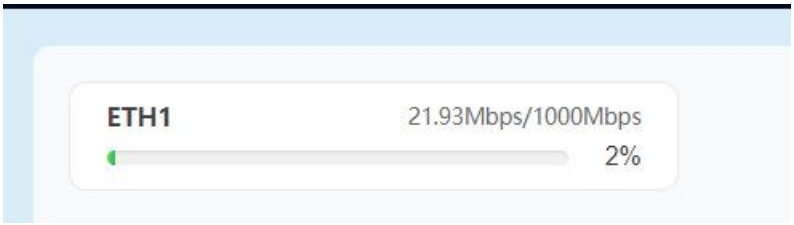
In routing management, we can analyze and forward programs.



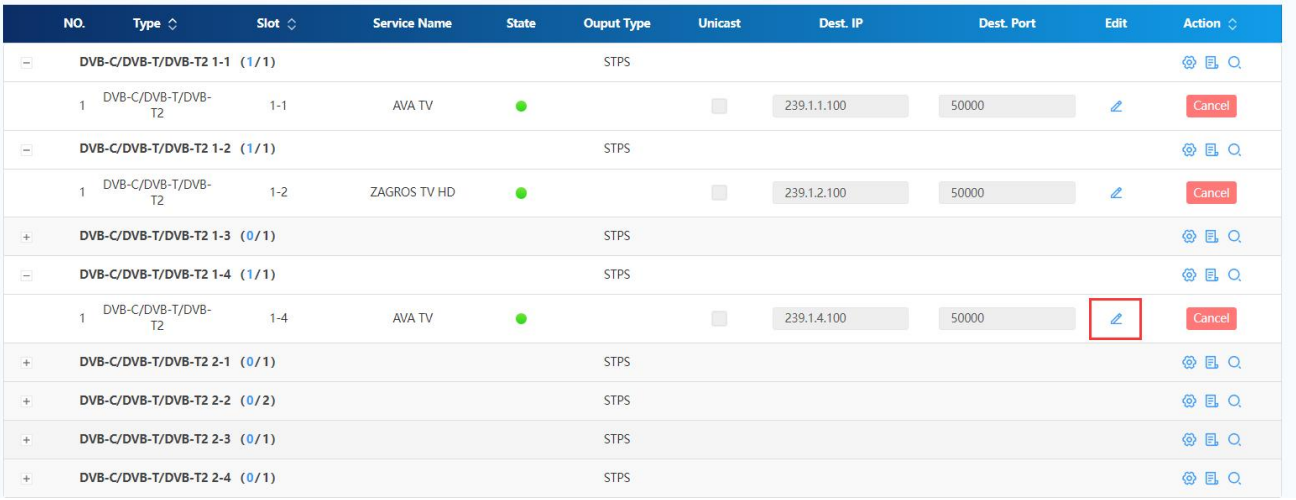
Type	Filter by the type of connected signal source.
General settings	Can modify output protocol, transmission mode, IP address, port number

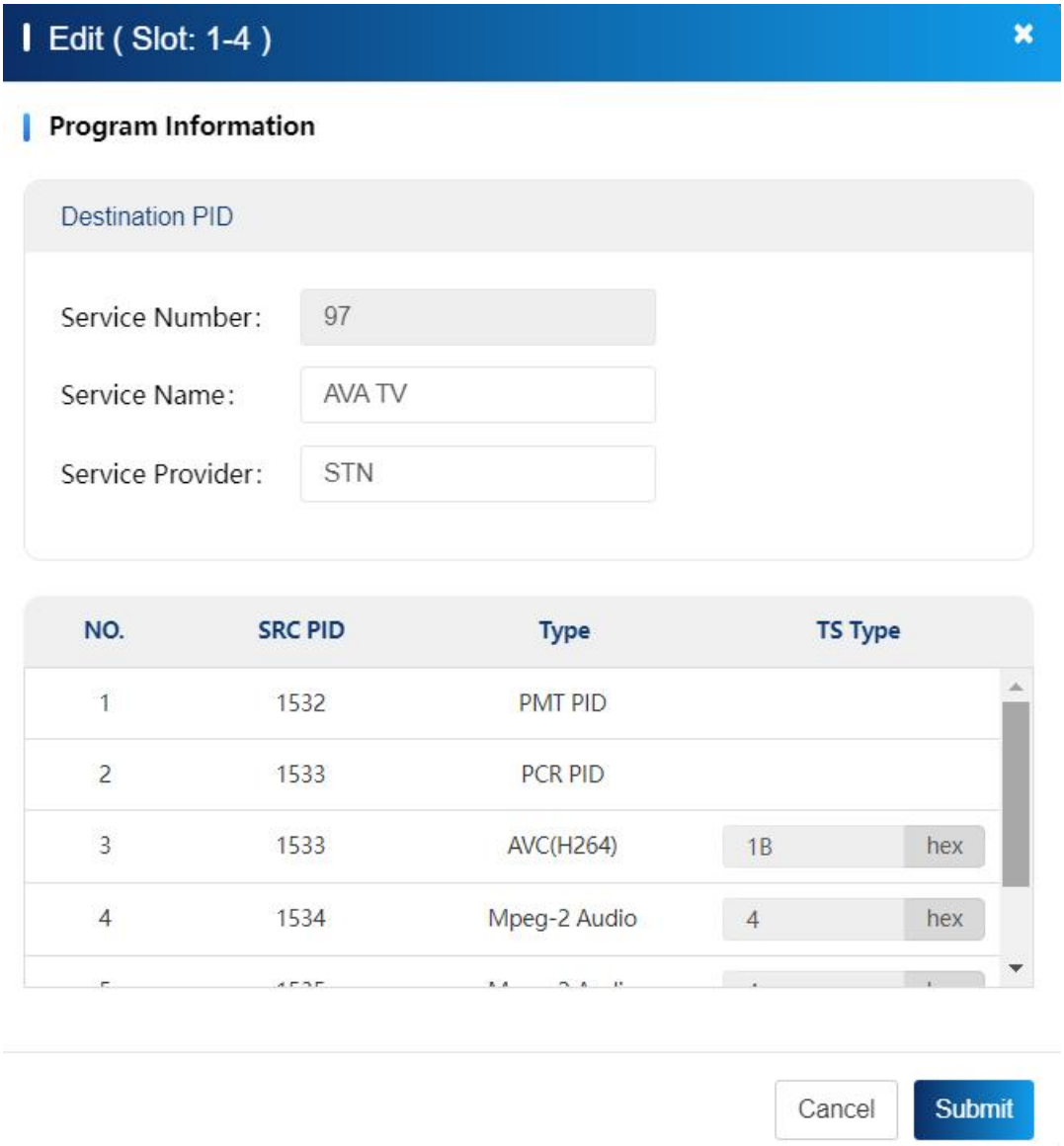
NO.	Represents: signal source card-channel (number of forwarded programs/total number of programs) Click the "+" sign to expand and display the program list under the channel. The programs can be set, analyzed and forwarded; Click the "-" sign to close the program list;
Type	Display the input type of this program
Slot	Display the input channel of the program
Service name	Display service name.
State	Display the status of the program, green: normal; red: interruption; yellow: PSI change; Program playback conditions are different in different states. When green and yellow, the program plays normally. When red, the program plays abnormally.
Output type	Display the output mode of this program（STPS/BYPASS） Forwarding is not possible in BYPASS mode.
Unicast	Check the checkbox to change it to a unicast IP address.
Dest. IP	Displays the IP address of the program. The multicast IP can be modified, but the unicast IP cannot be modified.。
Dest. port	Displays the port number of the program and can be modified.
Edit	Edit program information, which will be explained in detail below.

Forward	Forwarding a program, when clicked, it will turn into a cancel button, allowing you to cancel the forwarding.



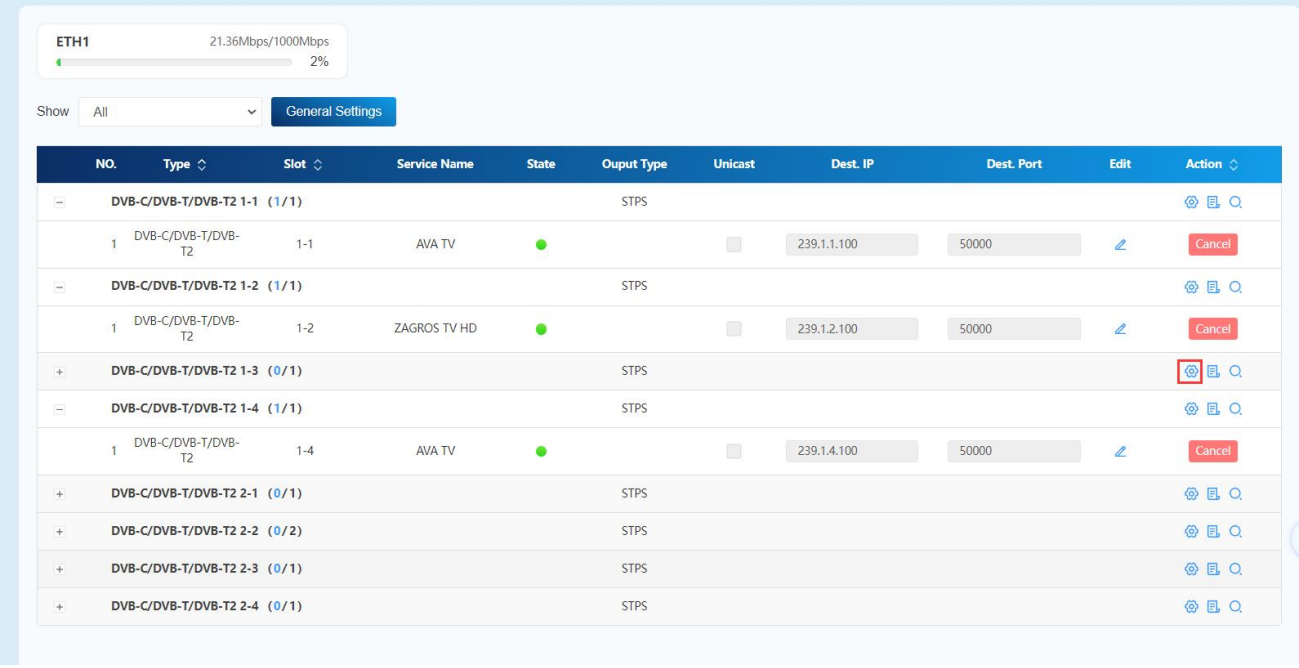
ETH1	There is only 1 output channel, which can support up to 1000Mbps.	
	Gray bar	Indicates a suitable bit rate range. When the bit rate of the forwarded program exceeds this range, the program may appear mosaic.
	Green bar	When a program is forwarded to a certain channel, the channel will display the bit rate of the program, represented by a green progress bar.

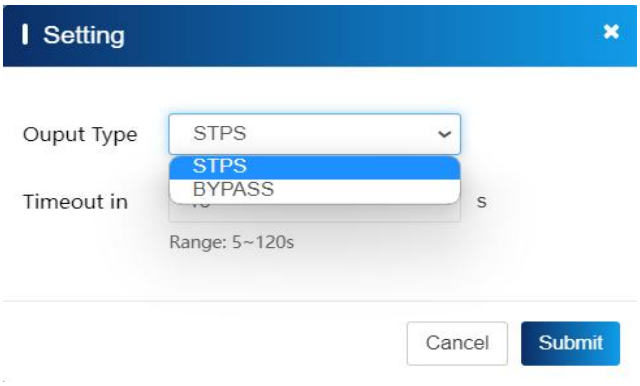




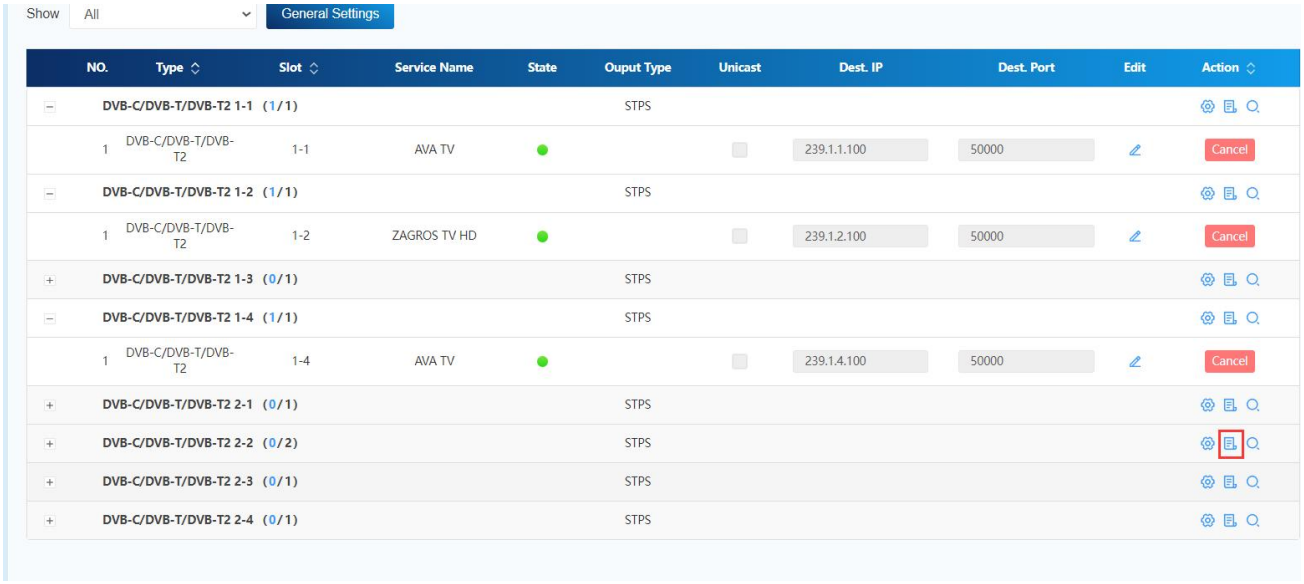
Detailed explanation of editing program information		
Destination PID	Service number	The program number is displayed and cannot be modified.
	Service name	Fill in the actual value, the value range is: 32 bytes.
	Service Provider	It is analyzed from the program source and does not need to be changed. The value range is: 32 bytes.
Detailed explanation of the table below the pop-up window		

No.		List serial number
SRC PID		Each media data stream has a unique PID that identifies the source and type of media packets
Type		The type of genre is determined by the content contained in the program source, and there may be more genres.
Type	PMT PID	Each program has a unique PMT PID that identifies the program's PMT.
	PCR PID	Each program needs an independent PCR PID to synchronize the audio and video streams of the program.
	AVC(H264)	Digital video encoding method
TS type	It is based on analysis of program source data and does not need to be changed.	
Cancel	Close editing page	
Submit	After the modified content is submitted successfully, it will take effect.	

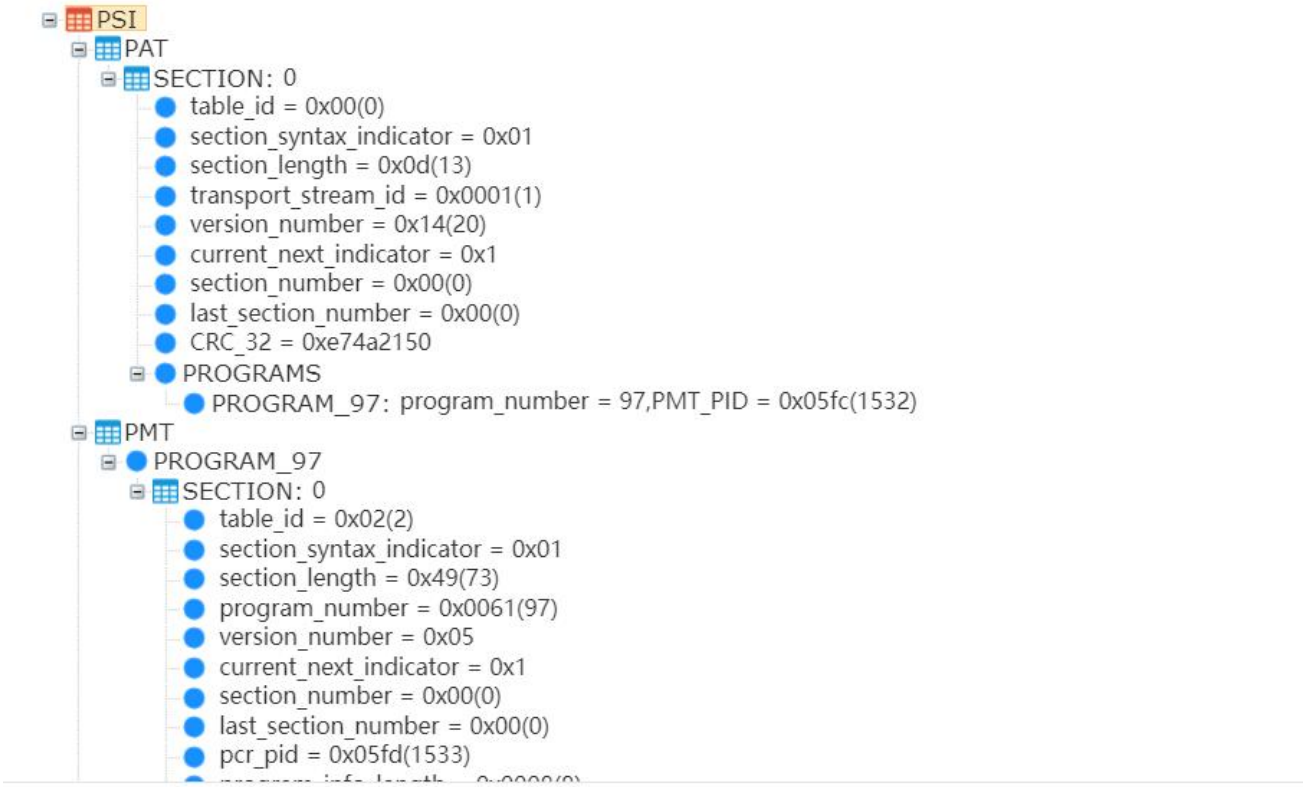




Setting	
Output type	STPS/BYPASS mode
Timeout in	Set the time to analyze the program, and stop the analysis after timeout. Value range: 5-120s

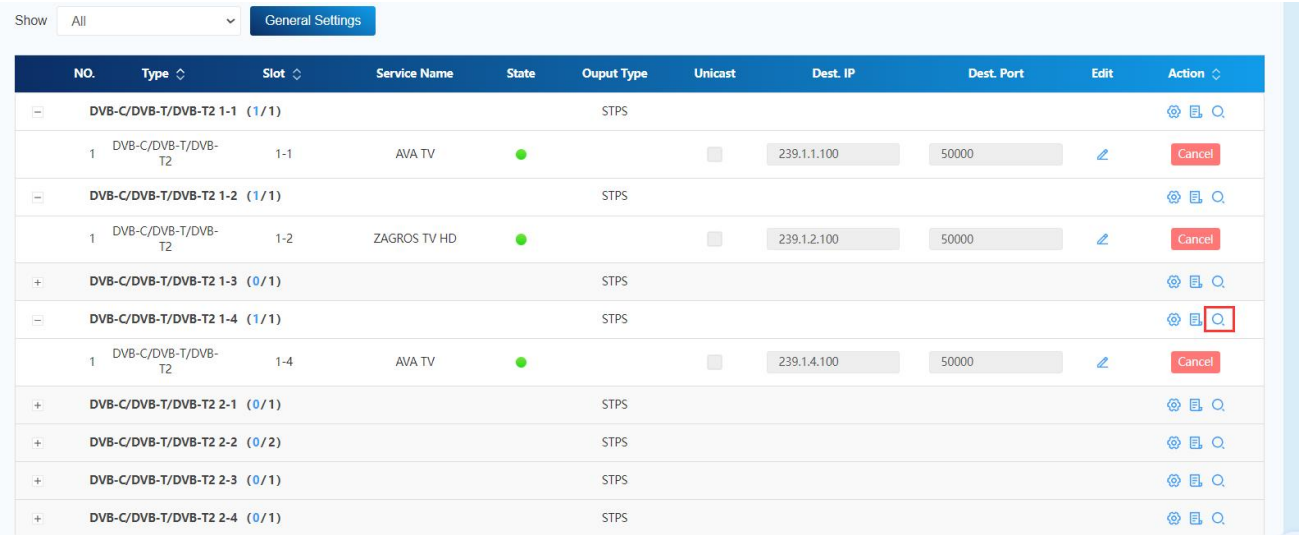


PSI/SI



DVB-C/DVB-T/DVB-T2 Source details	
PSI	PSI information consists of program association table PAT, program mapping table PMT and network information table SDT.
PAT	The program association table associates the program number with the program mapping table PID, which is the beginning of data acquisition;
PMT	Program mapping table, specifying the PID of one or more programs;

SDT	Describe various program and service information in the transmitted digital television signal

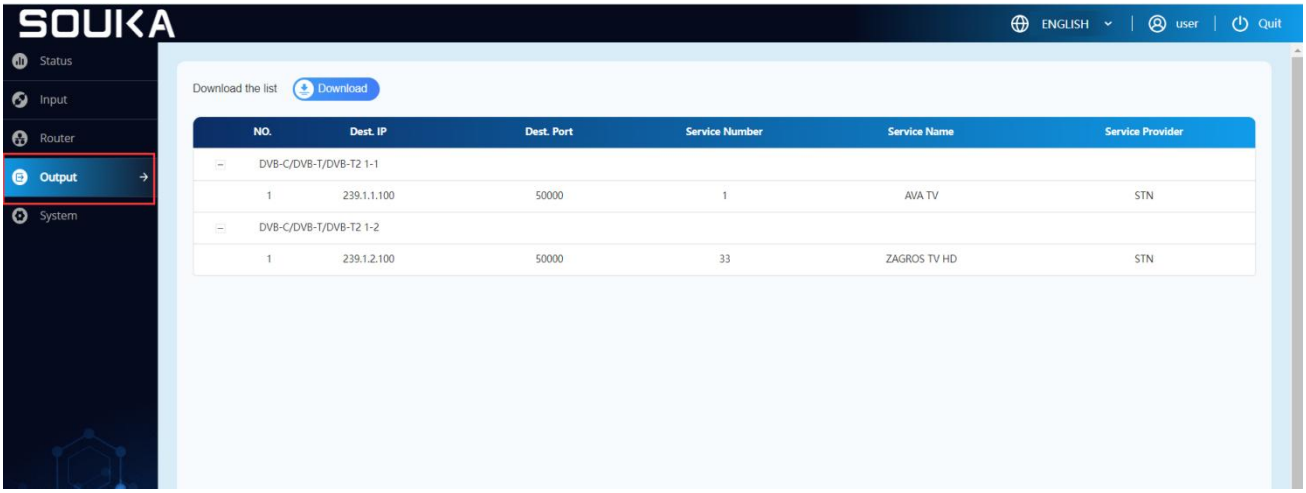


Analysis: Analyze the program from the source.

4.6. Output

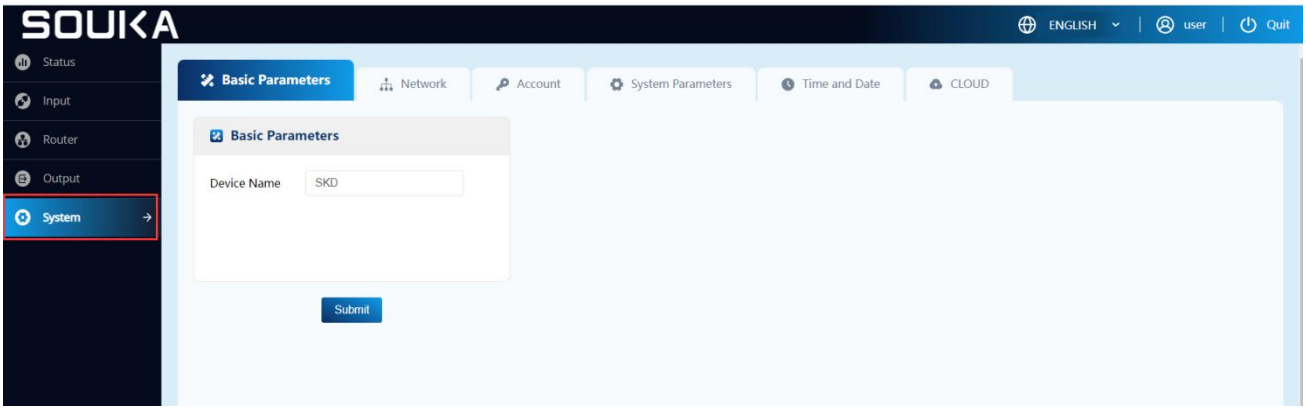
The output management mainly displays the output program information (No., Dest.

IP, Dest. Port, Service number, Service name, Service Provider). The forwarded programs will be displayed in the output management, and the output information can be downloaded.



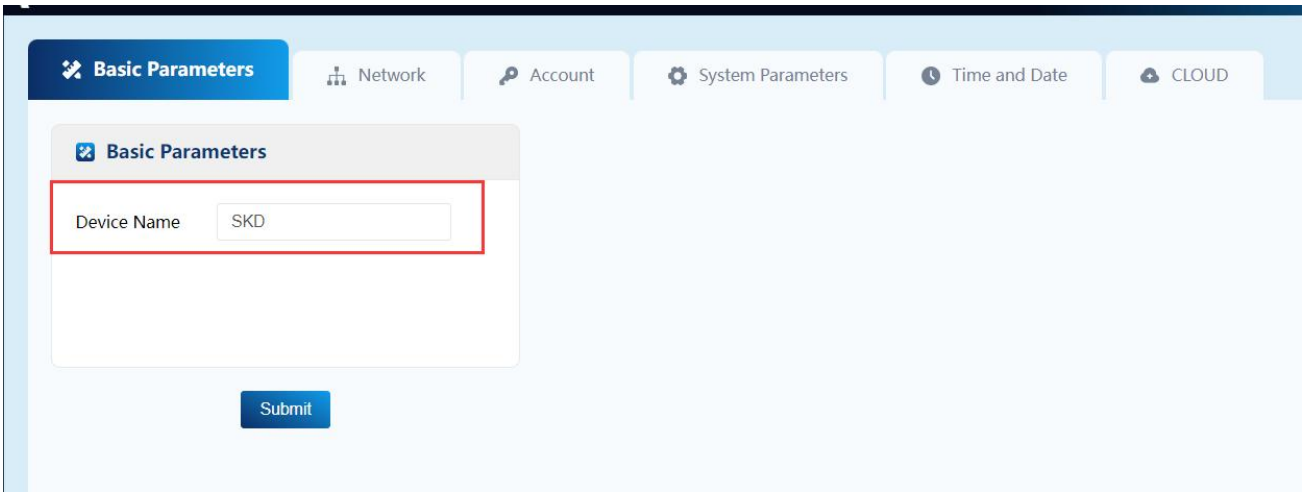
4.7. System

Able to set device name, network/IP input network port settings, password settings, system configuration, time settings and cloud network management binding.

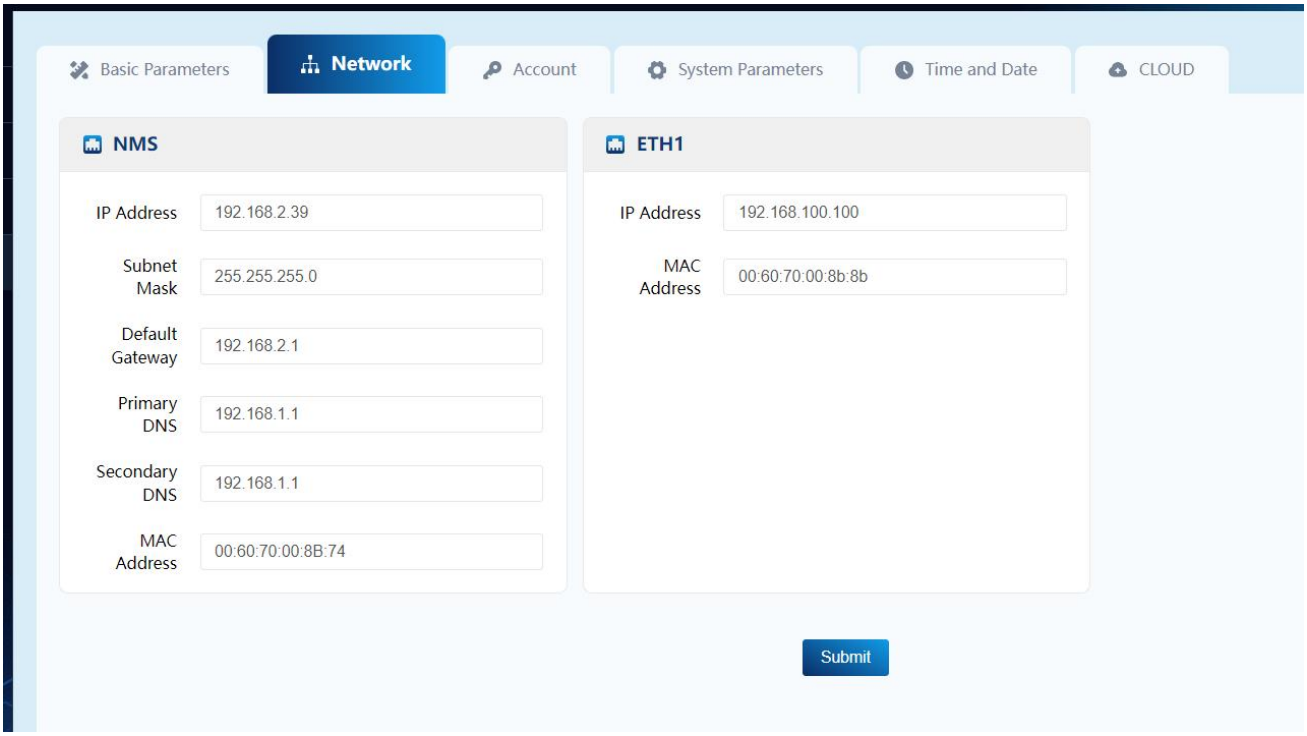


4.7.1. Basic parameters

Modify the device name and click Submit. A maximum of 32 bytes can be entered.



4.7.2. Network

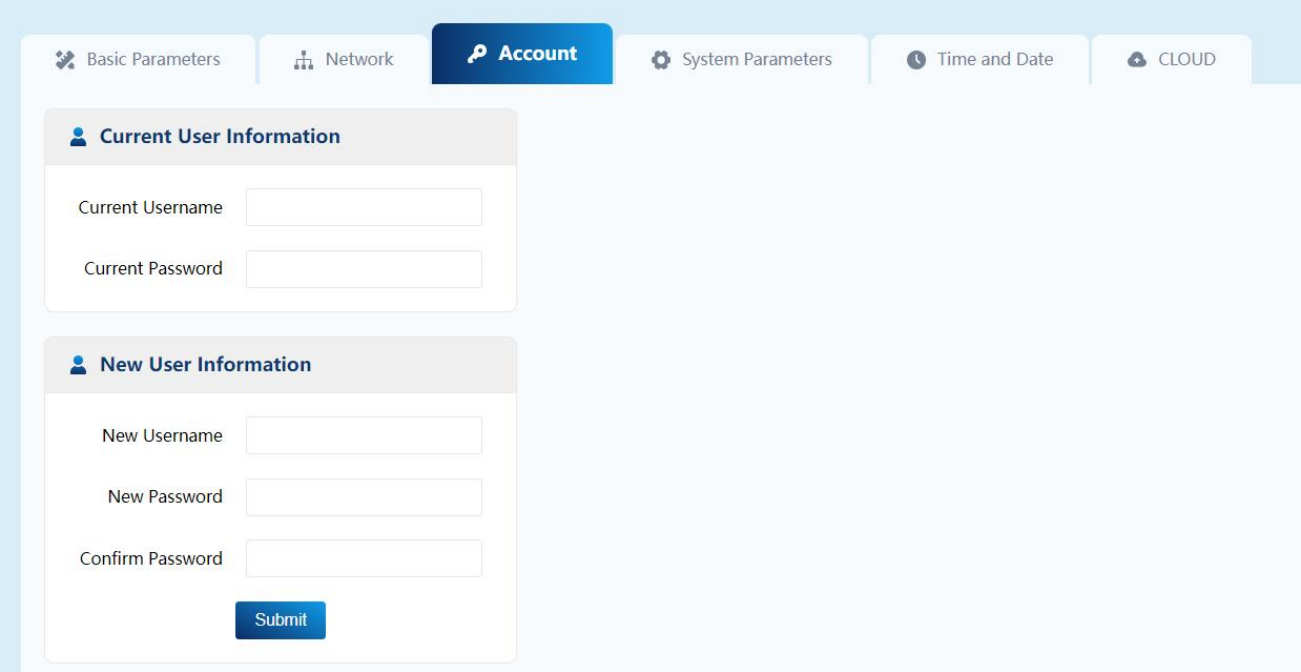


Network settings	
NMS	Network management port, connected computers must be in the same network segment.
ETH1	Network port 1, fill in according to actual needs.

4.7.3. Account

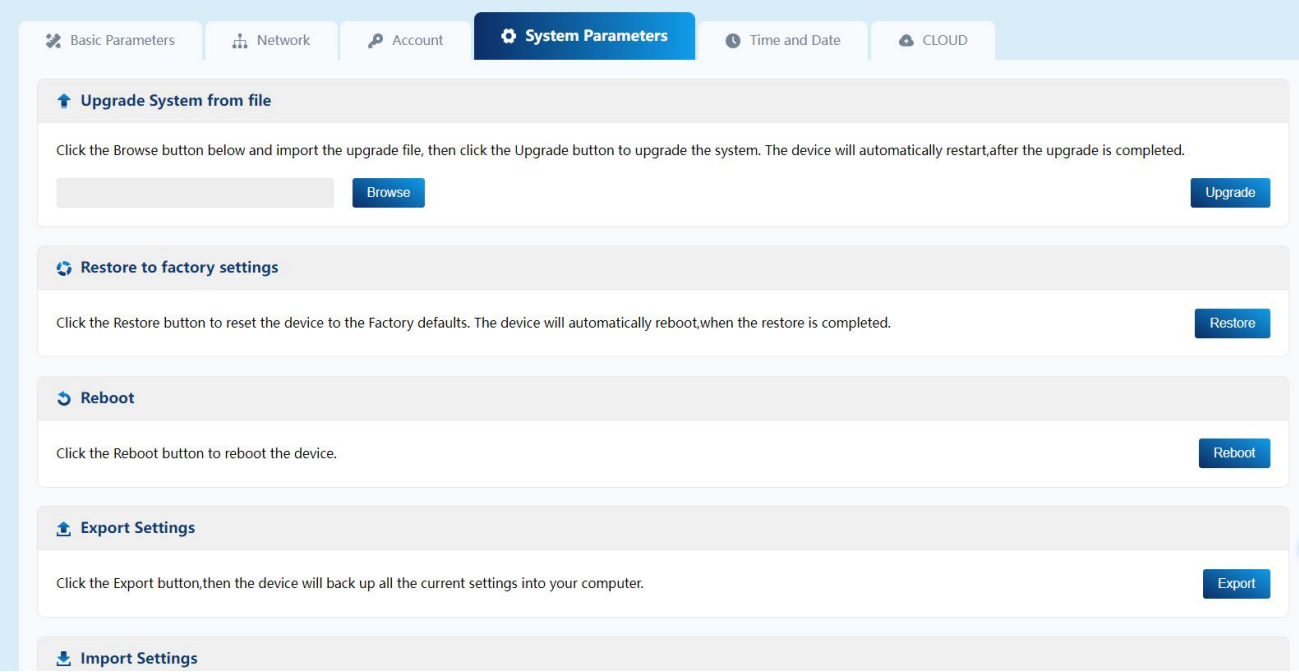
Reset a new username and password.

Operation steps: First fill in the user name and password in the Current User Information, and then fill in the new user name and password. Only when the current user name and current password are entered correctly can the password be modified.



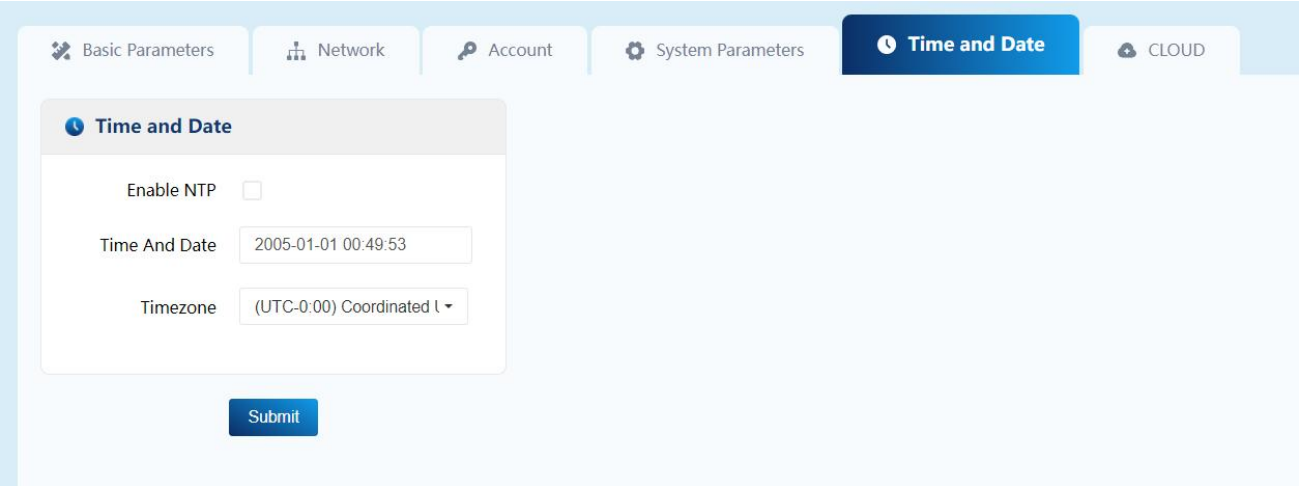
4.7.4. System parameters

In the system configuration, follow the operating instructions to upgrade the system, restore the factory, reboot, export the system configuration file, and import the system configuration file. The import and export files can manually back up the system configuration information. When you need to restore the previous configuration information, import the corresponding configuration file.



4.7.5. Time and Date

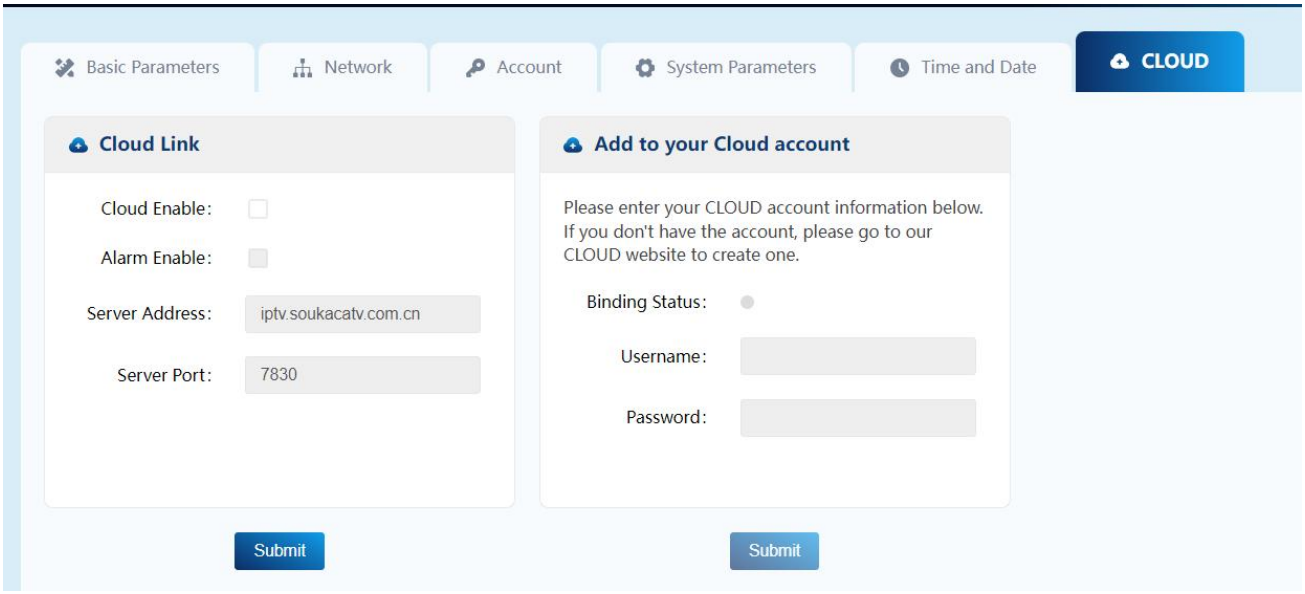
It can automatically calibrate time information, or manually set the time and adjust the time zone according to actual needs.



4.7.6. CLOUD

Please enter the cloud network management system account to bind the device. If you do not have an account, please register an account in the cloud network management system.

Enter the cloud network management account and password to bind. After the binding is successful, the binding status light turns green.



Cloud Enable	Cloud network management is enabled, checked by default. After unchecking, the device will be disconnected from the cloud network management.
Alarm Enable	Checked by default, device alarm information can be detected on the cloud network management.
Server Address	Fill in the server domain name of the cloud network management, default: iptv.soukacatv.com.cn
Server Port	Fill in the server port of the cloud network management, the

	default is 7830
Binding Status	Green: Binding successful; Gray: Unbound
Username	User name registered on the cloud network management system
Password	Password registered on the cloud network management system

5. Equipment operation precautions

The company's product quality assurance system includes equipment testing and operating procedure inspections to ensure the reliability of product quality. The company has taken all possible measures before the product leaves the factory. The optical, electrical and mechanical indicators of the products all meet national standards. During use, in order to prevent possible potential problems, the following precautions should be strictly followed for relevant operations.

5.1. Precautions

1. Place the device at an ambient temperature of 0~45°C. Other conditions meet the required scope of work.

2. Make sure the rear panel radiator is well ventilated and make sure all jacks are not blocked

3. Check whether the power supply voltage is within the specified range and whether all connections are correct

4. Check whether the adjustment level (dB) change is within its allowable range

5. Check whether the connection of each signal line is loose.

6. Please do not switch machines frequently (the switching interval should be at least 10 seconds)

5.2. The chassis needs to be unplugged from the power supply

1. The power cord or socket is damaged
2. If there is liquid injection equipment
3. Any debris falls into the chassis hole, causing an internal short circuit
4. Use water or soak
5. Collision or internal damage
6. Do not use this machine for a long time
7. If the preset is restored and the power is turned on, the device still does not

work properly

8. Equipment needs maintenance

5.3. Common malfunctions

1. Missing program: Please check whether there is a channel conflict, whether the video signal input is normal, and restart the device.

These terms are subject to change without prior notice, and we reserve the right of final interpretation. If you have any further questions, please contact our sales department directly.