

# SKD7150 User Manual (8 Tuners to IP Encoder)



# **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

The SKD7150 series is a platform product for centralized processing of small digital or IPTV front-end services. The installation method is flexible and can be installed in cabinets, wall-mounted, and desktop. Device parameter configuration can be operated through local or cloud network. The WEB page is beautiful and easy to understand, and the operation is simple. It has intelligent functions such as parameter batch import, export and exception reminder. It is a device that highly integrated, cost-effective IPTV front-end signal comprehensive processing equipment.

#### 1.1. Product picture

#### Front panel



#### Rear panel





## 1.2. SKD7150 parameter

SKD7150 Host performance parameters		
Size	318(L)*260(W)*44(H)mm	
Installation form	1U19inch chassi	s, Wall hanging, desktop
Working temperature, humidity	-10°C-45°C、40%-70%	
Storage temperature and humidity	-40°C-70°C、40%-95%	
Power	Supply voltage	DC12V
parameters	Maximum current	7000mA
Conector	Total number of slots	2
parameter of input module	Each slot can support modules	4 DVBS/S2 encoding module
IP output	IP output conector	1 Gigabit RJ45 network port
parameter	Output format	Supports UDP/RTP protocol output, supports SPTS/MPTS stream processing, and supports 256 IP addresses

## 1.3. Features of products

- Card design, 2 cards with 8 DVBS/S2 input
- Support 4-8 channels, DVBS-S2 input, supports BISS descrambling (optional)
- Support UDP/RTP protocol input, support SPTS/MPTS steam processing
- Supports PID remapping, PSI/SI information editing and insertion
- Supports optional MPTS or SPTS output. In MPTS, the maximum supported is 8 IP addresses; in SPTS, the maximum supported is 256 IP addresses.
- 1 Gigabit port and 1 management port
- Operated through PC (WEB), the device supports cloud management



# 1.4. Application scenarios

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

# 2. Structure diagram

# Front panel



Number		Function
4	PER	This indicator light lights up when the device is powered on
· ·	RUN	This indicator light lights up when the device is running
	CH1	When the No. 1 port receive the signal, the indicator light lights up.
	CH2	When the No. 2 port receive the signal, the indicator light lights up.
	СНЗ	When the No. 3 port receive the signal, the indicator light lights up.
2	CH4	When the No. 4 port receive the signal, the indicator light lights up.
	CH5	When the No. 5 port receive the signal, the indicator light lights up.
	CH6	When the No. 6 port receive the signal, the indicator light lights up.
	CH7	When the No. 7 port receive the signal, the indicator light lights up.

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	CH8	When the No. 8 port receive the signal, the indicator light lights up.
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.

## Rear panel



Number	Function	
	CH1	Signal input connector
4	CH2	Signal input connector
1	CH3	Signal input connector
	CH4	Signal input connector
	CH1	Signal input connector
2	CH2	Signal input connector
2	CH3	Signal input connector
	CH4	Signal input connector
3	Switch	
4	Ground	
5	Power inlet	

# 3. Installation guide

# 3.1. Installation preparation

When installing the device, follow these steps:

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- 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 5~40°C, and for short-term work in an environment of 0~45°C, 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 25mm2.

#### 3.4.1. Cabinet grounding

The ground terminals of each cabinet in the same computer room should be connected to the protective ground copper bar provided by the control room. The grounding wire is required to be as short as possible. If the wiring is too long during project installation, it should be cut off to avoid coiling of the grounding wire. The cross-sectional area of the conductor from the ground terminal to the ground bar must be greater than or equal to



25mm2.

# 4. Built-in web management terminal operation

#### 4.1. Preparation before operation

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

## 4.2. Login interface

- 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

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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. Device status



Devise serial	Display device serial number
number	
Software	Display the current software version number of the device
version	
	Display the temperature of the device's core board, and display the
Temperature	number of temperature progress bars based on the number of core
	boards.
Rear panel	Display the current access status of the rear panel. Green: connected;
	gray: not connected
	Display the operating status of the fans in the device. Under normal
Fans	conditions, all fans will rotate. Blue: running; black: stopped; the fan stops
	running and a yellow triangle warning appears <u>∧</u>



Frontal panel	Displays the current access status of the front panel. Green: connected;	
i Toritai parier	gray: not connected	
Language	然从中文/ENOLIGIA	
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	Displays the binding status of the device on souka cloud. Green: bound;	
management	gray: unbound	
binding status		

# 4.4. Input management



Serial number	Display the serial number of the channel number to visually display the
	number of channels
	Display the signal status of the channel.
Status	·Gray: The signal is not connected;
	·Green: The signal is locked and analyzed successfully;
Channel	Display the card and corresponding channel number. For example: 1-1
	represents the first channel of card 1.
Signal strength	Displays the signal strength of each channel, the higher the signal
	strength, the better
Signal quality	Displays the signal quality of each channel, the higher the signal quality,



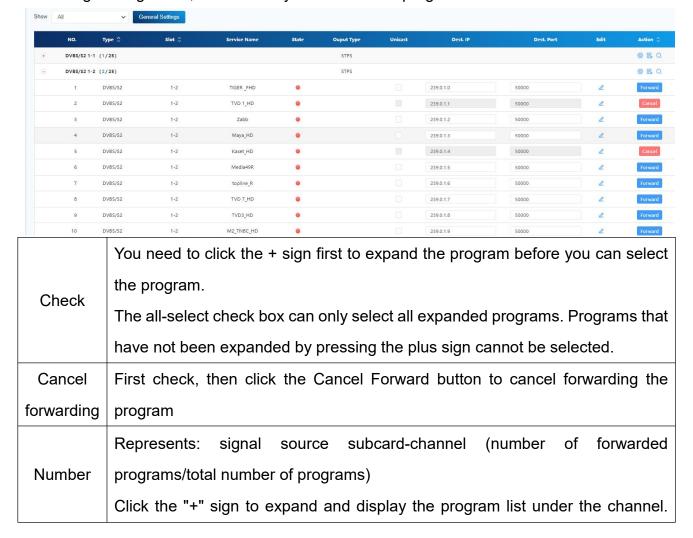
	the better
Signal frequency	Display the signal frequency offset value of each channel
deviation (MHz)	
MER	Displays the bit errors of the signal for each channel
Code rate (Kbps)	Display the code rate of the signal of each channel
	The value range is 0-100000. Fill in according to the label of the tuner.
LNB	The outdoor unit of the satellite radio and television receiving system is
	composed of receiving antenna, feed source, tuner and transmission
frequency(MHz)	feeder. The tuner is the most front-end equipment in the entire satellite
	radio and television receiving system.
	Parameters of accepted satellites. First, you need to determine the
SAT	position of the tuner, confirm the parameter information of the aligned
	satellite, and then fill in the accurate values according to the satellite
frequency(MHz)	reference table provided by the merchant, or check the satellite
	reference table online.
	Parameters of accepted satellites. First, you need to determine the
	position of the tuner, confirm the parameter information of the aligned
Symbol rate	satellite, and then fill in the accurate values according to the satellite
(KHZz)	reference table provided by the merchant, or check the satellite
	reference table online, and match it with the downlink frequency. Value
	range: 1000-45000
	Feed options include 13V, 18V or OFF. The purpose of different voltage
	levels between 13V and 18V is to choose the polarization method of the
	satellite pot tuner. Different polarization methods correspond to different
LNB control	signal radiation methods and different signal strengths. Normally 13V
LINB CONTROL	should correspond to the vertical polarization method; 18V should
	correspond to the 18V horizontal polarization method. In actual
	situations, we don't know how long the user's coaxial line is, so the
	output voltage needs to change to compensate for the impact of the



	1	
	long coaxial line.	
22KHz	After checking, the satellite signal flows through the line of port 22K.	
	After the 22K switch receives this pulse signal, it is rectified by the	
	internal rectification circuit of the 22K switch and obtains a DC voltage	
	to drive the 22K switch from normally closed end conduction to normally	
	open end conduction. to achieve switching purposes. The function of	
	the 22k switch is to switch.	
DiSEqC	Optional A, B, C, D or off	
Analyze	ze After clicking the Apply button, the signal of the channel is analyzed.	

#### 4.5. Router management

In routing management, we can analyze and forward programs.

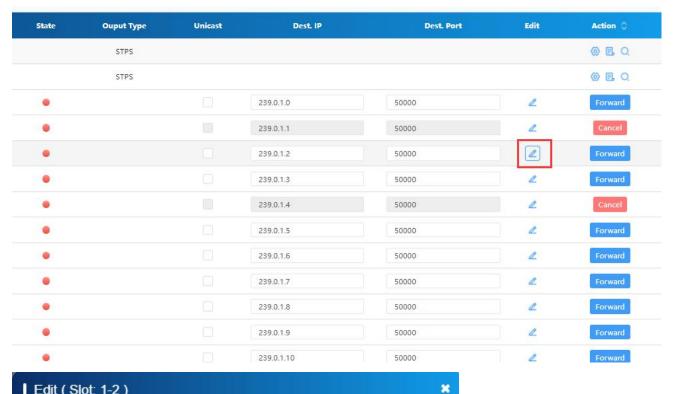


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	The programs can be set, analyzed and forwarded;	
	Click the "-" sign to close the program list;	
Туре	Display the input type of this program	
Channel	Display the input channel of the program	
Service	Display service name. It is analyzed from the program source and can be	
name	modified.	
	Display the status of the program, green: normal; red: interruption; yellow: PSI	
	change;	
State	Program playback conditions are different in different states. When green and	
	yellow, the program plays normally.	
	When red, the program plays abnormally.	
OUTPUT	Display information for single and multi-program streams	
TYPE	Display information for single and multi-program streams	
Edit	Edit program information, which will be explained in detail below.	
Famuor-1	Forwarding a program, when clicked, it will turn into a cancel button, allowing	
Forward	you to cancel the forwarding.	





# | Edit ( Slot: 1-2 )

#### Program Information





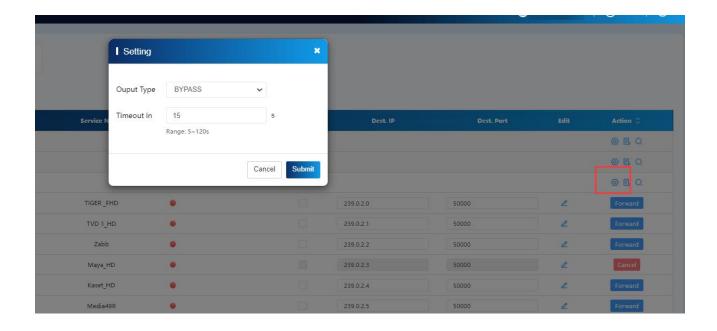


Detailed explanation of editing program information Target PID Fill in according to actual needs, the value range is: Target program

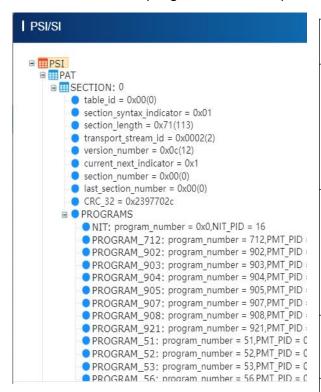


	number	1-65535. The content shown in gray below is the target
		program number analyzed in the program source.
	Target program	Fill in the actual value, the value range is: 32 bytes. The
		content shown in gray below is the name of the target
		program analyzed in the program source.
	Service Provider (Target)	It is analyzed from the program source and does not need
		,
		to be changed. The value range is: 32 bytes.
Number		List serial number
Cou	uras DID	Each media data stream has a unique PID that identifies
500	ırce PID	the source and type of media packets
	Tyroo	The type of genre is determined by the content contained in
	Type	the program source, and there may be more genres
	PMT PID	Each program has a unique PMT PID that identifies the
		program's PMT.
Tyma	PCR PID  AVC(H264)	Each program needs an independent PCR PID to
Туре		synchronize the audio and video streams of the program.
		Video compression standards
	Mpeg-2 AAC	Digital audio compression format
Submit	After the modified content is submitted successfully, it will take effect.	
button		
Cancel		
button	Close editing pag	ge
-		



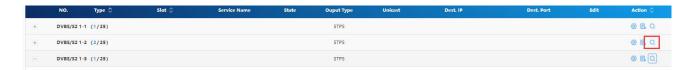


#### SPTS and MPTS program streams optional



	DVBS/S2 signal 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

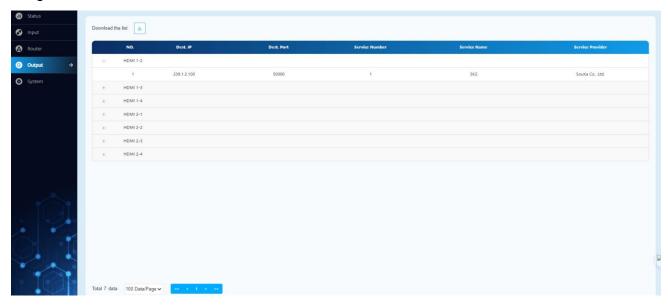




Analysis: Analyze the programs in the signal source. When not analyzed, the total number of black programs is 0.

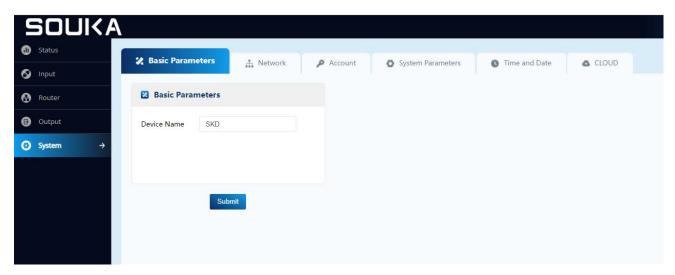
## 4.6. Output management

Program information lists can be downloaded in batches

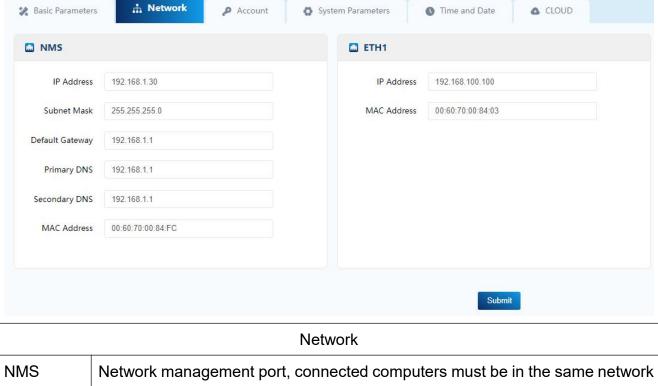


## 4.7. System management

Able to perform network and IP input network port settings, password settings, system configuration, time settings and cloud network management binding.



#### 4.7.1. Network setting



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

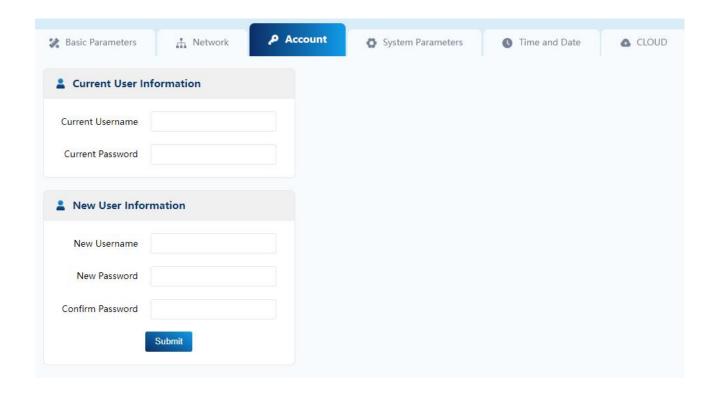
IGMP version: IGMPv1 defines the basic group member query and reporting process. IGMPv2 adds a mechanism for querier election and group member departure on this basis. The main function added in IGMPv3 is that members can specify to receive or not to receive certain Packets from the multicast source.

#### 4.7.2. Password setting

Reset a new username and password.

Operation steps: First fill in the username and password in the initial information, and then fill in the new username and password. Only when the initial username and password are entered correctly can the password be modified.

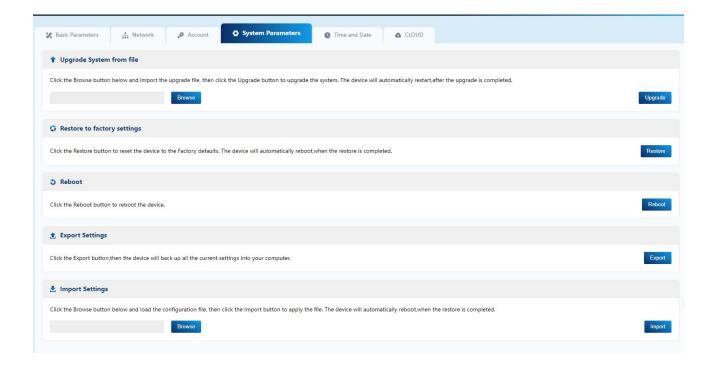




#### 4.7.3. System configuration

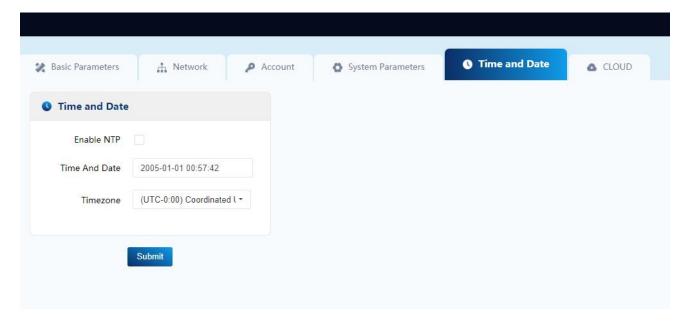
In the system configuration, follow the operating instructions to upgrade the system, restore the factory, restart, export the system configuration file, and import the system configuration file. The import and export files can manually back up the system configuration information. When you need to restore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





#### 4.7.4. Time setting

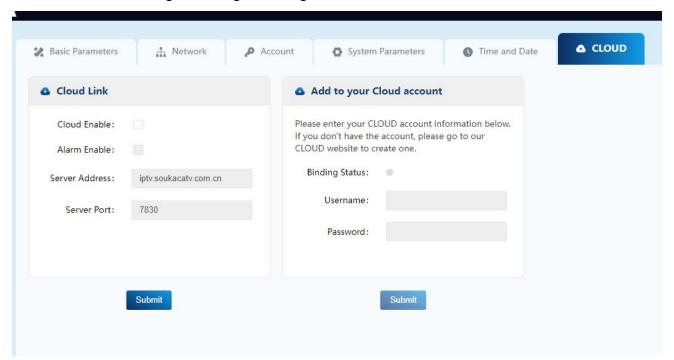
It can automatically calibrate time information, or manually set the time and adjust the time zone according to actual needs.





#### 4.7.5. Cloud network management binding

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.



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 domain	Fill in the server domain name of the cloud network management,
name	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	



## 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  $0\sim45\,^{\circ}$  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.