CMP320

Media Platform

User Guide

V1.1-W

Revision History

Date	Version	Description	Author
2019-09-02	1.0	First Draft	MC
2024-03-20	1.1	Fix some editing errors and format errors	JS

This guide contains some symbols to call your attention.

 DANGER	The DANGER symbol calls your attention to a situation that, if ignored, may cause physical harm to the user.
 CAUTION	The CAUTION symbol calls your attention to a situation that, if ignored, may cause damage to Our product.
 NOTE	The NOTE symbol calls your attention to important information.
 TIP	The TIP symbol calls your attention to additional information that, if followed, can make procedures more efficient.
 Red Arrow	The Red Arrow symbols point to import details mention the context above or below an image.
 Thick Arrow	The thick Arrow symbol calls your attention to a series of operation steps mentioned in the context.

This guide also contains the following text conventions.

Bold Italic	The bold Italic text indicates a button to click, an item in the drop-down menu to select, or a certain item in the UI.

Safety Instructions

- Read these instructions
- Keep these instructions
- Follow all instructions
- Heed all warnings
- Do not use this unit near water.
- Only use a damp cloth to clean chassis
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions
- This unit is grounded through the power cord grounding conductor. To avoid electrocution, do not remove the power cord before the outlet is switched off or unplugged. If the plug does not fit into your outlet, consult an electrician for replacement of the outlet.
- Route power cords and other cables so that they are not likely to be damaged.
- Only use attachments/accessories specified by the manufacturer.
- Do not wear hand jewelry or watch when troubleshooting high current circuits.
- Do not work on the system during periods of lightning.
- Refer all servicing to qualified service personnel. Servicing is required when this unit has been damaged in any way.
- **Damage Requiring Service**: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    - When the power-supply cord or plug is damaged.
    - If liquid has been spilled, or objects have fallen into the product.
    - If the product has been exposed to rain or water.
    - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. As an improper adjustment of the controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
    - If the product has been damaged in any way.
- **Replacement Parts**: When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer. Unauthorized part substitutions may result in fire, electric shock or other hazards.

Content

1 Chassis Overview

1.1 Front Panel

CMP320 series multi-channel DVB-S/S2 Gateway is designed for both cost-effective commercial TV systems and traditional DTV systems. The device supports 8/16 DVB-S/S2 input, 128 IP outputs. Due to its compact design and powerful function, it's widely used for such commercial market as hotel, hospital, community, club and campus as well as digital TV systems, where massive DVB-S/S2 programs are required to be received and converted to IP streams for further transmission in a cost-effective way.

1. Management Port
2. Data Port
3. Status and Power Indicators
4. Reset Button

1.2 Back Panel

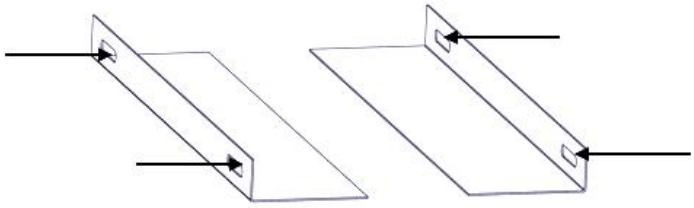
1. Card 1
2. Card 2
3. Card 3
4. Card 4
5. Power Outlet
6. Power Switch

2 Installation

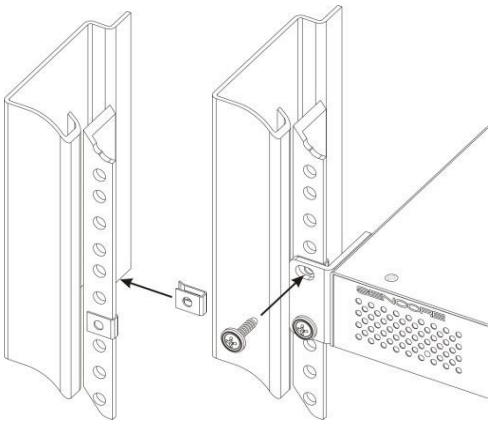
2.1 Rack Installation

The CMP320 is designed to be mounted in a standard 19” rack. It takes 1RU of rack space. To install it into a rack, please use the following steps:

1. Determine the desired position in the rack for the CMP320. Make sure that the air intake on the top of the unit and the exhausts on the back of the unit will not be blocked.
2. Install the brackets at desired position if there’s no supporting plate in the rack.



3. Insert the rack mount clips into place over the mounting holes in the rack.
4. Slide the CMP320 into the position in the rack.
5. Secure the chassis to the rack by installing four screws through the front mounting holes and tightening.



2.2 AC Power Connection

Please only use the supplied 3-prong power connector or one with equal specifications. NEVER tamper with or remove the grounding pin. This could cause damage to CMP320, personnel, or property. Make sure the power outlet is switched off before plug or unplug the power cable from the panel of CMP320.

When take the equipment from a cold condition into a much warmer and humid condition, the equipment should be acclimated to the warm and humidity condition for at least 30 minutes. Powering up a non-acclimated unit may lead to shortcut or other damage to electronic components.

3 Web GUI

3.1 Web GUI Overview

3.1.1 Connect the Management Port

Factory network settings of the Management Port:

- IP address 192.168.1.10
- Subnet Mask 255.255.255.0
- Gateway 192.168.1.254

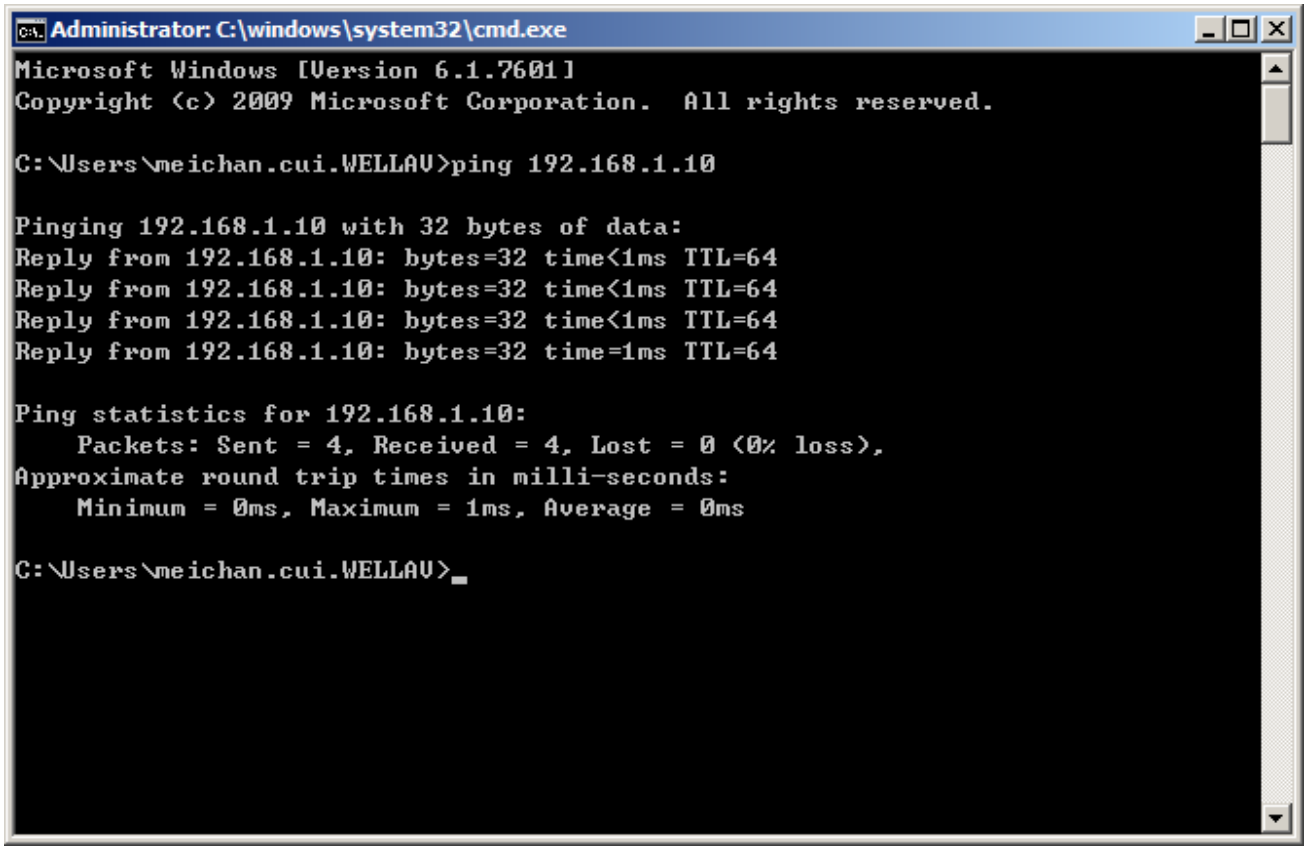
Factory network settings of the Data Port:

- IP address 192.168.2.10
- Subnet Mask 255.255.255.0

- Gateway 192.168.2.254

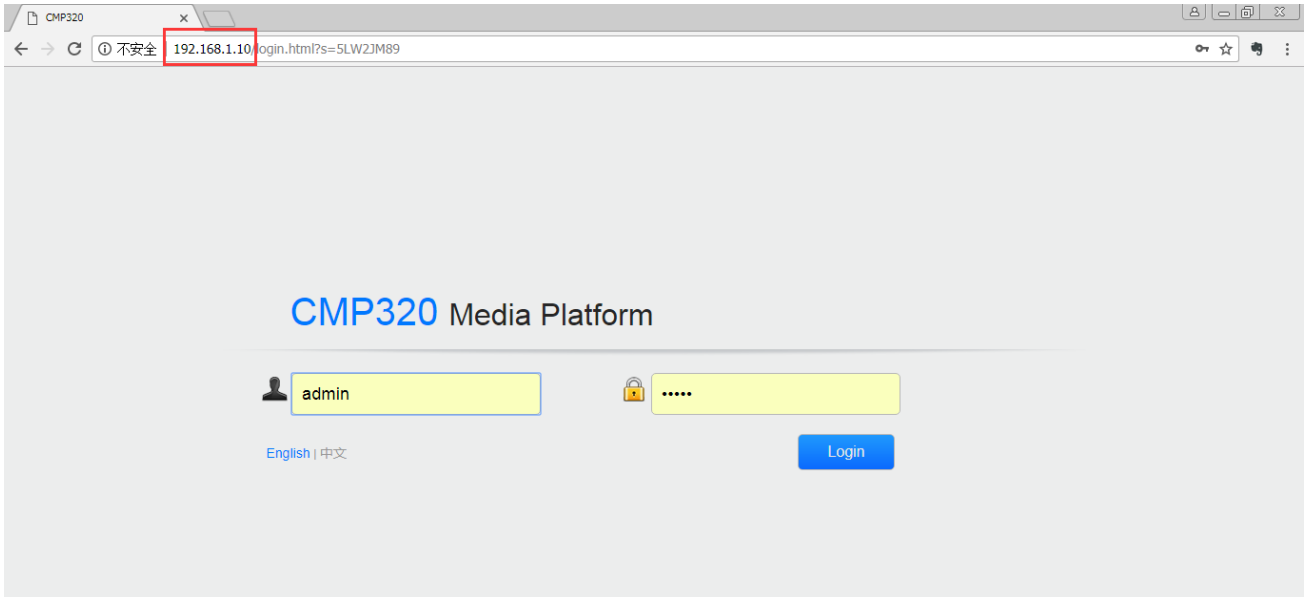
Take the following steps to access the Web GUI in a browser.

- Connect PC to CMP320 management port directly.
- Set the IP address of the laptop/computer in the same network segement as the CMP320 baseboard IP address. ***Please avoid possible IP address conflict between management PC and CMP320 unit.***
- Check the physical connection by ping command.



3.1.2 Log into the Web GUI

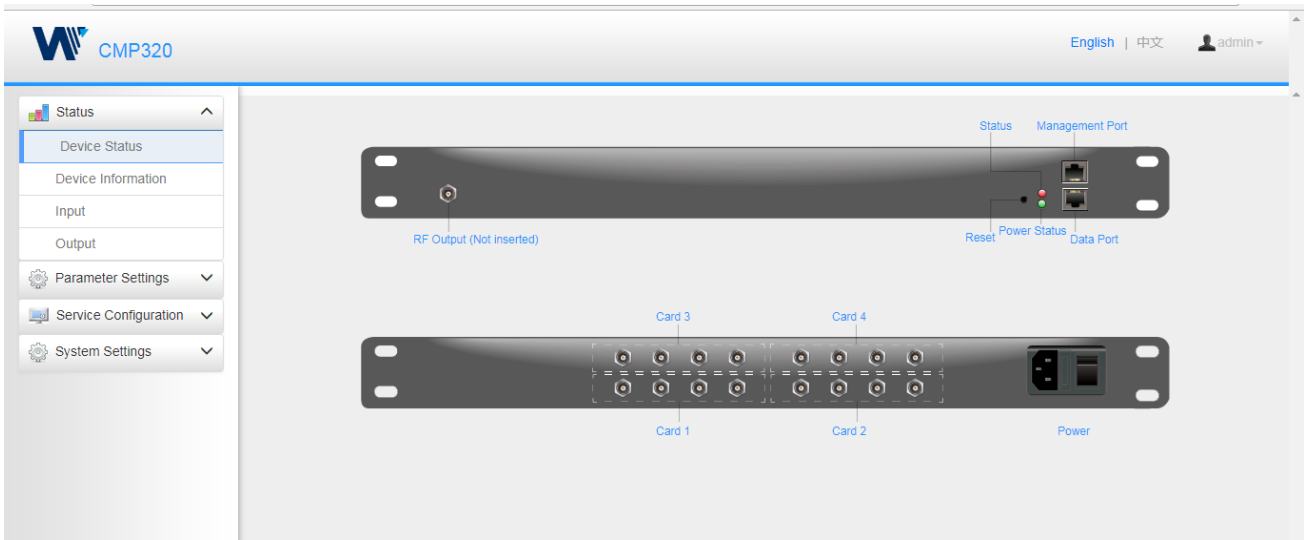
Enter the CMP320 baseboard IP address into the URL field of any recommended Web browsers (IE8 or above, Firefox, and Google Chrome) to access the login page. The default user name and password is admin/admin. Click ***Login*** to log into the GUI.



3.2 Status

3.2.1 Device Status

After a successful login, we will always enter the status overview page, where we can check the device status. ***Device Status*** page Explain CMP320's front panel and back panel.



We use only IE, Firefox and Chrome for testing procedures. If use other browsers, like Microsoft Edge, you may encounter incomplete UI layouts, and configure setting in these browsers may lead to errors.

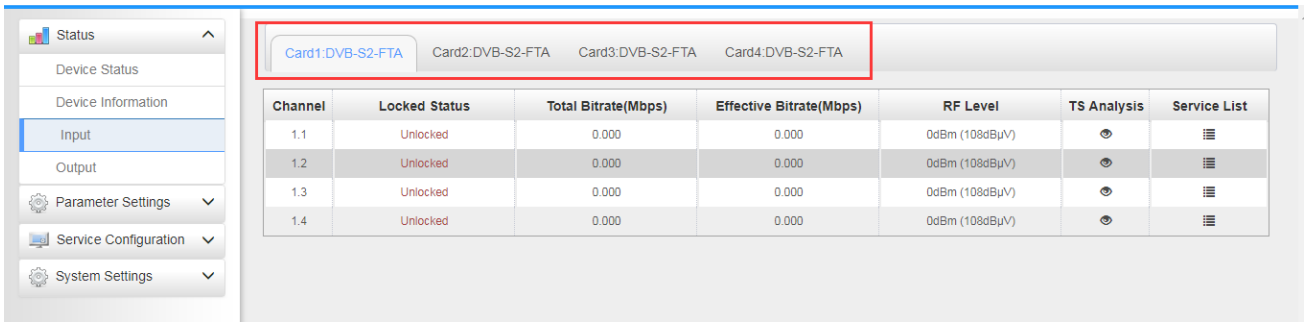
3.2.2 Device Information

Device Information page shows the firmware version, software version, and hardware version of baseboard.

Module	Firmware Version	Software Version	Hardware Version
Baseboard	V0.0.416	V1.0.12	V1.0.1

3.2.3 Input

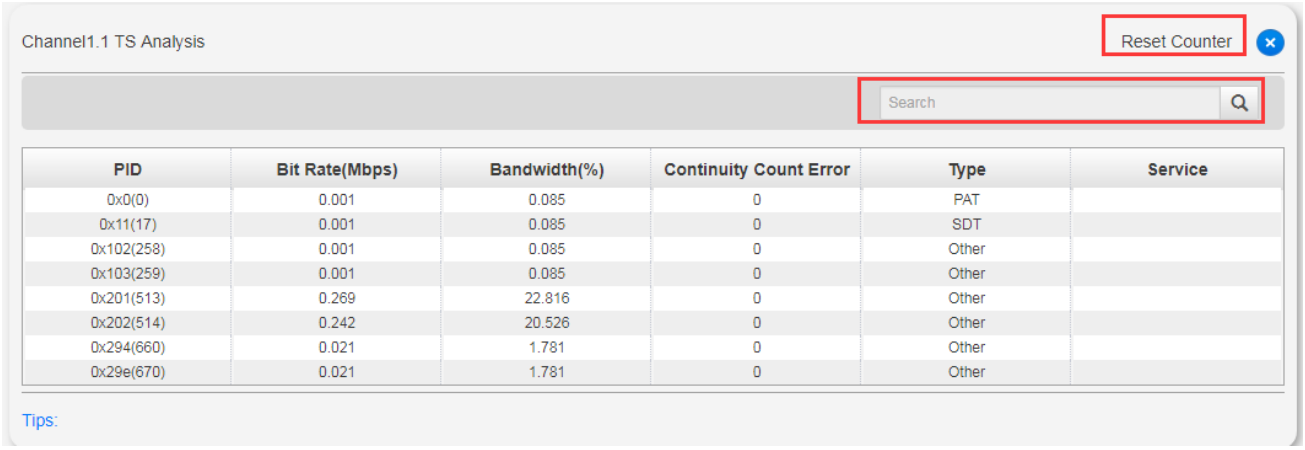
There are 4 embedded DVB-S2-FAT modules in CMP320. Each module has 4 channels. Select one module on top to see detailed information, including locked status, total bitrate, effective bitrate, RF level, TS analysis and service list.



Click the icon ( ) below the ***TS Analysis*** to see the TS analyzing result of this channel. Click the icon ( ) below the ***Service List*** to see the Services of this channel.

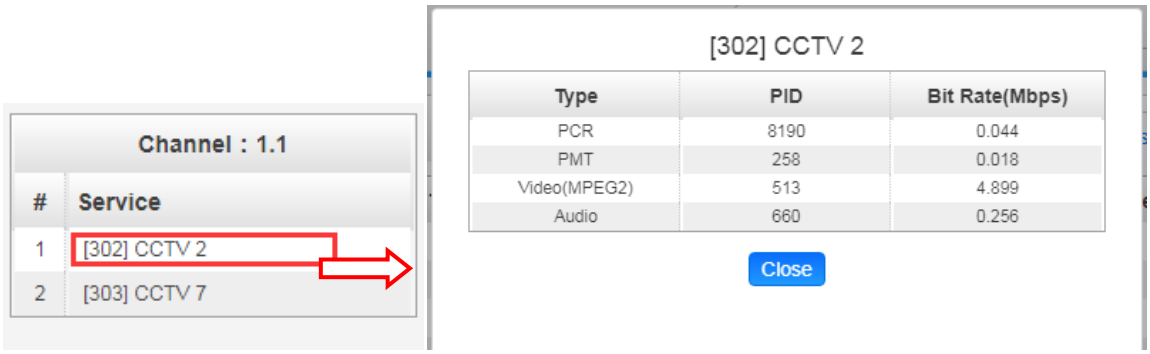
- **TS Analysis**

Click Reset Counter button to clear continuity count error and restart counting. Fill the key words of PID, bitrate, bandwidth, table type or service name in the search bar to check the info wanted.



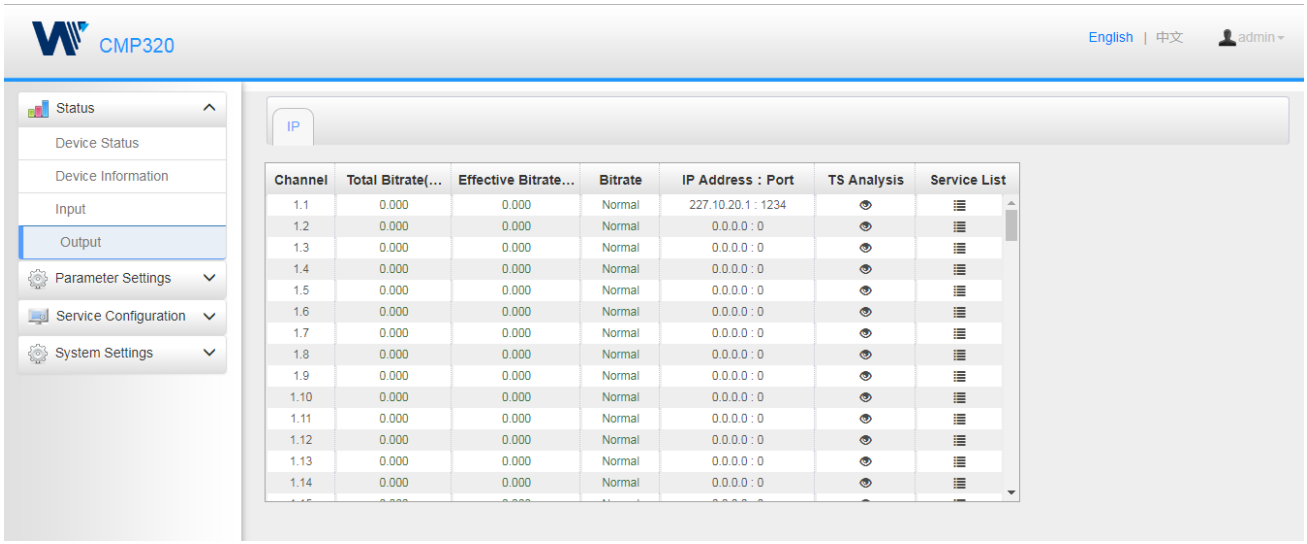
- **Service List**

Click the service name to check the detail info of this service.



3.2.4 Output

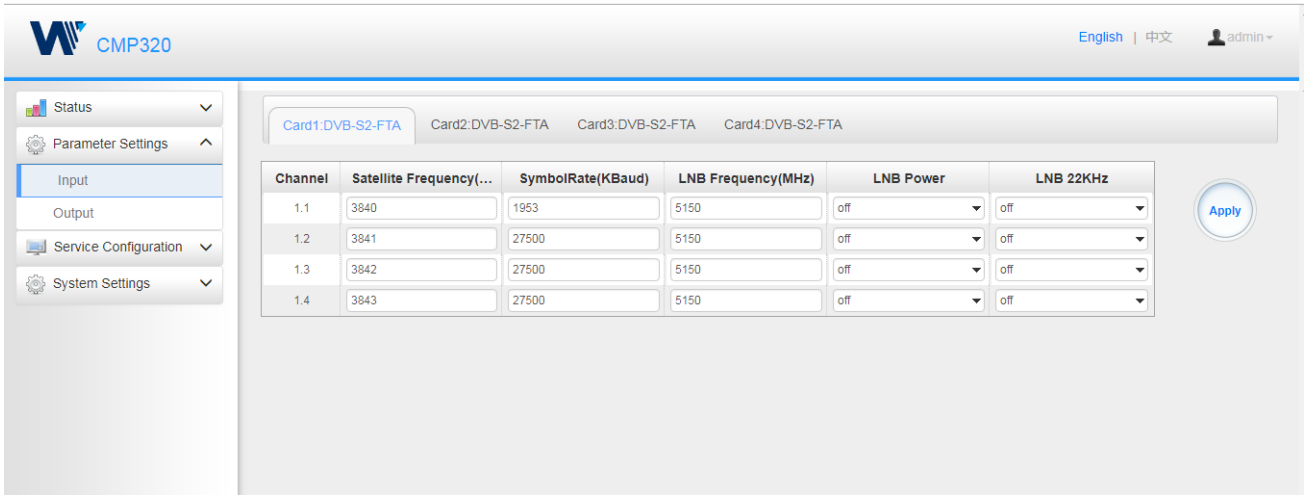
This page shows the following information: total bitrate, effective bitrate, bitrate status, IP address and port. TS analysis and service list function are also available.



3.3 Parameter Settings

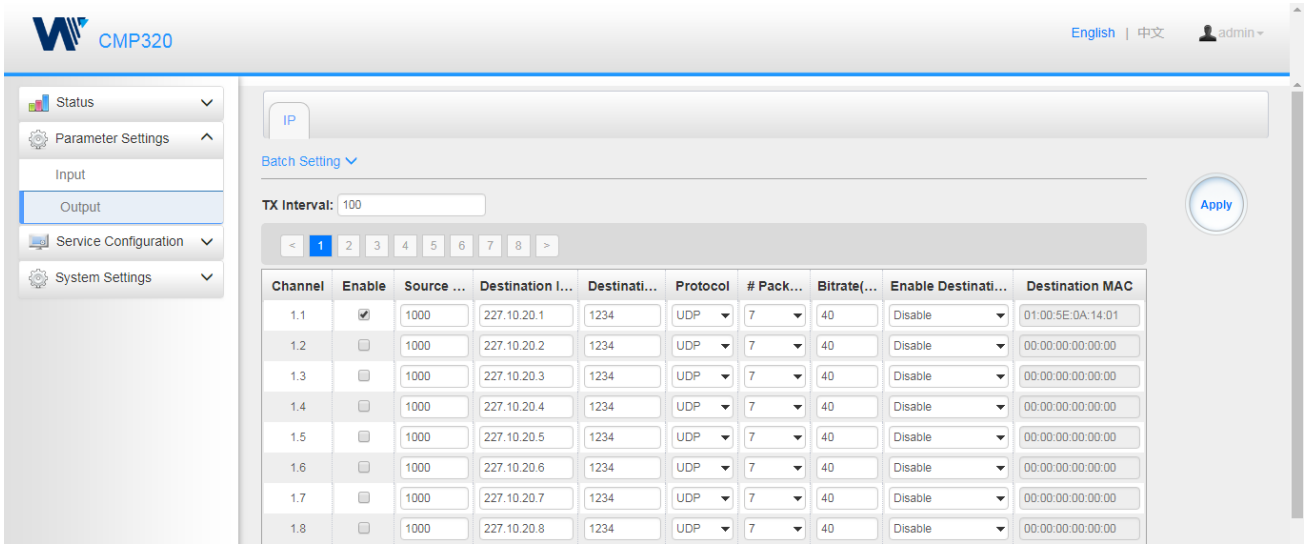
3.3.1 Input

Set the DVB-S2 signal receiving parameters in this page, including satellite frequency, symbol rate, LNB frequency. Click the ***Apply*** button in the right side to make the change take effect.



3.3.2 Output

To make the configuration of IP output parameters, need to set the TS sending interval, destination IP address and port, protocol (UDP/RTP), TS packets per IP packet, output bitrate. Click ***Apply*** to make the setting take effect.



- **Multicast output setting:** Fill the fit multicast IP addresses as output in the ***Destination IP Address*** *box.*

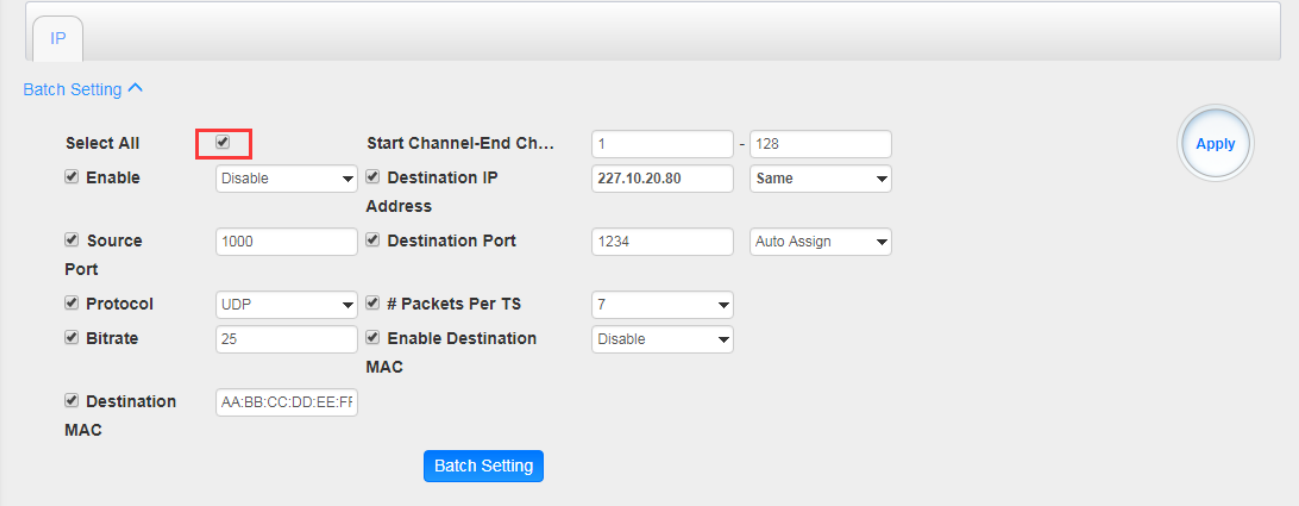
- **Unicast output setting:** Fill the unicast receiving end's IP addresses in the ***Destination IP Address*** box.

- **Destination MAC:** Normally, do not need to enable the Destination MAC switch, only in some specific case, when the unicast stream cannot be received due to unknown reason, should enable Destination MAC and fill the correct receiver MAC in instead of using unicast IP addresses.

Constant Rate of any output channel/TS/port ought to be set manually about 2 Mbps higher than the ***Effective Bitrate*** in the corresponding output channel/TS/port, since the ***Effective Bitrate*** might fluctuates a little bit. If set the ***Constant Rate*** much higher than the ***Effective Bitrate***, there will be lots of null packets in the output transport stream.

Configure a batch of channels, please click "Batch Setting"

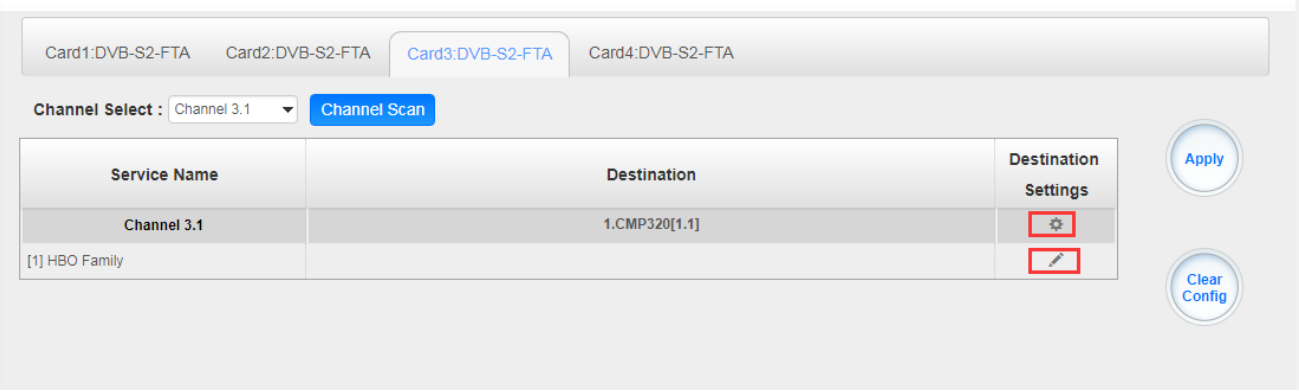
To batch set the IP input parameters, check the parameter box to make the modification. Click ***Apply*** to make the setting take effect.



3.4 Service Configuration

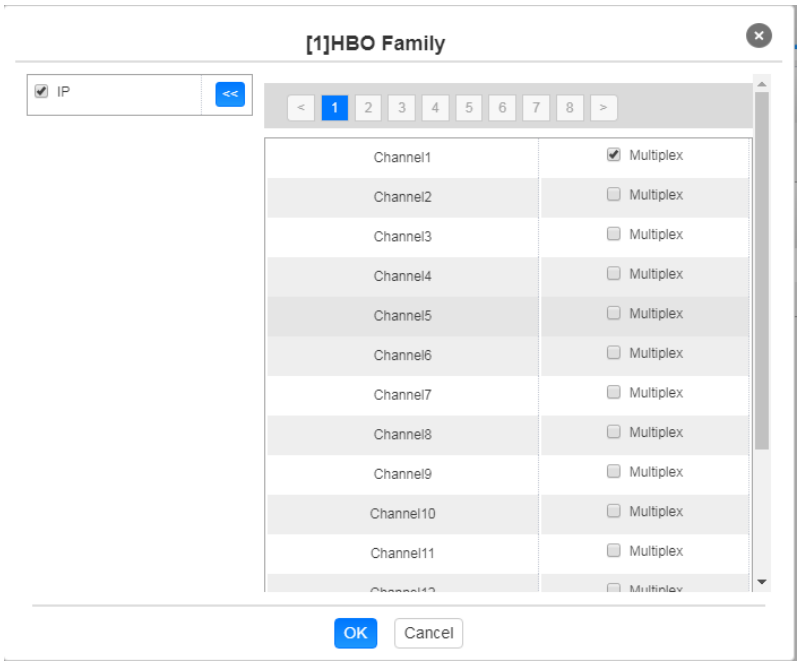
3.4.1 Input Service

To set input source streaming out, make the configuration of the destination in this page.



- **Multiplex or Bypass the stream: C**lick the channel line setting icon to make the whole stream multiplex or bypass out. Click the setting icon ( ), select the output mode. After selecting bypass mode, this output channel will be occupied only by this stream and when set other stream output from this channel, this channel will not be available in this time.

- **Multiplex services:** Click the service line setting icon ( ) to make the certain service output from certain channel combining with other services.

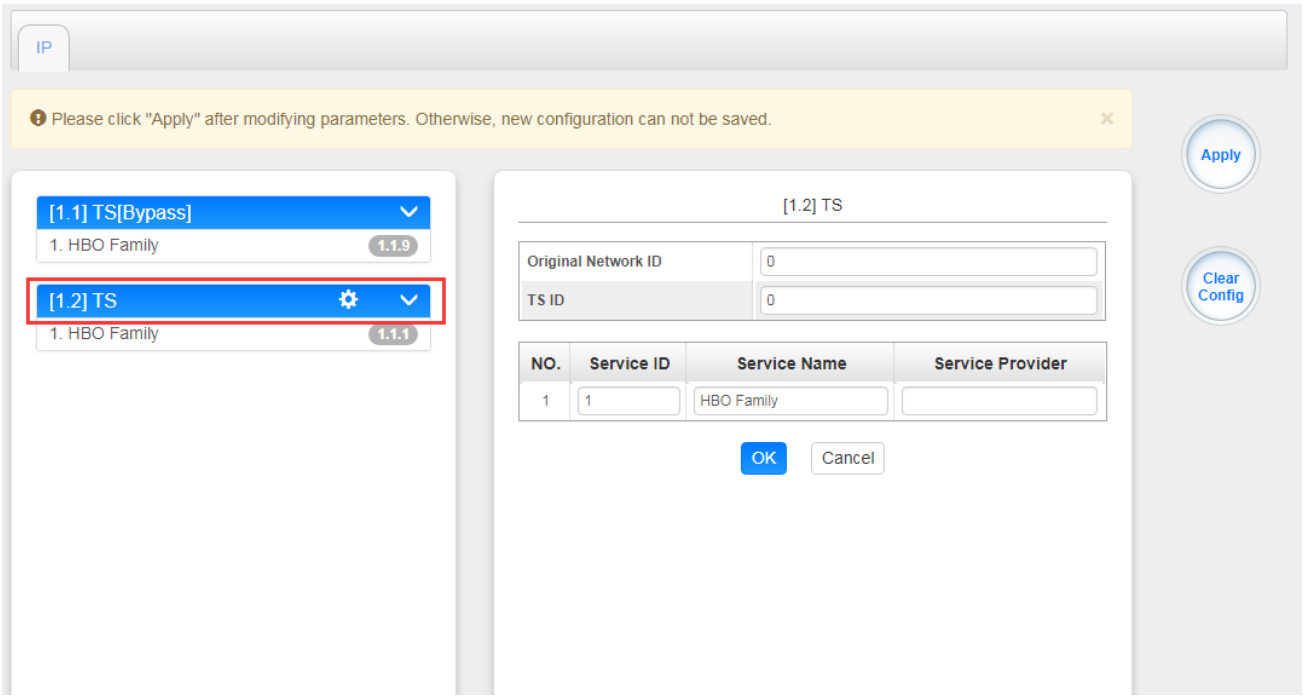


After making configuration of output destination, click ***Apply*** to make it take effect. The destination channel will be displayed in the channel/service line. Click ***Clear Config*** to clear all of configuration.

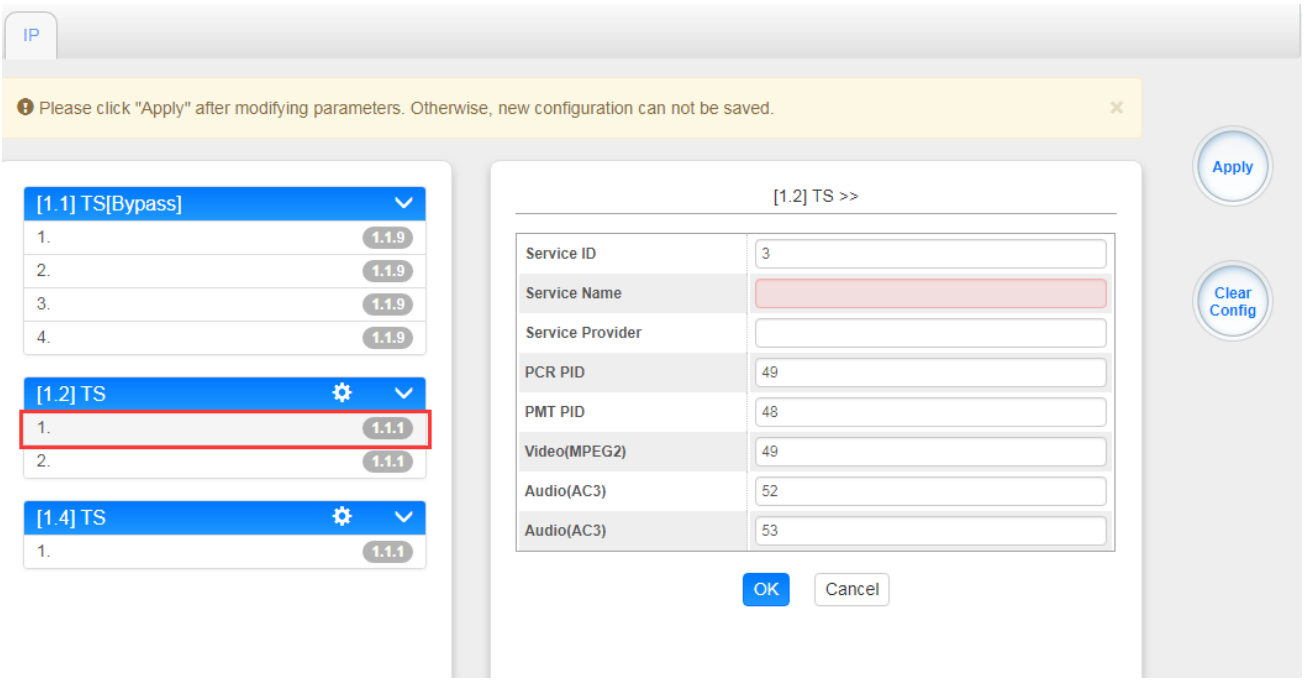
There is a channel scan button (Channel Scan) on top, normally the input service list of each channel will load itself in this page, but when change the input source, the list could not refresh immediately, at this time, should refresh the changed channels manually through the operation of selecting channel and clicking channel scan button.

3.4.2 Output Service

Make a configuration for output services and TS in this page. Click ***Apply*** to save new configuration. Click ***Clear Config*** to clear all configurations.



➢ TS setting: Click TS line (the blue area) to make the modification of Original Network ID, TS ID and each Service ID, Service Name, and Service Provider. If the TS stream is bypassed, any information can't be modified.

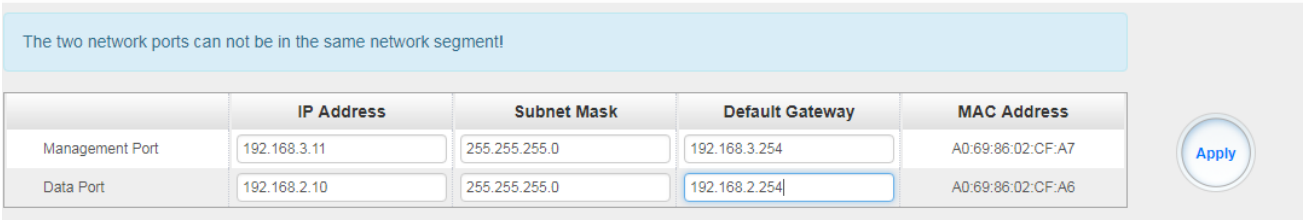


➢ Service setting: Click service line to make modification of service ID, service name, service provider, PCR PID and so on. If the service is bypassed, any information can't be modified.

3.5 System Settings

3.5.1 Network

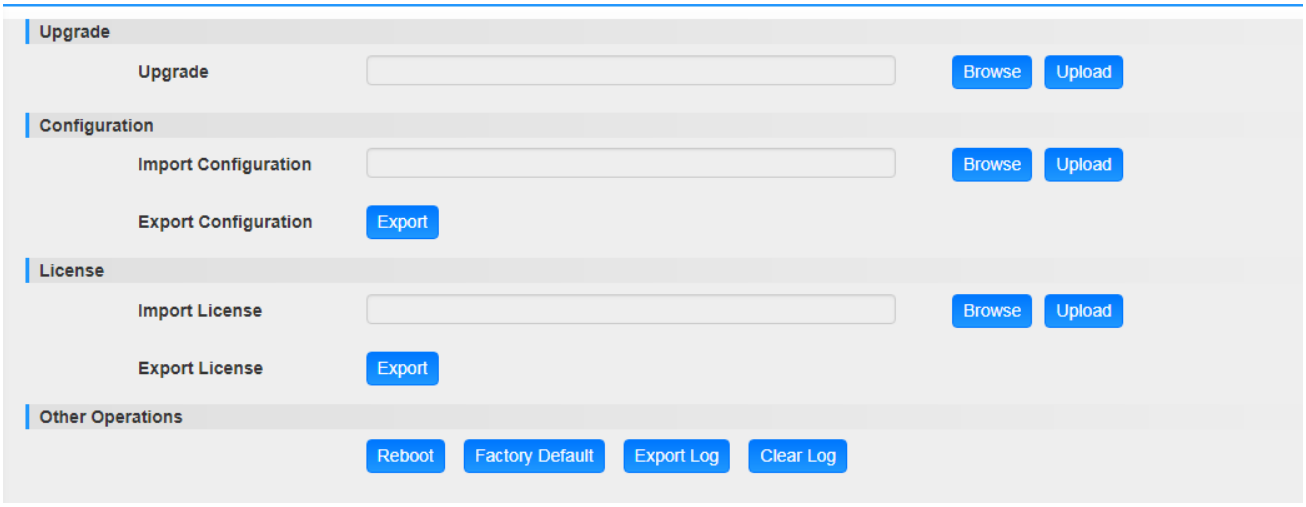
In ***Network*** page, we can configure the IP address, subnet mask and default gateway of both management port and data port. Click the ***Apply*** button in the right side to make the change take effect.



The two network ports cannot be in the same network segment!

3.5.2 System Operation

In this page, the following functions are available: upgrade, import or export configuration, import or export license, reboot the whole unit, restore to factory setting, export log and clear log.

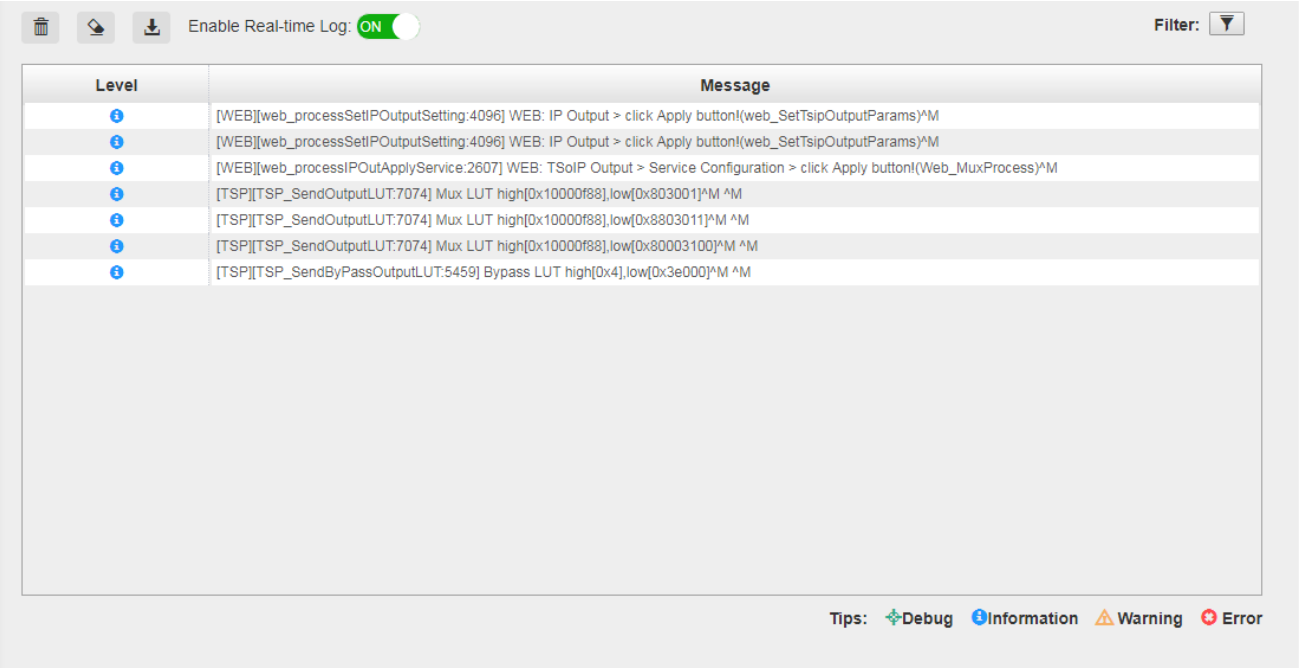


3.5.3 Password

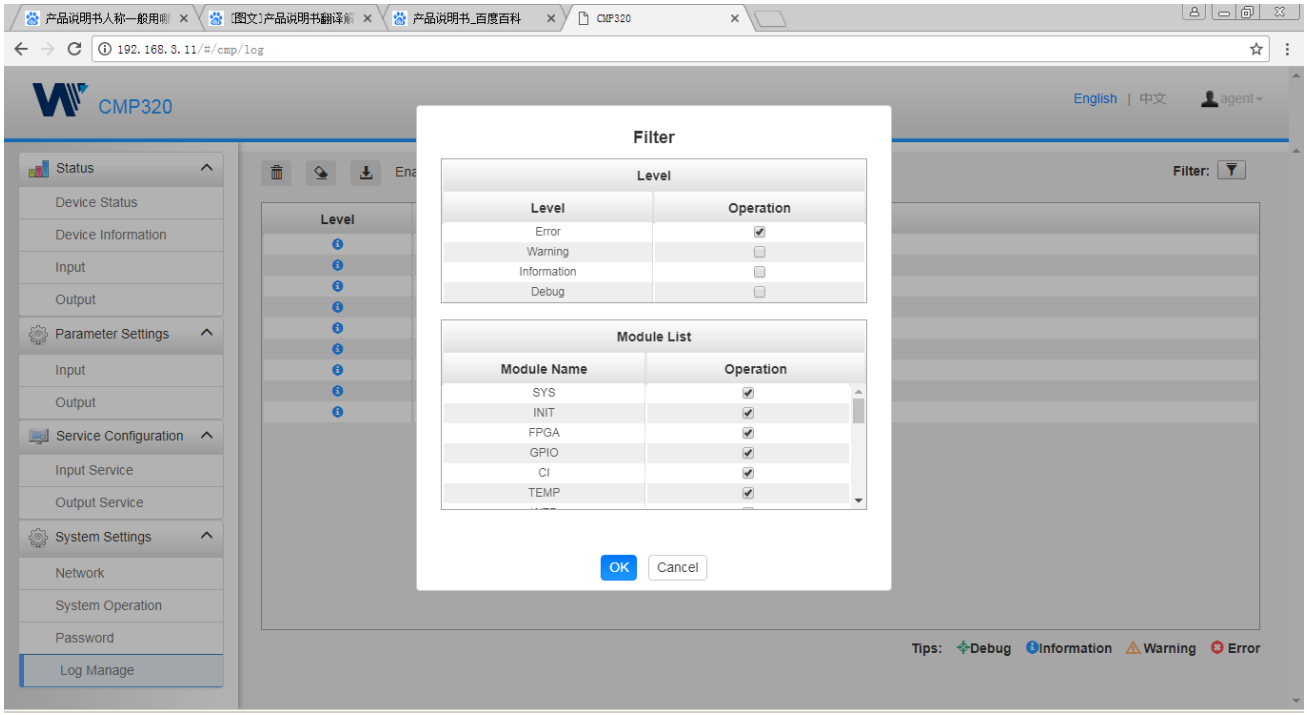
Reset the login password in this page. To reset your password, need to enter your original password first. After reset, need to login again.

3.5.4 Log Manage

Turn on ***Enable Real-time Log*** switch, see the real time log message and level below.



- Click  to clear all log messages on the screen.
- Click  to delete all log information.
- Click  to export log information.
- Click  to filter desired log message.



4 Appendices

Appendix A - Abbreviations

AAC	Advanced Audio Coding
AC-3	Also known as Dolby Digital
AV	Audio Video
BAT	Bouquet Association Table
BER	Bit Error Ratio
Bit Rate	The rate at which the compressed bit stream is delivered
BNC	British Naval Connector
CAM	Conditional Access Module
CAT	Conditional Access Table
CBR	Constant Bitrate
CI	Common Interface
CVBS	Composite Video Broadcast Signal

dB	Decibel
DVB	Digital Video Broadcasting
EIT	Event Information Table
EPG	Electronic Program Guide
FEC	Forward Error Correction
GOP	Group of Pictures
HD	High Definition
HDCP	High-bandwidth Digital Content Protection
HDMI	High Definition Multimedia Interface
HDMI™ HIGH-DEFINITION MULTIMEDIA INTERFACE	The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.
Kbps	1000 bit per second
LNB	Low-Noise Block
Mbps	1,000,000 bits per second
MER	Modulation Error Ratio
MPTS	Multi-program Transport Stream
NIT	Network Information Table
OFDM	Orthogonal Frequency-Division Multiplexing
PAT	Program Association Table
PCR	Program Clock Reference
PID	Packet Identifier
PMT	Program Map Table
PSI	Program Specific Information
PSU	Power Supply Unit
QAM	Quadrature Amplitude Modulation
QPSK	Quadrature Phase-Shift Keying
SD	Standard Definition
SDT	Service Description Table

SI	Service Information
SNMP	Simple Network Management Protocol
SNR	Signal Noise Ration
SPTS	Single Program Transport Stream
TDT	Time and Date Table
TS	Transport Stream
VBR	Variable Bitrate

Appendix B- Warranty

We warrants this instrument against defects from any cause, except acts of God and abusive use, for a period of 1 (one) year from date of purchase. During this warranty period, we will correct any covered defects without charge.

Appendix C- After-Sales Support

Please contact our sales/regional representatives for any help, product information, and troubleshooting.

Returning Products for Service

The CMP320 is a delicate piece of equipment and needs to be serviced and repaired by the manufacturer. In order to expedite this process please carefully read the following items.

- Confirm the required component

Before any product can be returned for service, the client ought to contact our sales representatives and after-sales support department by means of email to confirm the need to return the product or parts of the product.

- Collect the Serial Numbers to obtain RMA Number

Serial Number (SN) is printed on a label on the chassis and modules. To create a RMA number, SN must be submitted to support department. Once the RMA number has been issued to the client, the unit/component needs to be packaged and shipped back to the manufacturer. It’s best to use the original box and packaging for the product but if this not available, check with the service department for the proper packaging instructions. RMA Number should be specified in the delivery bill or written on the package.

 Do not return any power cables or accessories unless instructed to do so.