TX2404X Tuner to RF TransModulator



TX2404X



TX1204X

1. Overview

TX2404X series are devices to convert tuner input into Rfoutput . It support 4 /8 /12 /16 /20 /24 ways Tuner input,1 Gigabit IP input/output; support 4 frequencies(ATSC、ISDBT、DTMBT、DVB-C/-T)output and 4 MPTS output

2 Features

- support 4 /8 /12 /16 /20 /24 ways Tuner input
- Tuner（DVB-C、DVB-T、ATSC、DTMBT、ISDBT）input, or combined standard Tuner input （such as: 4 DVB-T and 4 ATSC to make 8 inputs）
- 1 Gigabit IP input/output （SPTS/MPTS/RTMP/SRT）, UDP/RTP/HLS protocol
- ATSC、ISDBT、DTMBT、DVB-C/-T output optional
- 2 ASI input
- 2 ASI output
- Web management and online upgrading

3 Specifications

input	Tuner(4/8/12/16/20/24 tuner) PS: Tuner type (**DVB-S2/DVB-C/DVB-T/ATSC/ISDBT/DMBT**)			
	2ch ASIinput			
	1 Gigabit IP input port			
output	RF output 4 frequencies (DVB-C/DVB-T/ATSC/ISDBT/DMBT)			
	2separate ASIoutput			
	IP output (SPTS/MPTS) , UDP、RTP protocol			
Modulator	DTMBT	Modulation	4 frequencies DTMB	
		Standard	DTMB GB20600-2006	
		Constellation	4QAM、16QAM、32QAM、64QAM	
		MER	≥40dB	
		Frequency Range	50~900MHz, 1kHz 步进	
		Output	-26dBm~-1dBm, 0.1dB 步进	
	DVB-T	Modulation	4 frequencies DVB-T	
		Standard	EN300744	
		FFT	2K	
		Band wiedeth	6M, 7M, 8M	
		Constellation	QPSK, 16QAM, 64QAM	
		interval	1/4, 1/8, 1/16, 1/32	
		FEC	1/2, 2/3, 3/4, 5/6, 7/8	
		MER	≥42 dB	
		Frequency Range	50~960MHz, 1KHz 步进	
		Output	-28~ -3 dBm, 0.1db 步进	
	DVB-C	Modulation	4 frequencies DVB-C	
		Standard	EN300 429/ITU-T J.83A/B	
		MER	≥40db	
		Frequency Range	50~960MHz, 1KHz Stepping	
		Output	-26~-1dBm , 0.1dBm Stepping	
		Symbol rate	5.0Msps~7.0Msps, 1ksps 步进	
			J.83A	J.83B
		Constellation	16/32/64/128/256QAM	64/256 QAM

		Band wiedeth	8M	6M
	ATSC			
	ISDBT			
System	Network management (Web) supports online upgrading			
	Chinese / English operation interface			
General	Dimension(L×W×H)	482mm×410mm×44mm		
	Weight	8kg		
	Tempreture	0~45℃(working); -20~80℃(stock)		
	Power in	AC100~240V, 50/60Hz		
	Power consumption	<90W		

4 Outlook

Front pannel



1.	RF Out
2.	LCD display
3.	Indicator light
4.	Button
5.	ASI In
6.	ASI OUT
7.	NMS、DATA input/output

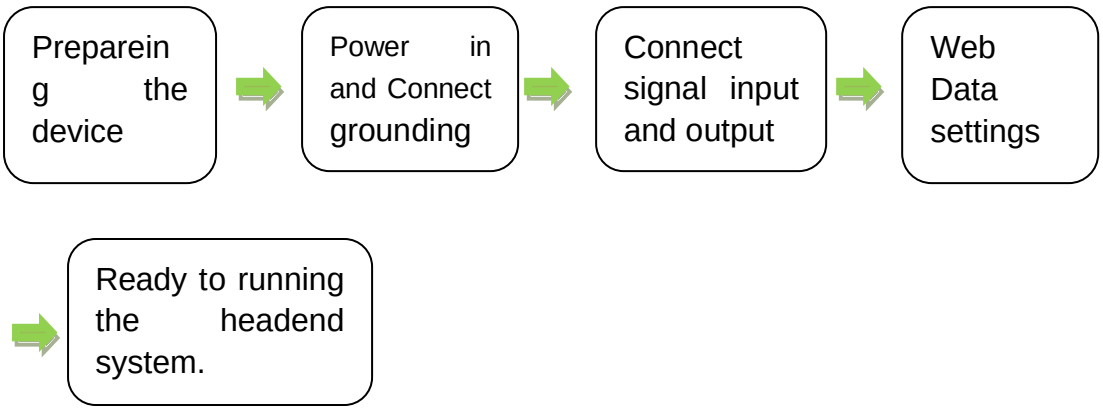
Rear Pannel



1.	Tuner input
2.	Power switch
3.	Power input
4.	Grounding

5 Installation

5.1 Installation process:



5.2 Grounding

The headend encoder modulator and chassisfor headend equioments both have to make grounding well, to protect the equipments from Lightning

strikes or electricity instability.

5.3 How to connect the equipments

Web port: connect the fist transmodulator from port “DATA 1/2” to the next piece transmodulator port “DATA” input port.

RF port: connect the fist transmodulator from Front pannal port “RF OUT” to the next piece transmodulator port “RF IN” .

5.4 Web setting connection

Connect the encoder modulator from port “DATA 1/2” to computor by network cable.

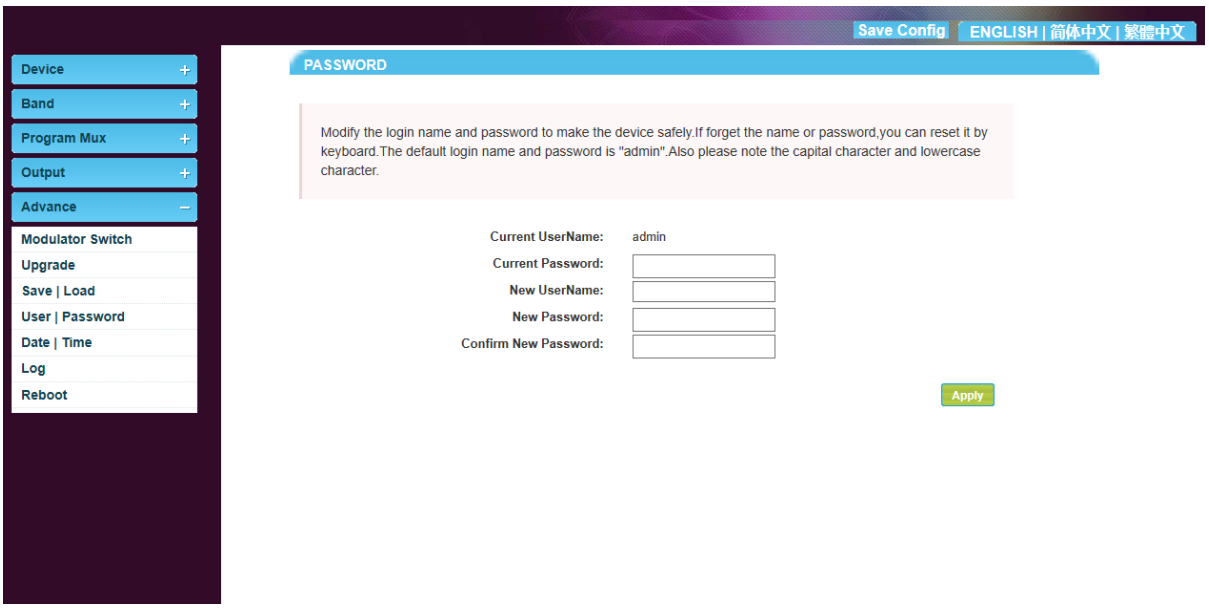
6 Web Management

6.1 Description

Web Management is for the control, managing and settings of the digital headend equipment. The Browser to running the software we suggest is for IE8 browser or higher version or Firefox browser o.

6.2 Log on the equipment

Open the browser, input IP: 192.168.0.136



Then input the user name and password：

User name：admin.

Password：admin

■ Caution：

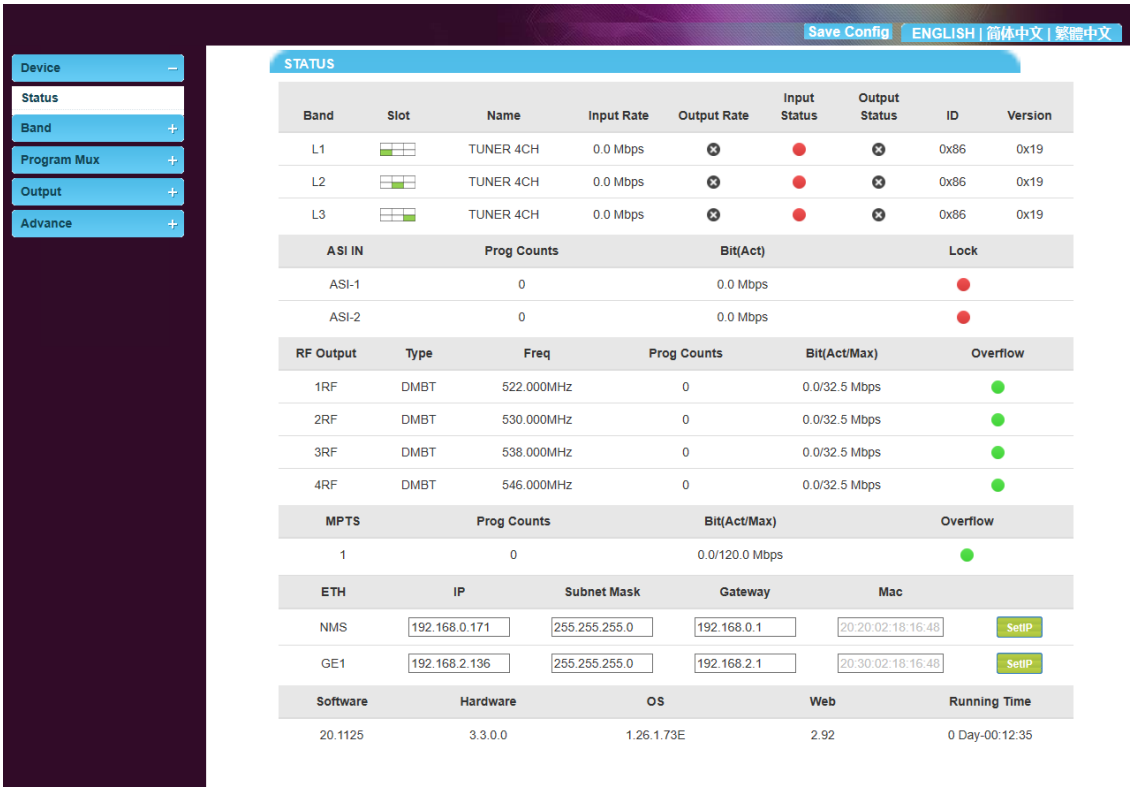
1.If fail to connect the computer and headend equipment, please check if the computer and headend equipment are in same IP range.

For example: The computer IP is 192.168.99.252,then we may need to set the headend equipment IP to be 192.168.99.xxx (from equiment fromt pannel LCD screen), or to set the computer IP to be same IP range as the equipment. (xxx can be any of 1-254 except“252”).

2. From front pannel LCD SCREEN you can check the IP address of the headend equipment. The original IP : 192.168.0.136.

6.3 **Basic instructions**

After log on, you will get the following interface,



Tune to English version

Status: shows the basic information like the version of thesystem.

Input/ output satus：shows the signal input and output status.

Software version: the version of the running software

Hardware version: the version of the running hardware

Web version: the running web page version

The System: the running system version

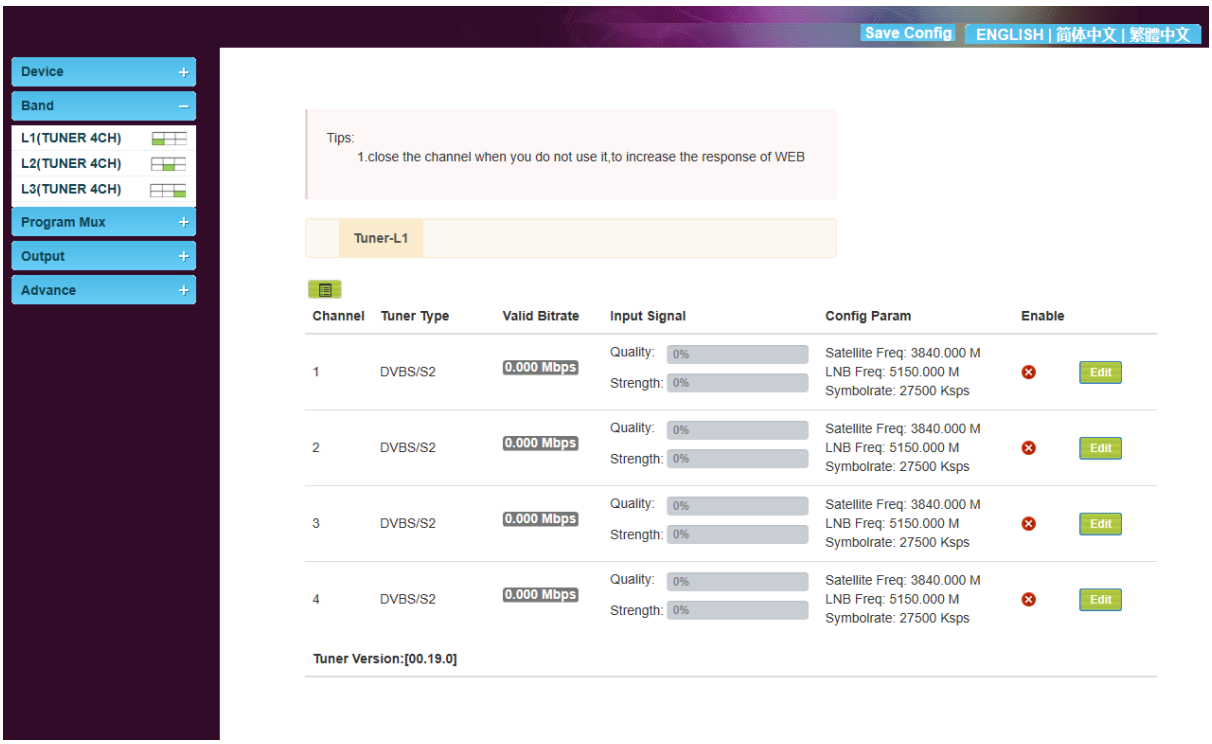
Time: the current time

6.3.2 **Settings**

There are Tuner Band, Program Mux, Modulation,and IP stream data under the Settins.

6.3.2.1 Tuner Band setting

This equipment supports 4~24 Tuner inputs, and multiplexing.



Tuner module: each Tuner module (mainborad)support 4 Tuner inputs , Max 6 module with 24 channle tuner inputs.

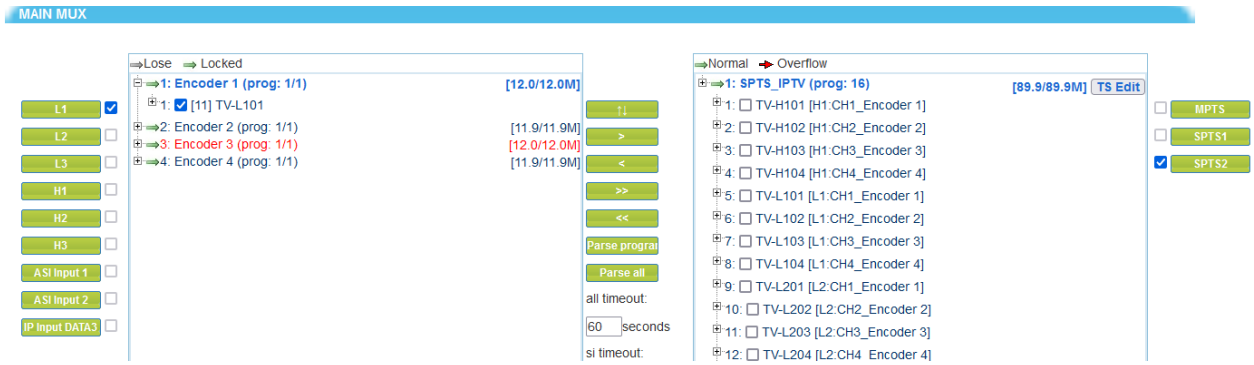
A. User can set the datas by clicking “Edit” to change the data.

When finished setting , save the data.

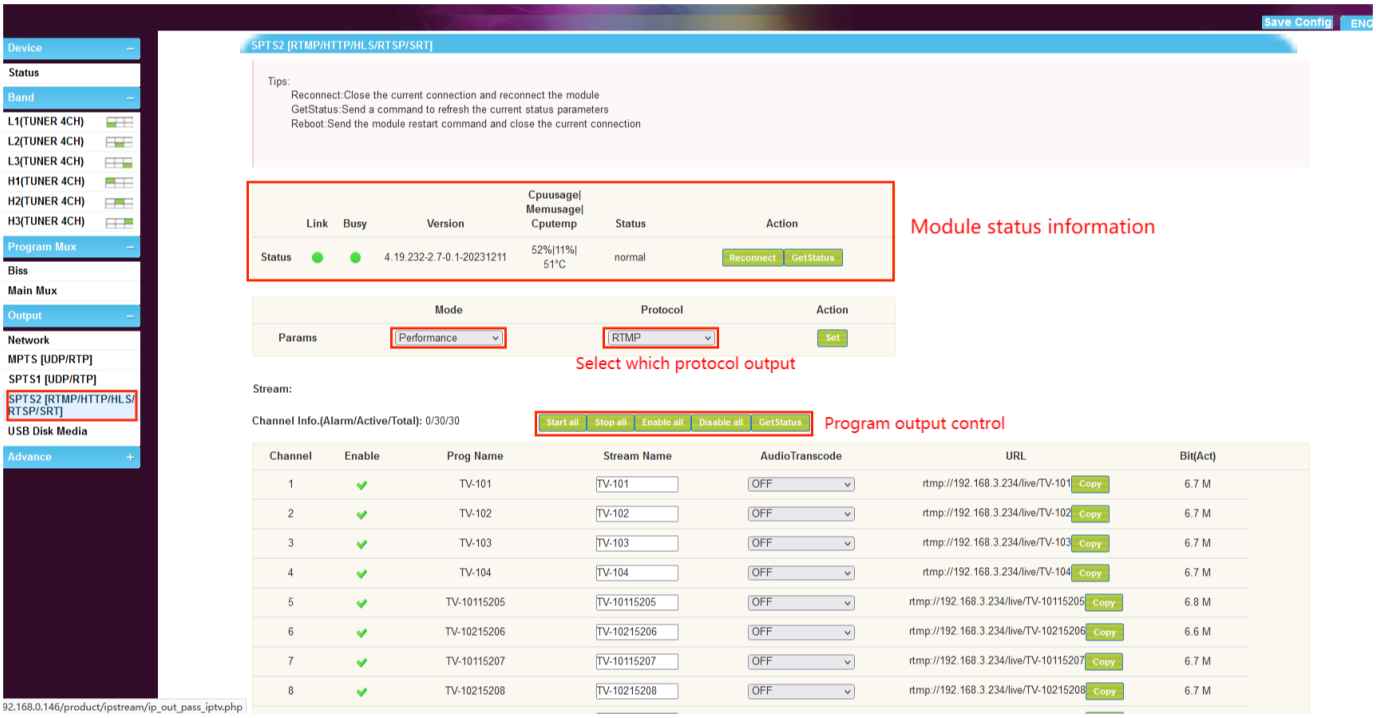
B. The “√” and “x” shows this channel is o*en or closed. Double click the button to switch their status.

6.3.2.2 SPTS2 IP Stream(RTMP/HTTP/RTSP/HLS/SRT:DATA1)

Uses DATA 1 port output, supports multiple protocol output (RTMP /HTTP/RTSP/HLS/SRT).

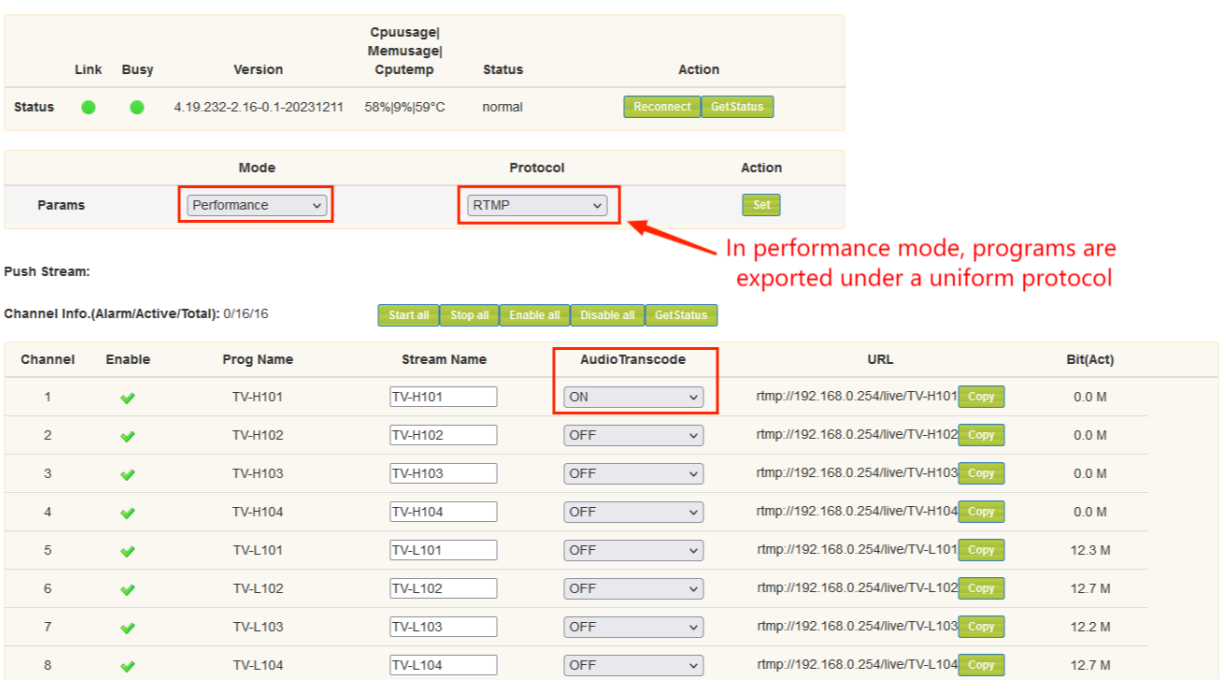


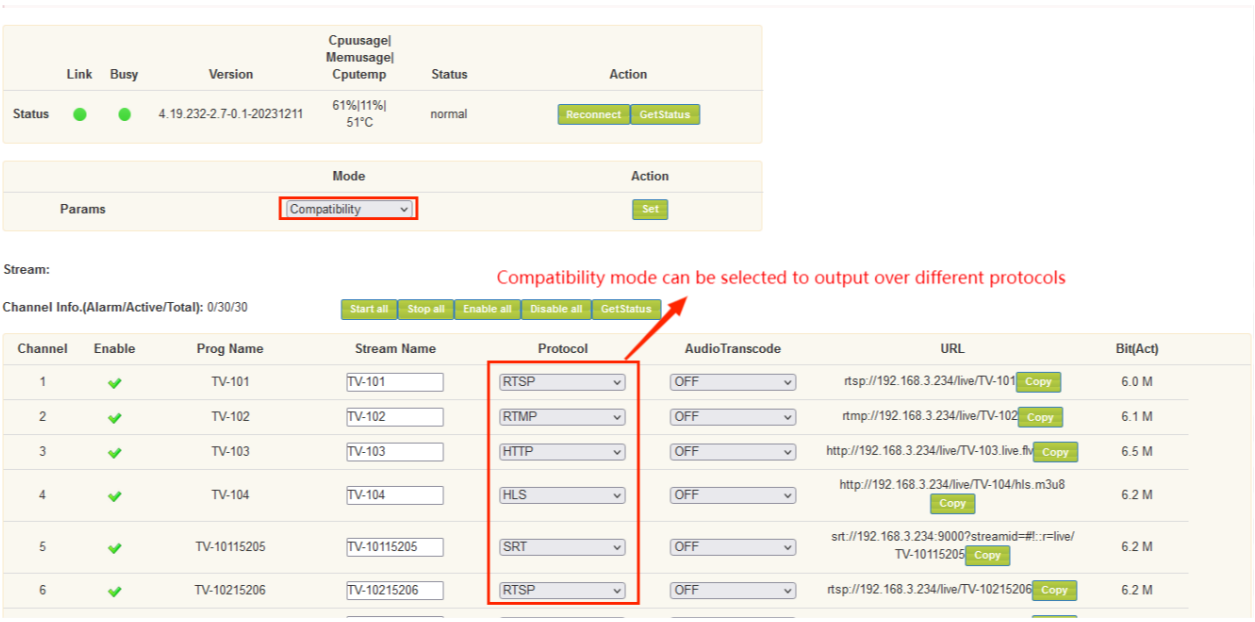
First, the program that needs to be output is selected to the SPTS2 directory in the multiplexing interface.



Select SPTS2 in the output option to set the output protocol and program.

Mode selection: When Performance mode is selected, all programs will be output in the same protocol, and the device will push at maximum performance. When the compatibility mode is selected, different programs can be output using different protocols, but this mode will occupy additional performance of the device, and the maximum amount of pushed data will be reduced compared with the performance mode.





Select the mode and output protocol, click Set, and click Start all again.

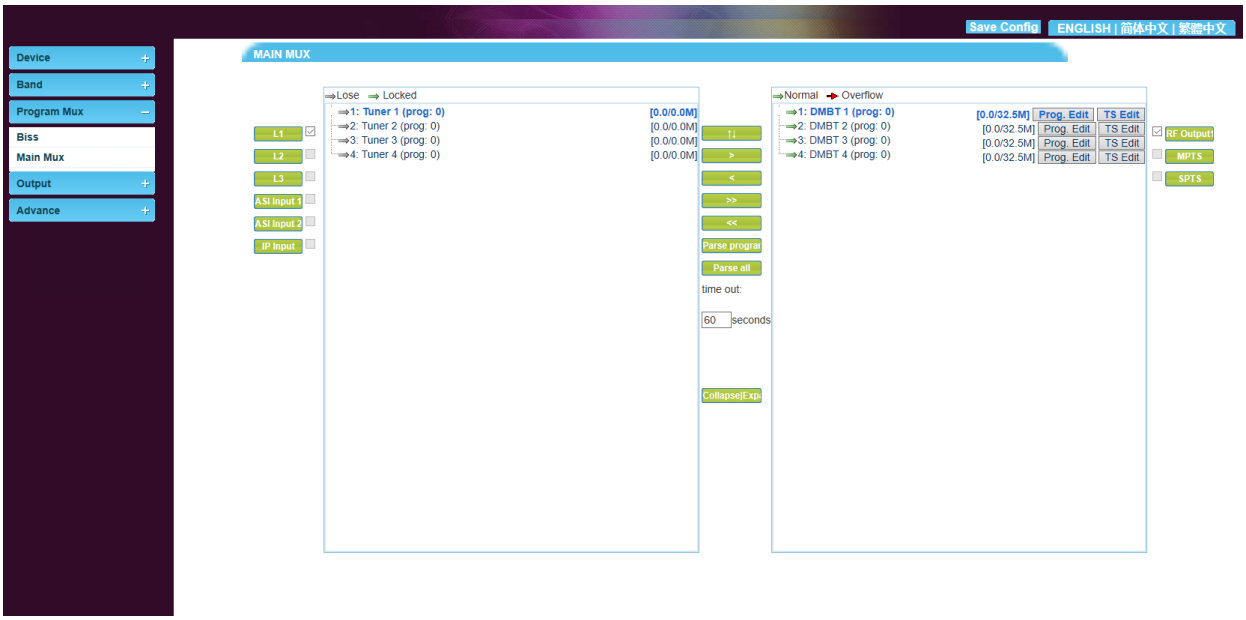
Note:

(1) The partial streaming media protocol standard only supports audio in AAC encoding format. Therefore, when the device uses streaming media output, it is recommended to set the audio encoding format to AAC or enable the audio transcoding function（Audio transcoding consumes device performance. Do not enable this function unless necessary）.

(2) Do not leave a space when modifying the stream name. Otherwise, the generated playback address cannot be pushed.

6.3.2.3 Progran Main Max setting

（1）Parse program: First input each Tuner data, locked, and choose “Tuner 1” or other channels, click “Parse program” or “Parse all” to parse allthe program for all channels .

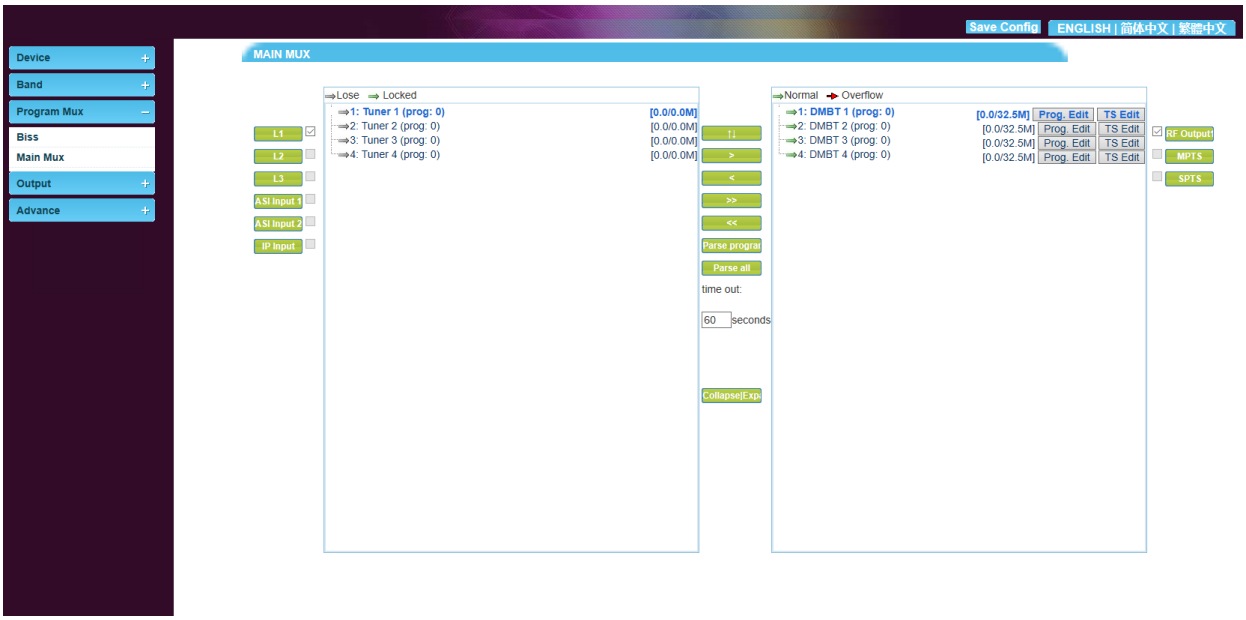


（2）RF Output:users can choose RF output here by tick “RF Output”. When make TS stream setting, first choose theoutput channel which you want to edit, then all your setting is based on this channel.

A. Program mux: The users can choose the program on this interface: first choose the frequency on “RF output”, then tick“√”the program you wantamd click “>” to add this program to this frequency.

B. Delete program: first choose the frequency on “RF output”, then tick “√” the program and click “<”to delete the program from this frequency.

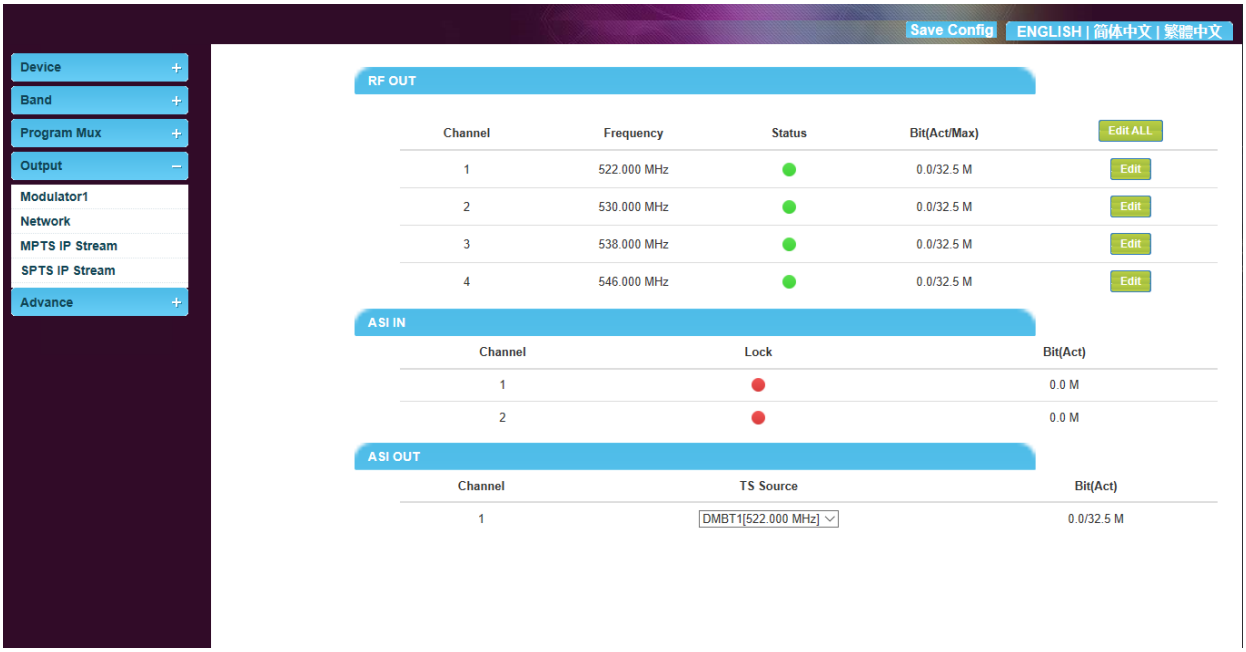
(3) ASI Mux



Click “ASI 1”, then click “Parse program”, then choose theprogram .

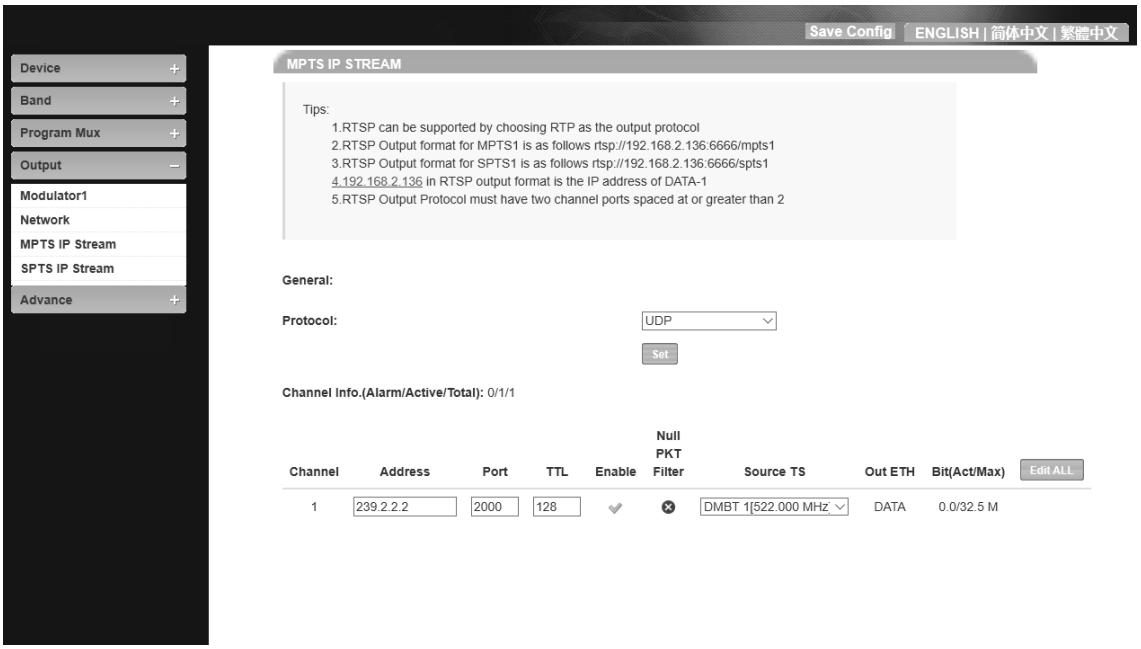
(4) Edit the program data

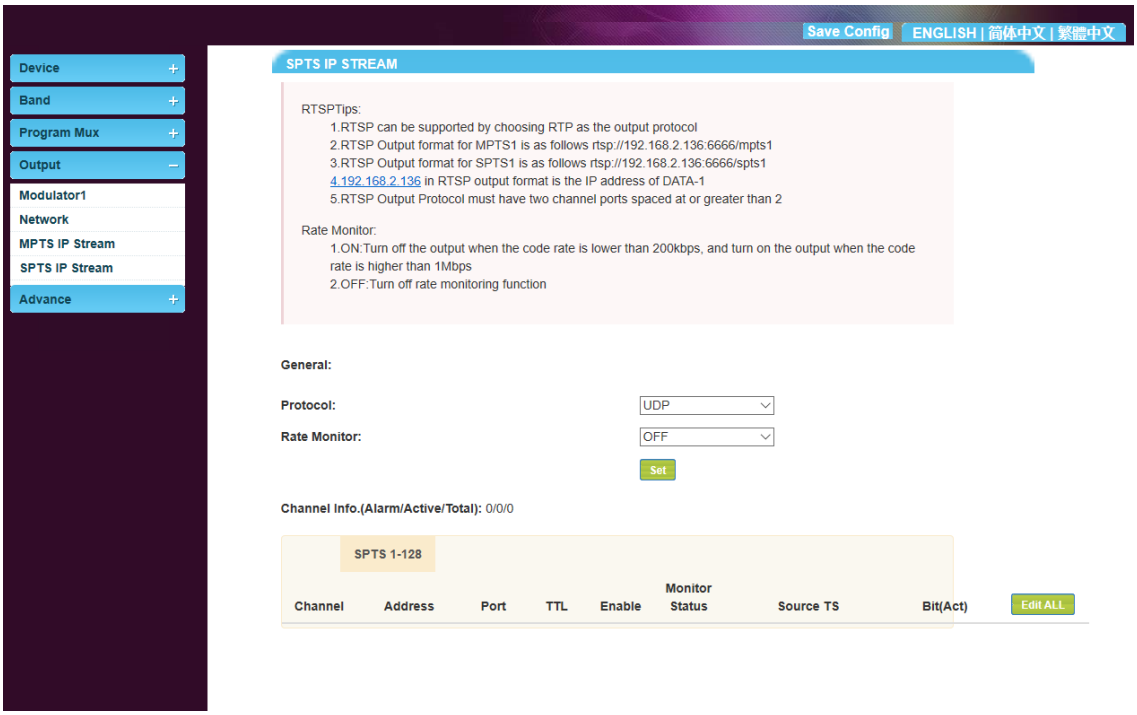
Click “Output” to show all the program data. :



After edit the data, click “Apply” to savethe data.

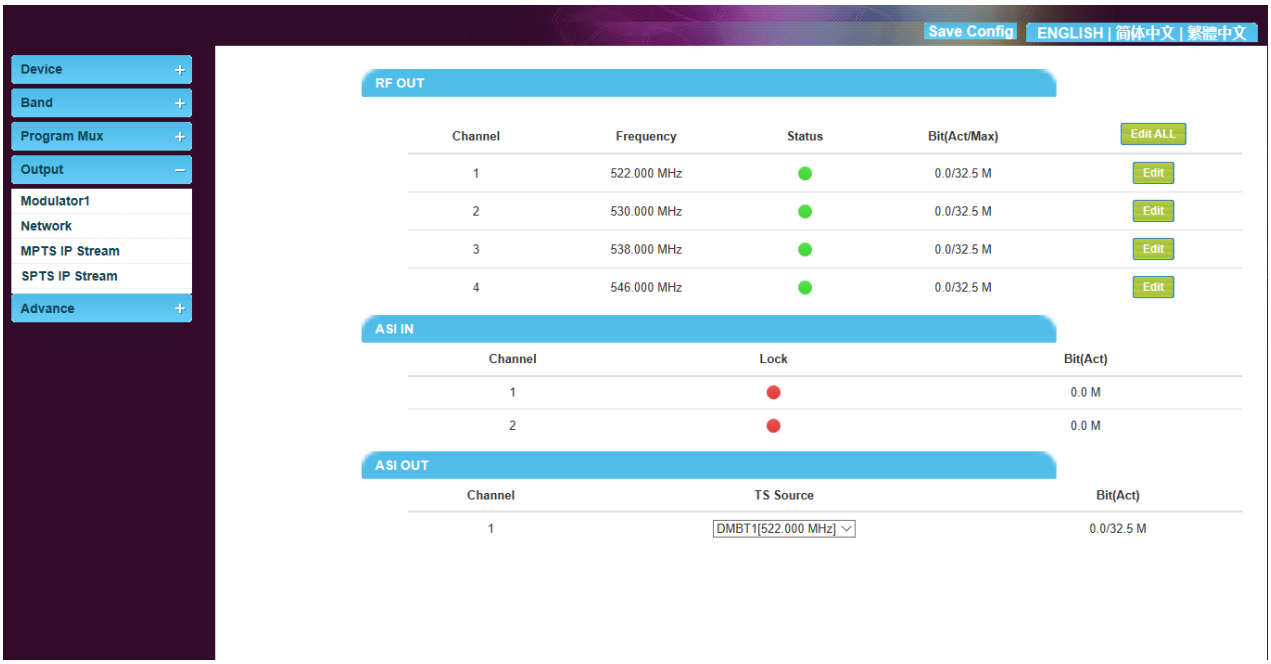
(5) IP Stream




Save Config
ENGLISH | 简体中文 | 繁體中文
Device
Band
Program Mux
Output
Modulator1
Network
MPTS IP Stream
SPTS IP Stream
Advance
SPTS IP STREAM
RTSPTips:
1.RTSP can be supported by choosing RTP as the output protocol
2.RTSP Output format for MPTS1 is as follows rtsp://192.168.2.136:6666/mpts1
3.RTSP Output format for SPTS1 is as follows rtsp://192.168.2.136:6666/spts1
4.192.168.2.136 in RTSP output format is the IP address of DATA-1
5.RTSP Output Protocol must have two channel ports spaced at or greater than 2
Rate Monitor:
1.ON:Turn off the output when the code rate is lower than 200kbps, and turn on the output when the code rate is higher than 1Mbps
2.OFF:Turn off rate monitoring function
General:
Protocol:
UDP
Rate Monitor:
OFF
Set
Channel Info.(Alarm/Active/Total): 0/0/0
SPTS 1-128
Channel
Address
Port
TTL
Enable
Monitor Status
Source TS
Bit(Act)
Edit ALL

6.3.2.4 Modulator setting

Users can check and change the modulator mode.



Click “Edit” to set the data for each frequency.

Click “Apply” to save the setting.

6.3.2.5 Network setting

To set the IP of this device:



When finished setting, click" Apply to save it.

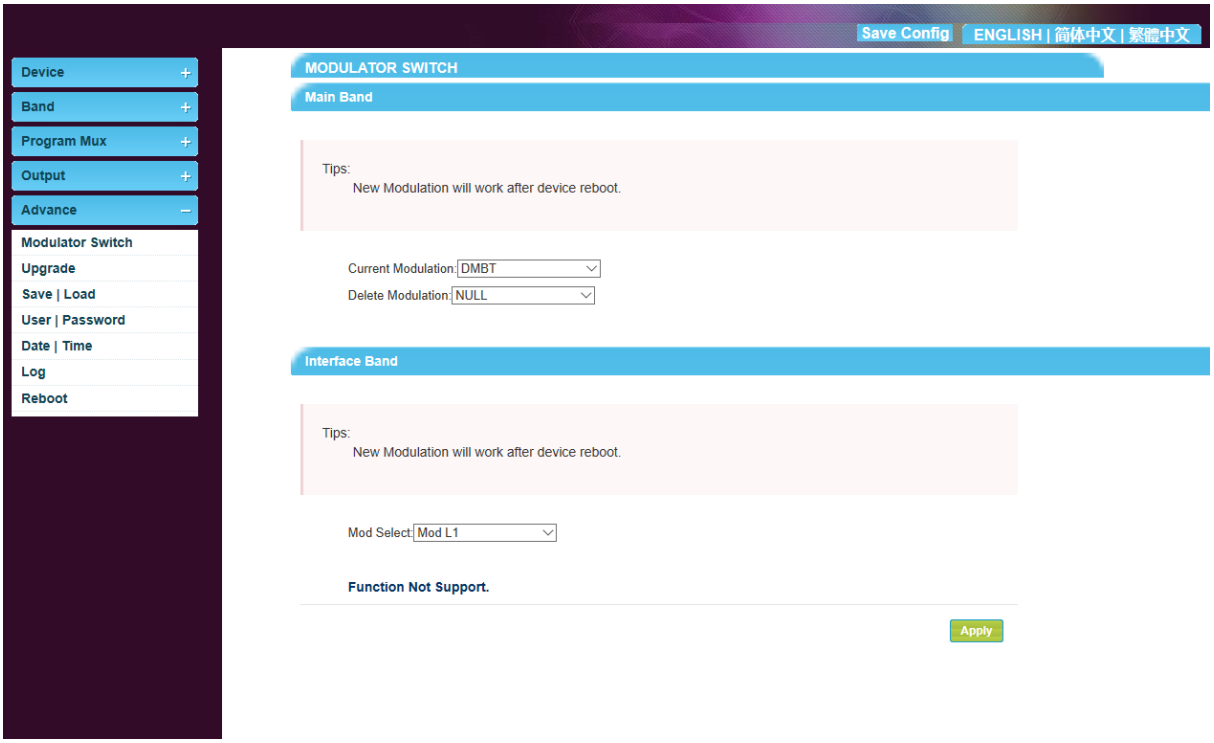
6.3.3 Advance setting

To set the device's modulation switch, upgrade , save etc.

6.3.3.1 Modulator Switch

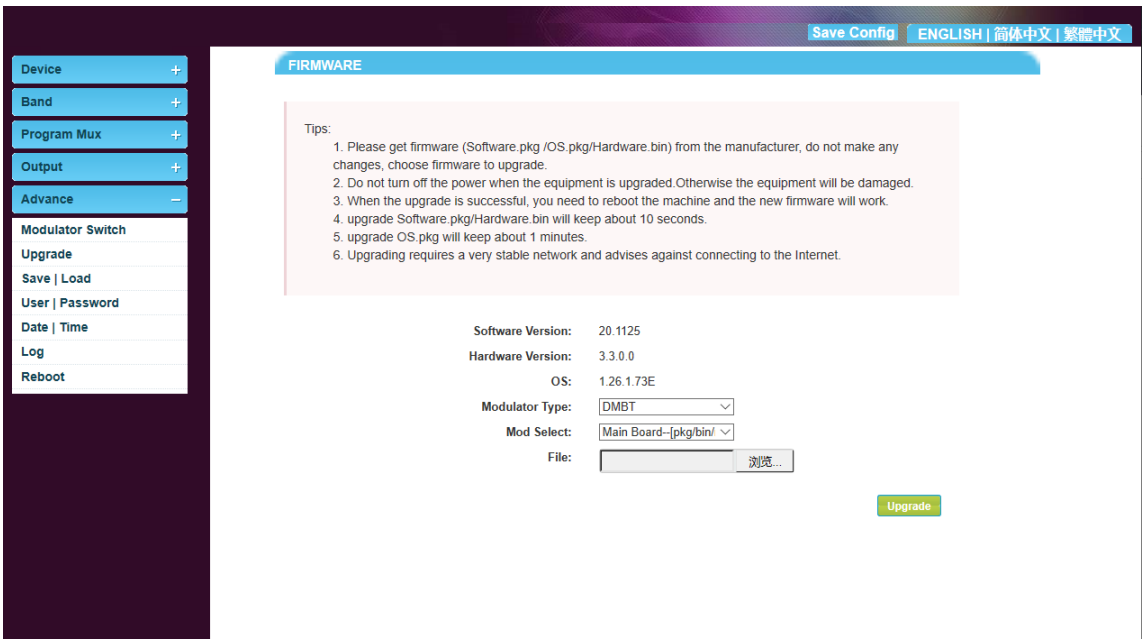
Users can choose the modulation standard and restart the device to live the modulation standard.

Users can delete the modulation standard , and restart the devoice to live the setting.



6.3.3.2 Upgrade

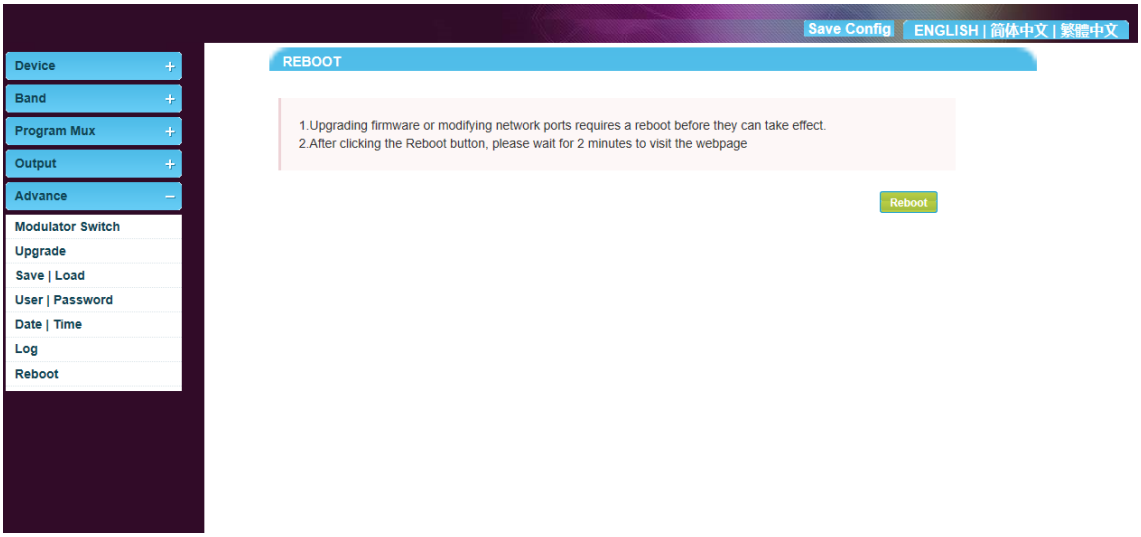
To upgrade the software of the device:

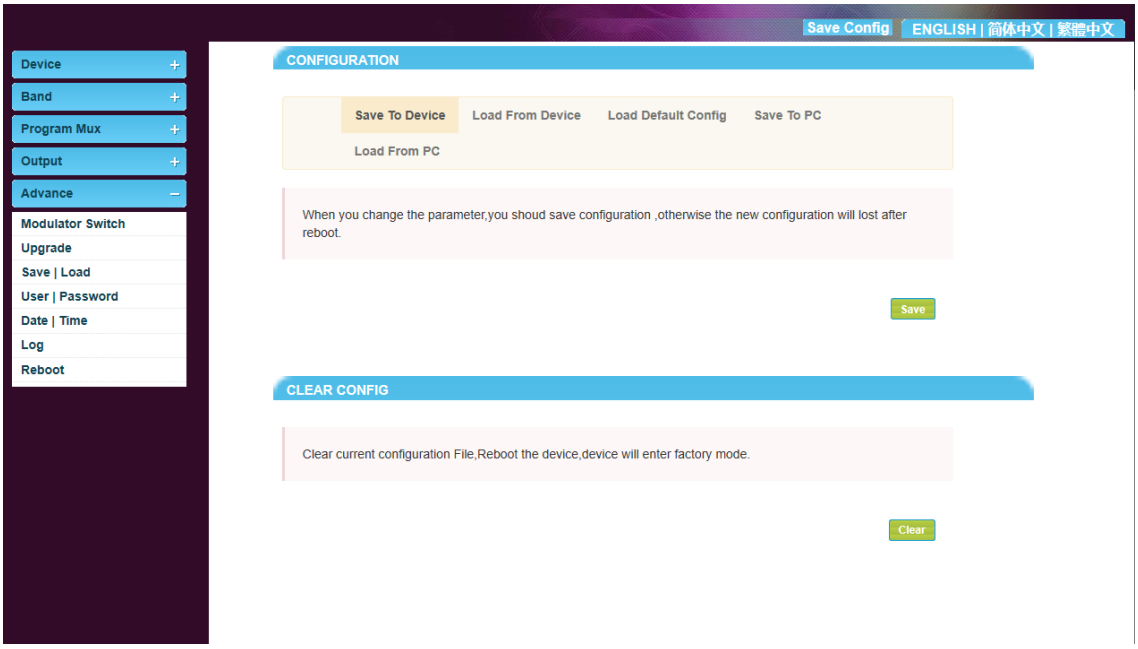


We’d better to contact the supplier to uograde the device.

6.3.3.3 Save

Users can save, load and reboot the device.

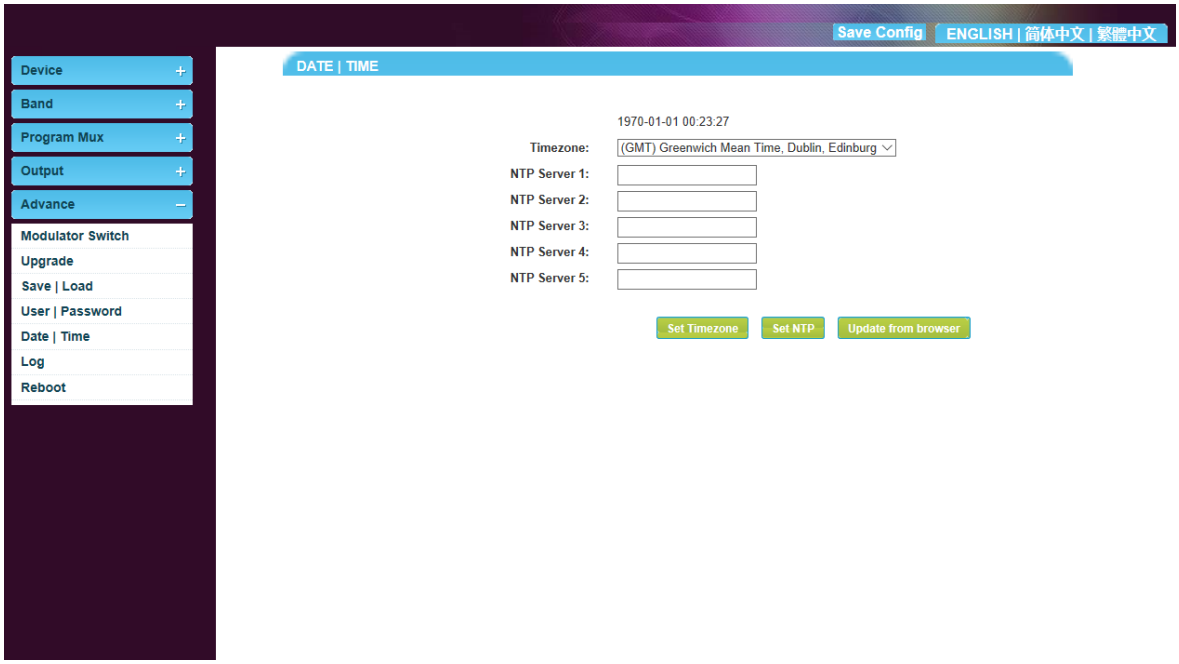




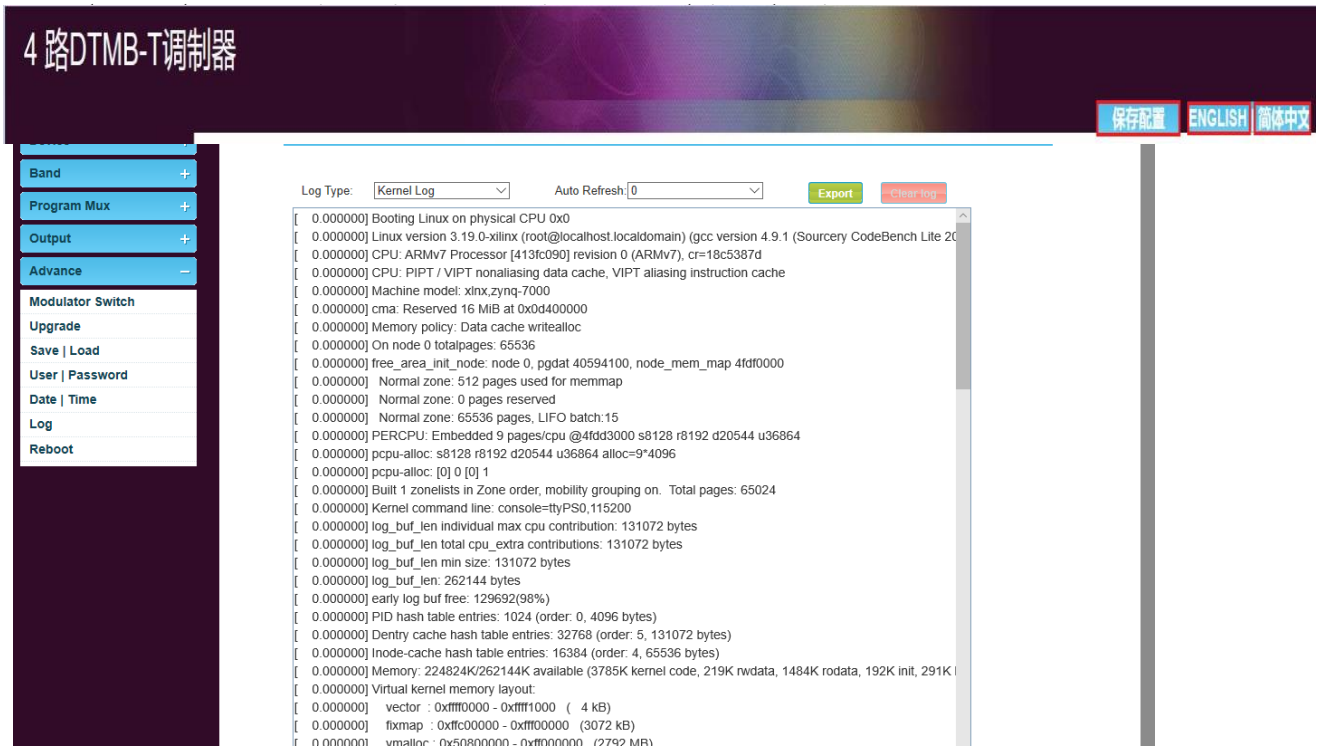
Each setting need to click “Apply” or “Save” to save the settings.

6.3.3.4 Time

To setthe time .


Save Config
ENGLISH | 简体中文 | 繁體中文
Device
Band
Program Mux
Output
Advance
Modulator Switch
Upgrade
Save | Load
User | Password
Date | Time
Log
Reboot
DATE | TIME
1970-01-01 00:23:27
Timezone:
(GMT) Greenwich Mean Time, Dublin, Edinburg
NTP Server 1:
NTP Server 2:
NTP Server 3:
NTP Server 4:
NTP Server 5:
Set Timezone
Set NTP
Update from browser

6.3.3.5 Log



6.3.6 Language exchange

Click “English” to change the web interface and LCD display into English version and save.

7 Cautions

Please follow the following tips to set running the equipmet to make sure safety and performance.

7.1 Precaution

- Place the equipmentin an suitable place with a tempreture range of 0-45℃
- Make sure that heat sink on the rear panel is well ventilated, and all jacks smooth opening;
- Check the power voltage, and all power connections;
- Chech the RF output leverl to make sure it is in the working range;
- Recheck all connections;
- Donot switch OFF/ON the euqipment frequently （each switch on and off shoud be Min. 10 secends later）

7.2 When do you need to upplug the power

- The power cord or socket is damaged.
- f any liquid get into the equipment.
- Short circuit carsed by anything getting into the chassis.
- Rainfall or soaking to the equipment.
- Any demage to the equipment.
- Long idleness of the equipment.
- Equipment does not work after preset recovery.
- Equipment reparement