HP836IV 8 in 1 AV to ISDB-T Encoder Modulator

1.Outline

HPS836IV 8 in 1 SD encoder modulator is a professional SD audio & video encoding and multiplexing device with powerful functionality. It has 8 channel CVBS input interfaces, supporting MPEG2 code format. This device can simultaneously encode 8 channel SD programs; moreover, it has an ASI input and can multiplex the input TS with the 8 encoded SPTS to generate a MPTS output. Also, the PSI/SI information can be inserted into SPTS output. In conclusion, its high integrated and cost effective design makes the device widely used in varieties of digital distribution systems such as CATV digital head-end, satellite and terrestrial digital TV, etc.

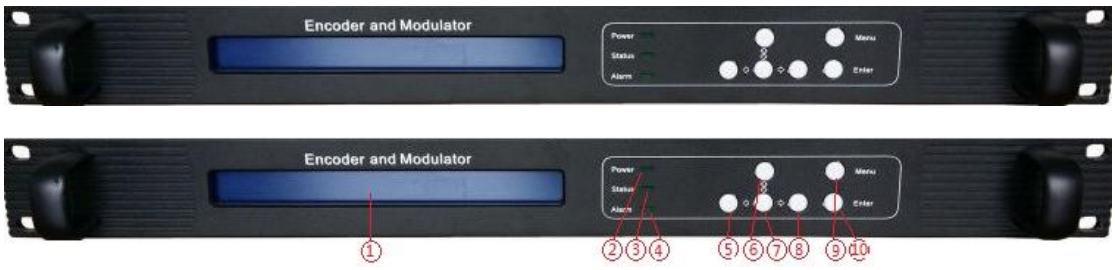
2.Specifications

Input	8 CVBS inputs, BNC interface	
	8 pairs of unbalanced stereo audio input, BNC interface	
	1×ASI input, BNC interface	
Video	Resolution	720×480_60i, 720×576_50i(D1)
		544×480_60i, 544×576_50i(3/4D1)
		352×480_60i, 352×576_50i(HD1)
		480×480_60i, 480×576_50i(2/3D1)
	Encoding	MPEG-2 MP@ML
	Bit-rate	0.8Mbps~19Mbps (each channel)
	Rate Control	CBR/VBR

	GOP Structure	IBBP
	Advanced Pretreatment	De-interlacing, noise reduction, sharpening
Audio	Encoding	MPEG-1 Layer 2
	Sampling rate	48KHz,44.1KHz,32KHz
	Resolution	24-bit
	Bit-rate	64Kb/s~384Kb/s each channel
Multiplexing		Multiplex 1ASI input and 8 channels SD encoding programs
Stream output		2×ASI outputs, BNC interface(support PID filter and pass, support real time monitoring of the output stream.
		IP out SPTS,support IP out null packets filter. RF Out(DVB-C)
System function		LCD/keyboard operating, network management(SNMP), English control interface
		Ethernet software upgrade
General	Dimensions (W×D×H)	482mm×455mm×44.5mm
	Approx weight	3.2
	Temperature range	0~45℃(Operating), -20~80℃(Storage)
	Power Requirements	AC 110V±10%, 50/60Hz or AC 220V±10%, 50/60Hz
	Power consumption	25W

3. Appearance and Description

A、Front Panel



1	LCD display interface
2	Power：power indicator, lighting means the encoder has been powered on
3	Status：Status indicator, lighting means encoder working well
4	Alarm：alarm indicator, lighting means encoder working wrong
5	Left button
6	Up button
7	Down button
8	Right button

9	Menu：Menu button
10	Enter：Enter Button

B、Back Panel

1~8	8 channels HDMI Inputs
9	IP Data out
10	SNMP network interface
11	ASI Input
12、13	2 Routes ASI Out
14	Power switch
15	Power Socket
16	Grounding pole
17	RF IN
18	RF OUT

4. Operation

Keyboard Function Description:

MENU: Canceling presently entered value, resuming previous setting; Return to previous menu.

ENTER: Activating the parameters which needs modify, or confirming the change after modification.

LEFT/RIGHT: To choose and set the parameters.

UP/DOWN: Modifying activated parameter or paging up/down when parameter is inactivated.

Device Unlock: Press Enter button for 3 seconds

A、Buttons, LCD operation

1、Power and turn on the encoder

Start up... Please Wait...	ISDBT IP:192.168.0.136

2、Menu 1

►1 Message 2 Input	►1.1 Alarm 1.2 Bitrate	Alarm System is normal	
	1.1 Alarm ►1.2 Bitrate	Bitrate(1/12) Enc 1CH:5.527 Mbps	Bitrate(9/12) ASI 9CH:34.733Mbps
	►1.3 Running Time	Running Time 5 Days 22:14:48	

Test 8 channels HDMI signal input, video lock or unlock, encoding or not

3、Menu 2

1 Message ►2 Input	►2.1 Enc 1CH 2.2 Enc 1CH	►2.1.1 Video 2.1.2 Audio	►2.1.1.1 Video bitr 2.1.1.2 Video Max	Video bitrate 05.300 Mbps
	2.1 Enc 1CH ►2.2 Enc 2CH		2.1.1.1 Video bitr ►2.1.1.2 Video Max	Video Max bitrate 5.300 Mbps
	►2.3 Enc 3CH 2.4 Enc 4CH		►2.1.1.3 Video Ave 2.1.1.4 Video Min	Video Ave bitrate 4.300 Mbps
	2.3 Enc 3CH ►2.4 Enc 4CH		2.1.1.3 Video Ave ►2.1.1.4 Video Min	Video Min bitrate 3.300 Mbps
	►2.5 Enc 5CH 2.6 Enc 6CH		►2.1.1.5 Video Rate	Video Rate mode *CBR VBR
	2.5 Enc 5CH ►2.6 Enc 6CH	2.1.1 Video ►2.1.2 Audio	►2.1.2.1 Audio bitr	Audio bitrate *128Kbps
	►2.7 Enc 7CH 2.8 Enc 8CH			
	2.7 Enc 7CH ►2.8 Enc 8CH			

Parameters setting of 8 channels

4、Menu 3

►3 TS Config 4 IP Output	►3.1 MPTS output se 3.2 ASI output sel	MPTS output select *MUX3		
	3.1 MPTS output se ►3.2 ASI output sel	ASI output select *MPTS		
	►3.3 ASI output bit 3.4 TS 1	ASI output bitrate 75 Mbps		
	3.3 ASI output bit ►3.4 TS 1	►3.4.1 TS ID 3.4.2 ON ID	TS ID 1	
		3.4.1 TS ID ►3.4.2 ON ID	ON ID 1	
		►3.4.3 NIT	►3.4.3.1 Network ID 3.4.3.2 Network na	Network ID 1
	►3.5 TS 2 3.6 TS 3		3.4.3.1 Network ID ►3.4.3.2 Network na	Network name Network-1
	3.5 TS 2 ►3.6 TS 3		►3.4.3.3 Version Mo 3.4.3.4 Version nu	Version Mode *Automatic
			3.4.3.3 Version Mo ►3.4.3.4 Version nu	Version number 29
			►3.4.3.5 TS name 3.4.3.6 Key ID	TS name TS-1
			3.4.3.5 TS name ►3.4.3.6 Key ID	Key ID 1
			►3.4.3.7 Trans type 3.4.3.8 Private da	Trans type info 0
			3.4.3.7 Trans type ►3.4.3.8 Private da	Private data 0x0
			►3.4.3.9 NIT insert	NIT insert *Yes No

TS setting and parameters setting of each carriers

5、Menu 4

3 TS Config ►4 IP Output	►4.1 Service IP 4.2 Subnet mask	Service IP 192.168.003.137	
	4.1 Service IP ►4.2 Subnet mask	Subnet Mask 255.255.255.000	
	►4.3 Gateway 4.4 MPTS 1	Gateway 192.168.003.000	
	4.3 Gateway ►4.4 MPTS 1	►4.4.1 Output Enabl 4.4.2 Null PKT Fil	Output Enable ON *OFF
		4.4.1 Output Enabl ►4.4.2 Null PKT Fil	Null PKT Filter ON *OFF
		►4.4.3 Output IP 4.4.4 Output Port	Output IP 224.002.002.002
		4.4.3 Output IP ►4.4.4 Output Port	Output Port 3000
		►4.4.5 Output proto	Output protocol *UDP RTP/RTSP

IP setting of 8 channels

6、Menu 5

►5 RF Output 6 Network	►5.1 RF frequency 5.2 RF on	►5.1.1 RF 1 Freq 5.1.2 RF 2 Freq	RF 1 Freq 650.000MHz
		5.1.1 RF 1 Freq ►5.1.2 RF 2 Freq	RF 2 Freq 656.000MHz
	5.1 RF frequency ►5.2 RF on	►5.1.1 RF 1 on 5.1.2 RF 2 on	RF 1 on Off * On
		5.1.1 RF 1 on ►5.1.2 RF 2 on	RF 2 on Off * On
	►5.3 Bitrate 5.4 Constellation	Bitrate(Act/Max) 22.72M/23.668M	
	5.3 Bitrate ►5.4 Constellation	Constellation * 64 QAM	
	►5.5 FFT 5.6 Guard interval	FFT *2K (Mode 1)	
	5.5 FFT ►5.6 Guard interval	Guard interval *1/32	
	►5.7 Code rate 5.8 RF level	Code rate *7/8	
	5.7 Code rate ►5.8 RF level	RF Level -10dBm	

RF parameters setting.

7、Menu 6

5 RF Output ►6 Network	►6.1 NMS IP 6.2 Subnet Mask	NMS IP 192.168.002.136
	6.1 NMS IP ►6.2 Subnet Mask	Subnet Mask 255.255.255.000
	►6.3 Gateway 6.4 MAC Address	Gateway 192.168.002.001
	6.3 Gateway ►6.4 MAC Address	MAC Address 201503250036
	►6.5 web NMS Port 6.6 Reset Password	Web NMS Port 00080
	6.5 web NMS Port ►6.6 Reset Password	Reset Password? Yes ►No

Network parameters setting

8、Menu 7

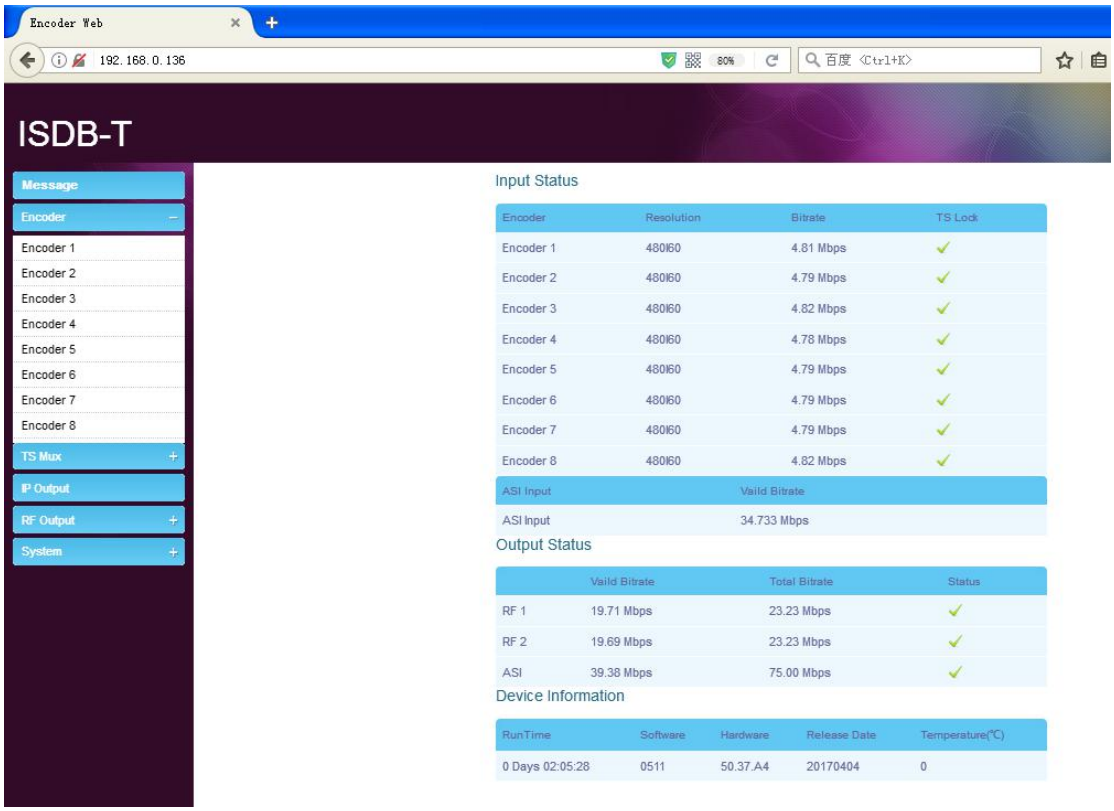
►7 System	►7.1 Save Config 7.2Load saved CFG	Save Configuration ? Yes ►No
	7.1 Save Config ►7.2Load saved CFG	Load Saved CFG ? Yes ►No
	►7.3 Factory reset 7.4 LCD time-out	Reset all sets ? Yes ►No
	7.3 Factory reset ►7.4 LCD time-out	LCD time-out *30 S
	►7.5 Key password 7.6 Lock keyboard	Set password 000000
	7.5 Key password ►7.6 Lock keyboard	Lock Keyboard Yes *No
	►7.7 Product ID 7.8 Version	3542b91600000004 3542170101040104
	7.7 Product ID ►7.8 Version	8 in 1 Encoder SW 5.06 HW 3.7
		8 in 1 Encoder 100 May 29 2016

System parameters setting.

B、WEB NMS Menu operation

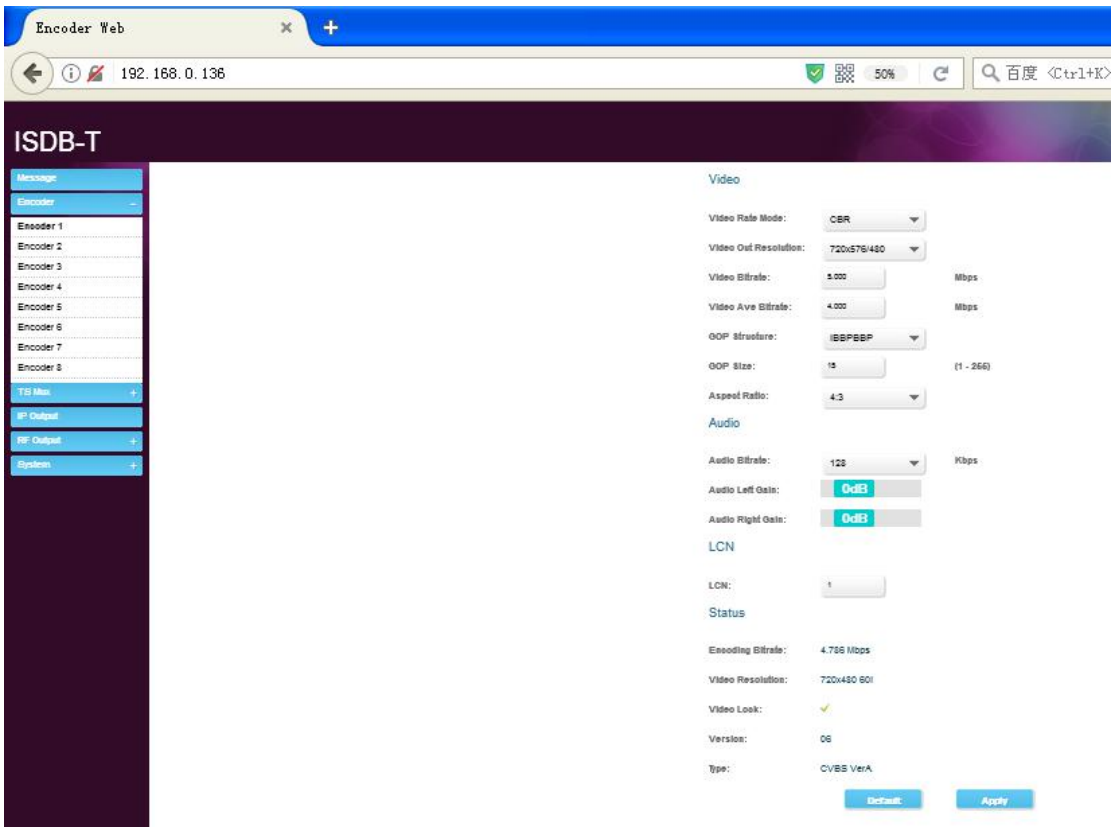
First set the Computer and devoice in same segment, input device IP address to browser to enter the web nms. Input user name, password(default admin)

1、Message



Display the encoding bit-rate, ASI input bit-rate, total bit-rate. Green indicator means device working well, Red indicator means working wrong.

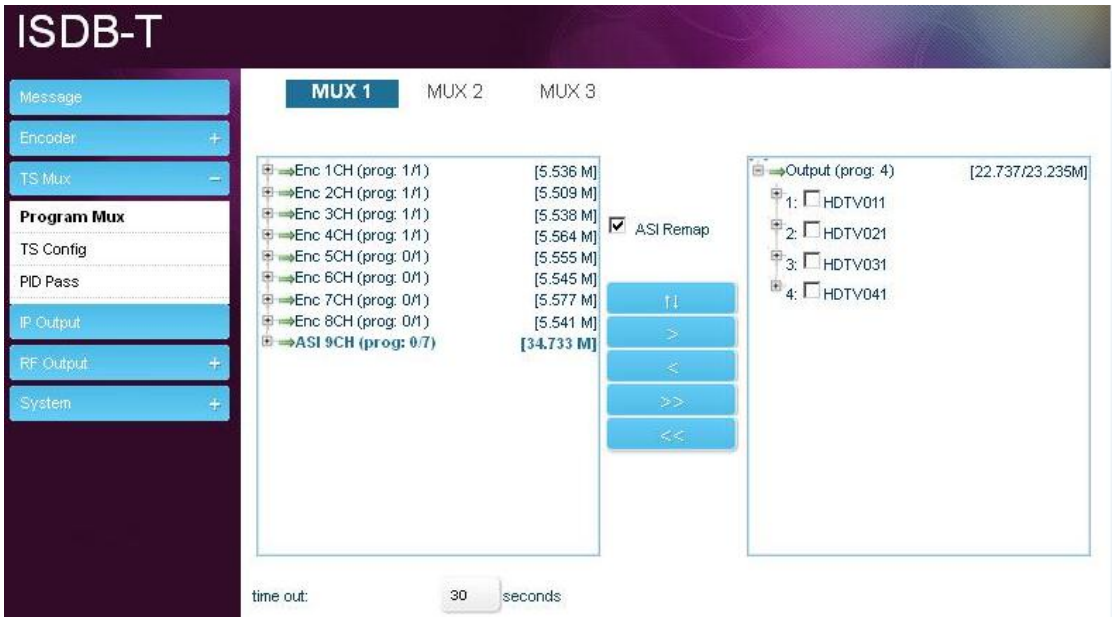
3、Encoder1~8



Parameters of each channel, when user change the parameters, set parameters well, and click

Apply to modify the parameters.

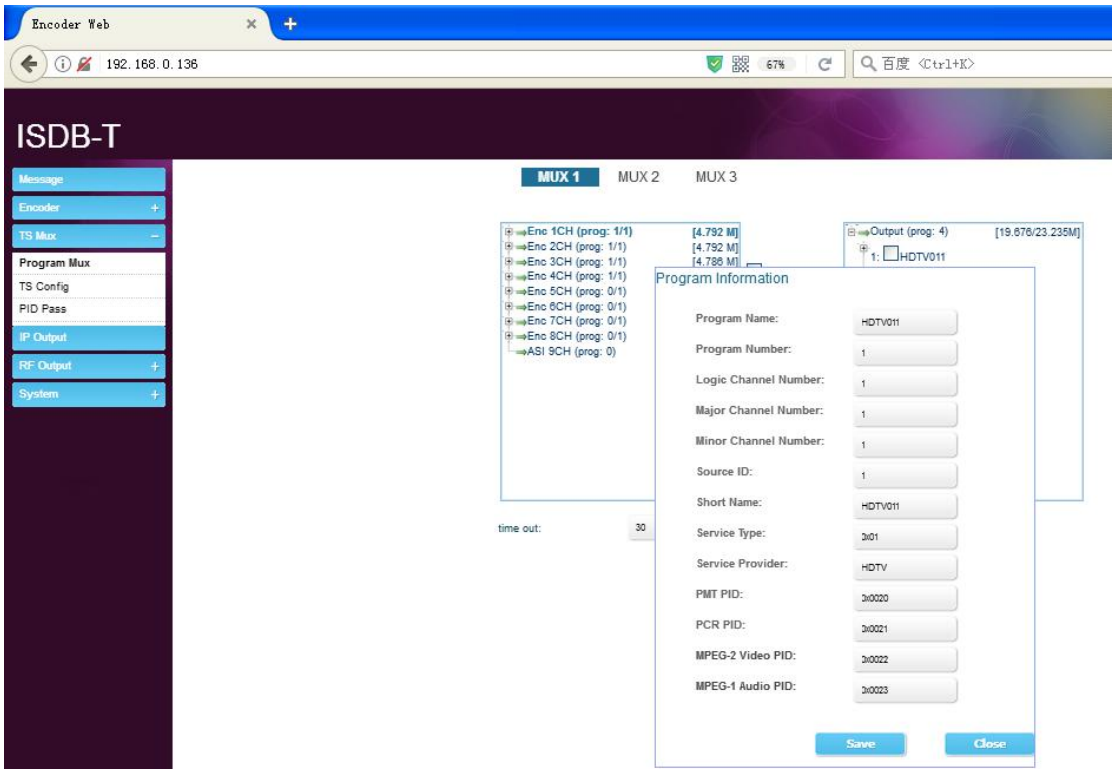
5、TS Mux

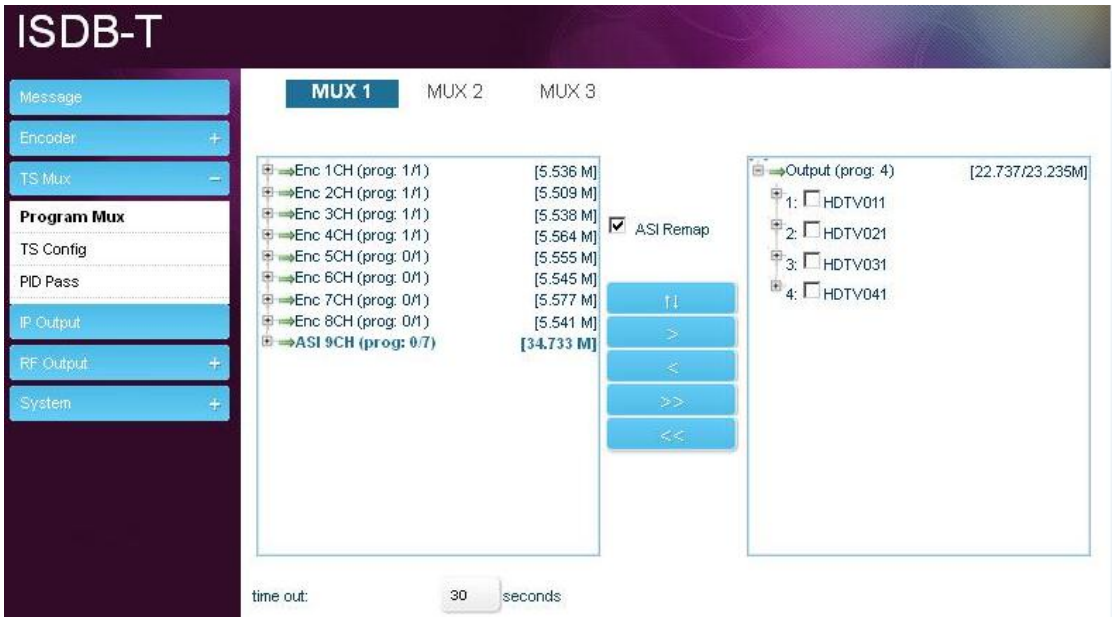


ASI input, click ↑↓ to refresh, seach the input ASI signal, like the following screenshot:

Multiplex the programs of ASI input, choose the programs, and click > to multiplex the program to the output. If user need to delete the program which has been multiplexed, choose the program from the output, click < to cancel the program, like the following screenshot:

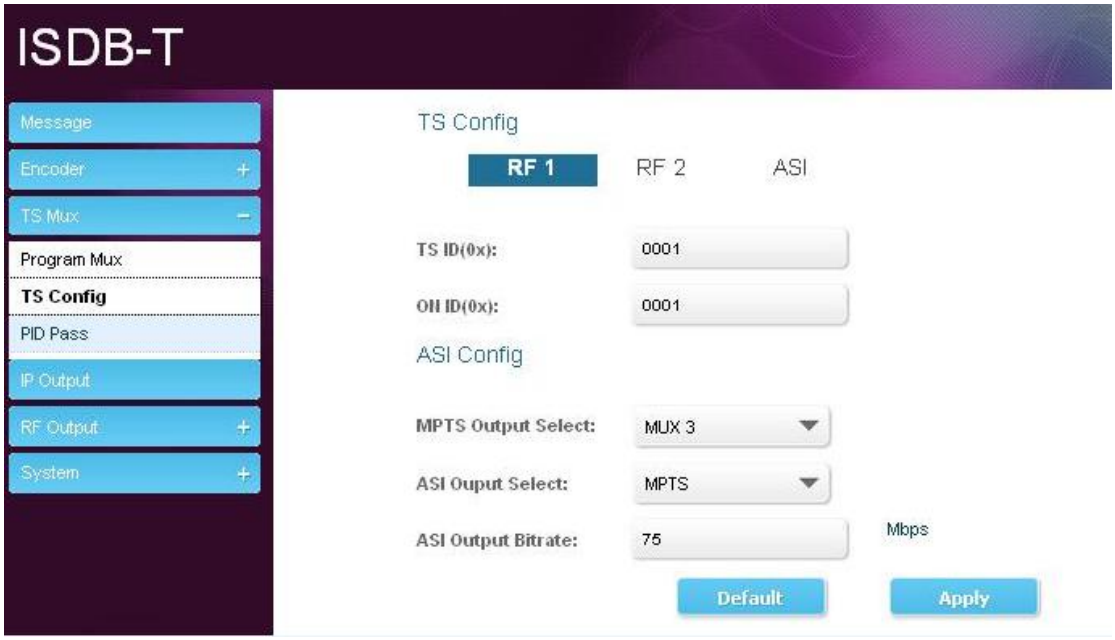
If user need to modify the info of Output Program, click the program name, like the “Digital 1”, after user modified the parameters, click Save to modification. Like the following screenshot:





Choose the output carrier first(Output 1, Output 2, Output3, Output4), and then choose the programs to output by the carrier

6、TS Config



PID Pass

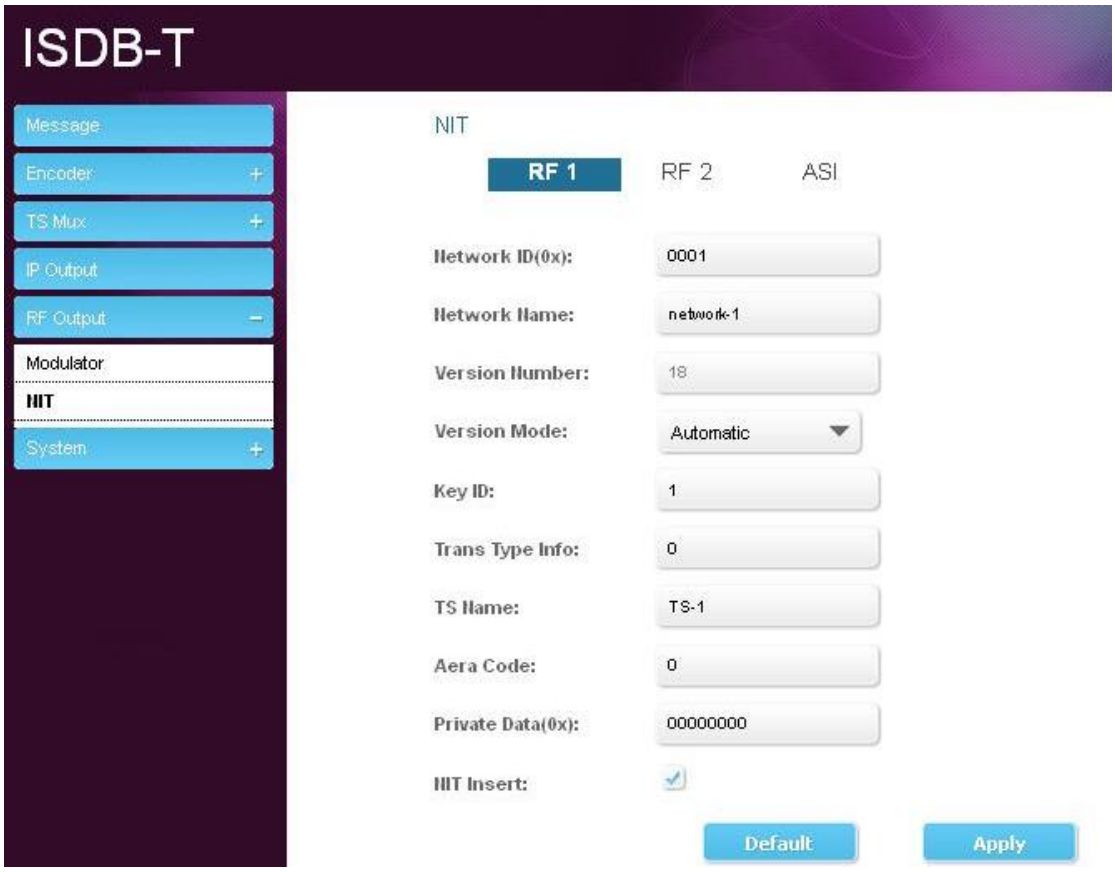
ASI Output choose

7、IP Output

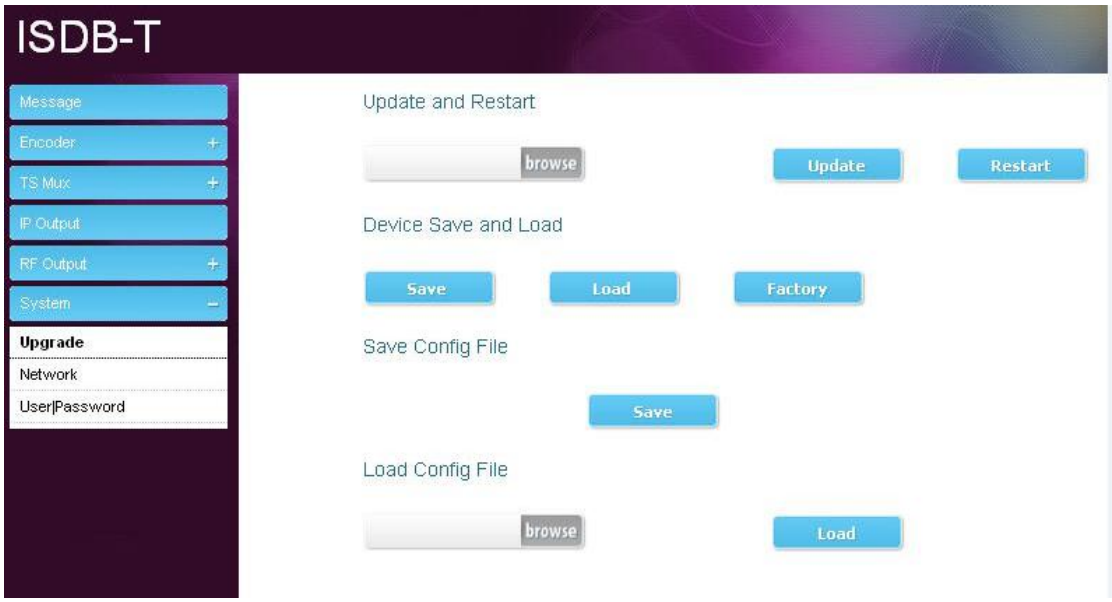
IP output, parameters setting like the above screenshot.

8、RF Output、Modulator

9、RF Output、NIT

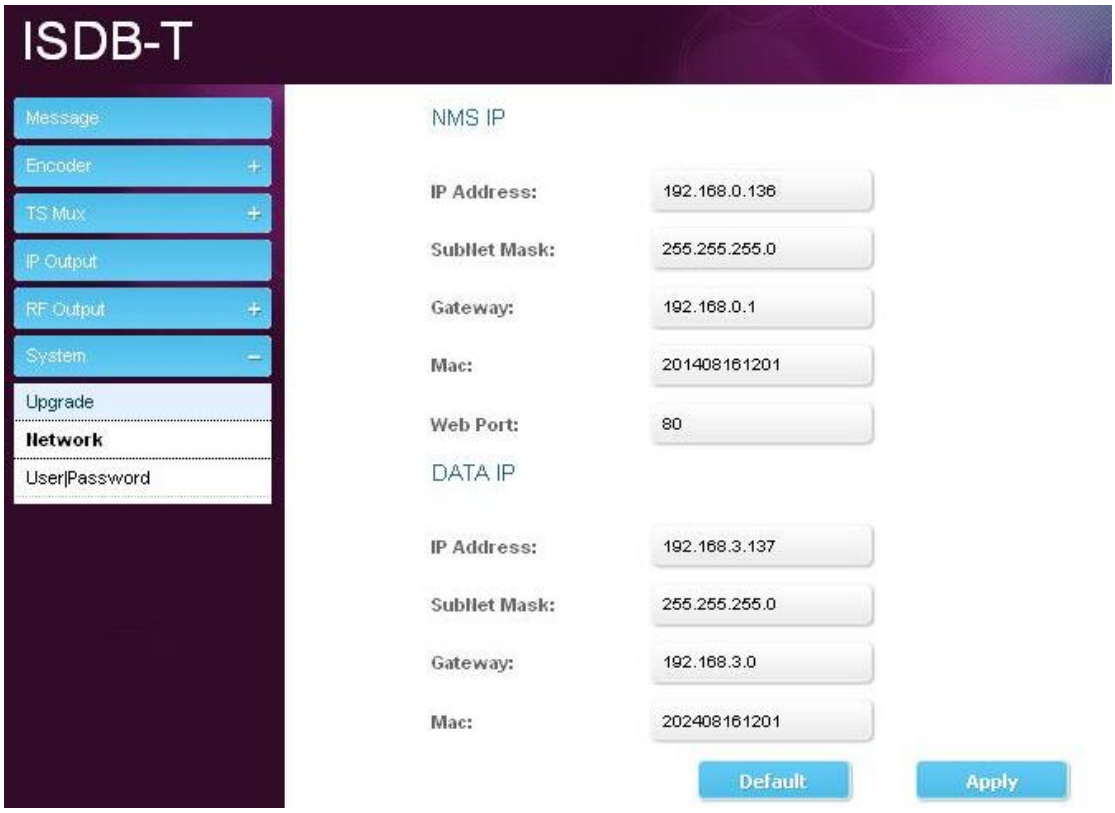


10、System、Upgrade



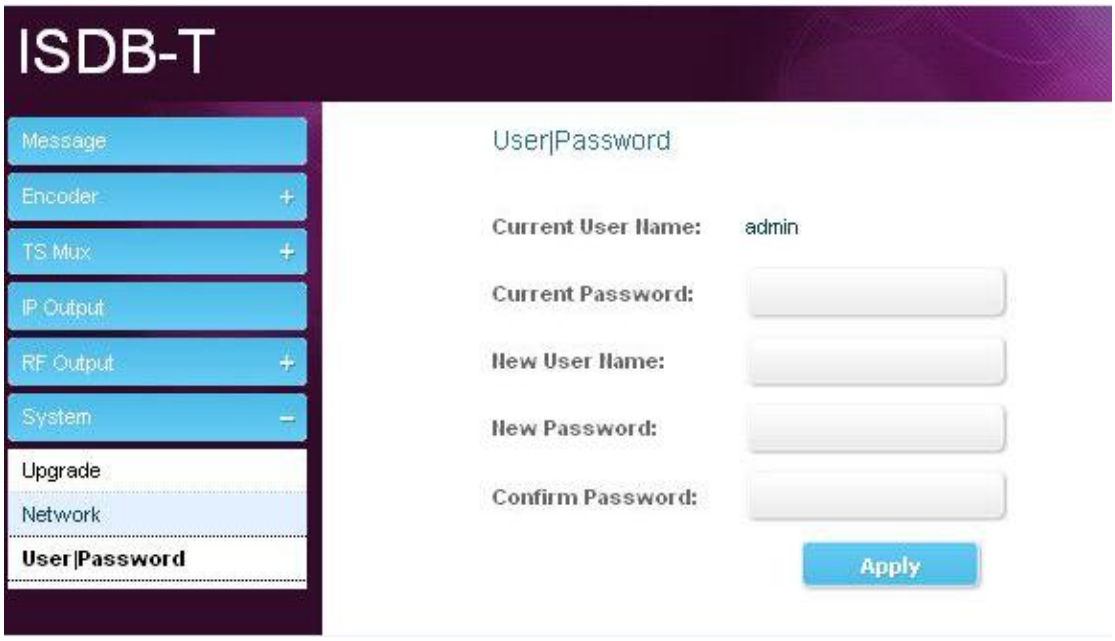
After parameters been modified, user must click "Save" **to save the parameters. (when user do the device upgrade, cannot do the operation wrong, or the device may work wrong)**

11、Network



Modify the device and computer communication IP info.

12、User|Password



Modify the User name and password of web nms.