

PRODUCT MODEL NUMBER: TL-9508B TUNER TO IP GATEWAY



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CHAPTER 1

INTRODUCTION

1.1 PRODUCT OVERVIEW

TL-9508B Tuner to IP Gateway is a head-end interface conversion device which supports MPTS and SPTS output switchable. It supports 16 MPTS or 512 SPTS output over UDP and RTP/RTSP protocol. It is integrated with tuner demodulation (or ASI input) and gateway function, which can demodulate the signal from 16 tuners into IP package, or directly convert the TS from ASI input and tuner into IP package, then output the IP package through different IP address and ports. BISS function is also embedded for tuner input to descramble your tuner input programs.

1.2 KEY FEATURES

- Supports 16 FTA DVB- S/S2/S2X (DVB-C/T/T2 /ISDB-T/ATSC optional) input, 2 ASI input
- Supports BISS descrambling
- Supports DisEqc function
- 16 MPTS or 512 SPTS output (MPTS and SPTS output switchable)
- 2 GE mirrored output (IP address and port number of GE1 and GE2 are different), up to 850Mbps → SPTS
- 2 independent GE output port, GE1 + GE2 →MPTS
- Supports PID filtering, re-mapping (Only for SPTS output)
- Supports “Null PKT Filter” function (Only for MPTS output)
- Supports Web operation

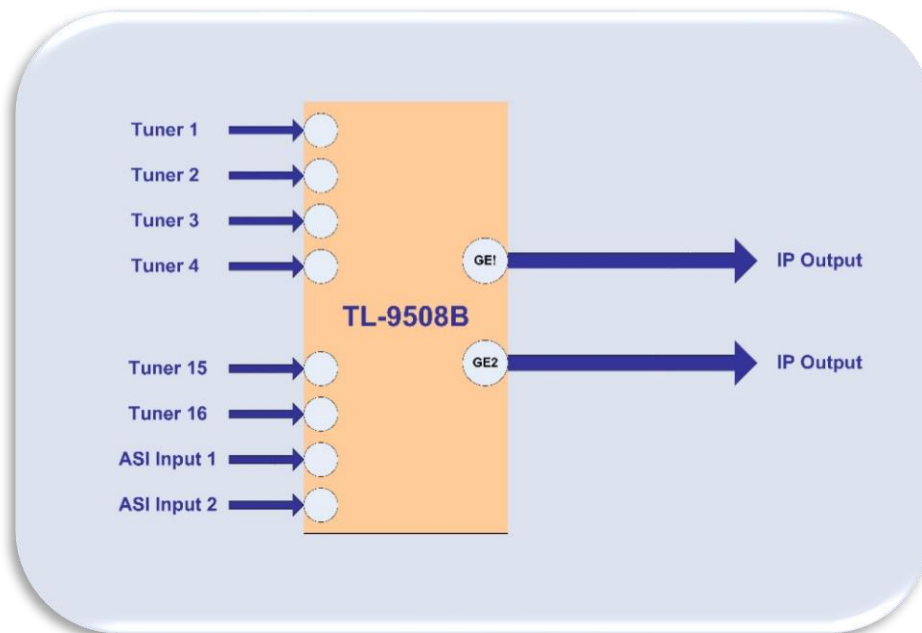
1.3 SPECIFICATIONS

Input		
Optional 1:16 tuners input +2 ASI input---SPTS output		
Optional 2:14 tuners input +2 ASI input --- MPTS output		
Optional 3:16 tuners input --- MPTS output		
Tuner Section		
DVB-C	Standard	J.83A(DVB-C), J.83B, J.83C
	Frequency In	30 MHz~1000 MHz
	Constellation	16/32/64/128/256 QAM
DVB-T/T2	Frequency In	30MHz ~ 999.999 MHz
	Bandwidth	6/7/8 M bandwidth
DVB-S/S2	Input Frequency	950-2150MHz
	Symbol rate	DVB-S: QPSK 2~45Mbauds; DVB-S2:QPSK 1~45Mbauds, 8PSK 2~30Mbauds
	Code rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
	Constellation	QPSK, 8PSK
DVB-S (Version 2)	Frequency In	950-2150MHz
	Symbol rate	0.5~45Msps
	Signal Strength	- 65- -25dBm
	FEC	1/2, 2/3, 3/4, 5/6, 7/8
	Constellation	QPSK
	Max input bitrate	≤125 Mbps

DVB-S2 (Version 2)	Frequency In	950-2150MHz
	Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 32APSK: 0.5~34Msps;
	FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
	Constellation	QPSK, 8PSK, 16APSK, 32APSK
DVB-S2X (Version 2)	Frequency In	950-2150MHz
	Symbol rate	QPSK/8PSK /16APSK :0.5~45 Msps 8APSK: 0.5~40Msps 32APSK: 0.5~34Msps
	FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 2/3-L, 32/45, 11/15, 7/9
	Constellation	QPSK, 8PSK, 8APSK, 16APSK, 32APSK
	Max input bitrate	≤125 Mbps
ISDB-T	Input Frequency	30-1000MHz
ATSC	Input Frequency	54MHz ~ 858MHz
	Bandwidth	6M bandwidth
Output		
512 SPTS IP mirrored output over UDP and RTP/RTSP protocol through GE1 and GE2 port, Unicast and Multicast		
16 MPTS IP output (for Tuner/ASI pass-through) over UDP and RTP/RTSP protocol through GE1 and GE2 port (IP address and port number of GE1 and GE2 are different), Unicast and Multicast		

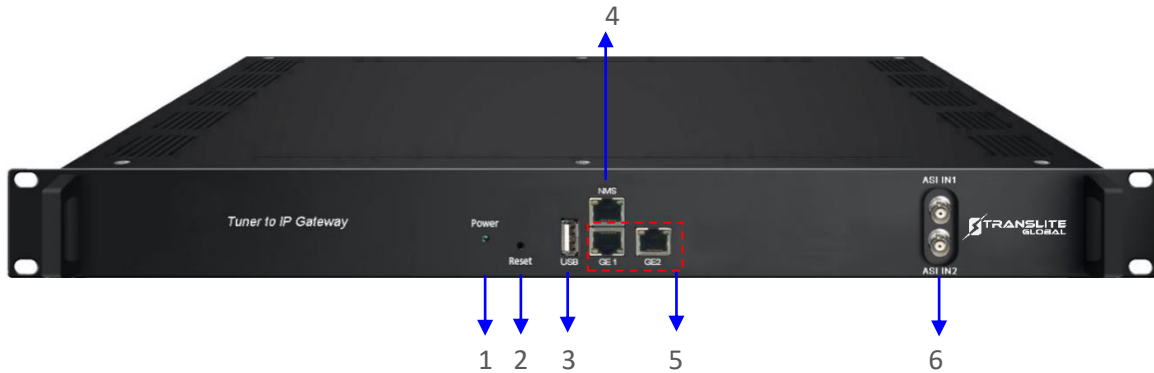
BISS Descrambling	
Mode 1, Mode E (Up to 850Mbps) (descramble individual program)	
Miscellaneous	
Dimension	482mm×410mm×44mm (W×L×H)
Approx. weight	3.6kg
Environment	0~45°C(work); -20~80°C (Storage)
Power requirements	100~240VAC, 50/60Hz
Power consumption	20W

1.4 PRINCIPLE CHART



1.5 APPEARANCE AND DESCRIPTION

Front Panel Illustration



1	Power indicator
2	Reset: Reset webmaster IP address, recover it to default IP address
3	USB port for upgrade
4	NMS port: Network management interface
5	Data port (GE1&GE2) : IP out port
6	ASI input port

Rear Panel Illustration



1	16 channels RF IN Interface
2	Integrated power switch and socket
3	Grounding Wire

CHAPTER 2

INSTALLATION GUIDE

This section is to explain the cautions the users must know in some case that possibly injure may bring to users when it's used or installed. For this reason, please read all details here and make in mind before installing or using the product.

2.1 ACQUISITION CHECK

When users open the package of the device, it is necessary to check items according to packing list. Normally it should include the following items:

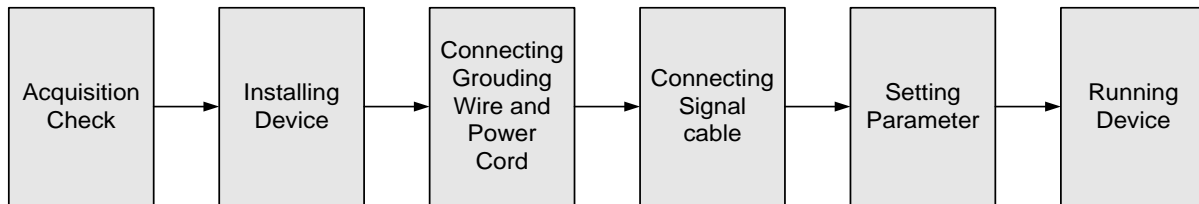
- TL-9508B Tuner to IP Gateway
- User's Manual
- Grounding Cable
- RF In and Loop Out Cable
- Power Cord

If any item is missing or mismatching with the list above, please contact local dealer.

2.2 INSTALLATION PREPARATION

- When you connect the power source, make sure if it may cause overload.
- Avoid operating on a wet floor in the open. Make sure the extension cable is in good condition
- Make sure the power switch is off before you start to install the device

2.3 DEVICE'S INSTALLATION FLOW CHART ILLUSTRATED AS FOLLOWING



2.4 ENVIRONMENT REQUIREMENT

Item	Requirement
Machine Hall Space	When user installs machine frame array in one machine hall, the distance between 2 rows of machine frames should be 1.2~1.5m and the distance against wall should be no less than 0.8m.
Machine Hall Floor	Electric Isolation, Dust Free Volume resistivity of ground anti-static material: $1 \times 10^7 \sim 1 \times 10^{10} \Omega$, Grounding current limiting resistance: $1 \text{M}\Omega$ (Floor bearing should be greater than $450 \text{Kg}/\text{m}^2$)
Environment Temperature	$5 \sim 40^\circ\text{C}$ (sustainable), $0 \sim 45^\circ\text{C}$ (short time) installing air-conditioning is recommended
Relative Humidity	20%~80% sustainable 10%~90% short time
Pressure	86~105KPa
Door & Window	Installing rubber strip for sealing door-gaps and dual level glasses for window
Wall	It can be covered with wallpaper, or brightness less paint.
Fire Protection	Fire alarm system and extinguisher
Power	Requiring device power, air-conditioning power and lighting power are independent to each other. Device power requires AC $110\text{V} \pm 10\%$, 50/60Hz or AC $220\text{V} \pm 10\%$, 50/60Hz. Please carefully check before running.

2.5 GROUNDING REQUIREMENT

- All function modules' good grounding is the basis of reliability and stability of devices. Also, they are the most important guarantee of lightning arresting and interference rejection. Therefore, the system must follow this rule.
- Coaxial cable's outer conductor and isolation layer should keep proper electric conducting with the metal housing of device.
- Grounding conductor must adopt copper conductor in order to reduce high frequency impedance, and the grounding wire must be as thick and short as possible.
- Users should make sure the 2 ends of grounding wire well electric conducted and be antirust.
- It is prohibited to use any other device as part of grounding electric circuit
- The area of the conduction between grounding wire and device's frame should be no less than 25mm².

2.5.1 FRAME GROUNDING

All the machine frames should be connected with protective copper strip. The grounding wire should be as short as possible and avoid circling. The area of the conduction between grounding wire and grounding strip should be no less than 25mm².

2.5.2 DEVICE GROUNDING

Connecting the device's grounding rod to frame's grounding pole with copper wire.

2.6 WIRE'S CONNECTION

The grounding wire conductive screw is located at the right end of rear panel, and the power switch, fuse, power supply socket is just besides, whose order goes like this, power switch is on the left, power supply socket is on the right and the fuse is just between them.

Connecting Power Cord

User can insert one end into power supply socket, while insert the other end to AC power.

Connecting Grounding Wire

When the device solely connected to protective ground, it should adopt independent way, say, share the same ground with other devices. When the device adopts united way, the grounding resistance should be smaller than 1Ω .



Caution:

Before connecting power cord to TL-9508B Tuner to IP Gateway, user should set the power switch to "OFF".

CHAPTER 3

WEB NMS OPERATION

User can only control and set the configuration in computer by connecting the device to web NMS Port. User should ensure that the computer's IP address is different from the TL-9508B's IP address; otherwise, it would cause IP conflict.

3.1 LOGIN

- The default IP of this device is 192.168.0.136.
- Connect the PC and the device with net cable and use ping command to confirm they are on the same network segment.
- I.G. the PC IP address is 192.168.99.252, we then change the device IP to 192.168.99.xxx (xxx can be 0 to 255 except 252 to avoid IP conflict).
- Use web browser to connect the device with PC by inputting this device's IP address in the browser's address bar and press Enter.
- It displays the Login interface as Figure-1. Input the Username and Password (Both the default Username and Password are "admin".) and then click "Login" to start the device setting.

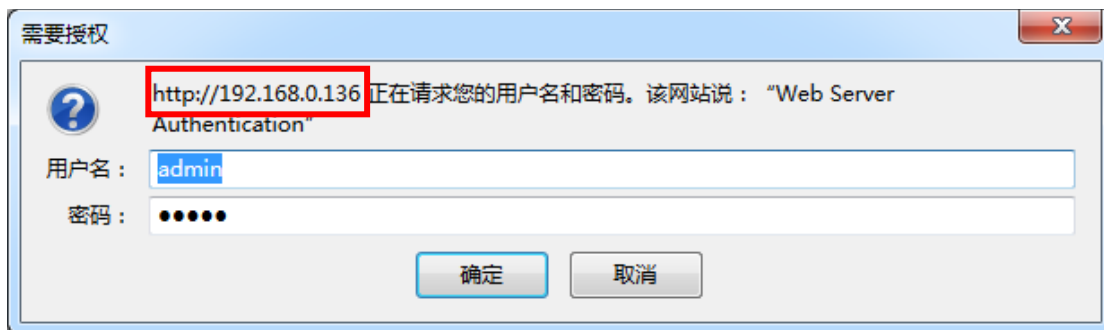
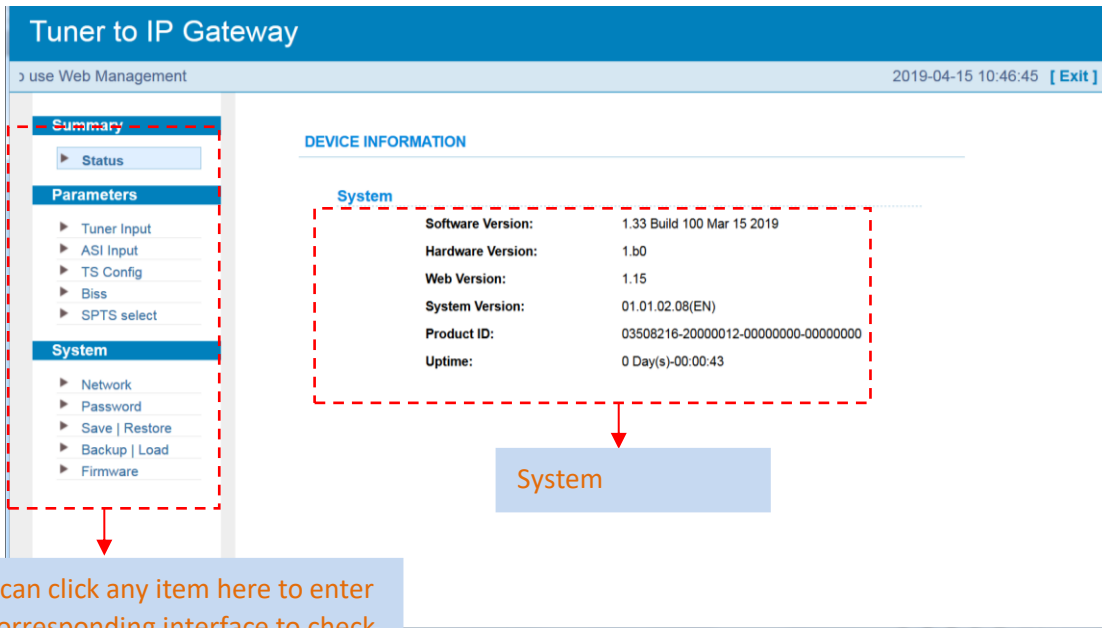


Figure-1

Summary → Status

When we confirm the login, it displays the status interface as Figure-2.



User can click any item here to enter the corresponding interface to check information or set the parameters.

Parameter → Tuner input (DVB-C/T/T2/ISDBT)

From the menu on top side of the webpage, click “Tuner Input”, it displays the interface where users can check the 16 Tuners input status. TL-9508B supports multi tuners switch manually. (Figure-3)

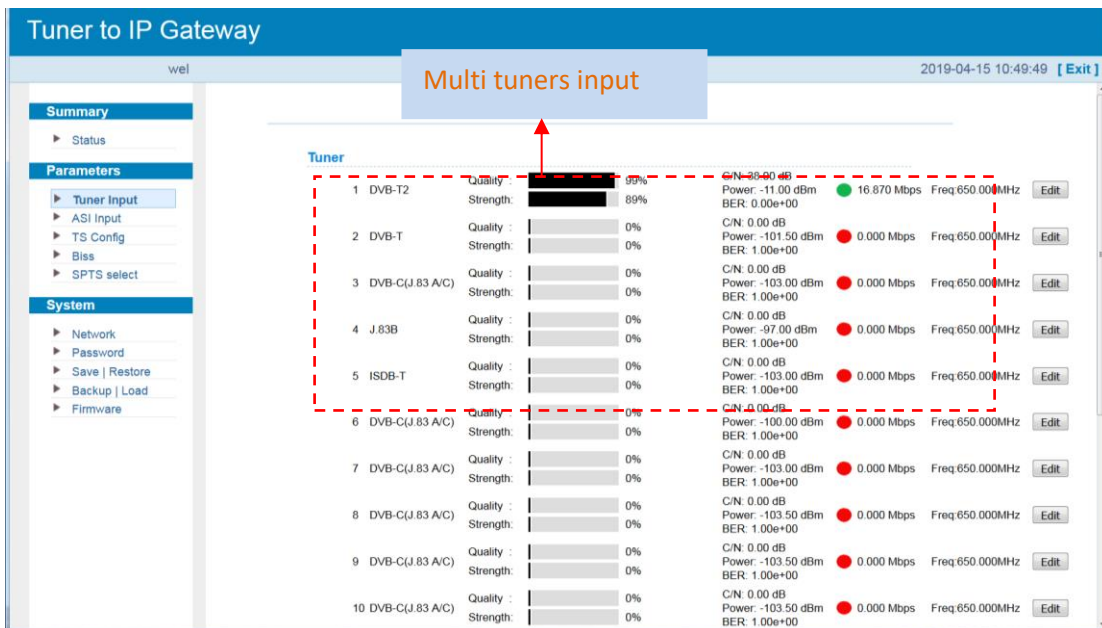


Figure-3

Clicking “Edit” to set parameters for tuner:

Detail Parameter

Demodulation: DVB-T2
Frequency:(60-890) 650.000 MHz
Bandwidth: 8 M
PLP: 0

Set Close

DVB-T2

Detail Parameter

Demodulation: DVB-T
Frequency:(60-890) 650.000 MHz
Bandwidth: 8 M

Set Close

DVB-T

Detail Parameter

Demodulation: DVB-C(J.83 A/C)
Frequency:(60-890) 650.000 MHz
Symbolrate:(1000-9000) 6875 Ksps
Constellation: 64 QAM

Set Close

DVB-C (J.83A/C)

Detail Parameter	
Demodulation:	J.83B
Frequency:(60-890)	650.000 MHz
Symbolrate:(1000-9000)	5057 Ksps
Constellation:	64 QAM

DVB-C (J.83B)

Detail Parameter	
Demodulation:	ISDB-T
Frequency:(60-890)	650.000 MHz

ISDB-T

Parameter → ASI input

From the menu on top side of the webpage, click “ASI Input”, it displays the interface where users can check the 2 channels of ASI input status. (Figure-4)

Figure-4

Parameter → TS Config

Clicking “TS Config”, it displays the interface where users can set the output TS and configure TS ID and ON ID (Figure-5).



Figure-5

Parameter → BISS

From the menu on left side of the webpage, clicking “BISS”, it displays the interface where users can configure BISS and descramble the input channels (Figure-6).

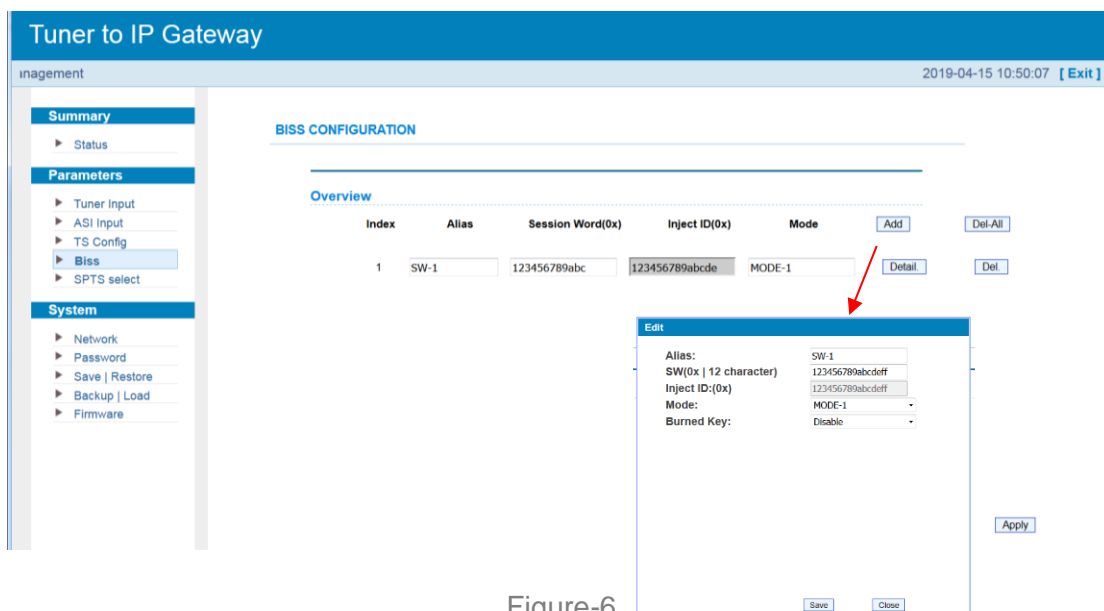


Figure-6

Parameter → SPTS Select:

From the menu on left side of the webpage, clicking “SPTS Select”, it displays the interface where users can choose 16 Tuner input and 2 ASI Input programs to output from IP (max 512 SPTS). (Figure-7)

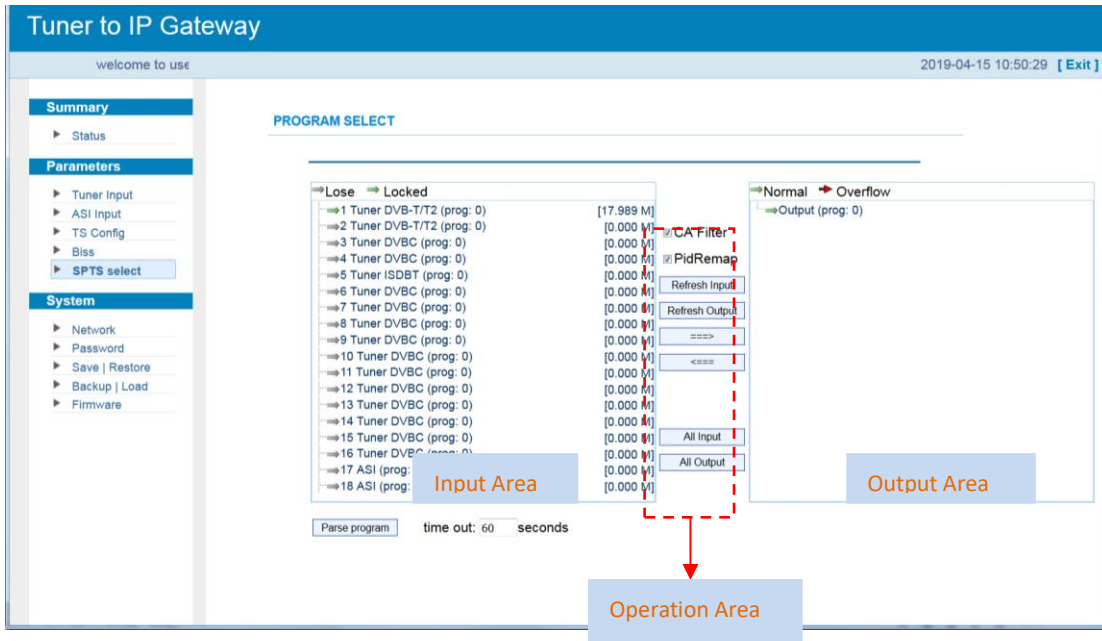


Figure-7

Configure ‘Input Area’ and ‘Output Area’ with buttons in ‘Operation Area’. Instructions are as below:

CA Filter : To filter/not filter the source CA information

PID Remap : To enable/disable the PID remapping

Refresh Input To refresh the input program information

Refresh Output To refresh the output program information

====> Select one input program first and click this button to transfer the selected program to the right box to output.

<==== Similarly, user can cancel the multiplexed programs from the right box.

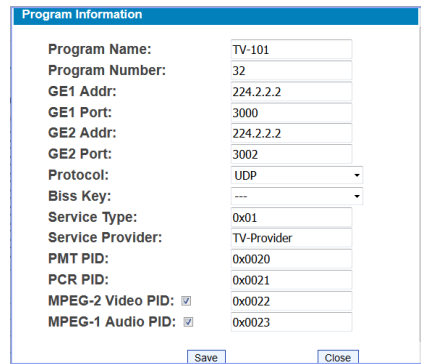
All Input To select all the input programs

All Output To select all the output programs

Parse program To parse programs seconds time limitation of parsing input programs

Program Modification:

The multiplexed program information can be modified by clicking the program in the 'output' area. For example, when clicking program in output area, it triggers a dialog box (Figure 8) where users can input new information.



Program Name:	TV-101
Program Number:	32
GE1 Addr:	224.2.2.2
GE1 Port:	3000
GE2 Addr:	224.2.2.2
GE2 Port:	3002
Protocol:	UDP
Biss Key:	---
Service Type:	0x01
Service Provider:	TV-Provider
PMT PID:	0x0020
PCR PID:	0x0021
MPEG-2 Video PID:	<input checked="" type="checkbox"/> 0x0022
MPEG-1 Audio PID:	<input checked="" type="checkbox"/> 0x0023

Figure-8

Note: TL-9508B support 16 Tuner input and 2 ASI input with 512 SPTS output, the parameter interface is different from MPTS. When users switch SPTS to MPTS, new mode will work after reboot the device.

Parameter → BISS:

From the menu on left side of the webpage, clicking "BISS", it displays the interface where users can configure BISS and descramble the input channels (Figure-9).

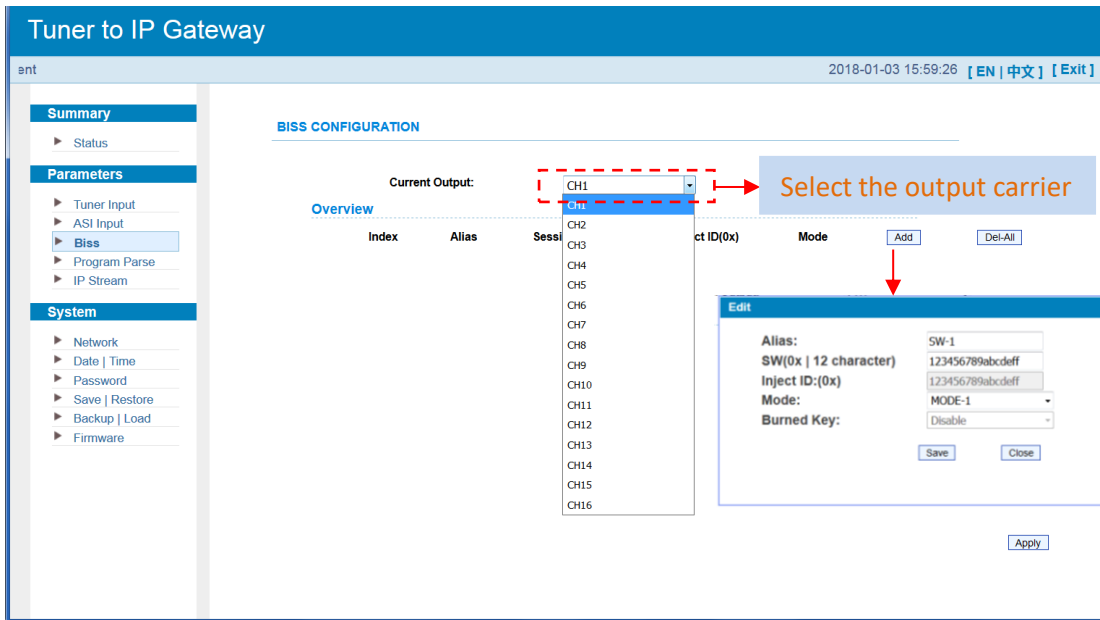


Figure-9

Parameter → Program Parse

From the menu on left side of the webpage, clicking “Program Parse”, it displays the interface where users can parse the program from the input channels.

When users disable the ASI input, TL-9508B can support 16 Tuner input with 16 MPTS IP output (Figure-10).

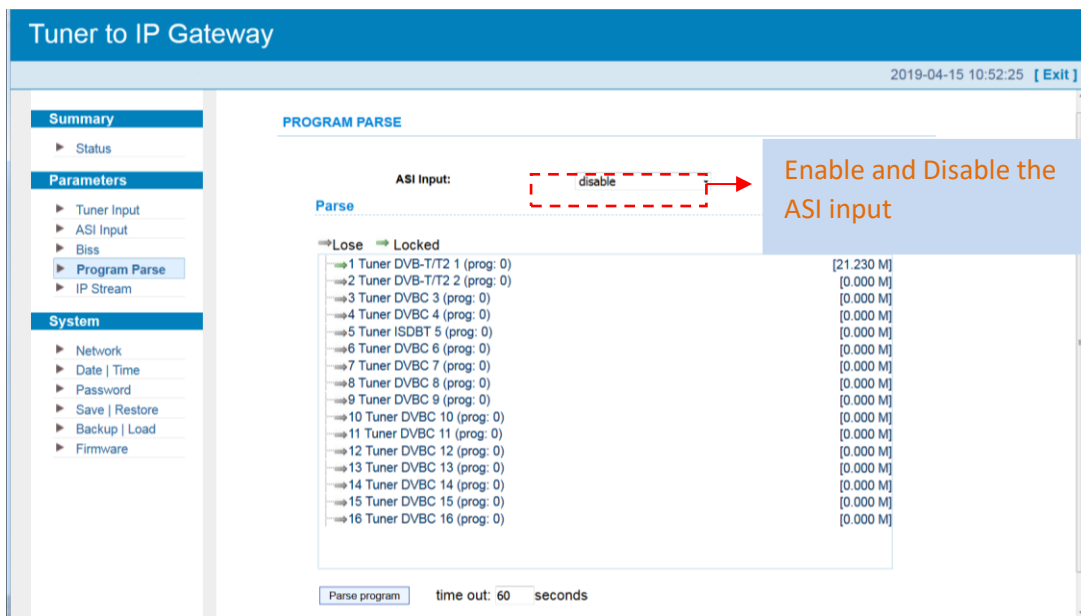


Figure-10

When users enable the ASI input, TL-9508B can support 14 Tuner input and 2 ASI input with 16 MPTS IP output (Figure-11).

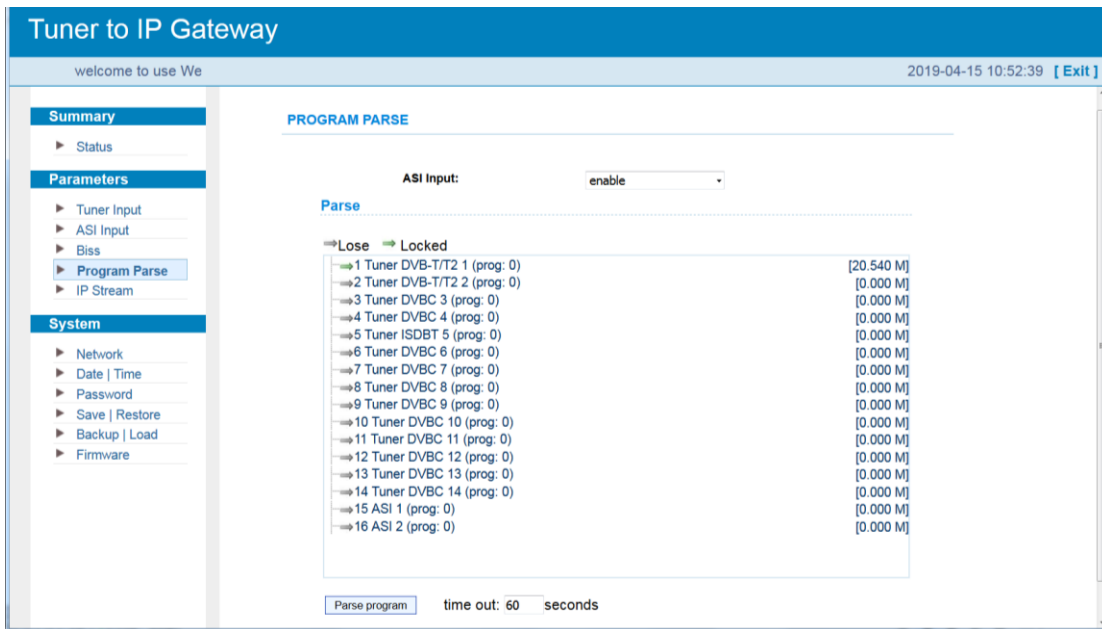


Figure-11

Parameter → IP Stream

TL-9508B supports TS to output in IP (16*MPTS) format through the GE1 or GE2 port. Clicking “IP Stream”, it displays the interface where to set IP out parameters (Figure-12).

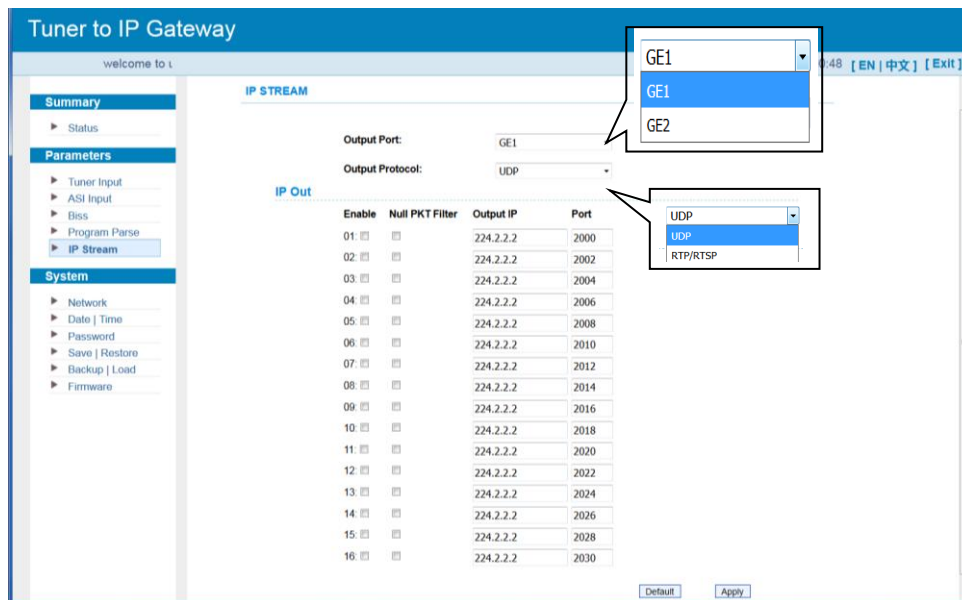


Figure-12

System → Network:

Clicking “Network”, it displays the interface as Figure-13 where to set network parameters.

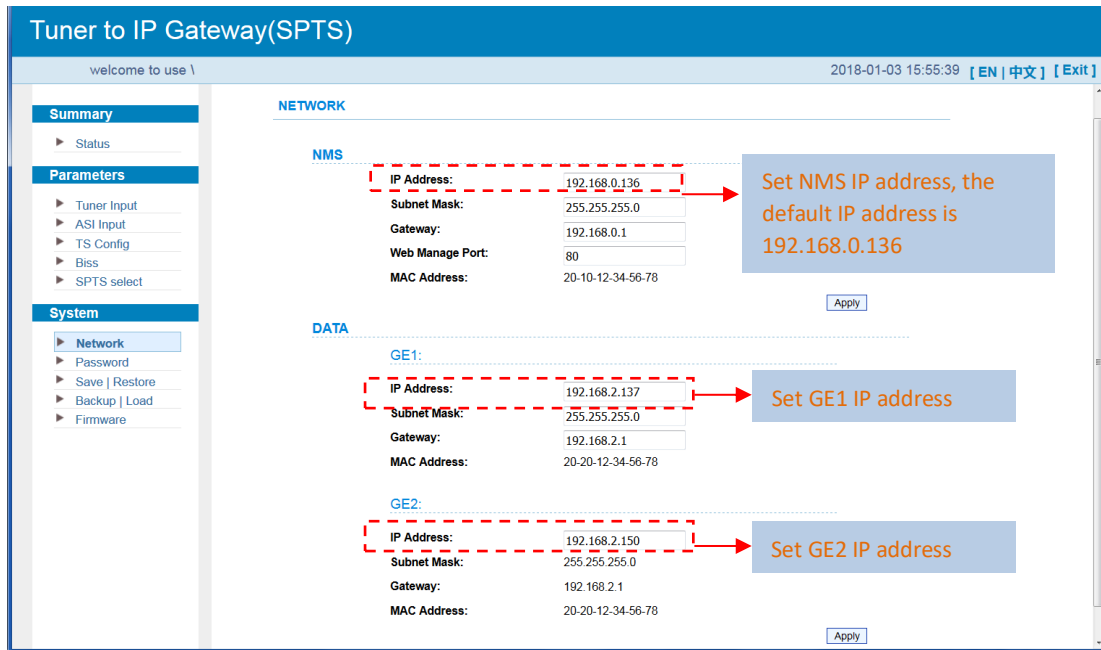


Figure-13

System → Date & Time:

Clicking “Date & Time”, it displays the interface as Figure-14 where to set date and time.

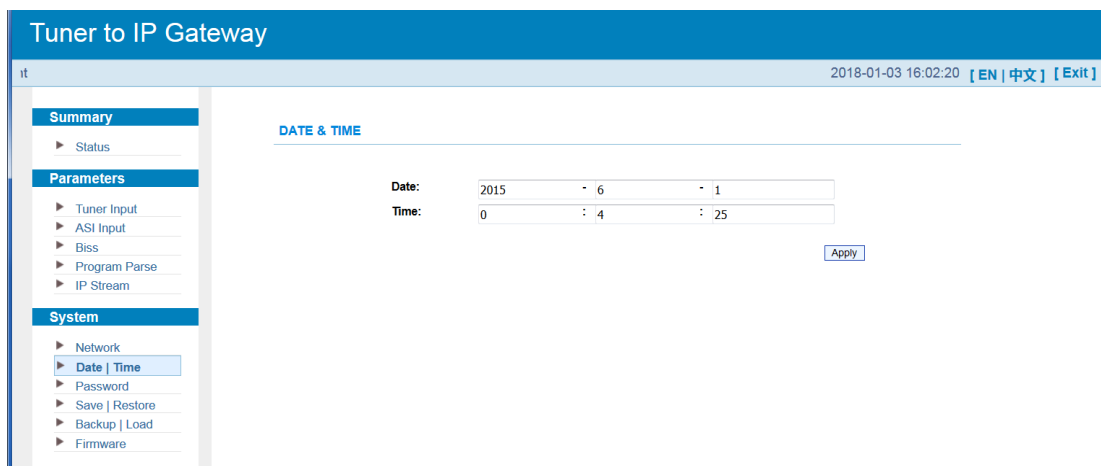


Figure-14

System → Password:

From the menu on left side of the webpage, clicking “Password”, it displays the screen as Figure-15 where to set the login account and password for the web NMS.

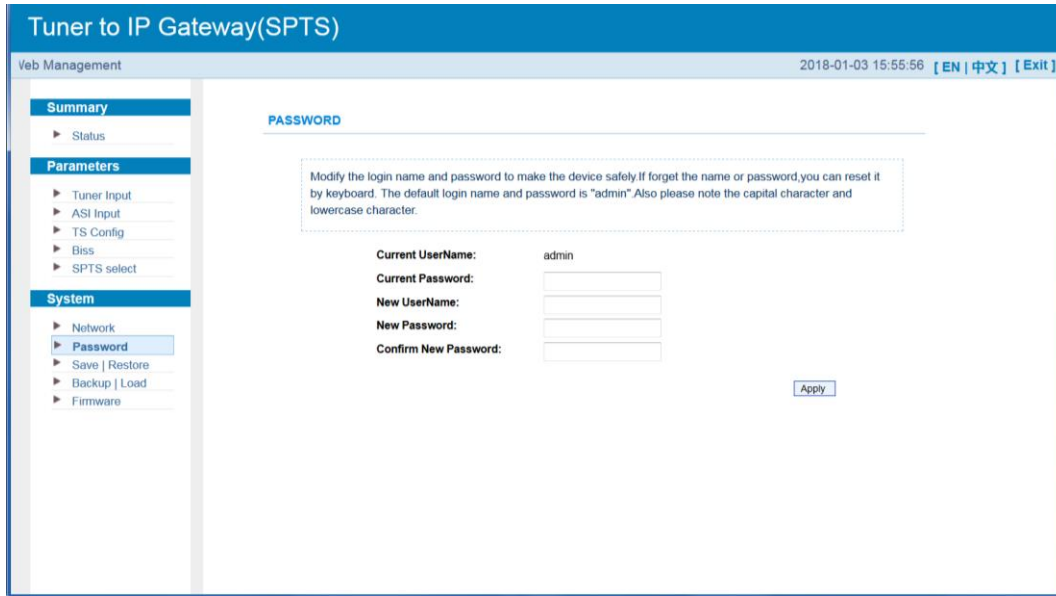


Figure-15

System → Save/Restore:

From the menu on left side of the webpage, clicking “Save/Restore”, it displays the screen as Figure-16 where to save or restore your configurations.

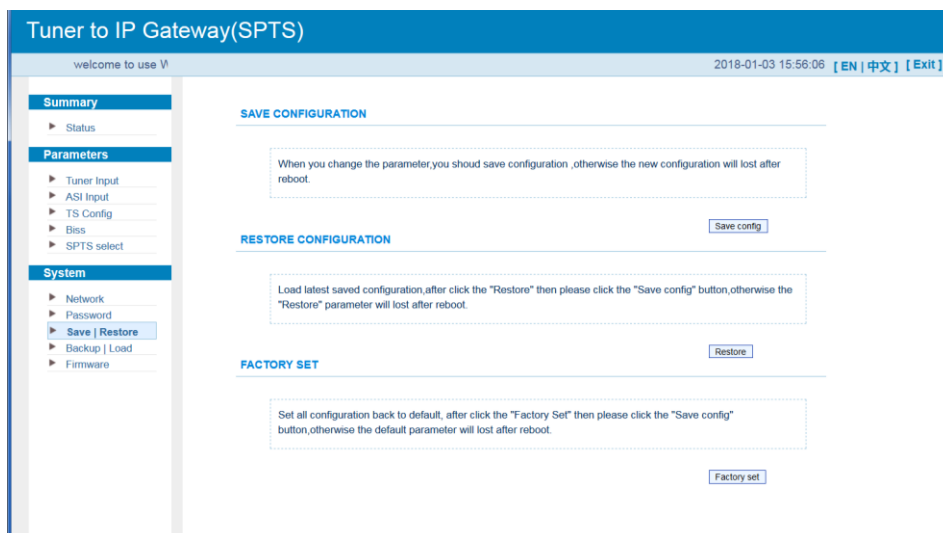


Figure-16

System → Backup/Load:

From the menu on left side of the webpage, clicking “Backup/Load”, it displays the screen as Figure-17 where to backup or load your configurations.

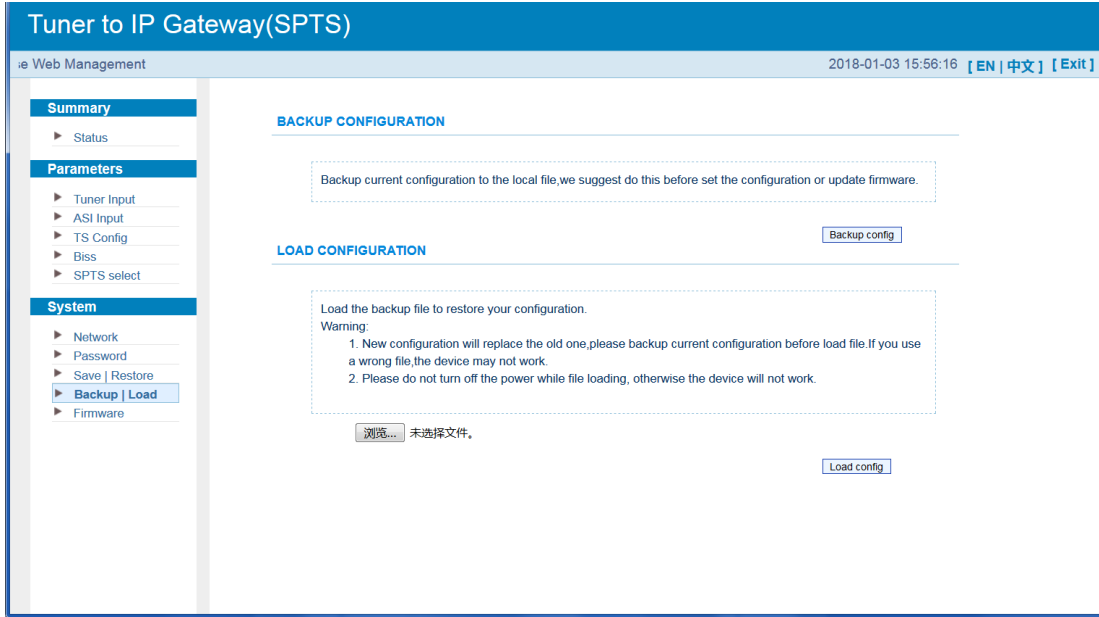


Figure-17

System → Firmware:

From the menu on left side of the webpage, clicking “Firmware”, it displays the screen as Figure-18 where to update firmware for the device.

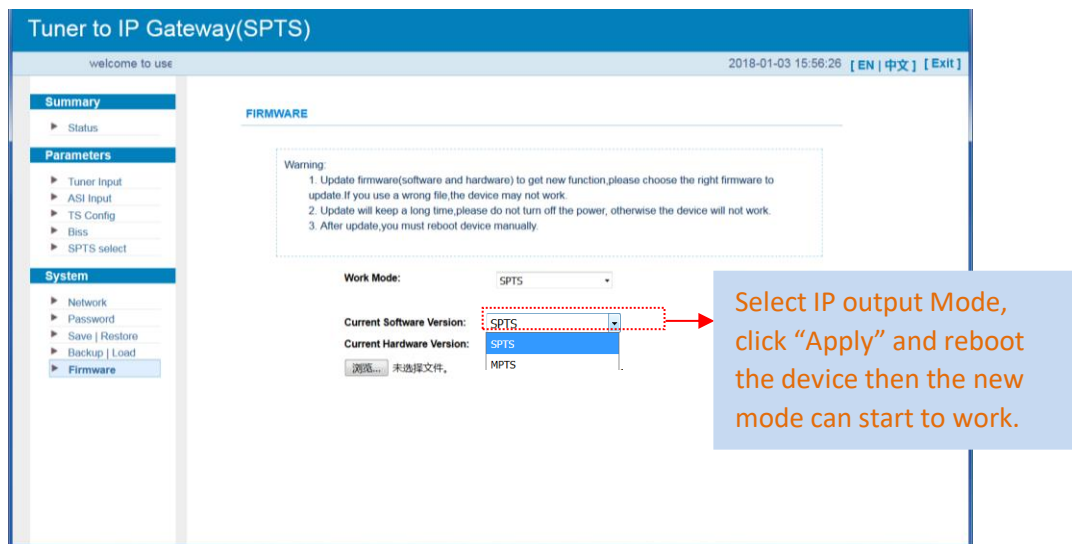


Figure-18

CHAPTER 4

TROUBLESHOOTING

All TRANSLITE products have been passed the testing and inspection before shipping out from factory. The testing and inspection scheme already covers all the Optical, Electronic and Mechanical criteria which have been published by TRANSLITE. To prevent potential hazard, please strictly follow the operation conditions.

Prevention Measure

- Installing the device at the place in which environment temperature between 0 to 45 °C
- Making sure good ventilation for the heat-sink on the rear panel and other heat-sink bores if necessary
- Checking the input AC within the power supply working range and the connection is correct before switching on device
- Checking the RF output level varies within tolerant range if it is necessary
- Checking all signal cables have been properly connected
- Frequently switching on/off device is prohibited; the interval between every switching on/off must greater than 10 seconds.

Conditions to unplug power cord

- Power cord or socket damaged.
- Any liquid flowed into device.
- Any stuff causes circuit short
- Device in damp environment
- Device was suffered from physical damage
- Longtime idle.
- After switching on and restoring to factory setting, device still cannot work properly.
- Maintenance needed

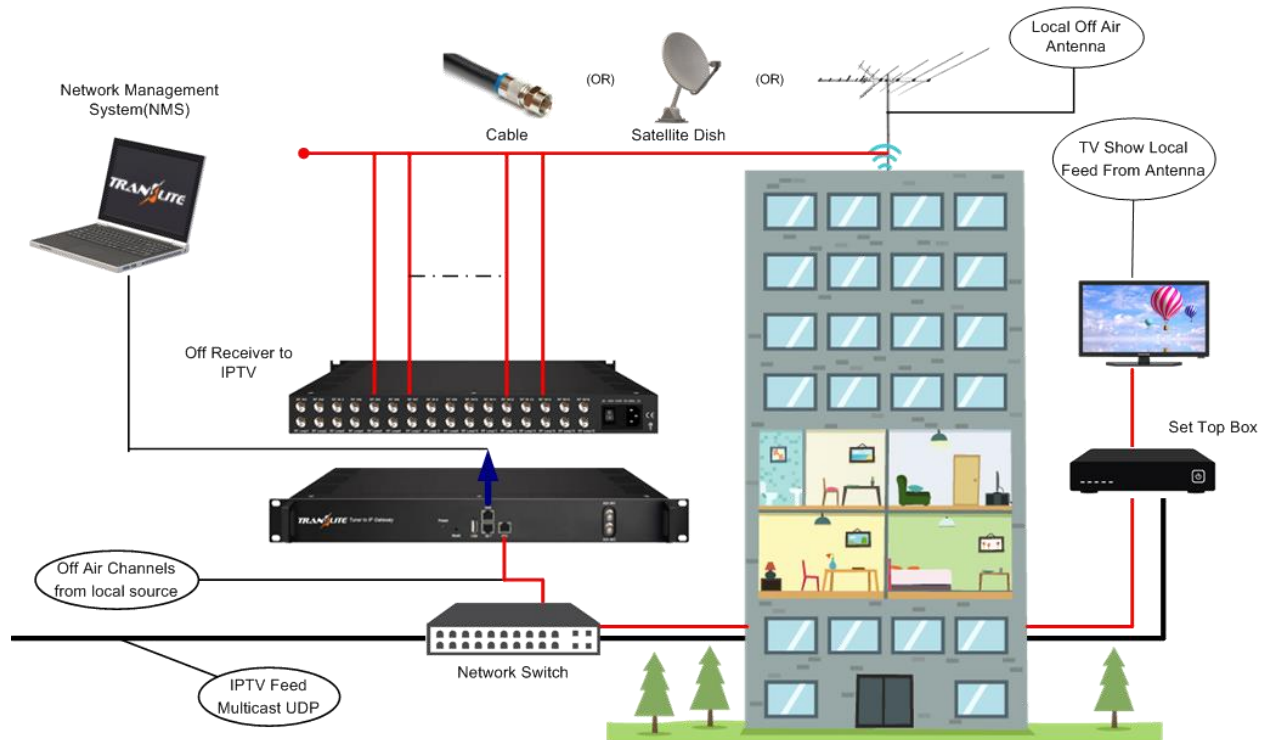
CHAPTER 5

PACKING LIST

TL-9508B Tuner to IP gateway
User's Manual
Grounding Cable
RF _{in} and Loop _{out} Cable
Power Cord

CHAPTER 6

APPLICATIONS



For Sales

North America:

sales@transliteglobal.com

Asia:

sales@translite.co.in

Rest Of The World:

sales@transliteglobal.com

For Support

North America:

support@transliteglobal.com

Asia:

support@translite.co.in

Rest Of The World:

support@transliteglobal.com