PBI Pro Broadband Inc.

Professional 8-in-1 TS Processor

DXP-3800D

User Manual

http://www.pbi-china.com

Contents

Notices

WARRANTY

This warranty does not cover parts which may become defective due to misuse of the information contained in this manual.
Read this manual carefully and make sure you understand the instructions provided. For your safety, be aware of the following precautions.

WARNING! IMPORTATNT SAFETY INSTRUCTIONS

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING

- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- To avoid explosion danger, do not dispose of batteries in an open fire.

CE MARK FOR EUROPEAN HARMONISED STANDARDS

The CE mark which is attached to these products means it conforms to EMC Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC).

IMPORTANT INFORMATION

Please retain the original packaging, should it be necessary at some stage to return the unit.
Disposal of Old Electrical and Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service, or the shop where you purchased the product.

COPYRIGHTS

Television programs, movies, video tapes, discs, and other materials may be copyrighted. Unauthorized recording of copyrighted material may be against the copyright laws in your region. Also, use of this product with cable television transmissions may require authorization from the cable television operator or transmitter/owner.

VENTILATION

- Do not expose the product to high temperatures, such as placing it on top of other product that produce heat or in places exposed to direct sunlight or spot lights.
- The ventilation slots on top of the product must be left uncovered to allow proper airflow into the unit.
- Do not stand the product on soft furnishings or carpets.
- Do not stack electronic equipment on top of the product.
- Do not place the product in a location subject to extreme changes in temperature. The temperature gradient should be less than 10 degrees C/hour.
- Place the product in a location with adequate ventilation to prevent the build-up of heat inside the product. The minimum ventilation space around the unit should be 7 cm. The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table cloth, curtains, etc.

POWER SOURCES

- The product is not disconnected from the AC power source (mains) as long as it is connected to the power outlet or wall socket, even if the product is turned off.
- If the product will not be used for a long period of time, disconnect it from the AC power outlet or wall socket.

Before Using the Device

Thank you for purchasing the DXP-3800D Professional 8-in-1 TS Processor. This User Manual is written for operators/users of the DXP-3800D to assist in installation and operation. Please read this user manual carefully before installation and use of the device.

FOR YOUR SAFETY

This equipment is provided with a protective earthing ground incorporated in the power cord. The main plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor, inside or outside the device, is likely to make the device dangerous. Do not remove the covers of this equipment. Hazardous voltages are present within this equipment and may be exposed if the covers are removed. Only Beijing Jaeger trained and approved service engineers are permitted to service this equipment.

The supplied AC power cable must be used to power the device. If the power cord becomes damaged it must be replaced. No operator serviceable parts inside. Refer servicing to Beijing Jaeger trained and approved service engineers. For the correct and safe use of the device, it is essential that both operating and servicing personnel follow generally accepted safety procedures in addition to the safety precautions specified in this manual. Whenever it is likely that safety protection is impaired, the device must be made in-operative and secured against unintended operation. The appropriate servicing authority must be informed. For example, safety is likely to be impaired if the device fails to perform the intended measurements or shows visible damage.

WARNINGS

- The mounting environment should be relatively dust free, free of excessive vibration and the ambient temperature between 0C° to 40C°. Relative humidity of 20% to 80% (non-condensed) is recommended.
- Avoid direct contact with water.
- Never place the equipment in direct sunlight.
- The outside of the equipment may be cleaned using a lightly dampened cloth. Do not use any cleaning liquids containing alcohol, methylated spirit or ammonia etc.
- For continued protection against fire hazard, replace line fused only with same type.
- Air intake for cooling is achieved via holes at the side of the device and the fans inside. The air flow should not be obstructed. Therefore, the device has to be placed on a flat surface, leaving some space at the sides of the device.
- When in operation, the internal temperature should not exceed the limit of 70C°.

Professional 8-in-1 TS Processor

1. Overview

DXP-3800D is a high-density, modular and CI decryption professional TS processor equipped with 8 independent tuners, which can be either of DVB-T/T2, DVB-S2/S, DVB-C, DTMB, ISDB-T and ATSC types. It supports a wide range of application by combining 8 tuners processing capability with industry standard outputs including ASI and TS/IP. DXP-3800D has 8 DVB common interface slots capable of working with most of well-known CAS in the market to de-crypt multiple pay TV services. DXP-3800D provides operators an ideal solution for multi receiving, re-multiplexing, descrambling and TS over IP operations, the compact 8 tuners and the powerful 8 CI decryption design make DXP-3800D one of the most competitive product in the head-end market.

2. Features

- 8 x Tuners Input, Supports variety of input options DVB-T2/T/S2/S/C/DTMB/ATSC/ISDB-T
- Supports DVB-S2 Input Stream Identifier (ISI, optional) and DVB-T2 Multi PLP and SFN MIP pass through
- Built-in TS re-multiplexer receives from CI Slot1 to CI Slot8 and TS/IP inputs
- 8×DVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption
- 8xASI output the transport stream from CI Slot1 to CI Slot8 or BISS decryption
- 1xchannel full duplex TS over IP ,9xchannels MPTS IP out without IP input or 128xchannels SPTS IP out without IP input
- Remote Control and Supervision by SNMP v2, HTTP WEB and Proprietary HDMS software
- On Site software update through IP or USB
- RSSI, received signal strength, Eb/N0, C/N and BER monitoring
- Redundency power supply

3. Technical Specifications

Tuner Input	
DVB-S/S2 Tuner Input (ISI Factory Optional)	
Connector Type	8×F type female 75Ω for Input
Input Frequency Range	950 ~ 2150MHz
Input Level	-25 ~ -65dBm
Symbol Rate	2 ~ 45MBaud
Roll-off Factor	DVB-S QPSK: 0.35
	DVB-S2 8PSK: 0.35, 0.25, 0.2
FEC Code Rate	DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
	DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9,9/10
	DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
LNB Polarity Selection Voltage	0, 13V, 18V selectable
LNB Band Selection Tone	0/22KHz selectable
Satellite Selection Command	DiSEqC 1.0
ISI ID	1 ~ 255 user configurable
DVB-C Tuner Input	
Connector Type	8×F type female 75Ω for Input
Input Frequency Range	51 ~ 862MHz
Input Level	51 ~ 75dBμV
Symbol Rate	1 ~ 7MBaud (ITU J.83 Annex A)
Constellation	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
Input Return Loss	7dB (typ.)
DVB-T/T2 Tuner Input	
Connector Type	8×F type female 75Ω for Input
Input Frequency	104 ~ 862MHz (VHF/UHF)
Input Level	-20 ~ -70dBm
Constellation	DVB-T: QPSK, 16QAM, 64QAM
	DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
FFT Mode	DVB-T: 2K, 8K

	DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K
Guarding Interval	DVB-T: 1/4, 1/8, 1/16, 1/32
	DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64, 1/128
FEC Code Rate	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8
	DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Input Return Loss	7dB (typ.)
DTMB Tuner Input	
Connector Type	8×F type female 75Ω for Input
Input Frequency Range	46.5~866MHz
Input Level	-87~-29dBm
Symbol Rate	7.56MBaud
Bandwidth	6MHz/7MHz/8MHz
Constellation	4QAM-NR,4QAM,16QAM,32QAM,64QAM
Guard Interval	PN420, PN595, PN945
Roll-off Factor	0.05
Interleaving Depth	240,720
FEC Code Rate	0.4, 0.6, 0.8
ATSC Tuner Input(compatible with ITU J.83 Annex B)	
Connector Type	8×F type female 75Ω for Input
Input Frequency Range	54~864MHz
Input Level	-75~-7dBm(ATSC 8VSB)
Symbol Rate	10.762MBaud
Constellation	8VSB
Roll-off Factor	0.115
Bandwidth	6MHz
TS Processing	
TS Input Management	Demux and Remux among IP Input and CI1 to CI8 Input
TS Output Management	ASI1 to ASI8 output directly pass through the TS from CI1 to CI8, Demux and Remux for ASI9, ASI10 output and IP output
Service and PID Management	Service and PID level for Remux
PSI/SI	PSI/SI table regeneration, NIT and SDT edition, LCN Edition and Re-generation
Descrambler	DVB Common Scrambling Algorithm (CSA)
BISS Mode	BISS-1, BISS-E

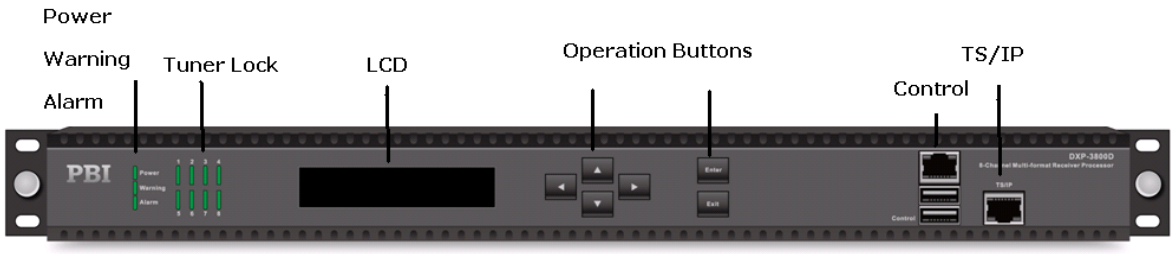
Common Interface	8 x PCMCIA slots, compatible with major CA CAMs in the market
ASI Output	
Connector Type	Daughter Board: 8xBNC female, independence output, 75Ω,
	Main Board: 1 pair of BNC female, mirror output, 75Ω,
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 200Mb/s
TS Processing	Daughter Board: ASI1 to ASI8 out pass through the TS from CI 1 to CI8,
	Main Board: ASI9 and ASI10 out from Remux
TS over IP	
Connector Type	1×RJ-45, 100/1000 Base-T
Effective Bit Rate	Support 3 different mode(need to reboot unit if change the TS/IP mode): 1. Max.430Mb/s for 9xchannels(8xchannels directly pass through the TS from CI1 to CI8, 1xchannel output the TS from Remux) MPTS IP out without IP in, 2. Max.430Mb/s for 128xchannels SPTS IP out the TS from one source, without IP in, 3. Max.80Mb/s for full duplex 1xchannel MPTS
Protocol	UDP/RTP, Multicast/Unicast, IGMPv3, ARP
Alarm	
Connector Type	1×D-sub 9 male
Switching Condition	User Defined
Control & Monitoring	
Connector Type	1×RJ-45, 10/100 Base-T, for equipment IP Control
Remote Control	SNMP, HTTP (Web Interface), Proprietary HDMS (Headend Device Management System)
Local Control	LCD display and 6-key keypad
Serial Port	1×RS-232 D-sub female, for debug use only
Equipment Upgrade	USB,WEB http and FTP
Physical 物理规格	
Dimension	505mm x 445mm x 45mm
Weight	7.9kg
Power Supply	AC 90V ~ 250V, 50/60Hz

Power Consumption	30W (exclusive of LNB power)
Operating temperature	0 ~ 45℃
Storage temperature	-10 ~ 60℃
Operating Humidity	10 ~ 90%, non-condensed
Certification	
EMC: EN 55024:1998+A1:2001+A2:2003, EN 55022:2006+A1:2007, EN 61000-3-2:2006, EN 61000-3-3:2008	
FCC: Part 15 Class B	
LVD: EN 60950-1:2006 + A11:2009	

* For more information about digital audio pass through, please contact our sales representative.

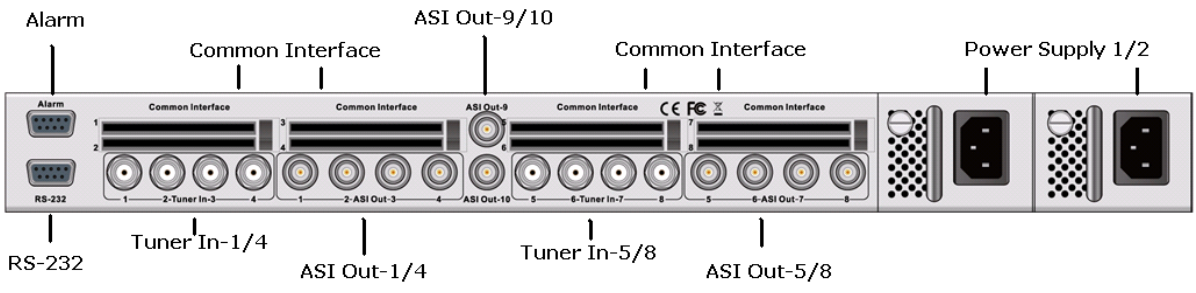
4. Front panel and rear panel instructions

4.1 Front panel



Name	Function
LED Power	When turned on, the Green LED indicates that power is available. When turned off, the power is not available or failed
LED Warning	LED ON: LED OFF:
LED Alarm	LED ON: Alarm or alarms happen to the equipment, For alarm description, please refer to details in the table 10. LED OFF: The equipment works properly
LED Tuner Lock	LED ON: Tuner input is locked, LED OFF: Tuner is un- locked.
LCD Display	Display menus, submenus and its parameters
Cursor Keys	UP, DOWN, LEFT, RIGHT. Used to navigate through the menu system
ENTER key	Confirm a selection then return to previous menu
EXIT Key	Exit and return to previous menu
Control	RJ-45 Ethernet port for equipment control and supervision
Control	USB port for firmware upgrade
TS/IP	RJ-45 TS over IP port

4.2 Rear panel



Name	Description
Alarm	
RS-232	Serial port for equipment debug use
Tuner In-1/4	Tuner signal input port 1~4
ASI Out-1/4	ASI Output ports in mirror 1~4
Common Interface	To insert CI CAM modules, maximum two CI modules 1~4
Tuner In-5/8	Tuner signal input port 5~8
ASI Out-5/8	ASI Output ports in mirror 5~8
Common Interface	To insert CI CAM modules, maximum two CI modules 5~8
ASI Out-9/10	ASI Output ports in Remux 1~2
Power Supply	Double Power Supply,AC 90~250V 50-60Hz input

4.3 RS-232 Serial Port

The RS-232 port is used for equipment software debug use, its pin definition is shown in the table.

The parameter settings are:

- No Parity bit
- 38400 Bauds
- 8 data bits
- 1 Stop bit

Pin	Pin Function
1	N.C.
2	TXD
3	RXD
4	N.C.
5	GND
6	N.C.
7	N.C.
8	N.C.
9	N.C.

4.4 Management Ethernet Port

The Management port is used to remote control and supervise the equipment through IP, it's also for the software update. Its factory setting is as following:

- IP address:10.10.70.48
- Sub Mask:255.255.255.0
- Gateway:10.10.70.1

Both web based control software and proprietary HDMS software are using this port.

Notice: When apply default setting to DXP-3800D, the above settings for IP will not be affected, this is for maintaining the connectivity of the unit to the IP Network.

4.5 TS over IP Ethernet Port

The TS over IP port is an option by adding the daughter board inside the rack. The default setting is as following:

- IP address:10.10.10.10
- 2nd IP address: 10.10.10.20 (for option DCH-5100P-32x, if equipped)
- Sub Mask:255.255.255.0
- Gateway:10.10.10.1

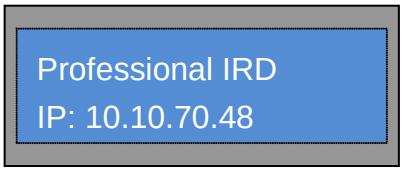
Depending on the option selected by the customer, this TS over IP port is either 10/100 Base-T or 100/1000 Base-T compliant to the IEEE 802.3 specifications.

5. Operation

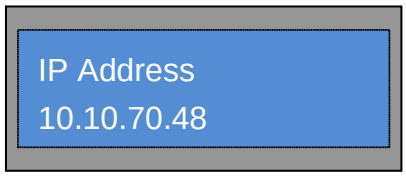
5.1 Local Control

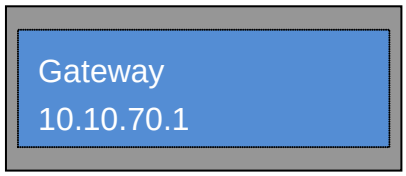
5.1.1 Getting Started

After successful installation and connection of the Professional IRD Processor DXP-3800D, switch on the power supply. The equipment will check the hardware and software versions, then the product name and its IP address will be shown in the LCD screen.



The IP address of the equipment can be changed in the **System** menu. Go into the **Network Setting** submenu, user can set IP address, network mask and IP gateway, press ENTER to select the option, and use LEFT or RIGHT to move the cursor between digits and use UP or DOWN to change the value until the right value, then press ENTER to make the selection.





Customers can use UP, DOWN, LEFT,RIGHT, ENTER, EXIT keys from front panel to navigate in the menus, select and confirm the parameters in LCD screen.

5.1.2 Main menu

User can press ENTER into the main menu. In the main menu, there are 3 sub-menu, Press UP/DOWN to switch between the sub-menus.

- **Status**
- **Config**
- **System**

After go into every sub-menu, you can press LEFT or RIGHT to move the cursor, then use UP or DOWN to change the value, and then you can press ENTER to make the selection.

Submenu Name	Description
Status	Monitor the parameters of Tuner RSSI, Input Bitrate, Output Bitrate, TS over IP input (only when the TS/IP streaming board is installed) information.
Config	Configure the parameters of Tuner setting, CI settings, BISS setting, Remux setting, ASI output and so on.
System	Check and set system settings and read the equipment information, and make the default factory setting and so on.

5.1.3 Configuration Menu

In the **Configuration** menu, user can configure and monitor the parameters of input and output, including Tuner, CI settings, AV decoder, ASI output, BISS, SDI, TS over IP input (only when the TS/IP streaming board is installed) and so on. Choose **Configuration** and press UP or DOWN to scroll the sub-menus, press ENTER to go into the sub-menus. There are ten sub-menus to configure:

- **Slave Board Setup (Tuner1~8 setting)**
- **CI**
- **BISS**
- **Remux**
- **TS/IP**
- **ASI Out**

Submenu Name	Description	
Slave Board Setup Tuner Tuner-1 Tuner-2 Tuner-3 Tuner-4 Tuner-5 Tuner-6 Tuner-7 Tuner-8	LNB LO Frequency	To configure the local oscillator frequency according to the right satellite, its range is from 5150 to 11,300MHz.
	Satellite Frequency	To configure the satellite down link frequency according to the right satellite, its range is from 1000 to 26,500MHz.
	Symbol Rate	To configure the symbol rate of QPSK signal, its range is from 1000 to 45,000KBaud.
	LNB Voltage	To select the correct LNB voltage output from the F-connector, user can choose between Off, 13V and 18V.

	LNB 22KHz	To activate the LNB 22KHz control signal to the LNB, user can select between On and Off.
	DiSEqC	To configure the DiSEqC control, user can select Port A, Port B, Port C, Port D or DiSEqC OFF.
CI CI-1(~8)	CI CAM Name	To check what kind of CAMs have been inserted.
	CI Setup	To set which programs should be descrambled by CI slot1 or CI slot2.
BISS BISS-1(~8)	BISS Mode	To select the BISS mode, user can choose between Off, BISS-1 and BISS-E.
	ID and Key	Input Key value in BISS-1 mode and input ID and Key in BISS-E mode.
	Program	To select which services will be decrypted by BISS.
Remux	Program select	To setting Remux.
	Bit Rate	To set the Max bit rate of the Remux output.
	Packet Size	To choose 188Byte or 204Byte for the Packet Size.
	TS ID	To set the TS ID.
	Remove CA	To choose Off or On for the Remove CA
	Insert EIT	To choose Off or On for the Insert EIT
	ON ID	To configure the Original Network ID.
	Output Program	To select which services will be output by Remux.
TS/IP		Bypass
ASI Out		Bypass

5.1.5 System menu

In this menu, you can check and set system settings and read the equipment information, and make the default factory setting and so on. There are nine submenus, including Version Info, IP Control, Product Name, Model, Factory Settings, Machine Type, LCD Language, Safety Level, and Upgrade. Use UP or DOWN key to scroll the submenu, and press ENTER to go into each submenu.

- **Network Setting**
- **Product Name**
- **Version**
- **Factory Settings**

- **Machine Type**
- **Web Login**
- **Gigabit Mode**

Submenu Name	Description	
Network Setting	IP Address	To configure the IP Address of the device.
	Network Mask	To configure the IP Net Mask of the device.
	Gateway	To configure the IP Gateway of the device.
	MAC Address	To display the MAC address of the device
Product Name	To configure the product name of the device.	
Version Info	To display some properties of the device, such as software version.	
Factory Settings	The switch to make factory default setting.	
Machine Type	Password	Bypass
	MAC Address	To configure the MAC address of the device.
	S/N	To configure the serial number of the device.
	External Board MAC	To configure the MAC address of the device.
Web Login	HTTP Login	To configure the user name and password of web access.
Gigabit Mode	To choose Gigabit mode (IPTV, Full Duplex, Multiple Output)	

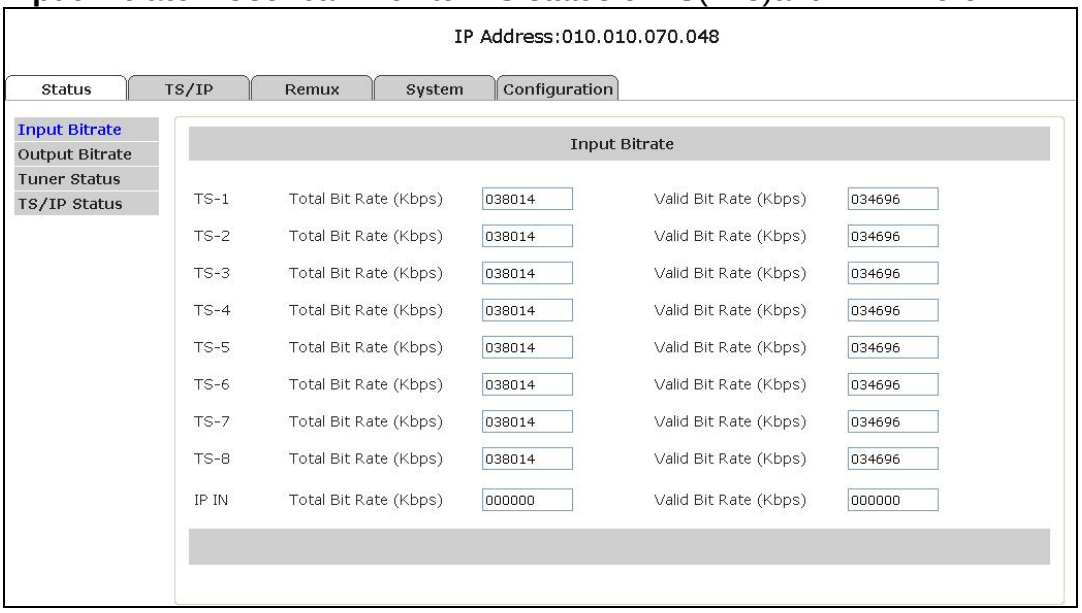
5.2 Remote Control（Web）

DXP-3800D can be controlled by WEB. User can type IP address of DXP-3800D in browser. It will show login pop-up. The default user name is root and password is 12345. If you forget this username and password, you can use front panel button to change it. You can set it in System→HTTP login menu.

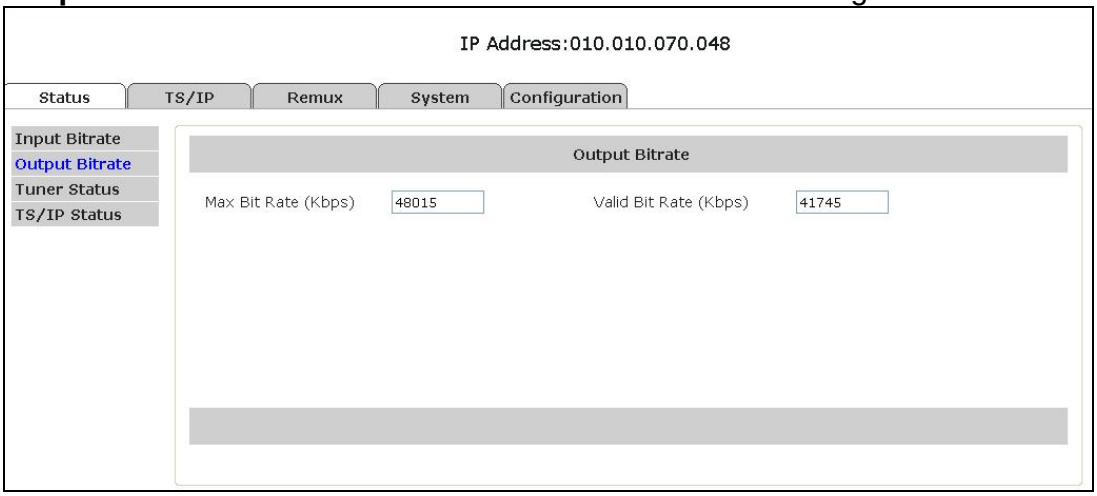
5.2.1 Status

User can monitor the status of input, output, Tuner and TS/IP. All information of every input source can be shown in this page. The output status and information can also be checked.

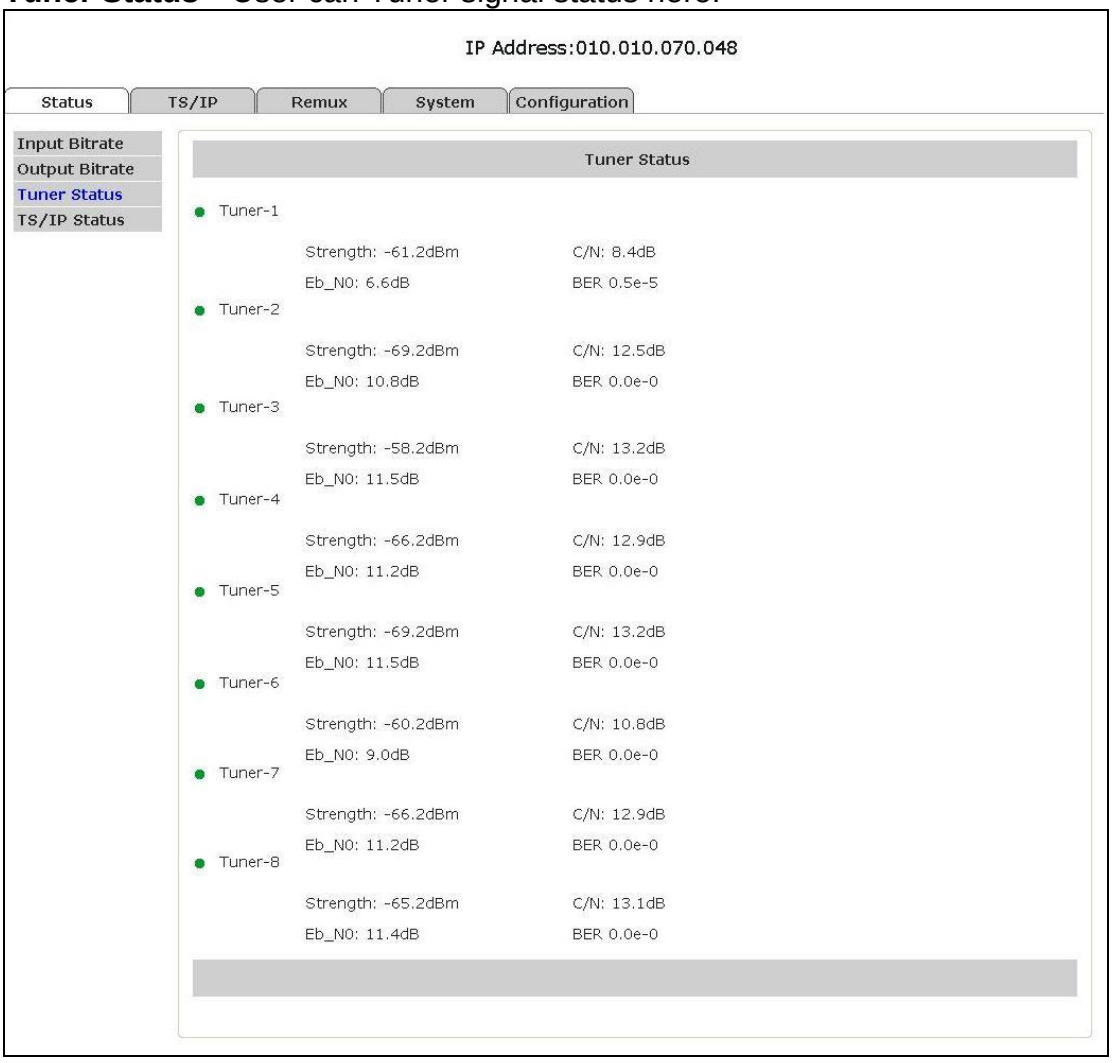
Input Bitrate—User can monitor TS status of TS(1~8)and IP IN here.



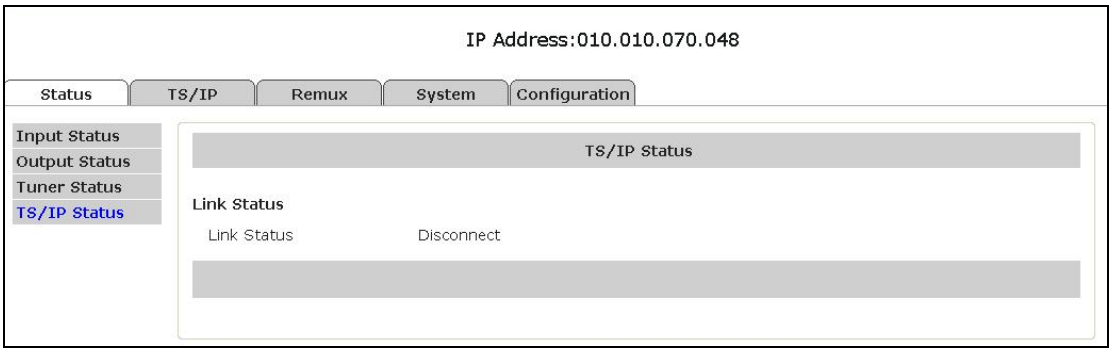
Output Bitrate—User can monitor video and audio decoding status here.



Tuner Status—User can Tuner signal status here.



TS/IP Status—User can TS over IP status here.



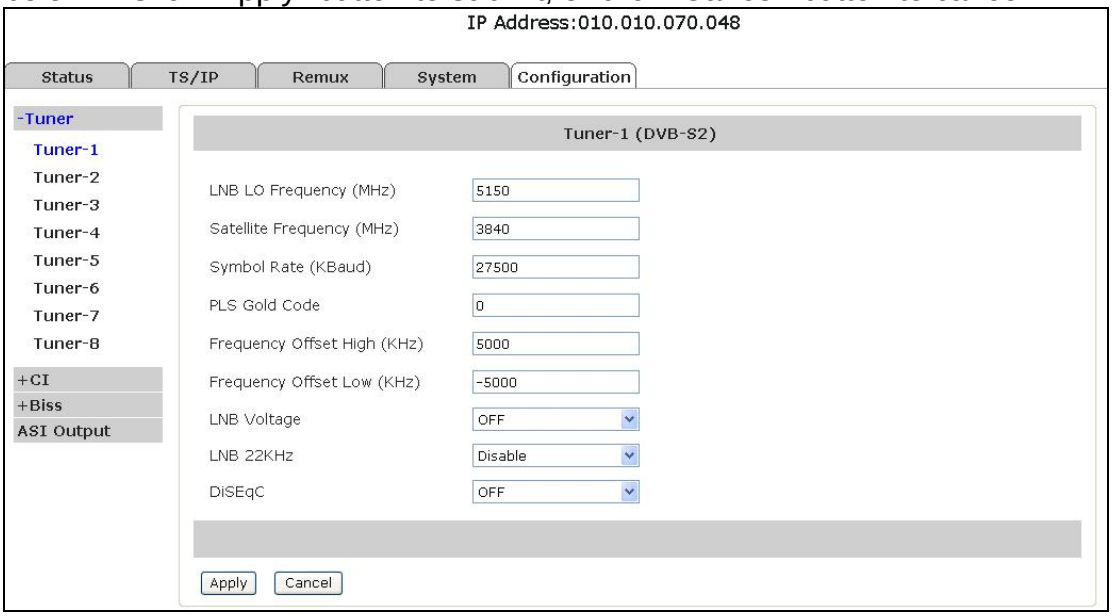
5.2.2 Configuration

Set parameters of tuner input, CI, Biss and ASI Output.

5.2.2.1 Configuration-Tuner

Tuner(1~8)

It is used to lock the right satellite. The description of parameters is shown in below. Click “Apply” button to submit, or click “Cancel” button to cancel.

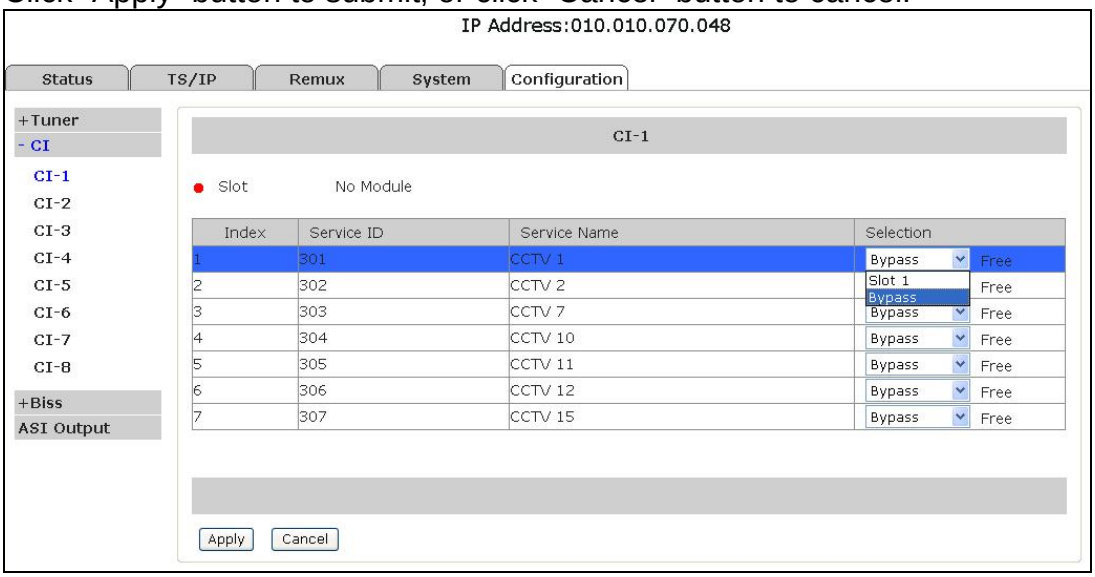


Menu Name	Description
LNB LO Frequency	To configure the local oscillator frequency according to the right satellite, its range is from 5150 to 11,300MHz.
Satellite Frequency	To configure the satellite down link frequency according to the right satellite, its range is from 1000 to 26,500MHz.
Symbol Rate	To configure the symbol rate of QPSK signal, its range is from 1000 to 45,000KBaud.
PLS Gold Code	To configure the PLS gold code, its range is from 0 to 262,141.
Frequency Offset High	To ensure the tuner locks the specific signal, its range is from 1000K to 5,000KHz.
Frequency Offset Low	To ensure the tuner locks the specific signal, its range is from -5,000K to -1,000KHz. The condition is “Freq Offset Low < Real IF - Setting IF < Freq Offset High”.
LNB Voltage	To select the correct LNB voltage output from the F-connector, user can choose between Off, 13V and 18V.
LNB 22KHz	To activate the LNB 22KHz control signal to the LNB, user can select between On and Off.
DiSEqC	To configure the DiSEqC control, user can select Port A, Port B, Port C, Port D or DiSEqC OFF.

5.2.2.2 Configuration-CI

CI (1~8)

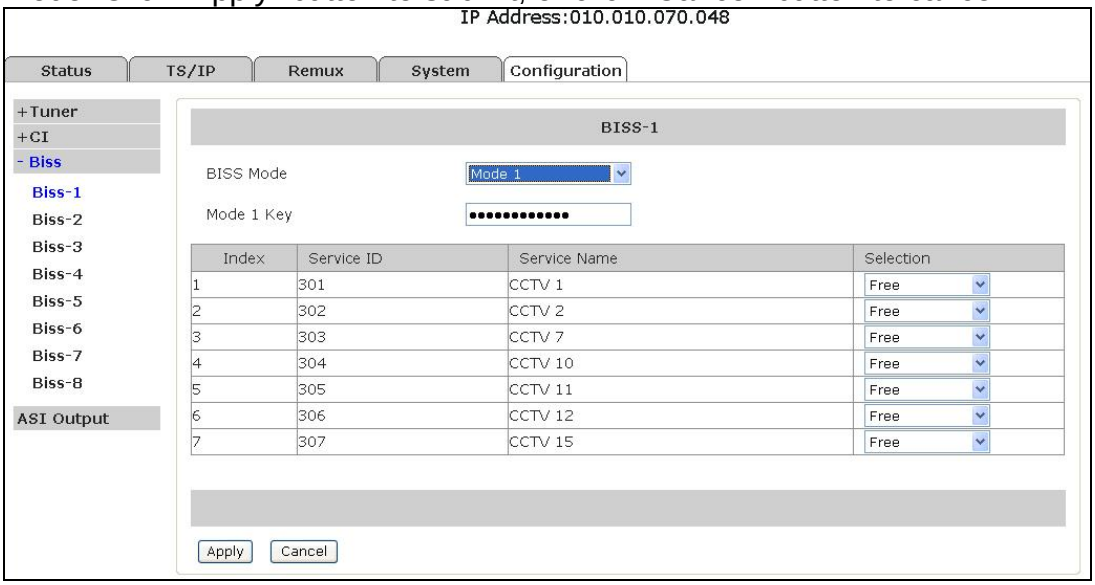
Set parameters for CI descrambling. Before you want to active this function, you have to insert the right CI cards into the CI slots. When select the right Input Source, the programs will be listed in the table, you can descramble the right programs.
Click “Apply” button to submit, or click “Cancel” button to cancel.

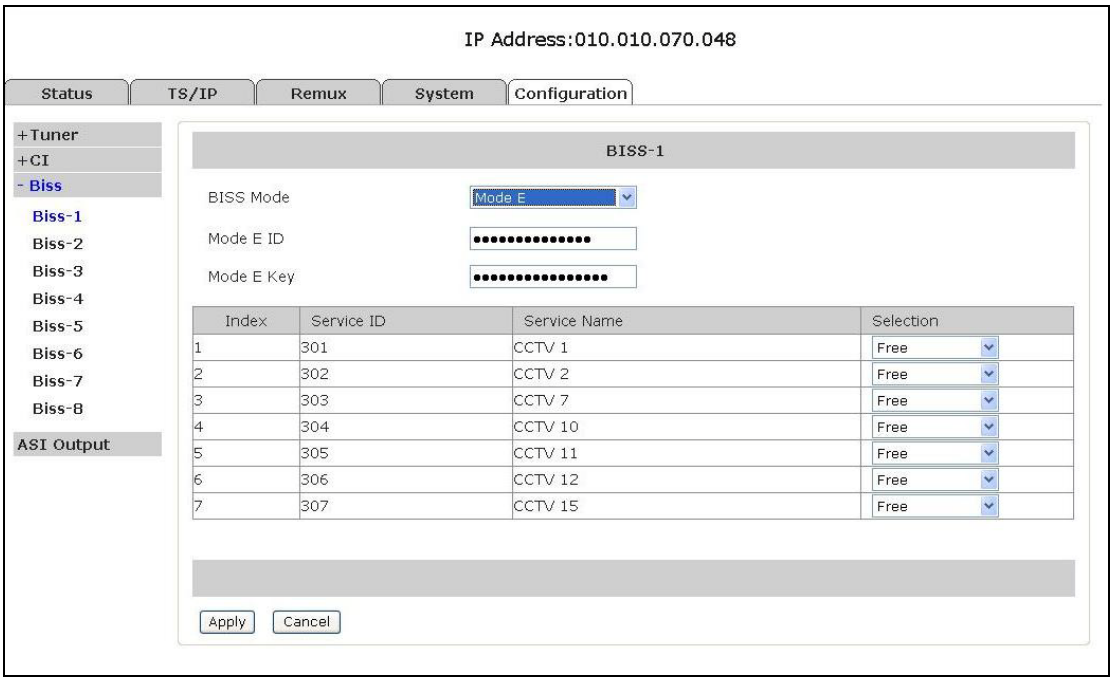


5.2.2.3 Configuration-Biss

Biss (1~8)

Set parameters of BISS Descryption. DXP-3800D supports BISS-1 and BISS-E mode. Click “Apply” button to submit, or click “Cancel” button to cancel.

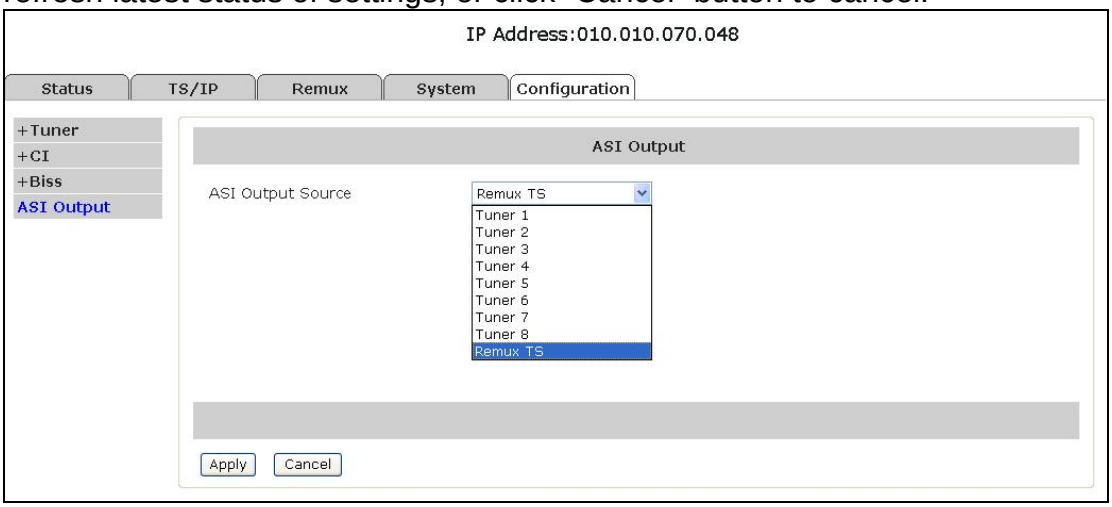




Menu Name	Description
BISS Mode	To select the correct BISS mode, user can choose between BISS-0, BISS-1 and BISS-E.
ID and Key	Input Key value in BISS-1 mode and input ID and Key in BISS-E mode.
BISS Program	To configure the programs should be decrypted.

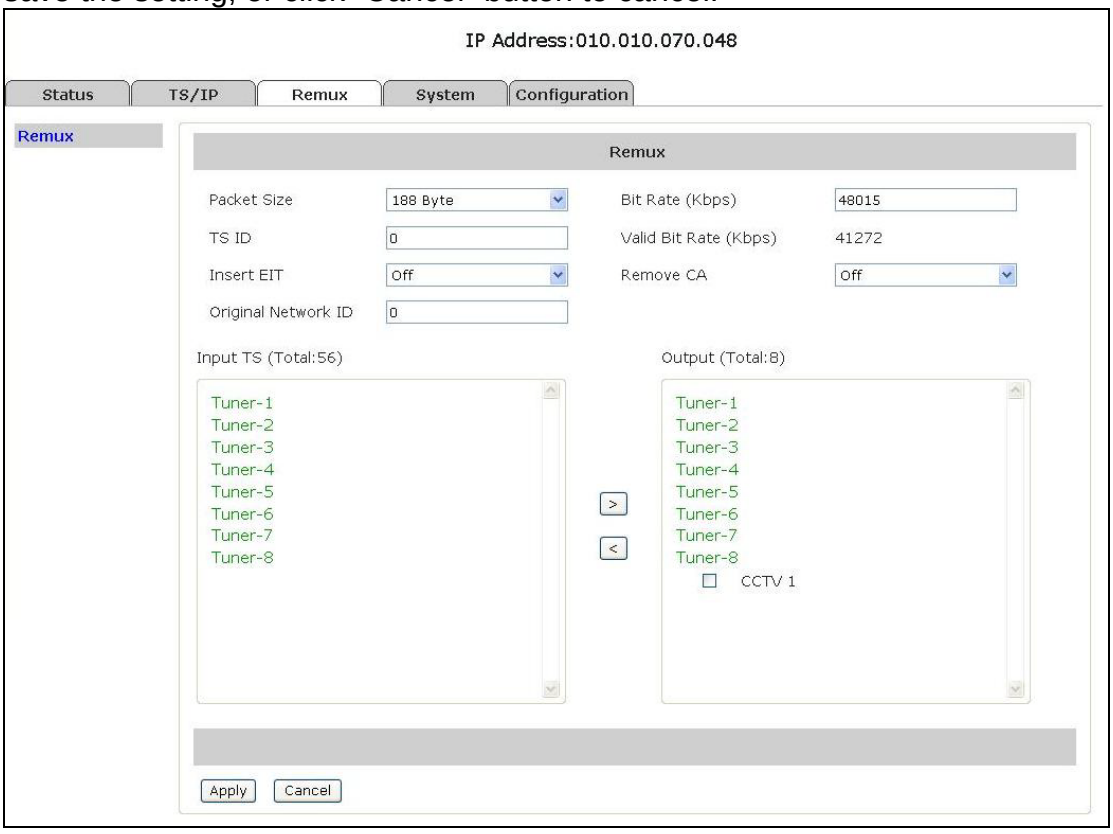
5.2.2.4 Configuration-ASI Output

Set parameters of ASI output. There are two ASI output ports, you can select the input source in this page. Click “Apply” button to submit, “Refresh” button to refresh latest status of settings, or click “Cancel” button to cancel.



5.2.3 Remux

Set parameters of programs remuxing. The Remux function is a optional function, you can active or close this option in the **System** page. In this page, all programs can be shown in the Input TS window, you can select the programs that need to be remuxed, and then type > button to add the programs into the Output TS window. If you want to delete the programs from remixed TS, you can type < button to delete the selected programs. Please don't forget click "Apply" button to save the setting, or click "Cancel" button to cancel.



Menu Name	Description
Packet Size	To choose 188Byte or 204Byte for the Packet Size.
Bit Rate(kbps)	To configure the output total bit rate.
TS ID	To configure the TS ID.
Valid Bit Rate(kbps)	To display the valid bit rate of the TS output.
Insert EIT	To choose Off or On for the Insert EIT
Remove CA	To choose Off or On for the Remove CA
Original Network ID	To configure the Original Network ID.
Input TS	The interface to select the input TS.

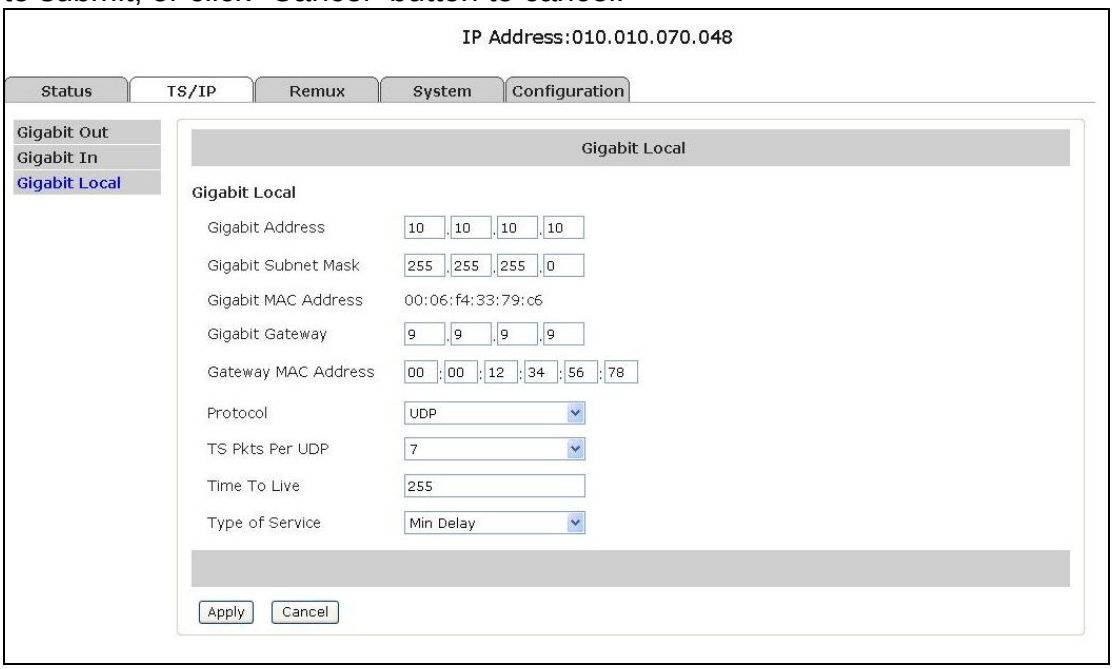
Output TS	To display the output TS of the Remux.

5.2.4 TS/IP

TS over IP function is also an optional function, you can select the IP board type in this page. TS/IP page will show Gigabit Out, Gigabit In and Gigabit Local (Gigabit Mode-Multiple Output only).

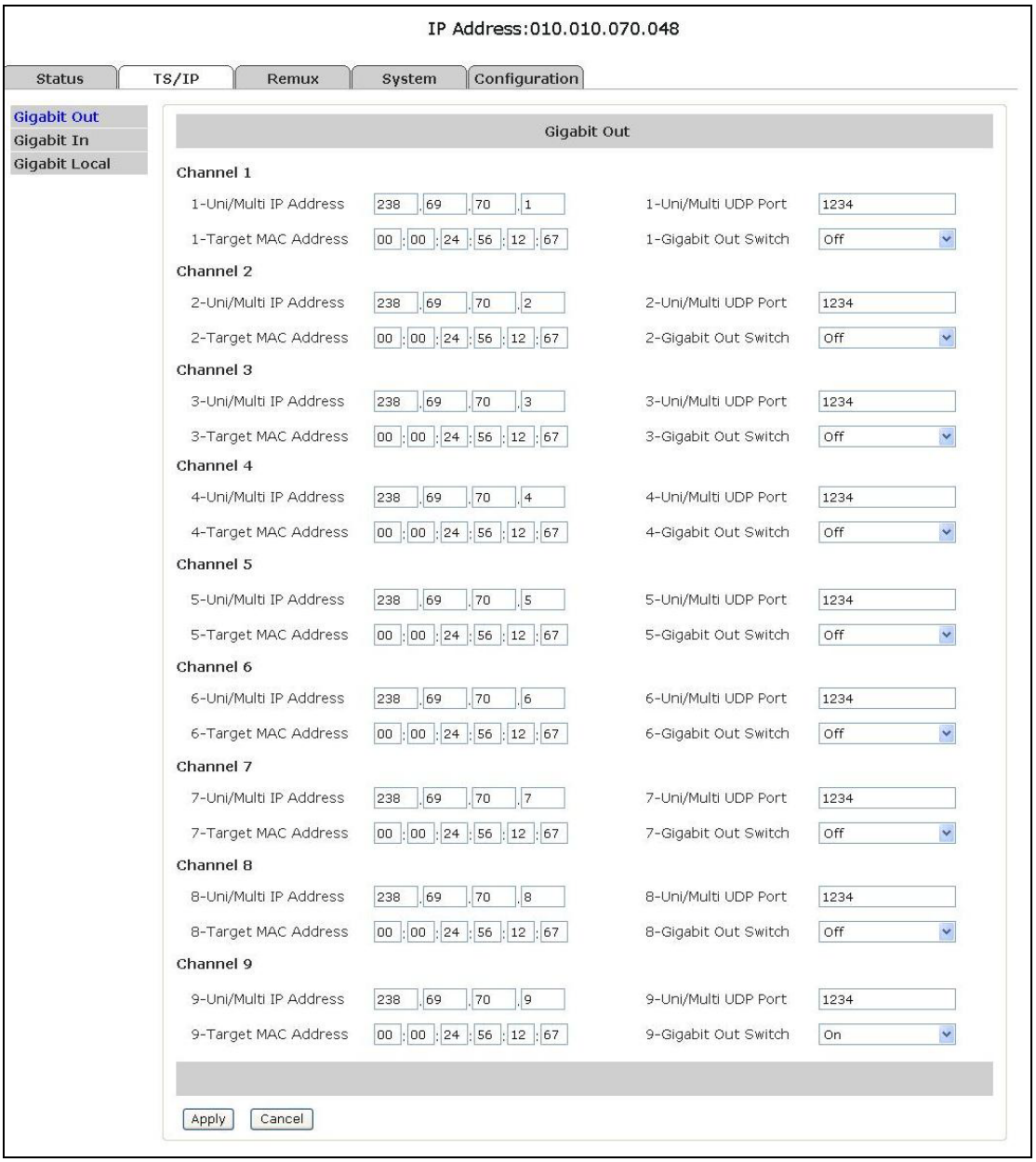
5.2.4.1 Gigabit Local

Gigabit Local is selected, the following page will be shown. Click “Apply” button to submit, or click “Cancel” button to cancel.



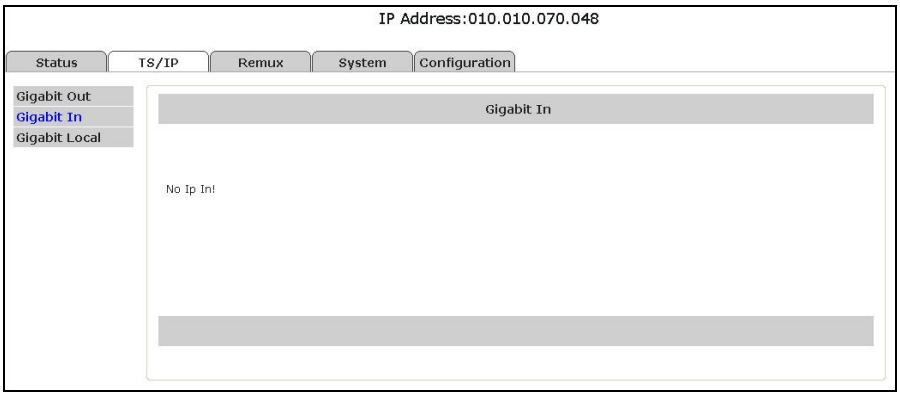
5.2.4.2 Gigabit Out

Gigabit Out is selected, the following page will be shown. Click “Apply” button to submit, or click “Cancel” button to cancel.



5.2.4.3 Gigabit In

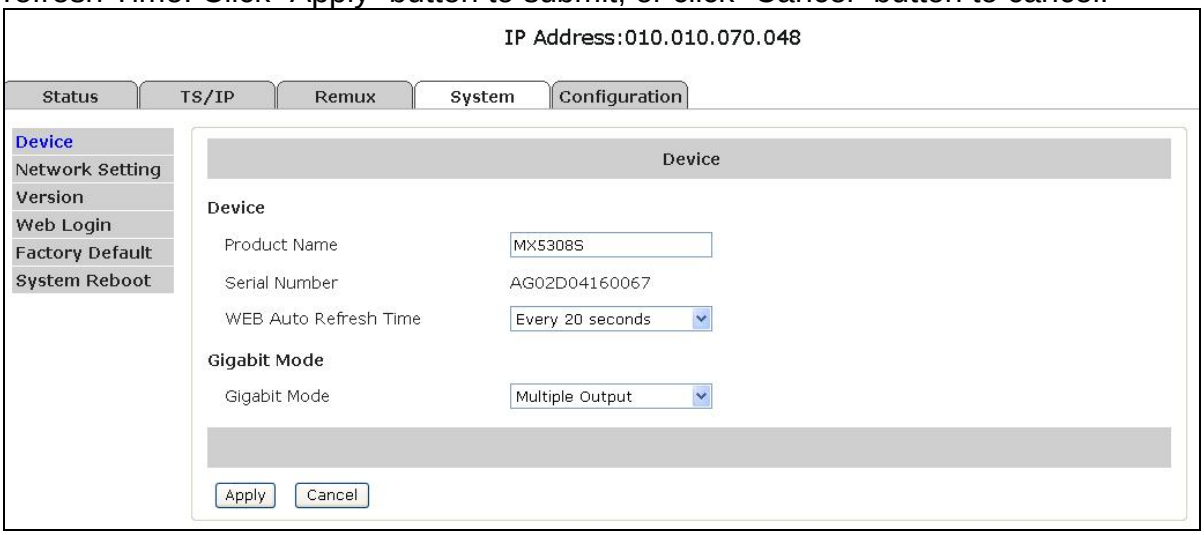
Gigabit In is selected, the following page no information (Gigabit Mode-Multiple Output only)).



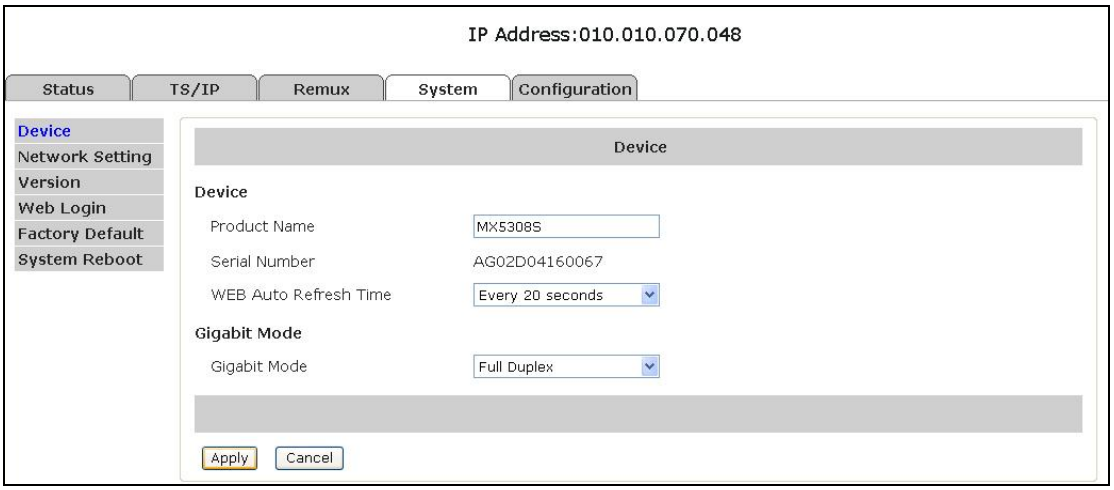
5.2.5 System

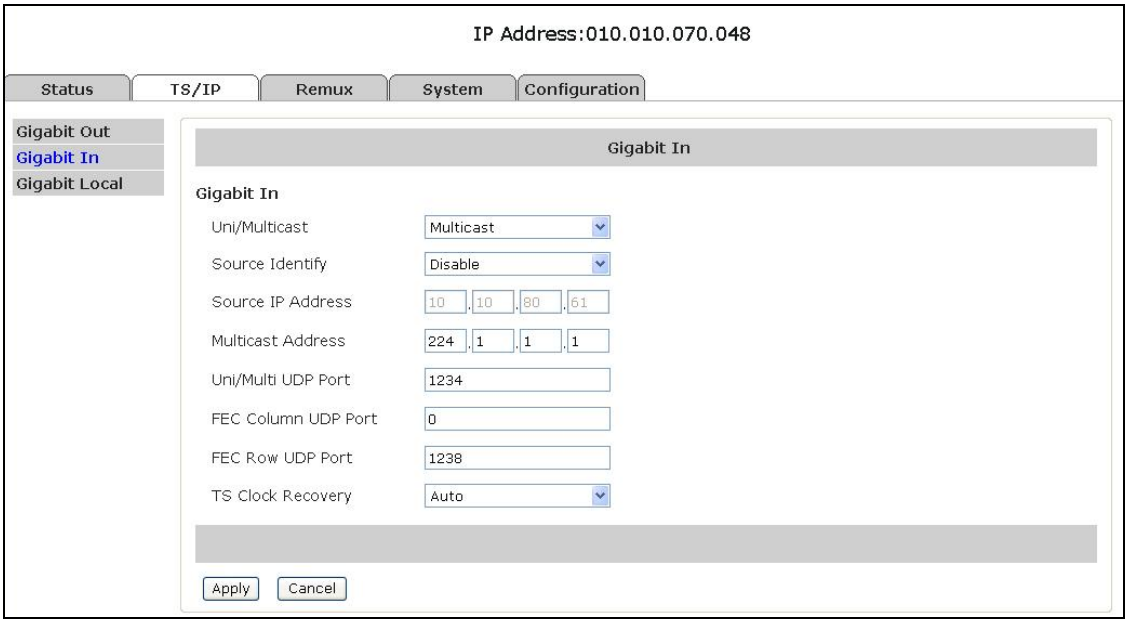
Set parameters of system. There are three subpages, Device page, IP Control Page, Version page, Login Page, Factory Default page, System Reboot and Upgrade page.

In Device page, user can set the Product name, Model number and Web auto refresh Time. Click “Apply” button to submit, or click “Cancel” button to cancel.

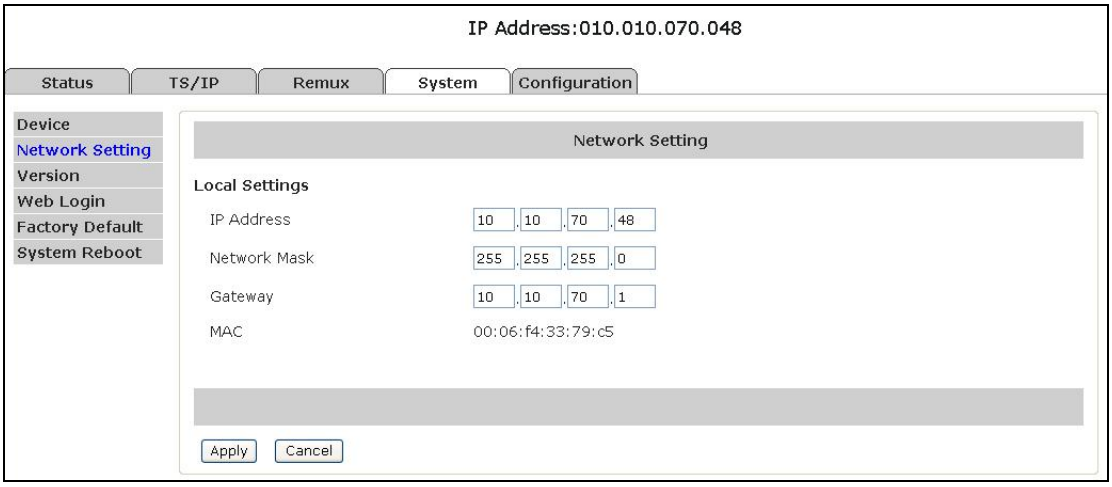


In the page, user can also set the Gigabit Mode, if choose the Full Duplex, in configuration-Gigabit In is selected, the following page will be shown. Click “Apply” button to submit, or click “Cancel” button to cancel.

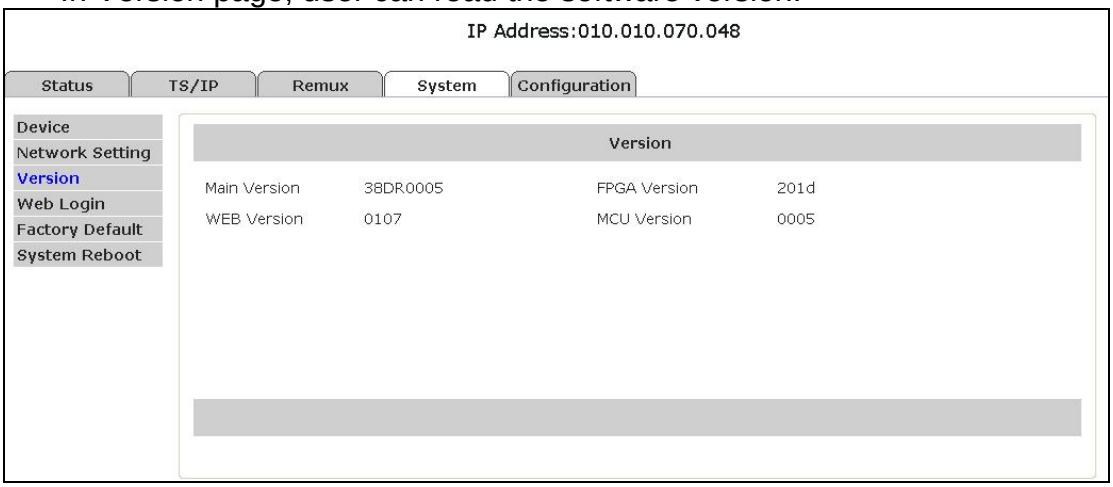




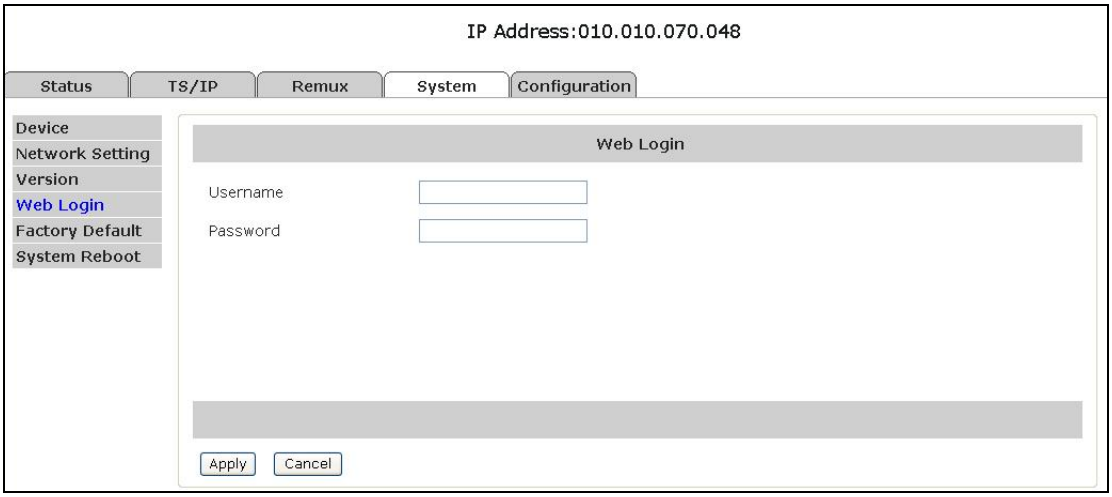
In Network Setting page, user can set the network management parameters and the MAC will be shown. Click “Apply” button to submit, or click “Cancel” button to cancel.



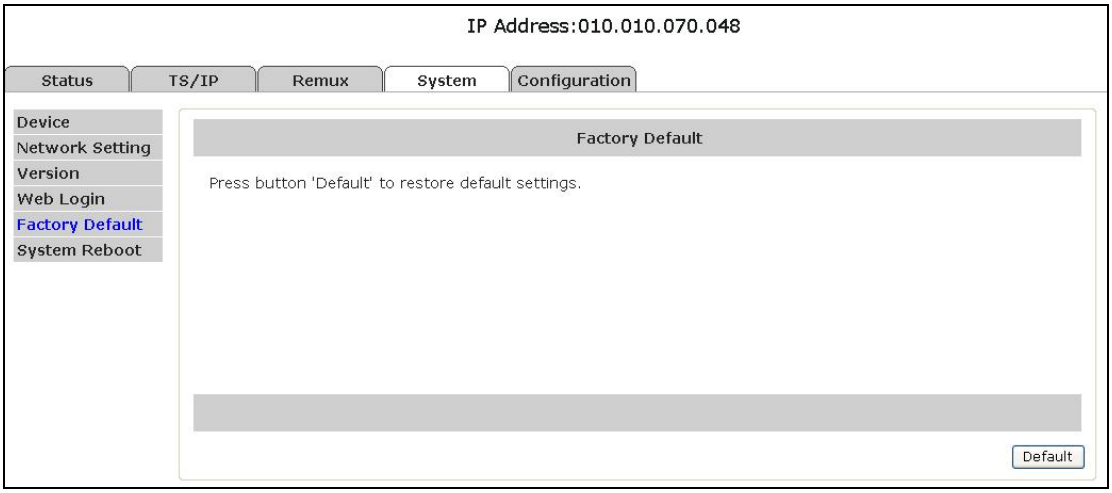
In Version page, user can read the software version.



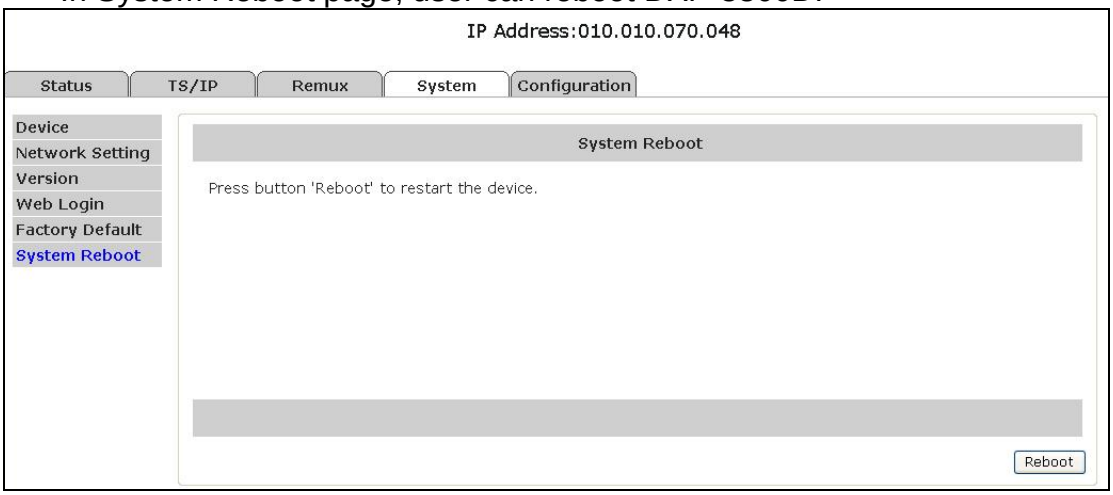
In Web Login page, user can set your own username and password to access webGUI of DXP-3800D.



In Factory Default page, user can restore factory default configuration of DXP-3800D.



In System Reboot page, user can reboot DXP-3800D.



6. Firmware Update

Before upgrading the digital TV head-end equipment, please check whether the Hardware and Software are compliant with the version in the release note.

6.1 Firmware Upgrade from USB Key

The firmware is contained in a file named “target.tgz”. Copy this file in a USB key, connect the key to the USB port of the equipment to be updated. If the equipment can detect the file “target.tgz” in the USB key, user can see the message “USB Found“ in the System->USB Status menu of LCD screen.

The firmware upgrade will start automatically if the firmware version in the USB key is higher than the version in the equipment. It is impossible to make firmware downgrade in automatic mode.

If the firmware version in the USB key is equal or lower than the version in the equipment, user can use the “Force Mode” in the System menu: System -> USB -> Force Upgrade”.

The equipment will reboot automatically when the software upgrade is finished.

After the firmware upgrade, please check the new version from the menu of front panel LCD: System->Properties”, or from the web control software.

6.2 Firmware Upgrade by FTP

Connect the equipment to a PC via a cross over CAT-5 (RJ45) LAN cable or a normal cable using IP switch/hub. Please ensure that the equipment and the PC are in the same local area network before upgrade.

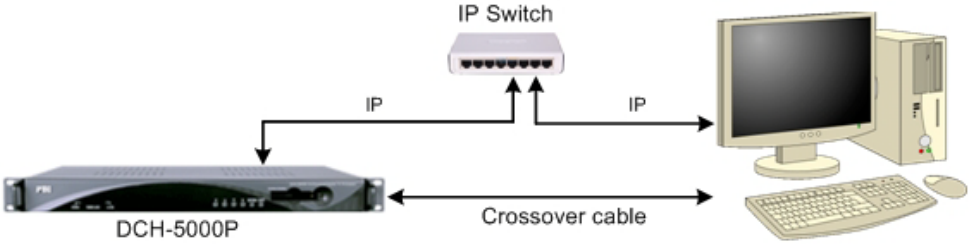


Figure 1: IP Connection Diagram

Turn on the equipment until the booting is completed. Check the IP address from

the LCD screen on front panel, the default IP address is 10.10.70.48. Please make sure that the equipment and your PC are in the same IP network, refer to Figure 1. **Important:** DON'T switch off the equipment and your PC during the software upgrade.

Open the IE browser and type ftp://10.10.70.48 in the address bar and press **Enter**. If the network configuration is correct, you can open the FTP folder without any error, as shown below.

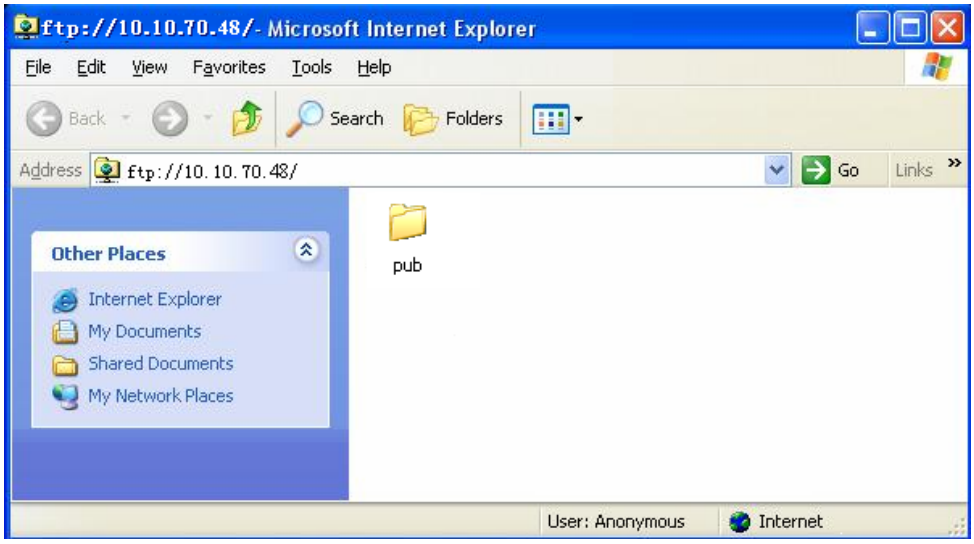


Figure 2: Open the FTP folder

Enter the "ftp://10.10.70.48/pub" folder, then copy the "target.tgz" file in this folder, as shown below.

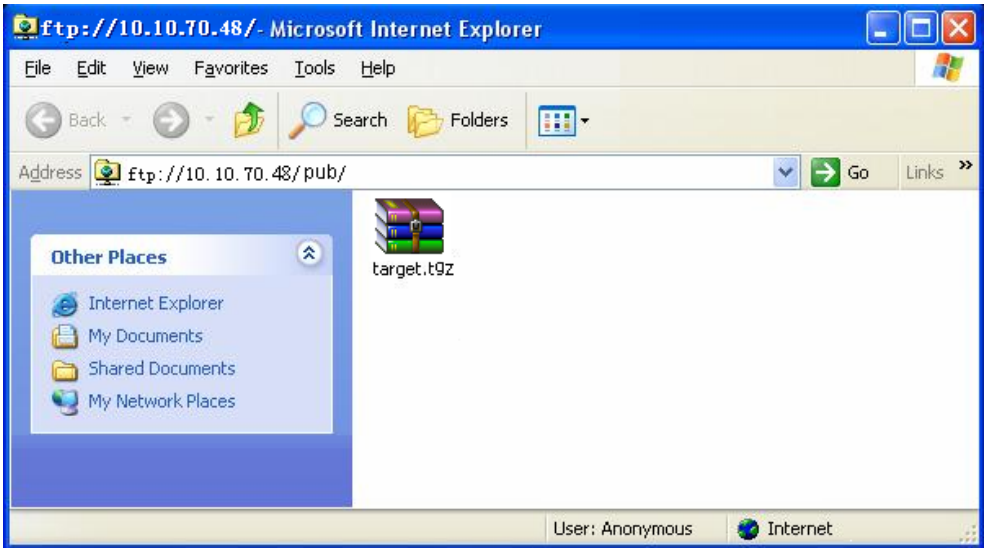


Figure 3: Copy "target.tgz" File

Open MS-DOS window by typing **Start** on the lower left quarter of Windows OS. Select **Run** and key in "cmd" in dialog and press **Enter**. Type the command "telnet

10.10.70.48”; the current IP address of the equipment under software upgrade as below.

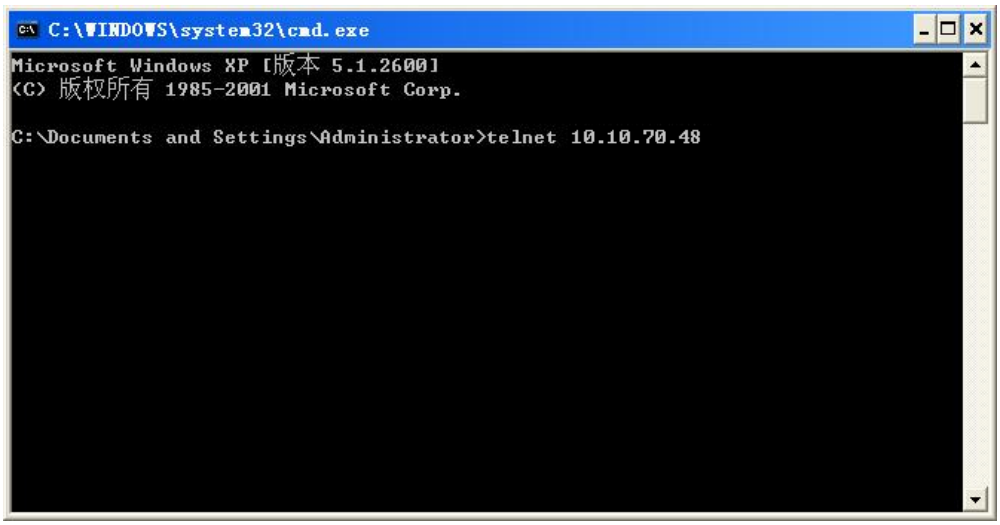


Figure 4: Open MS-DOS Window

Type **Enter** to go into the login window. Use “root” as login name and “12345” as password.

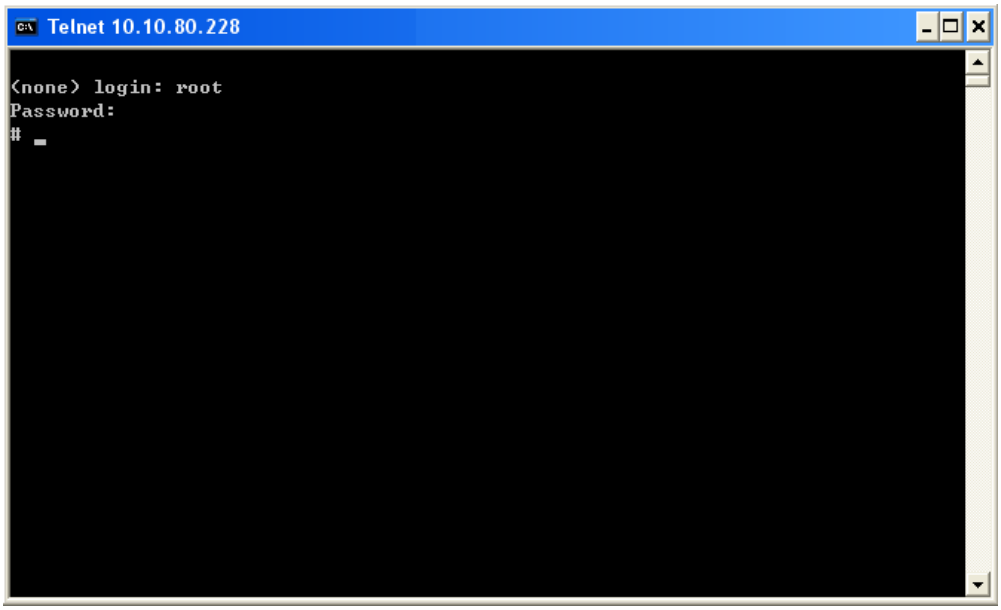


Figure 5: Login Menu

Key in the command “upgrade” and press **Enter**. The upgrade process will be launched.

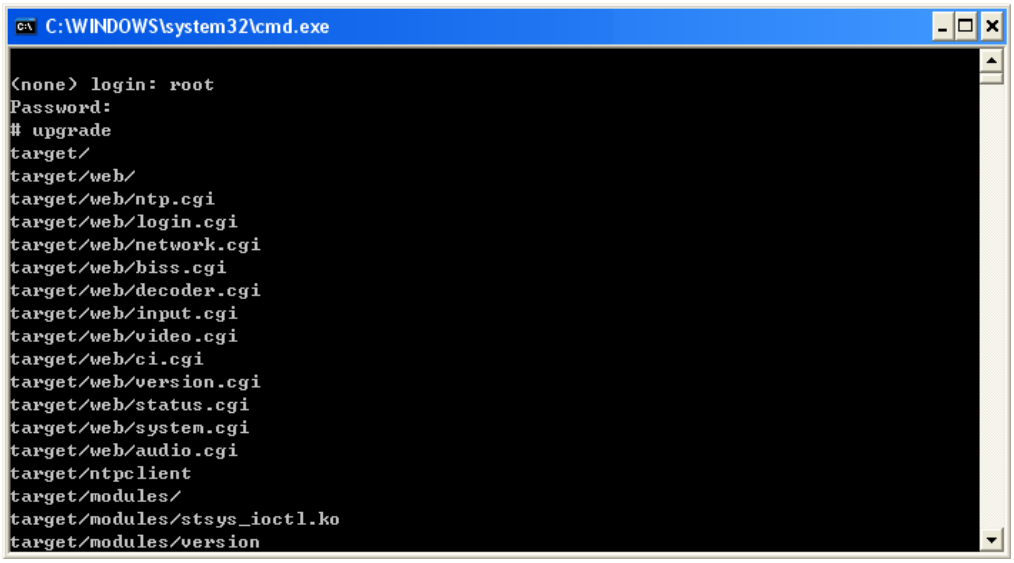


Figure 6: Upgrading

When the upgrade is finished, the equipment will reboot automatically.

Check the new version through “LCD: System->Properties”, or from web control page.

6.3 Firmware Upgrade from WEB

Open the Web control page of the equipment. Go to the “upgrade” function in the SYSTEM menu. Browse the file named “Target.tgz”, click Upload file button, then the firmware is automatically uploaded in the memory of the equipment. After the upgrade, check the version number in the SYSTEM menu.

7. Installation

- Fix the device in the standard 19” rack.
- Connect the power cable. Turn on the device and wait for 8 to 10 seconds, while the device will complete self inspection and configuration. The POWER Indicator LED will always light on during working. If not use the device, please pull out the AC plug. If user wants to reboot device, please leave it for at least 5 seconds after shutting it down.

8. Accessories

CD-ROM	1PC
Power cable	1PC
ASI cable	1PC
Balance audio to RCA cable	2PC
BNC to RCA Adapter	4PC
Certificate of quality /Guarantee card	1PC