PBI Pro Broadband Inc.

Professional HDTV IRD and Processor

DCH-5200P

User Manual

http://www.pbi-china.com

Contents

Notices

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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 DCH-5200P Professional HDTV IRD and Processor. This User Manual is written for operators/users of the DCH-5200P 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 HDTV IRD and Processor

1. Overview

The DCH-5200P IRD and Processor provides operators an ideal solution for receiving, remultiplexing, descrambling and decoding operations. Equipped with a variety of inputs that ensures compatibility with all transmission media. The DCH-5200P's remultiplexing capabilities enable creation of new transport streams that are subsets of the original stream. Customized services may be output as multiple SPTS or MPTS over IP, as well as over ASI. By the dual DVB common interfaces, DCH-5200P could decrypt multiple services in one transport stream or two. DCH-5200P is also a professional IRD that features a broadcast quality decoder for MPEG-2 and MPEG-4 AVC/H.264 in both Standard Definition and High Definition formats, and provides a variety of industry standard digital and analog outputs, including CVBS video, AES/EBU Audio, analog Audio, SD-SDI and HD-SDI. The unit also performs HD down-conversion and aspect ratio adaptation of HD programs to generate professional quality baseband analog video and audio outputs for easy integration with existing cable network infrastructure. This all-in-one architecture makes the DCH-5200P an ideal product for distribution and contribution networks.

2. Features

- ➤ Variety of input options DVB-T2/S2/S/C/T/DTMB/ATSC/ISDB-T, DS3/E3, TS/IP, ASI
- ➤ Supports DVB-S2 Input Stream Identifier (ISI, optional) and DVB-T SFN MIP pass through
- ➤ Redundant backup among Tuner, ASI and TS/IP with configurable priority
- ➤ SD/HD MPEG-2 and MPEG-4 AVC/H.264 digital video decoding
- ➤ Two Audio PIDs decode or pass through (compressed) in SDI output
- ➤ Multiple Analog and Digital Outputs, ASI, CVBS, YPbPr, HDMI, SD/HD-SDI, AES/EBU Audio, TS/IP
- ➤ Built-in TS re-multiplexer receives ASI, Tuner and TS/IP Inputs
- ➤ 2×DVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption
- ➤ Dynamic PMT detection and automatic updating
- ➤ Supports VBI TELETExT, EBU/DVB Subtitle, Closed Caption
- ➤ UDP/RTP, Unicast/Multicast, and SPTS/MPTS over IP (full duplex, optional)
- ➤ Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software

- ➢ PCM audio embedded in SDI and HDMI outputs

- ➢ PCM audio output on two AES/EBU audio output ports

- ➢ On Site software update through IP

- ➢ RSSI, received Eb/No & BER monitoring

3. Technical Specifications

Tuner Input	
DVB-S/S2 Tuner Input (ISI Factory Optional)	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
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	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	51 ~ 862MHz
Input Level	51 ~ 75dBµV
Symbol Rate	1 ~ 7MBaud (ITU J.83 Anne× A)
Constellation	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
Input Return Loss	7dB (typ.)
DVB-T/T2 Tuner Input	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output

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	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
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	
Connector Type	1×F type female 75Ω for Input, 1×F type female 75Ω for loop through output
Input Frequency Range	54~864MHz
Input Level	-75~-7dBm(ATSC 8VSB)
Symbol Rate	10.762MBaud
Constellation	8VSB
Roll-off Factor	0.115
Bandwidth	6MHZ
ASI Input	
Connector Type	1×BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Input Bit Rate	≤ 100Mb/s

DS3 Input (Option)

Connector Type	2×BNC female, 75Ω, including loop through
Standard	Compliant with ITU-T G.703
Frame Structure	Compliant with ITU-T G.752 and ITU-T G.804
Bit Rate	44.736Mb/s

TS over IP

Connector Type	1×RJ-45, 10/100 Base-T or 100/1000 Base-T for TS/IP
Effective Bit Rate	70Mb/s for 10/100/1000 Base-T
Protocol	UDP / RTP, Multicast / Unicast, IGMPv3, ARP

TS Processing

TS Input Management	Demu× and Remu× among Tuner / DS3(optional) / E3 (optional), ASI and TS/IP Inputs
TS Output Management	Demu× and Remu× for 2 independent ASI outputs
Service and PID Management	Remu×, filtering and remapping
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	Double PCMCIA slots, compatible with major CA CAMs in the market

ASI Output

Connector Type	2 pairs of BNC female, 75Ω
Standard	DVB-ASI, EN50083-9
Output Bit Rate	≤ 99Mb/s
TS Processing	2 Independent TS Re-multiple×ed from tuner, TS/IP and 2 ASI inputs

HDMI Output

Standard	1×HDMI 1.3 interface (up to 1080i)
Video Resolution and Frame Rate	1080i×30, 1080i×29.97, 1080×25,720p×60,720p×59.94, 720p×50, 480p×60, 576p×50, 576i×25, 480i×29.97
Audio Embedded	1×stereo

Digital Video Processing

Video Standard	MPEG-2(MP@ ML for SD, MP@HL for HD)
	MPEG 4/H.264 AVC Part 10 (MP@L3 for SD, HP@L4.1 for HD)
SDI Video Resolution	1080i×30, 1080i×29.97, 1080i×25, 720p×60, 720p×59.94, 720p×50, 576i×25, 480i×29.97
Video PID Bit Rate	< 80Mb/s

HD/SD-SDI Output

Connector Type	1 pair of BNCs (mirrored) , female, 75Ω
SD Standard	SMPTE 259M, 270 Mb/s (10bit)
HD Standard	SMPTE 292M, 1.485 Gbit/s (10bit)
Level	800mV p-p

Digital Audio Processing

Connector Type	2×D-sub 9 male with ×LR adaptor cables
Number of Output	2×audios are decoded or passed through
Audio Sampling Rate	32, 44.1 and 48 KHz
Audio Bit Rate	32, 64, 96, 128, 160, 192, 224, 256, 288, 320, 352, 384, 416 and 448 Kb/s for MPEG-1 Layer I, 32, 48, 56, 64, 80, 96, 112, 128, 160, 192, 224,256, 320 and 384 Kb/s for MPEG-1 Layer II
Nominal Output Level	1V p-p (with standard test stream)
Output Format	AES/EBU
Load Impedance	110Ω (with ×LR adaptor cables)

Analog Video Output

CVBS Connector	2×BNC female 75Ω
CVBS Standard	NTSC, PAL, and SECAM
CVBS Resolution	576i×25, 480i×29.97
Norminal Output Level	1.0 Vp-p±5% (with standard test stream)
Frequency Response	<±1 dB, at 5.5 MHz for PAL/SECAM, 4.2MHz for NTSC
Chroma-Luma Delay	<±30 ns
Field Time Distortion	<2%
Line Time Distortion	<1%
Short Time Distortion	<2%
Differential Gain	<3%
Differential Phase	<2°
Signal to Noise Ratio	>55dB (luminance weighted)

Analog Audio Output

Connector Type	2×D-sub 9 male, with ×LR adaptor cable
Output Impedance	600Ω (balanced)
Output Mode	Left, Right, Dual Mono, Stereo
Number of Output	2 pairs of stereo audio outputs (2 Audio PIDs or 4 channels are decoded).
Cross Talk Among Channels	>70dB
THD	<0.3% @ 400Hz, 1KHz test tone
Frequency Response	±0.5dB over 20Hz ~ 18KHz

Output Level	0dBm in 600Ω (0dBu), adjustable range ±I0dB
Ancillary Data Processing	
Subtitle	DVB, EBU
VBI	Telete×t, WSS
Closed Caption	EIA 608, EIA 708, EIA 608-to-708
Redundancy	
Redundancy Port	among Tuner, ASI input and TS/IP input
Switching Condition	TS Sync Loss
Switching Mode	Main, Spare
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	Embedded FTP loader and Telnet
Physical	
Dimension	44mm×483mm×255mm
Weight	3.4Kg Net, 5.4Kg Gross
Power Supply	AC 90V ~ 250V, 50/60Hz
Power Consumption	24W (e×clusive 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.

Order information

DCH-5200P			-10X	-20X				-30X			
Model Function				-20X	-22X	-24X	-26X	-30X	-32X	-34X	-36X
Standard Video/Audio	CVBS	2*BNC(one for mirror)	●	●	●	●	●	●	●	●	●
	AUDIO	2*R/L	●	●	●	●	●	●	●	●	●
	HD-VIDEO	1*HDMI	●	●	●	●	●	●	●	●	●
Digital Video/Audio	HD-SDI	2*BNC						●	●	●	●
	AES/XRL	2*D9(with extended cable adaptor)						●	●	●	●
TS Input	ASI IN	1*BNC						●	●	●	●
TS Output	ASI OUT	4*BNC(2 for mirror)		●	●	●	●	●	●	●	●
TS/IP	100M/6 channel multicast	2*RJ45(one for mirror)			●				●		
	100M/32 channel multicast	1*RJ45				●					●
	GbE	1*RJ45					●				●
Control/Upgrade	Mangement	1*RJ45	●	●	●	●	●	●	●	●	●
	Upgrade	2*USB	●	●	●	●	●	●	●	●	●
	RS-232	1*D9	●	●	●	●	●	●	●	●	●
	ALARM/RELAY	1*D9	●	●	●	●	●	●	●	●	●
TUNER	-C	DVB-C	Factory default option: X=S2								
	-T	DVB-T									
	-S2	DVB-S2									
	-T2	DVB-T2									
	-D	DS3									
	-M	STM-1									
	-A	ASI									
	-N	no TUNER									

4. Front panel and rear panel instructions

4.1 Front panel
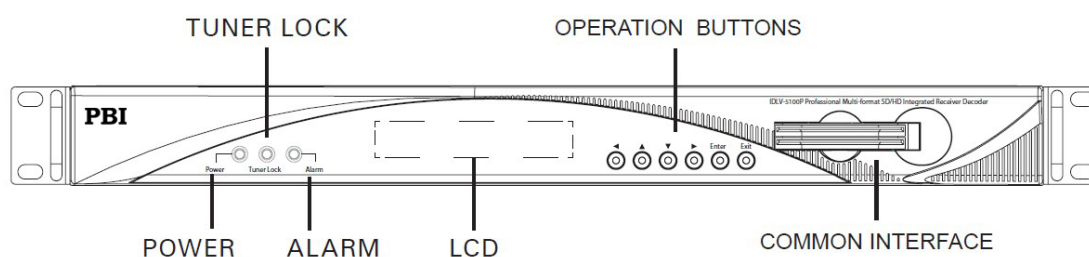
Name	Function
LED Power	When turned on, the Green LED indicates that power is available. When turned off, the power is not available or failed
LED Tuner Lock	LED ON: Tuner input is locked, LED OFF: Tuner is un- locked.
LED Alarm	LED ON: Alarm or alarms happen to the equipment, For alarm description, please refer to details in the table 10. LED OFF: The equipment works properly
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
Common Interface	To insert CI CAM modules, maximum two CI modules

4.2 Rear panel

Name	Description
TS/IP(option)	TS over IP input or output
RS-232	Serial port for equipment debug use
ASI OUT2	Group 2 of 2 ASI output ports in mirror
ASI OUT1	Group 1 of 2 ASI output ports in mirror
ASI IN	ASI input port
Alarm	
L-Audio-R1	Group 1 of RCA audio left and right outputs port
L-Audio-R2	Group 2 of RCA audio left and right outputs port
Audio 1	AES/EBU and Balance Audio output port 1 (A special DB-9 conversion cable is offered as accessory)
Audio 2	AES/EBU and Balance Audio output port 2 (A special DB-9 conversion cable is offered as accessory)
TUNER OUT	Tuner signal loop through output port
TUNER IN	Tuner signal input
SWITCH	AC Power supply switch
Control	RJ-45 Ethernet port for equipment control and supervision
Control	USB port for firmware upgrade

SDI 2		SD or HD Serial Digital Video output port 2
SDI 1		SD or HD Serial Digital Video output port 1
HDMI		High Definition Multimedia Interface output port
CVBS		CVBS RCA video output port
	⏚	Grounding terminal
POWER SOCKET		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 Audio DB-9 Port

DCH-5200P uses a special DB-9 port for AES/EBU and balanced Audios. Pins are defined in below Table.

Pin	Pin Function
1	AES Audio (+)
2	AES Audio Ground
3	Left Channel (-)
4	Right Channel (-)
5	Right Channel Ground
6	AES Audio (-)

7	Left Channel Ground
8	Left Channel (+)
9	Right Channel (+)

4.5 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 DCH-5200P, the above settings for IP will not be affected, this is for maintaining the connectivity of the unit to the IP Network.

4.6 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 DCH-5200P, 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.

Professional IRD
IP: 10.10.70.48
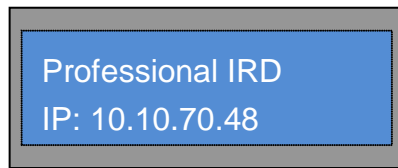
The IP address of the equipment can be changed in the **System** menu. Go into the **Local Setup** submenu, user can set IP address, network mask and IP gateway, press ENTER to select the option, and use LEFT or RIGHT to move the cursor between digits and use UP or DOWN to change the value until the right value, then press ENTER to make the selection.

IP Address
10.10.70.48

Network Mask
255.255.255.0

Gateway
10.10.70.1
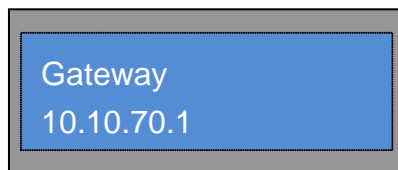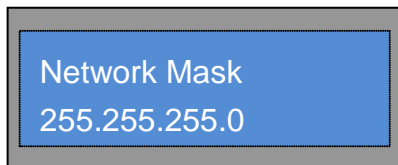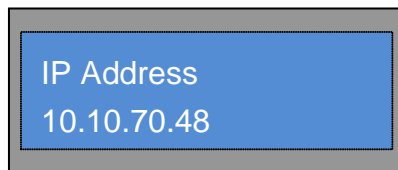
Customers can use UP, DOWN, LEFT,RIGHT, ENTER, EXIT keys from front panel to navigate in the menus, select and confirm the parameters in LCD screen.

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.
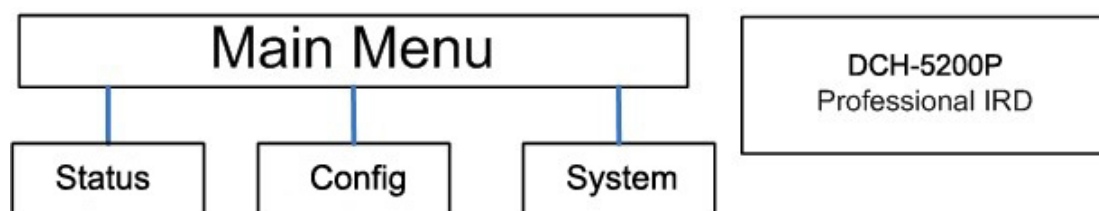
Submenu Name	Description
Status	Monitor the parameters of Tuner, TS over IP input (only when the TS/IP streaming board is installed) and decoding info.
Config	Configure the parameters of Input and output, including CI settings, AV decoder, ASI output and so on.
System	Check and set system settings and 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:

- **Tuner**
- **Decoder**
- **ASI-1 Output**
- **ASI-2 Output**
- **TS over IP**
- **Remux**
- **CI**
- **BISS**
- **Redundancy**
- **SDI**

```
                          Configuration
   ┌──────┬────────┬──────┬──────┬──────┬──────┬────┬──────┬───────────┬──────┐
 Tuner  Decoder  ASI-1  ASI-2  TS over  Remux  CI  BISS  Redundancy  SDI
                 Output Output   IP
```
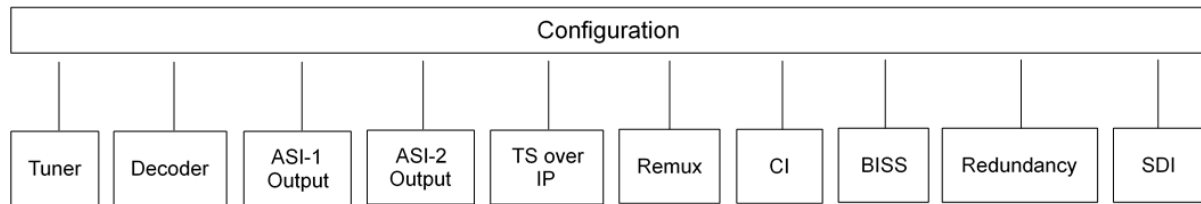
Tuner
- LNB LO Frequency: xxxxxMHz
- Satellite Frequency: xxxxxMHz
- Symbol Rate: xxxxxKBaud
- LNB Voltage: On/13V/18V
- LNB 22KHz: On/Off
- DiSEqC: Off/Port A/B/C/D
- PLS Gold Code: xxxxxx
- Freq Offset High: xxxxKHz
- Freq Offset Low: -xxxxKHz

Decoder
- Source: Tuner/CI/BISS/ASI Input/IP Input
- Program: Program List
- Video: ◆Video Standard: Auto/576I 25/480I 29.97/
                576P 50/480P 59.94/480P 60/
                720P 50/720P 59.94/720P 60/
                1080I 25/1080I 29.97/1080I 30
         ◆Aspect Ratio: Auto/4:3 Full/4:3 Letterbox/
                16:9 Full/16:9 Letterbox
         ◆Subtitle Mode: Disable/DVB Subtitle/
                EBU Subtitle
         ◆Subtitle Lang: Subtitle language
         ◆Failure Mode: Black Screen/Last Screen
         ◆Close Caption: Disable/Enable
         ◆CVBS SUB: PALBDGHI/PALN/
                PALN_C/SECAM
- Audio: ◆Audio-1/2 Level: xx
         ◆Audio-1/2 Model: Stereo/Left/Right/Mono
         ◆Audio-1/2 Language: xxx
- Mode: Manual Selection/First Service
- A/V Alarm Switch: ◆Video Alarm Switch:
                Disable/Enable
         ◆Audio Alarm Switch:
                Disable/Enable

BISS
- BISS Mode: ◆Mode 0
         ◆Mode 1: Key: xxxxxxxxxxxx
         ◆Mode E: ID: xxxxxxxxxxxxxx
                Key: xxxxxxxxxxxxxxxx
- Source: Tuner/IP In/ASI Input
- Program Setup: Program list

Redundancy
- Switch: Disable/Enable
- Main Port: Tuner/ASI Input/ IP In
- Backup Port: Tuner/ASI Input/IP In
- Main CH Unlock Time: xxs
- Main CH Recover Time: xxs
- Backup Mode: Auto/User Define Program

ASI-1 Output
- ASI Source: Tuner/IP IN/CI/BISS/ASI Input

ASI-2 Output
- ASI Source: Tuner/IP IN/CI/BISS/ASI Input

TS over IP
- IP Board Type: Single IP In/No Exist/
                6-CH Dual Out/32-ch Single Out
In Single IP In mode:
- Target IP: xxx.xxx.xxx.xxx
- Target Port: xxxxx
- Protocol: UDP/RTP
- Stream IP Addr: xxx.xxx.xxx.xxx
- Stream Netmask: xxx.xxx.xxx.xxx
- Stream Gateway: xxx.xxx.xxx.xxx
- IGMP Version: IGMPv2/IGMPv3
- TS Buffer Size: 4M/2M/1M/512K/256K/128K
- Output Smoothing: Auto/Fixed Rate/Disable

In 6-CH Dual Out or 32-CH Single Out mode:
- Source: ASI Input/Tuner/CI/BISS
- Mode: IPTV/DVB
- Uni/Multicast Setup
- Protocol:UDP/RTP
- Stream IP Addr: xxx.xxx.xxx.xxx
- Stream Netmask: xxx.xxx.xxx.xxx
- Stream Gateway: xxx.xxx.xxx.xxx
- Gateway MAC Addr: xx-xx-xx-xx-xx-xx
- TS Pkts Per UDP: 1~7
- Time To Live: 0~255
- Type of Service: Normal/Min Delay/Max
                Throughput/Max Reliability/Min Monetary Cost

Remux
- Switch: Disable/Enable
- Max Bit Rate: xxxxxKbps
- TS ID: xxxxx
- Program: Remux List/Pass/Forbid

CI
- Source: Tuner/ASI Input/IP In
- CAM Name: CI Slot 1: CAM name/No Module
                CI Slot 2: CAM name/No Module
- Setup: Program list

SDI
- Emb Aud Switch: Disable/Enable
- Emb Aud Mapping: Channel 1~8: Audio-1/Audio-2/
                Audio-1 Pass TH/Audio-2 Pass TH
                Channel 1~8 level: xxx
- Closed Caption Mode: Auto/Line 21/SMPTE
                334M-608/SMPTE 334M-708

Submenu Name	Description	
Tuner	LNB LO Frequency	To configure the local oscillator frequency according to the right satellite, its range is from 1000 to 26,500MHz.
	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.
	PLS Gold Code	To configure the PLS gold code, its range is from 0 to 262,141.
	Freq Offset High	To ensure the tuner locks the specific signal, its range is from 1000K to 5,000KHz.
	Freq 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".
Decoder	Source	To configure the decoder source, user can select Tuner Input, ASI-1 Input, ASI-2 Input, IP Input or Remux Input.
	Program	To configure which program should be decoded.
	Video Output	To configure the video properties, such as the screen ratio, resolution, VBI issues and so on.
	Audio Output	To configure the audio properties, such as the audio PID, output level and so on.
	Mode	To configure which program should be decoded when the decoder source is changed, user can select between First Service and Program Manual Selection.
	A/V Alarm Switch	To enable or disable the A/V alarm, user can choose between On and Off.

ASI-1	ASI-1 Source	To select the ASI-1 output source.
ASI-2	ASI-2 Source	To select the ASI-1 output source.
TS over IP	When set IP Board Type as Single IP input	
	Stream IP Address	To configure the IP address of the TS over IP port.
	Stream Netmask	To configure the Netmask of the TS over IP port.
	Stream Gateway	To configure the Gateway of the TS over IP port.
	Stream Mac Address	To display the Mac address of the TS over IP port.
	Uni/Multicast IP	To configure the unicast or multicast address of TS over IP input.
	Uni/Multicast Port	To configure the unicast or multicast port of TS over IP input.
	Protocol	To select the correct protocol to receive the IP input stream, user can select UDP or RTP.
	Output Smoothing	To adjust the clock of the IP stream, user can select Auto, Fixed Rate and Disable.
	IGMP Version	To select the correct IGMP version according to the IP out device, user can select IGMP v2 or IGMP v3.
	TS Buffer Size	To select the TS over IP buffer size.
	When set IP Board Type as 6-CH Dual IP output or 32-CH Single IP output	
	Stream IP Address	To configure the IP address of the TS over IP port.
	Stream Netmask	To configure the Netmask of the TS over IP port.
	Stream Gateway	To configure the Gateway of the TS over IP port.
	Stream Mac Address	To display the Mac address of the TS over IP port.
	Gateway Mac Address	To configure the Mac address of the TS over IP gateway.
	Protocol	To select the correct protocol to receive the IP input stream, user can select UDP or RTP.
	TS Pkts per UDP	To configure the IP packet include how much DVB PES packets.
	Time to Live	To define the maximum of multi switch the IP stream can be passed, user can set the value from 1 to 255.
	Type of Service	To match the multi switch settings, user can select Normal, Min Delay, Max Throughput, Max Reliability or Min Monetary Cost
	Source	To configure the TS/IP source.
	Mode	To configure the TS/IP output mode, user can choose between DVB and IPTV.

	Uni/Multicast Setup	To configure the TS/IP output parameters, such as unicast or multicast address, port and so on.
Remux	Remux Switch	To enable or disable the Remux function.
	Max Bit Rate	To set the Max bit rate of the Remux output.
	TS ID	To set the TS ID.
	Program List	To select which services will be output by Remux.
CI	CI Source	To configure the CI descramble source, user can select Tuner Input, ASI-1 Input, ASI-2 Input, IP Input or Remux Input.
	CI Setup	To set which programs should be descrambled by CI slot1 or CI slot2.
	CI CAM Name	To check what kind of CAMs have been inserted.
BISS	BISS Mode	To select the BISS mode, user can choose between Off, BISS-1 and BISS-E.
	BISS Source	To select the BISS source, user can select Tuner Input, ASI-1 Input, ASI-2 Input or IP Input.
	Program	To select which services will be decrypted by BISS.
SDI	Emb Aud Switch	To enable or disable the embedded audio
	Emb Aud Mapping	To select which audio to be embedded in which group
	Closed Caption Mode	To configure the Closed Caption mode over SDI, user can select between Auto, Line21, SMPTE 334-608 and SMPTE 334M-708.
Redundancy	Switch	To enable or disable the Redundancy function
	Main Port	To configure the main output source, user can select Tuner Input, ASI-1 Input, ASI-2 Input or IP Input.
	Backup Port	To configure the backup output source, user can select Tuner Input, ASI-1 Input, ASI-2 Input or IP Input. The backup port can not select the same source as main port.
	Main CH Unlock Time	To define the condition of the backup port.
	Main CH Recover Time	To define the condition when the main port recover.
	Backup Mode	To configure the decoder output mode, user can select between Auto and User Define Program.

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.

- **Version Info**
- **IP Control**
- **Product Name**
- **Model**
- **Factory Settings**
- **Machine Type**
- **LCD Language**
- **Safety Level**
- **Upgrade**

System

| Version Info | IP Control | Product Name | Model | Factory Settings | Machine Type | LCD Language | Safety Level | Upgrade |

Version Info
- Main Version: 52PR00xx
- Decoder Version: xx
- FPGA Version: xxxx
- Linux OS Version: xx
- Modules Version: xx
- TS/IP Out FPGA: xx
- TS/IP Out NIOS: xx

IP Control
- IP Address: xxx.xxx.xxx.xxx
- Network Mask: xxx.xxx.xxx.xxx
- Gateway: xxx.xxx.xxx.xxx
- HTTP Login: Username: xxxxxxxx
             Password: xxxxxxxx
- NTP: Switch: Enable/Disable
       NTP Server IP: xxx.xxx.xxx.xxx
       NTP Interval: xxxs
       Time Zone: GMT xx:00
       Date: xxxx-xx-xx
- MAC Address: xx:xx:xx:xx:xx:xx

Product Name
- Product Name: xxxxxxxxxxxxxxxxxxx

Model
- Model: xxxxxxxxxxxxxxxxxxxx

Factory Settings
- Factory Settings? ENTER=YES/EXIT=NO

Machine Type
- MAC Address: xx-xx-xx-xx-xx-xx
- S/N: xxxxxxxxxxxxx
- Dynamic PMT Switch: Enable/Disable

LCD Language
- LCD Language: English/Chinese

Safety Level
- Safety Level: OFF/Low Level/High Level/Send Trap Only

Upgrade
- Upgrade: No Upgrade file, please download file!/Find upgrade file, start to upgrade

Submenu Name	Description	
Version Info	To display some properties of the device, such as software version.	
IP Control	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.
	HTTP Login	To configure the user name and password of web access.
	NTP	To configure NTP parameters.
	MAC Address	To display the MAC address of the device
Product Name	To configure the product name of the device.	
Model	To configure the model number of the device	
Factory Settings	The switch to make factory default setting.	
Machine Type	MAC Address	To configure the MAC address of the device.
	S/N	To configure the serial number of the device.
	Dynamic PMT Switch	To enable or disable the dynamic PMT function.
LCD Language	To switch LCD display language between English and Chinese	
Safety Level	To configure a special safety mode in China market.	
Upgrade	To start to upgrade firmware after inserting a USB storage which contain new firmware file into the USB port of the device.	

5.2 Remote Control

DCH-5200P can be controlled by WEB. User can type IP address of DCH-5200P 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. The parameters are the same as Chapter 3.3.

5.2.1 Status

User can monitor the status of inputs and output. All information of every input source can be shown in this page. The output status and information can also be checked.

    Input TS—User can monitor TS status of Tuner, ASI, CI and IP here.

    Decoder—User can monitor video and audio decoding status here.

5.2.2 Config--Tuner

Set parameters of tuner input, 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.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

Tuner
- Decoder
  Decoder
  Video
  Audio
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

DVB-S2

LNB LO Frequency (MHz)	5150
Satellite Frequency (MHz)	3840
Symbol Rate (KBaud)	27500
LNB Voltage	OFF
LNB 22KHz	Enable
DiSEqC	OFF

Apply   Cancel

Menu Name	Description
LNB LO Frequency	To configure the local oscillator frequency according to the right satellite, its range is from 1000 to 26,500MHz.
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.
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".

5.2.3 Config--Decoder

Set parameters of decoder. There are three subpages, Program page, Video Output page and Audio Output page. In the Program subpage, user can set the parameters of output program. Click "Apply" button to submit, or click "Cancel" button to cancel.

Menu Name	Description
Source	To configure the decoder source, user can select Tuner Input, ASI-1 Input, ASI-2 Input, IP Input or Remux Input.
Current Program	To show which program should be decoded.
Program List	Programs which can be selected.
Decoder Mode	To configure which program should be decoded when the decoder source is changed, user can select between First Service and Program Manual Selection.
A/V Alarm Switch	To enable or disable the A/V alarm, user can choose between On and Off.

In the Video Output subpage, user can set the video parameters of output program. Click "Apply" button to submit, or click "Cancel" button to cancel.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

Tuner
- Decoder
  Decoder
  Video
  Audio
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

Video

Video Standard	576I 25
Aspect Ratio	Auto
Subtitle Mode	Disable
DVB Subtitle Language	No DVB subtitle
EBU Subtitle Language	No EBU subtitle
Failure Mode	Last Screen
Closed Caption	Disable
CVBS PAL SUB	PAL-BDGHI
CVBS NTSC SUB	NTSCM

Apply   Cancel

Menu Name	Description
Video Standard	To configure the video output resolution.
Aspect Ratio	To configure the video output screen ratio.
DVB Subtitle Language	To select the DVB subtitle language.
EBU Subtitle Language	To select the EBU subtitle language.
Subtitle Priority	To configure the display priority of the subtitle.
Fail Mode	To configure the video output mode when change program.
Closed Caption	The switch to enable or disable the closed caption.
VBI Mode(TTX/CC/WSS)	The switch to enable or disable the VBI output.
CVBS SUB PAL	To select the CVBS PAL mode when the video resolution is set as 1080ix25, 720px50,576px50 or 576ix25.
CVBS SUB NTSC	To select the CVBS NTSC mode when the video resolution is set as 1080ix30,1080ix29.97,720px60,720px59.94,480px60, 480px59.94 or 480ix29.97.

In the Audio Output subpage, user can set the audio parameters of output program.
Click "Apply" button to submit, or click "Cancel" button to cancel.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Tuner
- Decoder

　Decoder
　Video
　Audio

ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

Audio

Audio-1

Audio-1 Level	0	(-55 to 8)
Audio-1 Mode	Auto	
Audio-1 Priority	No audio	

Audio-2

Audio-2 Level	0	(-55 to 8)
Audio-2 Mode	Auto	
Audio-2 Priority	No audio	

Apply   Cancel

Menu Name	Description
Audio-x Level	To configure the analog audio output level.
Audio-x Mode	To set output audio mode among "Auto", "Stereo", "Left", "Right" and "Mono"
Audio-x Priority	To configure output audio priority.

5.2.4 Config—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.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Tuner
+Decoder
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

ASI Output

ASI-1 Output Source	Tuner
ASI-2 Output Source	Tuner

Apply   Cancel

Menu Name	Description
ASI-1 Output Source	To configure which TS should be output by ASI-1 Output.
ASI-2 Output Source	To configure which TS should be output by ASI-2 Output.

5.2.5 Config--TS over IP

TS over IP function is also an optional function, you can select the IP board type in this page. For the different IP board type, TS over IP page will show the different parameters.

When Single IP Input option is selected, the following page will be shown. Click "Apply" button to submit, or click "Cancel" button to cancel (DCH-5200P-34xx model only).

When 32CH Single Output option is selected, the following page will be shown. Click "Apply" button to submit, or click "Cancel" button to cancel (DCH-5200P-34xx model only).

When 6CH Dual Output option is selected, the following page will be shown. Click "Apply" button to submit, or click "Cancel" button to cancel (DCH-5200P-32xx model only)

When 32CH Single Output option is selected, there are two modes that Uni/Multicast parameters can be configured. If select DVB mode and click Uni/Multicast Setup button, it will show following page:

If select IPTV mode and click Uni/Multicast Setup button, it will show like this:

Note: It is slightly different in TS over IP page according to the different hardware configuration of DCH-5200P.

5.2.6 Config--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
Remux Switch	The switch to enable or disable the Remux function.
Max 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.
Input TS	The interface to select the input TS.
Output TS	To display the output TS of the Remux.

5.2.7 Config--CI

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.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

Tuner
+Decoder
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

CI

● Slot 1   No Module   Source   Tuner ▾

● Slot 2   No Module

| Index | Service ID | Service Name | Selection |

Apply   Cancel

5.2.8 Config--BISS

Set parameters of BISS Descryption. DCH-5200P supports BISS-1 and BISS-E mode. Click "Apply" button to submit, or click "Cancel" button to cancel

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

Tuner
+Decoder
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

BISS

Source   ASI Input ▾

BISS Mode   Mode 1 ▾

Mode 1 Key   •••••••••••

| Index | Service ID | Service Name | Selection |

Apply   Cancel

Menu Name	Description
Source	To select the TS stream which you want to do BISS decryption
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.

5.2.9 Config--Redundancy

Set parameters of Redundancy. Redundancy function can help to improve the system's security, backup parameters can be set in this page. User can active or close this function in System page. Click "Apply" button to submit, or click "Cancel" button to cancel.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Tuner
+Decoder
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

Redundancy

Switch	Disable
Main Port	ASI Input
Backup Port	Tuner
Main Channel Unlock Time (s)	1
Main Channel Recover Time (s)	0
Backup Mode	Auto

Apply   Cancel

5.2.10 Config--SDI

Set parameters of SDI output, such as Embedded audio and Close caption. Click "Apply" button to submit, or click "Cancel" button to cancel.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

Tuner
+Decoder
ASI Output
TS over IP
Remux
CI
BISS
Redundancy
SDI

SDI

Embedded Audio Switch   Enable

Closed Caption Mode   Auto

Embedded Audio Mapping

SDI Channel 1-2   Audio-1

SDI Channel 1-2 Audio Level   0

SDI Channel 3-4   Audio-2

SDI Channel 3-4 Audio Level   0

SDI Channel 5-6   Audio-1 Pass Through

SDI Channel 5-6 Audio Level   0

SDI Channel 7-8   Audio-2 Pass Through

SDI Channel 7-8 Audio Level   0

Apply   Cancel

Menu Name	Description
Emb Aud Switch	To enable or disable embedded audio function.
Closed Caption Mode	To Select the mode of closed caption among "Auto", "Line21" and "SMPTE 334M-608" and "SMPTE 334M-708". (Note: must enable closed caption function in Decoder menu first.)
SDI Channel x-x	To set audio embedded channel.
SDI Channel x-x Audio level	To adjust audio level on that channel.

5.2.11 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 subpage, user can set the Product name, Model number, Brightness of LCD on front panel and Web auto refresh Time. Click "Apply" button to submit, or click "Cancel" button to cancel.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Device
IP Control
Version
Login
Factory Default
System Reboot
Upgrade

Device

Product Name	Professional IRD
Model	DCH-5200P
Serial Number	0123456789abc
Brightness	50%
WEB Auto Refresh Time	Never

Apply   Cancel

In IP Control page, user can set the network management parameters and active NTP function. Click "Apply" button to submit, or click "Cancel" button to cancel.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Device
IP Control
Version
Login
Factory Default
System Reboot
Upgrade

IP Control

Local Settings

IP Address	10 . 10 . 100 . 231
Subnet Mask	255 . 255 . 255 . 0
Gateway	10 . 10 . 70 . 1

NTP Settings

Switch	Disable

MAC Address

Main MAC Address	00:0e:26:ff:5e:50
TSoIP1 MAC Address	00:0e:26:ff:5e:51
TSoIP2 MAC Address	00:0e:26:ff:5e:52

Apply   Cancel

In Version subpage, user can read the software version.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Device
IP Control
Version
Login
Factory Default
System Reboot
Upgrade

Version			
Main Version	52PR0014	Web Version	0115
Decoder Version	13	FPGA Version	120B
Linux OS Version	05	Modules Version	04
TS/IP Out FPGA	1b	TS/IP Out NIOS	5d

In Login page, user can set your own username and password to access webGUI of
DCH-5200P.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Device
IP Control
Version
Login
Factory Default
System Reboot
Upgrade

HTTP Login	
Username	
Password	

Apply   Cancel

In Factory Default page, user can restore factory default configuration of
DCH-5200P.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

Status	Configuration	System

Device
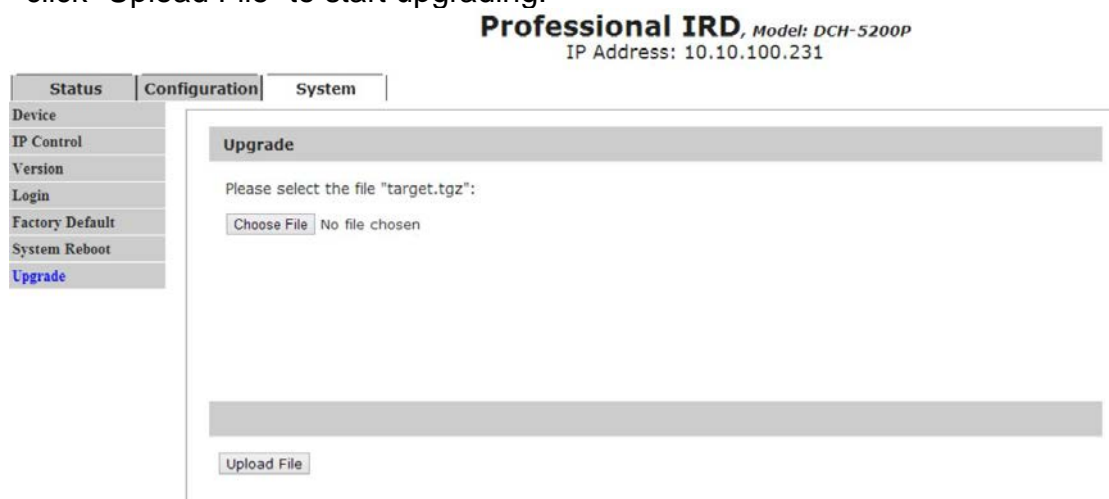IP Control
Version
Login
Factory Default
System Reboot
Upgrade

Factory Default

Press button 'Default' to restore default settings.

Default

In System Reboot page, user can reboot DCH-5200P.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

- Device
- IP Control
- Version
- Login
- Factory Default
- **System Reboot**
- Upgrade

System Reboot

Press button 'Reboot' to restart the device.

Reboot

In Upgrade page, user can upgrade the latest firmware of DCH-5200P. Click "Choose File" button to select a firmware upgrade package from your PC. Then click "Upload File" to start upgrading.

Professional IRD, *Model: DCH-5200P*
IP Address: 10.10.100.231

| Status | Configuration | System |

- Device
- IP Control
- Version
- Login
- Factory Default
- System Reboot
- **Upgrade**

Upgrade

Please select the file "target.tgz":

Choose File No file chosen

Upload File

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.
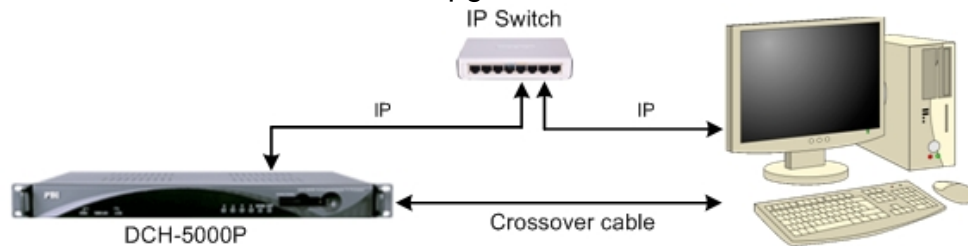
Figure 1: IP Connection Diagram

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.
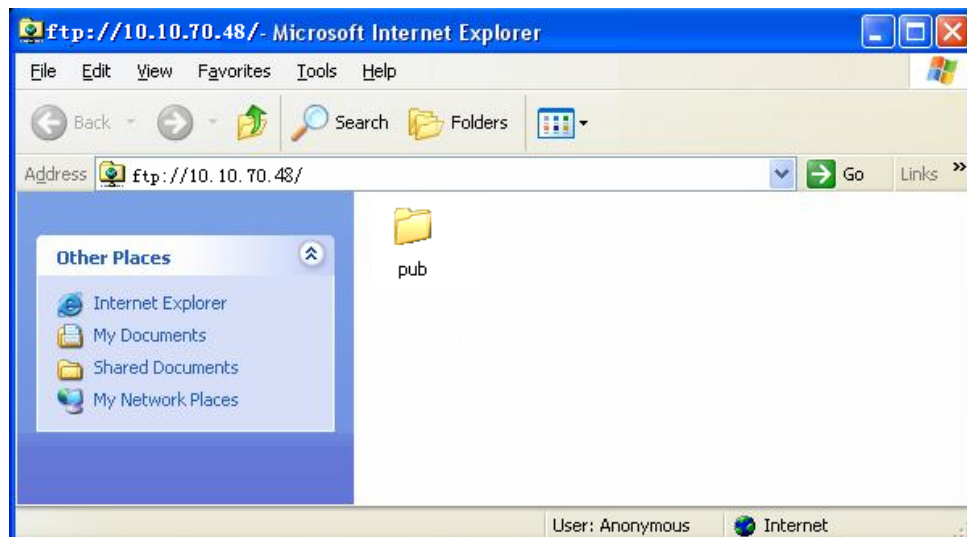
Figure 2: Open the FTP folder

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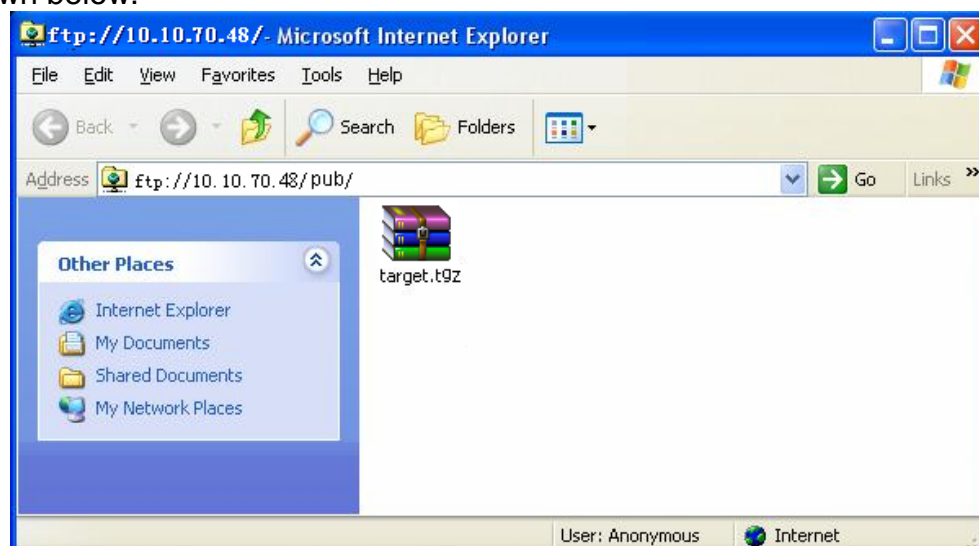

Figure 3: Copy "target.tgz" File

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.
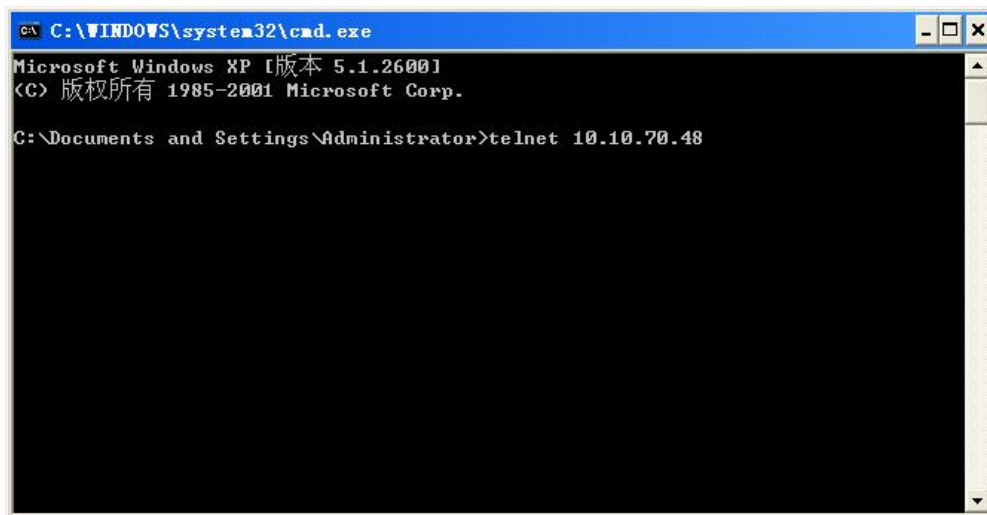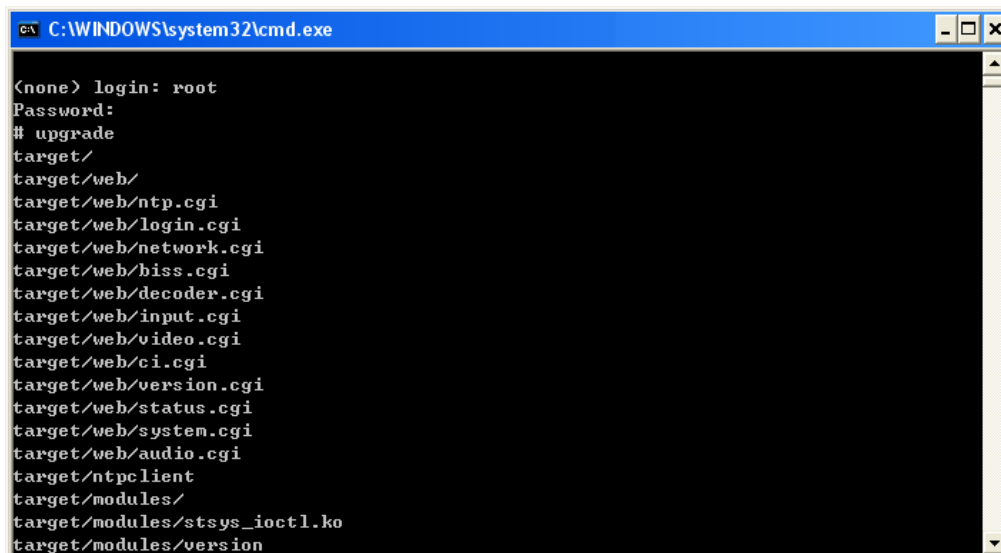
Figure 4: Open MS-DOS Window

Type **Enter** to go into the login window. Use "root" as login name and "12345" as password.
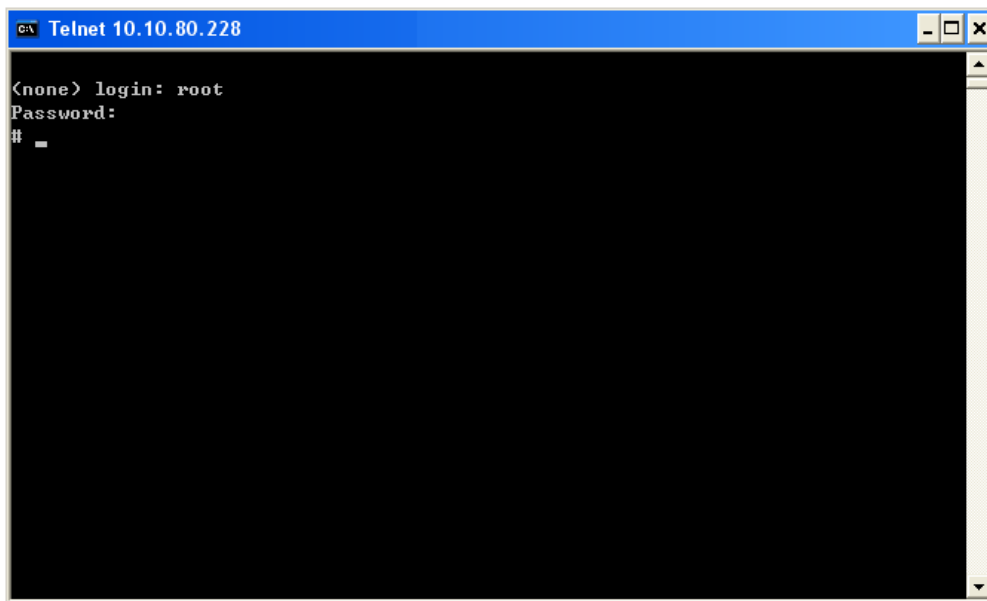
Figure 5: Login Menu

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