



MODEL IDH2-3308

DVB **T2** **S2** **C** **IP** **ASI**  **IP** **H.264**
MPEG-4/AVC

Safety Instructions

1. Read this manual carefully before start operating the device.
2. Removal of device cover without permission may cause harm to human body and the maintenance bond will be invalidated.
3. Handle the device with care to avoid crashing and falling, or otherwise it may cause hazards to the internal hardware components.
4. Keep all inflammable, metal and liquid materials from dropping into the device casing, or otherwise it may cause damages to the device.
5. Avoid dusty places and places with heating resources nearby, direct projection of sunlight or instant mechanical vibrations for installation of the device.
6. Connect the grounding connector on the rear panel to protect earth contact properly while in operation.
7. Choose proper type of cable connectors for connecting network interfaces of the device.
8. Avoid rapid and frequent power on/off, or it may cause damages to the semiconductor chipsets.
9. Keep proper direction of the power cord when plug into or out from a power socket.
10. Do not touch the power socket with wet hands to avoid electric shocks.
11. Take off all jewelry or ornaments, such as ring, necklaces, watches, bracelets, etc., before operating the device, or otherwise the metal contact may possibly cause short circuit and result in components damage.
12. Make sure the AC power is unplugged in case of operator services within the device casing or close to power supply are needed.
13. Only TELELYNX trained and approved staff is permitted to perform live line operation and maintenance within the device casing.
14. Ensure good ventilation when the device is in operation, or otherwise it may cause damages to the device due to overheating.
15. It is recommended to unplug the power cord from the socket if the device will not be used for a long period of time.

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Postscript	錯誤! 尚未定義書籤。

1 Introduction

1.1 Functionality

IDH2-3308 is a MultiChannel SD encoder which complies with low bit rate performance requirements. It can perform SD H.264/MPEG-2 compression encoding for up to eight channels of analog input A/V signals simultaneously, and then output the signals through ASI/IP interface after multiplexing, it also can support multiplexing of 2 ASI inputs and coding outputs, with higher quality of coding image and rate.

1.2 Key Features

This product has the following main features :

- A. 2/4/6/8 independent channels of video/audio and SDI input ports.
- B. 2 independent channels of ASI input ports (multiplexing input).
- C. Support video SD encoding: MPEG-2/H.264.
- D. Video profile modes support both main profile and high profile.
- E. Video output bit rate range: 0.25~5.5Mbps(H.264).
- F. Video output bit rate range: 0.5~5.5Mbps(MPEG-2).
- G. Support VBR/CBR video encoding.
- H. Video aspect ratio support: 4:3, 16:9, 1:1.
- I. Support MPEG-1 L2 or LC-AAC audio encode format.
- J. MPEG-1 L2 audio sampling support: 192Kbps, 224Kbps, 256Kbps, 320Kbps, 384Kbps.
- K. LC-AAC audio sampling support: 96Kbps, 112Kbps, 128Kbps, 160Kbps, 192Kbps, 224Kbps, 256Kbps, 320Kbps.
- L. Support audio sample rate: 32KHz, 44.1KHz, 48KHz.
- M. System output data rate range: 2~60Mbps.
- N. IP output TS is in the form of UDP/RTP packet, support MPTS/SPTS mode; when "SPTS" is selected for output mode, ASI output should be closed.
- O. Support encoded programs output in SPTS mode.
- P. Support encoded and multiplexed programs output in MPTS mode.
- Q. Support up to 32 programs output in multiplexing mode; support up to 8 programs output in encode mode.
- R. Support the auto-padding of empty data packets and the constancy of output bit rate.
- S. LCD-display front panel, to real-time monitor & configure the system status and parameter locally.
- T. Web-based remote management and control
- U. Malfunction alarm display
- V. Power failure memory recovery

* Please refer to Annex A for detailed technical specifications.

1.3 FrontPanel

As shown in figure 1, there are one LCD display、one 6-key keypad and three LED indicators on the front panel of IDH2-3308.

The model type and logo notification information will display on the LCD screen during the device initialization stage. User can check part of the working status of device, and set part of the parameters of IDH2-3308 by exploring a menu realized by buttons/LCD screen after system initialization, see section for details.

1. The POWER LED will be light if the device powers on successfully.
2. The STATUS LED will show some working status of the device, see section § 3.4 for details.
3. The WARNING LED will indicate warning messages of the device, if exists, see section § 3.4 for details.



1.4 Rear Panel of IDH2-3308

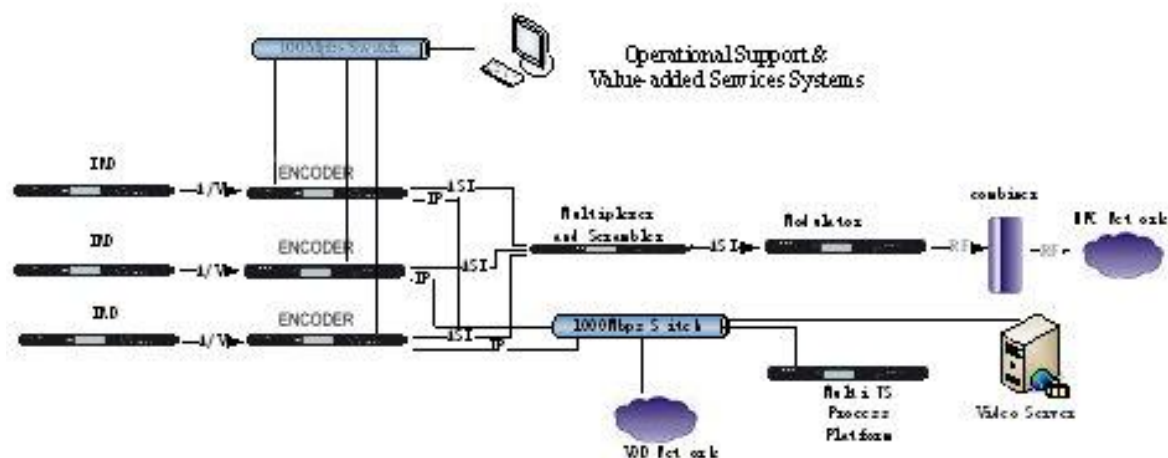
As shown in figure 2, the rear panel of IDH2-3308 includes eight A/V input ports, two ASI input ports, two ASI output ports, one IP output ports (data1), one RJ45 connector for management, one engineering test port, one power supply connector, one power switch, and a grounding connector.

1. Power Input Port: To connect to 100~240V 50/60Hz AC input;
2. Power Switch: To turn IDH2-3308 on or off;
3. CNOTROL Management Port: RJ45 interface, to connect to management server via 100BaseT or Gigabit Ethernet;
4. CONSOLE port: engineering test port. Do not use as management port or data port, or affect IDH2-3308 and other network devices (as the physical port is RJ 45, while the actual electric standard is RS-232)!
5. AV Input port: BNC port, one video and one stereo input/one video and two independent mono audio input;
6. ASI input port: BNC port, input the TS which comply with DVB standard;
7. ASI output port: BNC port, output the TS which comply with DVB standard;
8. IP Output Port: RJ45 port, output the TS via IP protocol (output the same TS as ASI port does);
9. Grounding point: To connect the device with conductive earth. Please make sure of proper grounding of the device before start operating it for the safety of the operators and the device itself!



1.5 Typical Application Architecture

Refer to figure 3:



4. IDH2-3308 System Application Black Diagram

IDH2-3308 compressed encodes the signals and packet them into TS after digitization sampling of received analog AV signals, and then output the signals through ASI/IP interface. Please refer to section 2.1.1 for details of supported transport stream formats.

The input devices of IDH2-3308 should be A/V output devices, such as satellite receiver, video player, DVD, etc. the output connection devices of IDH2-3308 should be multiplexer and scrambler.

[Remark] We strongly recommend use of TELELYNX products as IDH2-3308's input and output signal processing devices, as the reliability of their unified performance is proven. For products of other manufacturers, they may also be used together with IDH2-3308, as long as they satisfy TS signal characteristics stated in section 2.1.1, but the compatibility between them may need further verification in the real system applications.

2 Before Use the Device

2.1 Operation Requirements

In order to ensure proper operation of IDH2-3308, there are some requirements for other digital TV and network devices, which will connect with IDH2-3308. Please see below for details:

2.1.1 Requirements for Digital TV Devices

The preceding device of IDH2-3308 needs to provide Standard Definition AV/SDI signal source. The succeeding device of IDH2-3308 need to receive ASI/IP signal derived from IDH2-3308. If modulator is used later, the terminal STB and this modulator should be agreed with the same DVB's transmission standard.

Administer should properly configure the input and output settings for IDH2-3308.

2.1.2 Requirements for Network Devices

The switch for the IDH2-3308 and the managing workstation should be a 100M or gigabit switch, the maximum data exchange speed of each port must be higher than 60Mbps.

Any hosts that may worsen the network traffic, such as some workstations or servers installed real-time communication tools, streaming media server or WEB server, must not be located at the LAN switch of the output of IDH2-3308. These additional signals may cause packet loss, network jitter worsening, and hence due to audio/video distortion at the audiences.

2.2 Remarks

Management workstation must contain network device such as network card. Microsoft Windows are the recommended operating systems of the management workstation.

The using value of parameter settings should comply with the criteria below:

Parameter Settings	Value Range	Note
Video Output Bit Rate	0.25 ~ 5.5Mbps (H.264) 0.5 ~ 5.5Mbps (MPEG-2)	Channel 1 ~ 8
Video Bit Rate Mode	CBR/VBR	Channel 1 ~ 8
Video Encode Standard	H.264/MPEG-2	Channel 1 ~ 8
Profile Mode	High profile/Main profile	
Video Input Format	A/V:PAL60/SECAM/NTSC4.43/PAL(COMBINATION- N)/PAL(M)/PAL(D/K/B/G/H/I/N)/NTSC(M/J) SDI:PAL/NTSC	Channel 1 ~ 8

Parameter Settings	Value Range	Note
Video aspect ratio	4 : 3/16 : 9/1 : 1	Channel 1 ~ 8
Audio Encode Standard	MPEG-1 L2/LC-AAC	Channel 1 ~ 8
Audio Output Bit Rate	192/224/256/320/384Kbps (MPEG1 L2) 96/112/128/160/192/224/256/320Kbps (LC-AAC)	Channel 1 ~ 8
Lightness	0 ~ 100	Channel 1 ~ 8(no SDI)
Contrast	0 ~ 100	Channel 1 ~ 8(no SDI)
Saturation	0 ~ 100	Channel 1 ~ 8(no SDI)
HUE	0 ~ 100	Channel 1 ~ 8(no SDI)
Image Horizontal Offset	0 ~ 40	Channel 1 ~ 8(no SDI)
Video PID	0x20 ~ 0x1ffe	Channel 1 ~ 8 (No PID value conflict)
Audio PID	0x20 ~ 0x1ffe	Channel 1 ~ 8 (No PID value conflict)
PCR_PID	0x20 ~ 0x1ffe	Channel 1 ~ 8 (No PID value conflict except video PID)
PMT_PID	0x20 ~ 0x1ffe	Channel 1 ~ 8 (No PID value conflict)
Program Name	(16 letters or 8 Chinese characters) , character range : A ~ Z , a ~ z , 0 ~ 9, space and underline.	Program 1 ~ 8
Program ID No.	1 ~ 65535	Program 1 ~ 8 (No program ID No. conflict)
Output Data Rate	2 ~ 60Mbps	
Output TS_ID	1 ~ 65535	

Parameter Settings	Value Range	Note
Output ON_ID	1 ~ 65535	
Audio Sampling Frequency	32/44.1/48KHz	Same application value for channel 1~4; Same application value for channel 5~8;
IP Address	000.000.000.000 ~ 255.255.255.255	
Subnet Mask	000.000.000.000 ~ 255.255.255.255	
Default Gateway	000.000.000.000 ~ 255.255.255.255	
Language Selection	Chinese/English	
IP Output Program Type	MPTS/SPTS	IP Output Module
Source IP Address	000.000.000.000 ~ 255.255.255.255	IP Output Module
Destination IP Address	000.000.000.000 ~ 255.255.255.255	IP Output Module
IP Network Subnet Mask	000.000.000.000 ~ 255.255.255.255	IP Output Module
UDP Port	1 ~ 65535	IP Output Module

3 Operating the Device

3.1 Quick Start:

Please follow the procedures below if it is the first time for you to use IDH2-3308 for constructing digital TV head-end system:

1. Construct your hardware environment, including chassis installation, power supply system deployment, and connecting switches, IDH2-3308, the preceding device(s)(SD Video Source), the succeeding device(s) (e.g. Multiplexer, Modulator, and network receiving devices), management workstation.
2. Plan for the IP addresses of management port, A/V encode standard, A/V bit rate, and PID etc. It is strongly recommend that take note of IP addresses and other configurations and keep it safely for checking purposes in future.
3. Boot up each preceding devices of IDH2-3308 and configure the operating parameters, in order to ensure the proper signal source. Please refer to the user manuals of preceding devices provided by their suppliers for detailed configuration.
4. Boot up IDH2-3308, perform a factory reset through the front panel control. If you have known the management port IP address of the IDH2-3308 you are currently using, and it is in the same subnet with the management workstation, you may also start configuring IDH2-3308 from the management workstation directly. Or otherwise you will need to configure the IP address of management port using front panel control
5. Login to IDH2-3308 from the web management workstation.
6. Configure the coding parameter, program parameter, IP module parameters and ASI output parameter.
7. Configure the signal receiving of IDH2-3308's succeeding devices (e.g. Multiplexer) according to the user manuals provided by their suppliers.
8. Make use of TS analyzer and set-top box to test the transport streams in the head-end equipment room, if normal, then the signal is ready for transmission in the real network.

3.2 IDH2-3308 Web Management Operation

IDH2-3308's monitor control could be implemented through browser.

Remarks: IE6.0~IE8.0 are currently supported, the other versions of browser cannot be guaranteed.

3.2.1 User Login

After system established, IDH2-3308 can be connected to the server through a cable. To ensure the server can access the device, the IP address of the server and the IP management address of IDH2-3308 should be in the same network segment and no two hosts can share one IP address. The management IP address of IDH2-3308 can be modified through “3.0” sub-menu (refer to section 3.3).

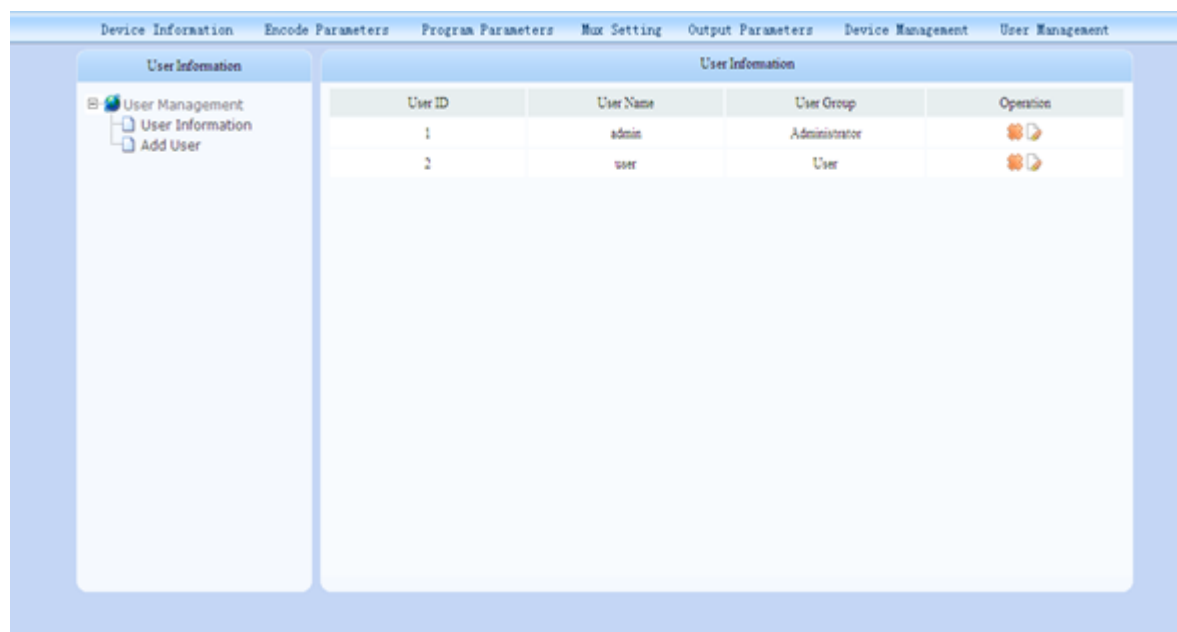
Login to IDH2-3308 through web NMS. To ensure the device security, you should enter the username and password, as shown in the figure below:

There is a factory default administrator account “admin” with password of “000000”. Please use this account and password to login to the system for the first time operation of IDH2-3308. But changing of password for this account is strongly recommended, and the new password should be kept safely.

3.2.2 User Management

User Management allows creating of new user, editing information of existing user, and deleting of existing user.

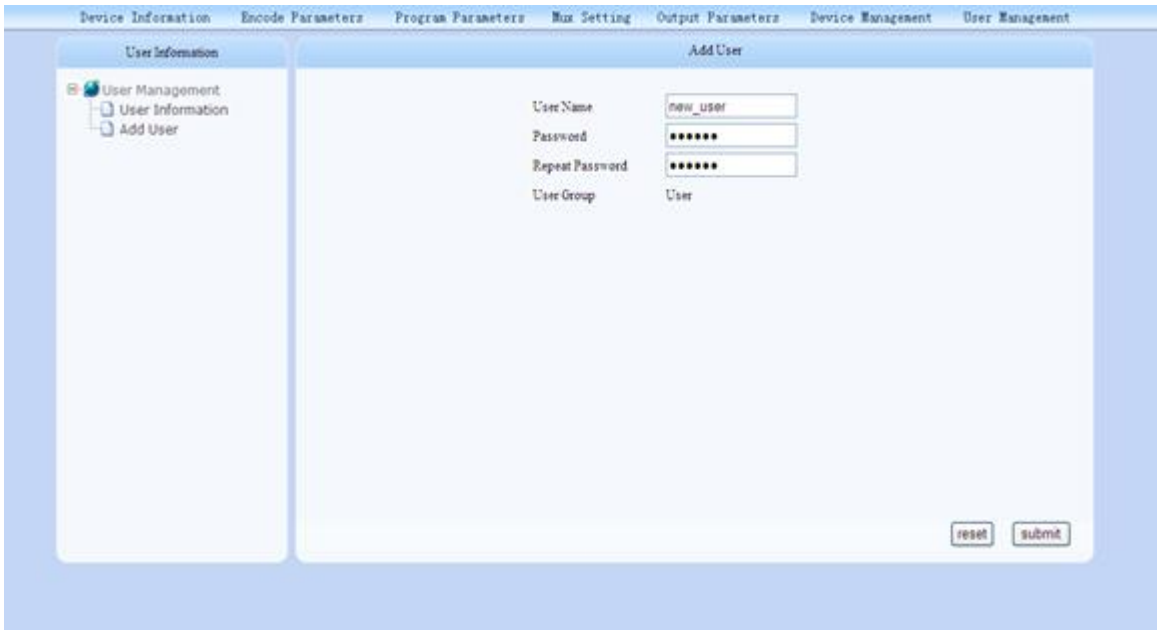
【Remark】 User Management page is accessible only when logging in as Admin.



Register New User

3.2.2.1 Create New Users

Clicking “Add User” button in the default page will enter the page of creating a new user, as shown in the figure below:




Add New User

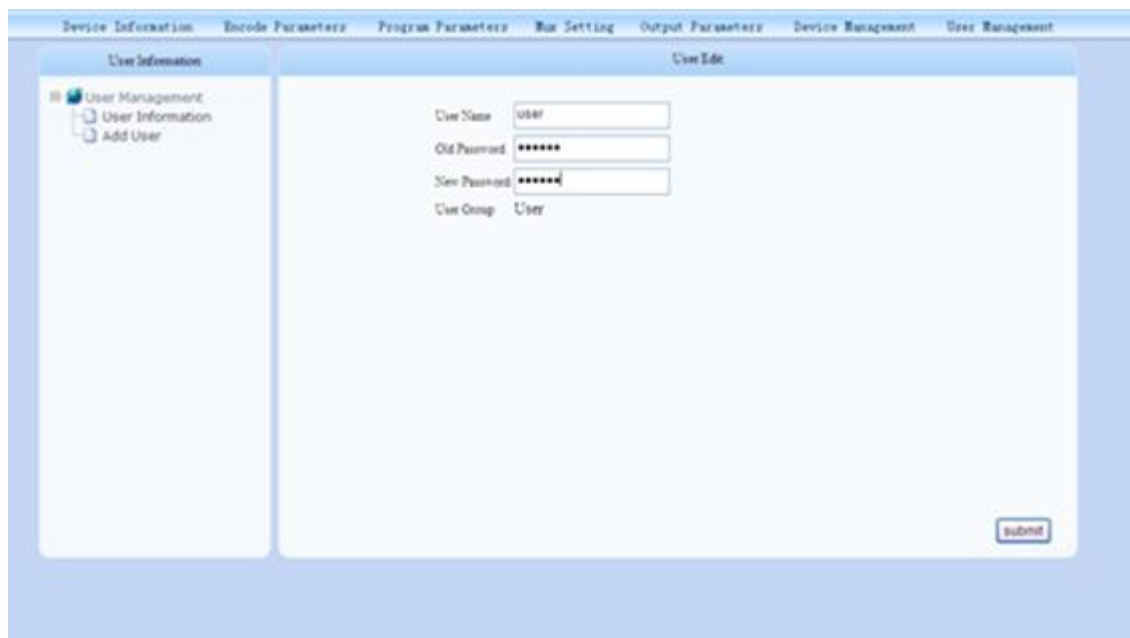
In this page, properly key in the new username, new password, and then confirm the password, click “submit” to add a new user account.

【Remark】

1. All the accounts created are common users;
2. Common user can do system configuration, but is not allowed to perform task such as user management and system upgrade.
3. Username and password should be limited within 3 to 32 letters, all the string characters are available(including: letter, number and other symbols).
4. Available number of users is less than 8.

3.2.2.2 User Edit

User could modify password of current account by clicking  button of any user account, as shown in the fig.7:




User Edit

In this page, the password of any user account can be modified. Please click “submit” button when you finish the modification.

【Remark】

1. Admin account cannot be deleted, but its password can be modified.
2. When using IDH2-3308 for the first time, password of admin account should be modified firstly, and kept them safely.
3. The modified password should be limited within 3 to 32 letters, all the string characters are available (including: letters, number sand underlines).

3.2.2.3 Delete Existing Users

In the default page, click  button of any user account to delete this user directly, as shown in the fig.5

【Remark】Deleting of “Admin” account in IDH2-3308 is not allowed, but deleting of other common users is allowed.

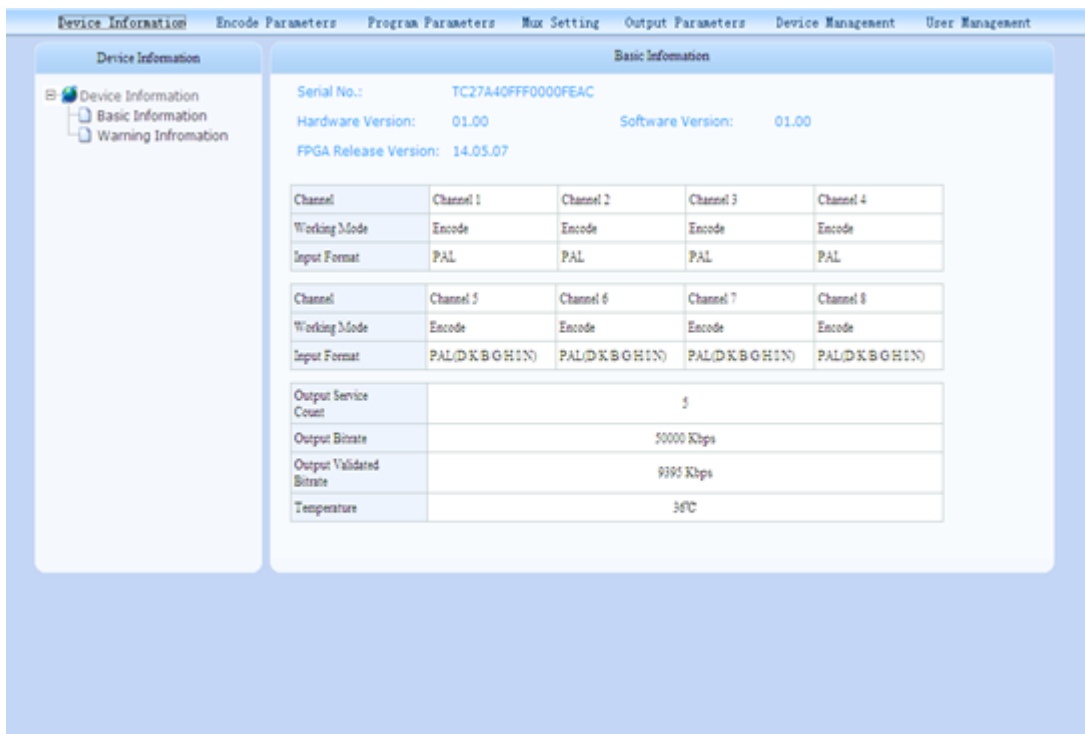
3.2.3 Connecting Device

You can check the system information and warning information after proper connection through “device information” page.

The layout of this web network management adopted the structure of upper navigation bar, left tree structure for choosing the sub-page, and right for showing the current page.

3.2.3.1 Device Information

Clicking of “Device Information” button in upper navigation bar will enter the page of device information, as shown in the figure below:



Channel	Channel 1	Channel 2	Channel 3	Channel 4
Working Mode	Encode	Encode	Encode	Encode
Input Format	PAL	PAL	PAL	PAL

Channel	Channel 5	Channel 6	Channel 7	Channel 8
Working Mode	Encode	Encode	Encode	Encode
Input Format	PAL(DK BGHN)	PAL(DK BGHN)	PAL(DK BGHN)	PAL(DK BGHN)

Output Service Count	5
Output Bitrate	50000 Kbps
Output Validated Bitrate	9395 Kbps
Temperature	36°C

Device Information

This device information bar will show the following information in sequence: serial No., hardware version, software version, FPGA release version, as well as working mode, input port, input format, output validated bit rate, and temperature of each encode channel.

3.2.3.2 Warning Information

Clicking of “Warning Information” button under the “Device Information” node will redirect you to check the Warning information in the right side of the window, as shown in the figure below:

Device Information

Encode Parameters

Program Parameters

Mux Setting

Output Parameters

Device Management

User Management

Device Information

Basic Information

Warning Information

Warning Information

Channel 1	INPUT SIGNAL LOST
Channel 2	INPUT SIGNAL LOST
Channel 3	NO ALARM
Channel 4	NO ALARM
Channel 5	NO ALARM
Channel 6	NO ALARM
Channel 7	NO ALARM
Channel 8	NO ALARM
ASI Input 1	INPUT SIGNAL LOST
ASI Input 2	NO ALARM
Output Status	NO ALARM
System Status	NO ALARM

Warning Information

The Warning information bar will show the working status of each coding channel and the output status of system, as well as real-time refresh the status information. If you encountered these common Warning information as follows, please refer to Annex C: frequently asked questions.

Common Warning information in channel:

1. No signal input
2. Coding error

Common Warning information of ASI input:

1. No signal input

Common Warning information of output status:

1. Buffer overflow

Common Warning information of system status:

1. FPGA load failure
2. Temperature exceed the threshold

3.2.4 Parameter Settings

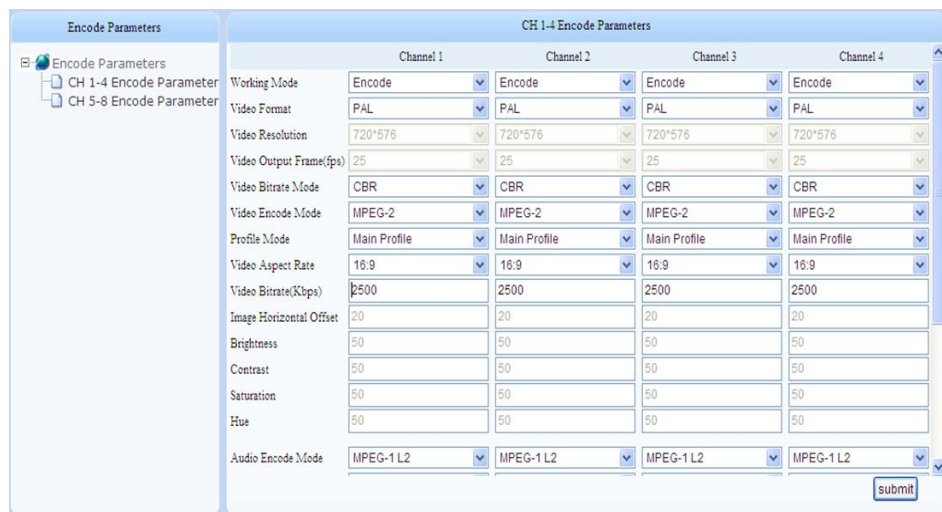
The configurable working parameters of IDH2-3308 include “encode parameters”, “program parameters”, “output parameters” and “device management”, the setting methods of these parameters are described as follows.



Navigation bar

3.2.4.1 Encode Parameter Settings

Click “Encode Parameters” hyperlink in the navigation bar to enter the page for setting of encoding parameters, 4 channels of the current encode parameters will be shown for modification, as shown in the figure below:



Encode Parameter Settings

1. Video format of channel 1~8:
A/V: PAL60/SECAM/NTSC4.43/PAL(COMBINATION-N)/PAL(M)/ PAL(D/K/B/G/H/I/N) ;
SDI: PAL/NTSC;
2. Video resolution of channel 1~8:
PAL: 720*576/704*576/640*576/544*576/352*576
NTSC: 720*480/704*480/640*480/544*480/352*480
3. Video bit rate mode of channel 1~8: CBR/VBR;
4. Video encode mode of channel 1~8: MPEG-2/H.264;
5. Profile mode of channel 1~8: main profile / high profile;
6. Video aspect rate of channel 1~8: 16:9 / 4:3 / 1:1;
7. Video bit rate (Kbps) settings of channel 1~8:
MPEG-2: 500~5500(kbps);
H.264: 250~5500(kbps).
8. Image horizontal offset settings of channel 1~8: 0~40(no SDI);
9. Brightness settings of channel 1~8: 0~100(no SDI);

-
10. Contrast settings of channel 1~8: 0~100(no SDI);
 11. Saturation settings of channel 1~8: 0~100(no SDI);
 12. Hue settings of channel 1~8: 0~100(no SDI);
 13. Audio encode mode of channel 1~8: MPEG-1 L2/LC-AAC;
 14. Audio bit rate (Kbps) settings of channel 1~8:
MPEG-1 L2: 192/224/256/320/384(Kbps);
LC-AAC: 96/112/128/160/192/224/256/320(Kbps).
 15. Audio insertion of channel 1~8: channel 1/ channel 2/ channel 3/ channel 4/ channel 5/ channel 6/
channel 7/ channel 8 (dedicated to SDI)
 16. Volume (dB) settings of channel 1~8: -63~20;
 17. Audio sample frequency settings of channel 1~8: 48/44.1/32(KHz);
 18. Video PID settings of channel 1~8: 32~8190;
 19. Audio PID settings of channel 1~8: 32~8190;
 20. PCR PID settings of channel 1~8: 32~8190;
 21. PMT PID settings of channel 1~8: 32~8190.

3.2.4.2 Program Parameter Settings

Click “Program Parameters” hyperlink in the navigation bar to enter the page for setting of program parameters, as shown in the figure below:

	Program 1	Program 2	Program 3	Program 4
Program Name	PROGRAM 1	PROGRAM 2	PROGRAM 3	PROGRAM 4
Service ID	1	2	3	4

Program Parameter Settings

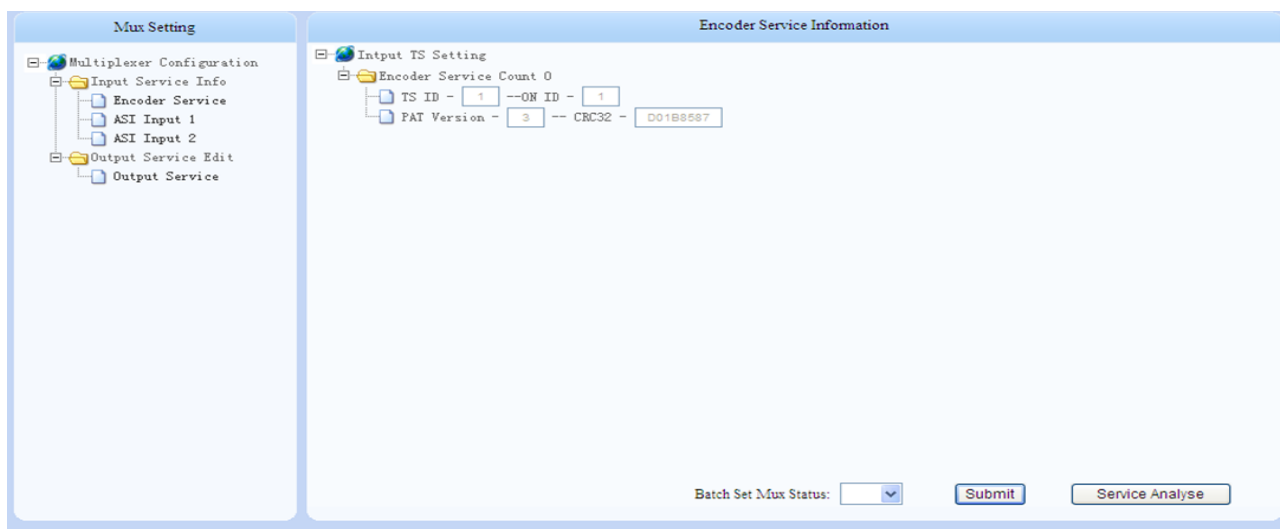
Program parameter settings:

1. Program name settings of program 1~8:
16 characters or 8 Chinese characters: A~Z, a~z, 0~9, space and underline, and do not use space for the first character.
2. Program number settings of program 1~8: 1~65535; program numbers cannot be conflict.

Remarks: If 1858's multiplexing function is enabled, please set the parameters in the multiplexing page, and this page is invalid.

3.2.4.3 Multiplex Settings


Click “Mux Settings” hyperlink in the navigation bar to enter the page for setting of mux parameters, shown as below:

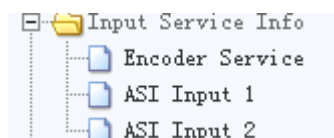


Mux Settings

The left selection items of “multiplexer configuration” include input service information and output service information.

3.2.4.4 Input Service

As shown in fig.13, click the  button in front of “Input Service Info” to unfold its sub-menu shown as below:



Input Service Info

As shown in fig. 14, click any link (e.g. “Encoder Service”) to enter the page of encoder service information, shown as below:

Encoder Service Information

Input TS Setting

Encoder Service Count 0

TS ID - 1 --ON ID - 1

PAT Version - 3 -- CRC32 - D01B8587

Batch Set Mux Status: ▼
Submit
Service Analyse

Input TS Setting

3.2.4.4.1 Program Search

As shown in fig.15, system will automatically analyze and show the input service information by clicking of “Service Analyse” button, shown as below:

Encoder Service Information

Input TS Setting

Encoder Service Count 8

TS ID - 1 --ON ID - 1

PAT Version - 6 -- CRC32 - 1BA314E7

+	PROGRAM 1	-- Service ID -	1	-- Mux Status -	OFF ▼
+	PROGRAM 2	-- Service ID -	2	-- Mux Status -	OFF ▼
+	PROGRAM 3	-- Service ID -	3	-- Mux Status -	OFF ▼
+	PROGRAM 4	-- Service ID -	4	-- Mux Status -	OFF ▼
+	PROGRAM 5	-- Service ID -	5	-- Mux Status -	OFF ▼
+	PROGRAM 6	-- Service ID -	6	-- Mux Status -	OFF ▼
+	PROGRAM 7	-- Service ID -	7	-- Mux Status -	OFF ▼
+	PROGRAM 8	-- Service ID -	8	-- Mux Status -	OFF ▼

Batch Set Mux Status: ▼
Submit
Service Analyse

5. Input Service Info

3.2.4.4.2 Service Information

Check the TS information in the figure below:

Input TS Setting

Encoder Service Count 8

TS ID - 1 --ON ID - 1

PAT Version - 6 -- CRC32 - 1BA314E7

TS Info

Click button in front of any program name to unfold its detailed information shown as below:

PROGRAM 1 -- Service ID - 1 -- Mux Status - OFF

Service Type - Digital TV

Service Provider -

PMT PID: 176 -- Version - 0 -- CRC32 - 491769D6

PCR PID: 160

PMT Descriptor - 0

SDT Version - 7

ES PID - 128 -- ES Type - MPEG-2 Video

ES PID - 144 -- ES Type - 13818-003

TS Info of Program

3.2.4.4.3 Single Program Multiplexing

Select "ON" from the dropdown list of Mux Status of the program to multiplex it, shown as below:

Input TS Setting

Encoder Service Count 8

TS ID - 1 --ON ID - 1

PAT Version - 6 -- CRC32 - 1BA314E7

Program	Service ID	Mux Status
PROGRAM 1	1	OFF
PROGRAM 2	2	ON
PROGRAM 3	3	OFF
PROGRAM 4	4	OFF
PROGRAM 5	5	OFF
PROGRAM 6	6	OFF
PROGRAM 7	7	OFF
PROGRAM 8	8	OFF

6. TS Info of Program

Click the "submit" button to complete the multiplexing.

3.2.4.4.4 Batch Program Multiplexing

IDH2-3308 supports batch program multiplexing. It means to multiplex all programs in input channels to

output channels, shown as below:


The screenshot shows the 'Encoder Service Information' window. It contains a tree view on the left with 'Input TS Setting' expanded, showing 'Encoder Service Count 8'. Below this, there are input fields for 'TS ID' (1), 'ON ID' (1), 'PAT Version' (6), and 'CRC32' (1BA314E7). A table lists eight programs, each with a 'Service ID' and a 'Mux Status' dropdown menu, all currently set to 'OFF'. At the bottom, there is a 'Batch Set Mux Status' dropdown menu (currently showing 'OFF'), a 'Submit' button, and a 'Service Analyse' button.

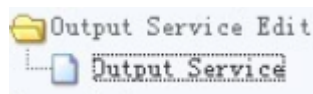
Program	Service ID	Mux Status
PROGRAM 1	1	OFF
PROGRAM 2	2	OFF
PROGRAM 3	3	OFF
PROGRAM 4	4	OFF
PROGRAM 5	5	OFF
PROGRAM 6	6	OFF
PROGRAM 7	7	OFF
PROGRAM 8	8	OFF

7. TS Info of Program

Select "ON" from the dropdown list of "Batch Set Mux Status" and click "submit" button to complete the batch multiplexing.

3.2.4.5 Output Service

As shown in figure 13, click  button in front of "Output Service Edit" to unfold the output service channel, shown as below:



8. Output Channel Menu

As shown in figure 21, click "output service" button to enter the output TS setting page, shown as below:

Output TS Information

Output TS Setting

Service Count 8

TS ID -

-- ON ID -

PAT Version -

-- ON

SDT Version -

-- ON

PROGRAM 1

PROGRAM 2

PROGRAM 3

PROGRAM 4

PROGRAM 5

PROGRAM 6

PROGRAM 7

PROGRAM 8

-- Service ID -

-- Service ID -

-- Service ID -

-- Service ID -

-- Service ID -

-- Service ID -

-- Service ID -

-- Service ID -

Descriptor Type:


Index	Descriptor Data (HEX)	Enable

9. Output TS information page

3.2.4.5.1 Output TS Information Monitoring and Configuration

Shown as figure 22, the output TS information page will display the TS related information, such as TS ID, ON ID, PAT version, etc.

3.2.4.5.2 Program Information Edit

IDH2-3308 allows users to edit each individual program information. Click  button at the front of the service name to open the program information.

PROGRAM 1

-- Service ID -

Input TS -

--

-- Service ID -

Service Type -

Service Provider -

PMT PID -

-- Version -

-- ON

PCR PID -

PMT Descriptor -

-- User Defined Descriptor -

ES PID -

-- ES Type -

-

ES PID -

-- ES Type -

-

10. Program information

Editable information include service name, service number, service provider, PMT information, PCR PID, EIT information, CA related information, ES information, etc.

11. TS information

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Input TS - Encoder Service -- PROGRAM 1 -- Service ID - 1

Service Provider -

TS information

Users can type the service name, service number, and provider in the corresponding boxes, and click “Submit” button to validate the setting.

PMT information

PMT PID - 176 -- Version - 2 -- ON

PMT information

Users can type the value of PMT PID, PMT version, sending interval in the corresponding boxes, and click “Submit” button to validate the setting.

PCR PID

PCR PID - 160

PCR PID

Users can type the value of PCR PID in the corresponding box, and click “Submit” button to validate the setting.

PMT descriptor

PMT Descriptor - 0 -- User Defined Descriptor - Edit

PMT Descriptor

To edit the PMT descriptors, click the “Edit”, then the “Descriptor Type” box at the bottom of the page will display Service PMT Descriptors, shown as below:

Descriptor Type: Service PMT Descriptors

Index	Descriptor Data (HEX)	Enable
		<input type="checkbox"/>

Add Remove Submit Refresh

Edit PMT Descriptor

Click “add” button to edit the PMT descriptor.



Index	Descriptor Data (HEX)	Enable
1	04011F	OFF

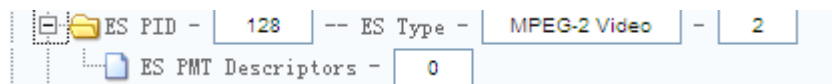
Add Remove Submit Refresh

Edit PMT Descriptor

The “enable” drop down list controls the transmission of descriptor’s on/off. Click “submit” button to save. Click the selection bar of descriptor to delete, and then click “submit” button to delete.

ES information

Click  button in front of  ES PID - -- ES Type - - to open the TS information list shown as below:



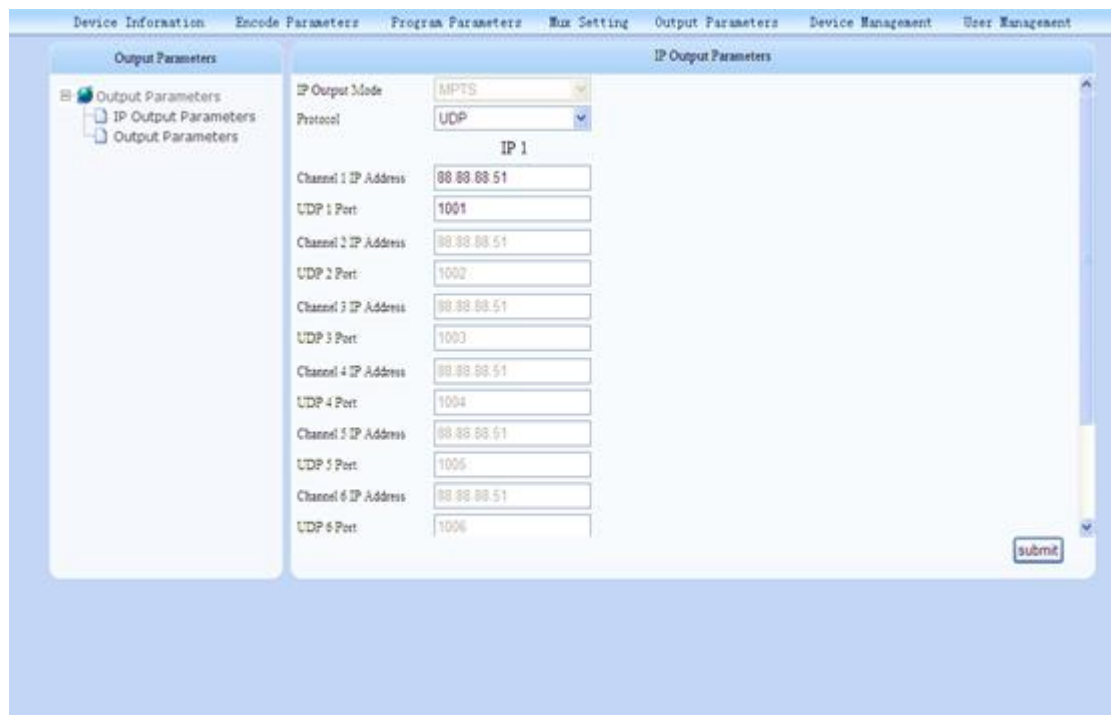
ES information

Users can type the value of ES PID in the corresponding box and turn ON/OFF the sending switch.

3.2.4.5.3 Output Parameters Setting

Click “Output Parameters” hyperlink in the navigation bar to enter the page for setting of output parameters, including IP output parameters.

3.2.4.5.4 IP Output Parameter Settings



IP Output Parameter Settings

The output parameters that can be configured in this page are as follows:

1. IP output mode: MPTS/SPTS;.
2. IP address of channel 1~8 and output port settings should comply with standard IPV4;
3. UDP/RTP port of channel 1~8: 1~65535;

【Remark】

1. When "MPTS mode" is selected for output mode, the program in each encode channel will be re-multiplexed to one TS out, and its output network parameter is the value in “channel 1 parameter

settings”

2. When "SPTS mode" is selected for output mode, the program in each encode channel will be output as a separate TS, and its output network parameter also can be set respectively, but not identical.
3. In unicast, multicast, and broadcast, the address value range should comply with the IP address value standard.
4. In MPTS working mode, IP and ASI can output TS simultaneously; while in SPTS working mode, only IP can output TS, the TS output from ASI cannot be used properly.
5. If multiplex function is enabled, IP output is fixed as MPTS.

3.2.4.5.5 ASI Output Parameter Settings

Output Parameters	
Encoder Output Bitrate(Kbps)	25000
Mux Output Bitrate(Kbps)	50000
TS_ID	1
ON_ID	1

submit

ASI Output Parameter Settings

Click the sub-node of “Output Parameters” hyperlink in the left side of page, the related parameters of ASI output can be set or checked in the right side of window, including:

1. Output bit rate: according to your required encoding quality and available channel bandwidth, configure it from the range of 2000 Kbps to 60,000Kbps, buffer overflow alarm will be shown when output bit rate is too low.
2. TS_ID, configure it from the range of 1~65535;
3. ON_ID, configure it from the range of 1~65535 (it usually should be set as the operator’s ID);

3.2.5 Device Management Settings

3.2.5.1 Device Management

Click “Device Management” hyperlink in the navigation bar to enter the page for setting of system working parameter, as shown in the figure below:

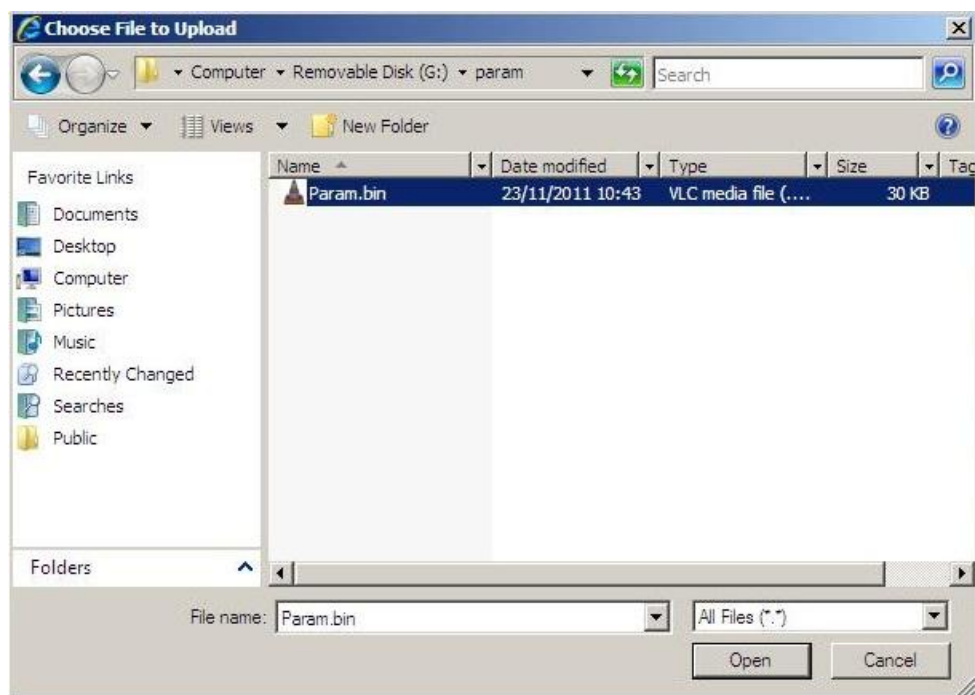
Device Management Settings

The system working parameters that can be configured in this page according to TCP/IP protocol:

1. IP address and subnet mask of management port, IP address of gateway;
2. IP address and subnet mask of IP data output source port;
3. Mux Setting.
4. Output charset settings: ASCII, ISO 9959-5 Cyrillic, GB-2312, Unicode(UFT-8), Unicode(UCS-2 BE), Unicode(UCS-2 LE).
5. Import system configurations, it provide the user with a quick way to set by using the existing parameter file.
6. Mux status: ON/OFF
7. Analyse timeout (ms): Adjust the accuracy of mux analyze, with range of 800~30,000ms.

Import method:

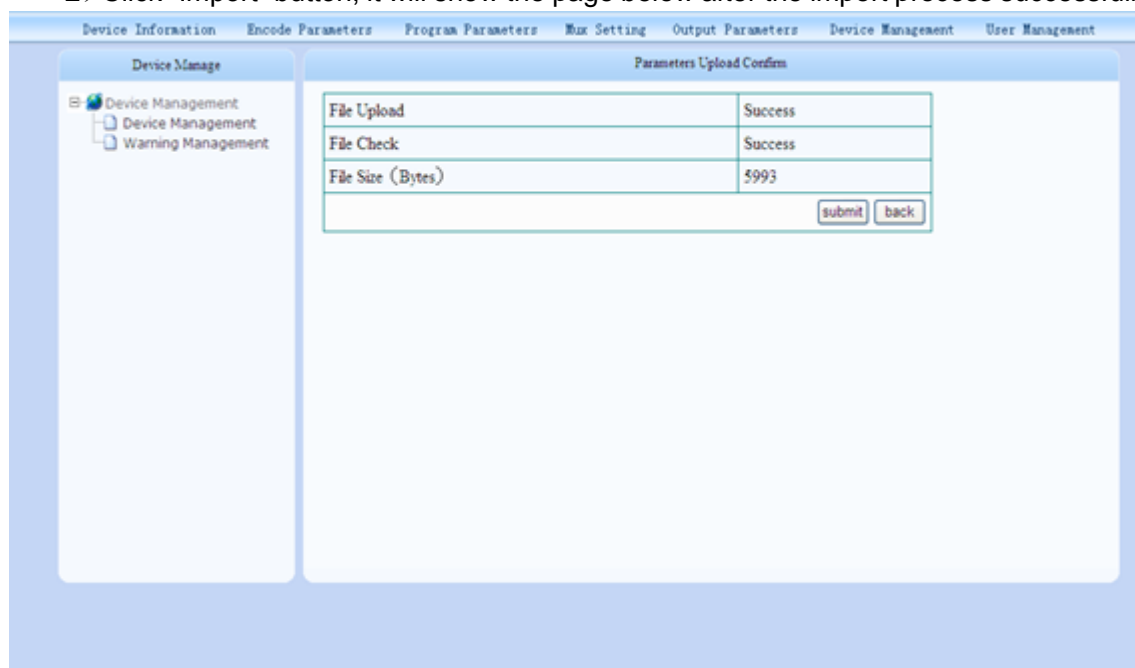
- 1) Click "Browse" button of " Import System Configurations" and select the file to be upgraded, as shown in the figure below:



Select Upgrade File

Remarks: please use the parameter file provided by TELELYNX, or import the exported parameter file in advance, otherwise, the imported parameter file will be rejected by device, even it may lead to improper working.

2) Click "Import" button, it will show the page below after the import process successfully completed.



Confirm Parameter Upload

【Remark】

1. If "File Upload" shows "failed", then file uploading is failed, and it may be caused by network connection, please check the network connection and upload the file again;
2. If "File Check" shows "failed", then file checking is failed, and it is possible that you upload a illegal file, please upload the proper file;

3. File description: file size.

F: Export system configurations, it could export the current working status of system to backup, and the parameter packet could be reverted in the import process;

Export method:

Click "Export" button of "export system configuration", as shown in the figure below:



Confirm Parameter Export

2) Select the path to save it

G: Software upgrade settings, this function should be used after TELELYNX released its new available software, to ensure that user can use the new functions of new software, or eliminate the problems caused by the previous version; please use the upgrade packet we provided to upgrade, wrong packet may cause the improper operation of device.

H: Parameter reconfiguration, we recommend you reconfigure the parameters if parameter abnormality occurred, to reset settings to the factory defaults.

I: Reset device.

【Remark】

In order to ensure the proper operation of system, please make sure that:

1. Management port IP address should be in the same subnet with the management workstation of IDH2-3308;
2. Data output port IP address should be in the same subnet with the succeeding device of IDH2-3308;
3. No need to reset after modifying IP address of network management.

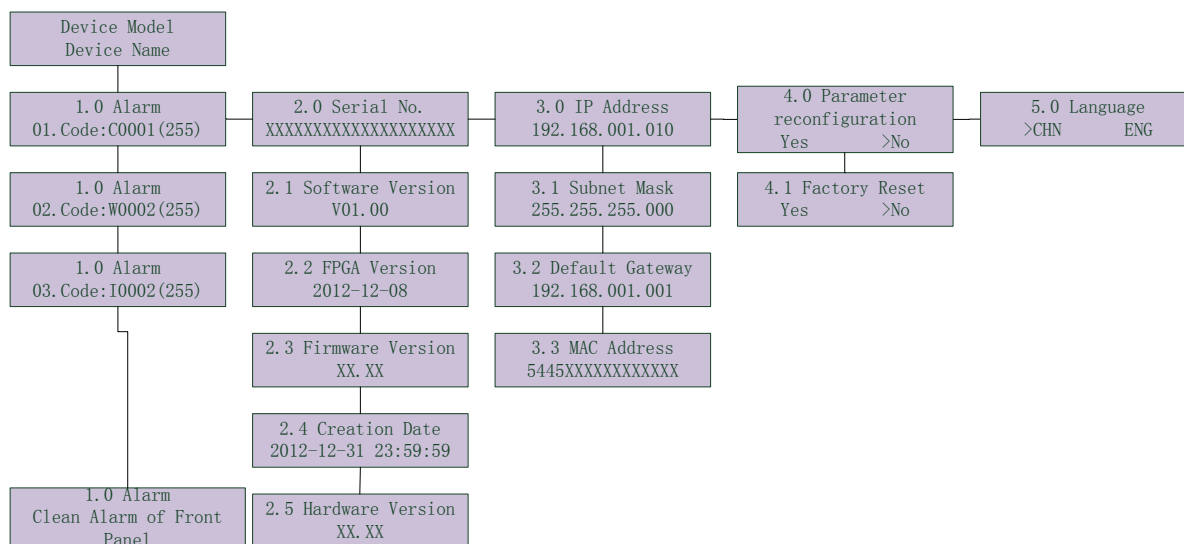
3.3 Front Panel Operation of IDH2-3308

3.3.1 Backlight/Alarm

1. The front panel LCD light will be off and keypad will be locked if there is no key pressed within 30 seconds.
2. When new alarm occurred, the alarm light and status light will be flickering for 10 seconds. If no new alarm occurred, the alarm light and status light will keep red until be cleaned.
3. After alarm be cleaned, if no new alarm occurred, both the alarm light and status light will be turned green.

3.3.2 Menu Content & Keypad Operation

3.3.3 Menu Content



12. Front Panel Menu

3.X IP address, subnet mask, default gateway and 5.0 Language settings are modifiable parameters. Enter into 4.X to restore factory settings, the parameters will restore to factory settings.(Please refer to Annex B for details).

3.3.4 Keypad Operation

Check the main menu by pressing “Left” and “Right” key; check the sub-menu by pressing “UP” and “DOWN” key.

Modify the parameters. Firstly, enter the modification state by pressing “Enter” key, and then save the modify value by pressing “Enter” key, finally, press the “Menu” key to exit the modified state.

The “Enter” and “Menu” keys are invalid under the other status.

Annex A: Technical Specifications of IDH2-3308

A.1 Common Technical Specifications

Characteristic	Properties	Specifications
Power Supply and Consumption	AC Input Range	100V ~ 240VAC
	AC Input Frequency	50/60Hz
	Consumption	≤50W
	No. of PS Module	1
Working/Storage Environment	Working Temperature Range	0°C ~45°C (36°F ~109°F)
	Storage Temperature Range	-25°C ~80°C (-13°F~158°F)
	Air Pressure	86 ~ 106KPa
	Humidity	10% ~ 90%

A.2 Interfaces

Characteristic	Properties	Specifications
Video Input Interface	Video Format	PAL60/SECAM/NTSC4.43/PAL(COMBINATION-N)/PAL(M)/PAL(D/K/B/G/H/I/N) (optional)
	Physical Connector	BNC-Female
	Electrical Specification	Impedance 75Ω
	Video Bandwidth	25Hz ~ 5.75MHz
	CPL	1.0Vp-p
	Quantification	10bits , Comply with CCIR-601
	Sampling Frequency	27MHz
Audio Input Interface	Physical Connector	BNC-Female
	Electrical Specification	Impedance 600Ω , Unbalanced
	Quantification	16bits
	Sampling Frequency	32/44.1/48kHz
ASI Input Interface	Physical Connector	BNC-Female
	Number of Connector	2
	Packet	188 Bytes
	Electrical Specification	Impedance 75Ω
	Bit rate	0 ~ 270Mbps (valid input bit rate≤60Mbps, and do not support burst TS mode)

ASI Output Interface	Physical Connector	BNC
	Electrical Specification	Impedance 75Ω
	Packet	188 Bytes
	Bit rate	2 ~ 60Mbps
	Output EPL	800mv±10% (75Ω)
TCP/IP Management Port	Physical Connector	RJ45
	Communication Protocol	TCP/IP
	Data Rate	100Mbps
IP OUT Output Interface	Physical Connector	RJ45
	Communication Protocol	UDP/RTP
	Data Rate	100Mbps

A.3 TS Re-multiplexing

Characteristic	Properties	Technical Specification
Output Programs	Output No. of Programs	1~8
Output TS's PSI Information	Standard Syntax	ISO/IEC 13818-1
	Table Type	PAT/PMT/ SDT Automatically Generate

Annex B: Default Settings

Parameter Settings	Value Range	Note
Video Format	PAL(D/K/B/G/H/I/N)	Channel 1~8
Video Resolution	720*576	Channel 1~8
Video Bit Rate Mode	CBR	Channel 1~8
Video Encode Standard	MPEG-2	Channel 1~8
Profile Mode	High Profile	Channel 1~8
Video aspect ratio	4:3	Channel 1~8
Video Bit Rate	2500Kbps	Channel 1~8
Image Horizontal Offset	20	Channel 1~8
Lightness	50	Channel 1~8
Contrast	50	Channel 1~8
Saturation	50	Channel 1~8
HUE	50	Channel 1~8
Audio Bit Rate Mode	MPEG-1 L2	Channel 1~8
Audio Bit Rate	192Kbps	Channel 1~8
Volume	0dB	Channel 1~8
Audio Sampling Frequency	48KHz	Program 1~8
Video PID	128/129/130/131/132/133/134/135	Program 1~8
Audio PID	144/145/146/147/148/149/150/151	Program 1~8
PCR_PID	160/161/162/163/164/165/166/167	Program 1~8
PMT_PID	176/177/178/179/180/181/182/183	Program 1~8
Program Name	PROGRAM1/PROGRAM2/PROGRAM3/PROGRAM4 PROGRAM5/PROGRAM6/PROGRAM7/ PROGRAM8	Program 1~8
Program ID No.	1/2/3/4/5/6/7/8	Program 1~8
Output Data Rate	25000Kbps	
Output TS_ID	1	
Output ON_ID	1	
Local IP Address	120.120.120.10	
Subnet Mask	255.255.255.0	
Gateway	120.120.120.001	
Mux Status	OFF	
Analyze Timeout(ms)	1500	
IP Output Mode	MPTS	IP Module
Destination IP1 Address of IP 1/2	88.88.88.51	
IP1 UDP Port of UP1/2	1001	

Parameter Settings	Value Range	Note
Destination IP2 Address of IP 1/2	88.88.88.51	
IP2 UDP Port of UP1/2	1002	
Destination IP3 Address of IP 1/2	88.88.88.51	
IP3 UDP Port of UP1/2	1003	
Destination IP4 Address of IP 1/2	88.88.88.51	
IP4 UDP Port of UP1/2	1004	
Destination IP5 Address of IP 1/2	88.88.88.51	
IP5 UDP Port of UP1/2	1005	
Destination IP6 Address of IP 1/2	88.88.88.51	
IP6 UDP Port of UP1/2	1006	
Destination IP7 Address of IP 1/2	88.88.88.51	
IP7 UDP Port of UP1/2	1007	
Destination IP8 Address of IP 1/2	88.88.88.51	
IP8 UDP Port of UP1/2	1008	
Data Port MAC Address	00:5c:b1:00:xx:xx	xx:xx: based on serial No, and only the .specific users can modify.
Data Port IP Address	88.88.88.50	
Data Port Subnet Mask	255.255.255.0	
Data Port MAC Address	00:5c:b1:01:xx:xx	xx:xx: based on serial No, and only the .specific users can modify.
Language Selection	English	

Annex C Frequently Asked Question

Symptoms	Possible Causes	Recommended Resolution
No display at boot up	Improper connection of power cord.	Check power input
Device is not accessible from the NMS, Cannot connect.	Network connection problems	Check whether the device is connected to the same physical network with the management workstation.
	Incorrect IP address	Key in correct IP address in the URL field
	Device is not in the same subnet as management workstation	Modify Management port IP address of the device via front panel.
Alarm prompt that input signal loss, input format error and encoding error.	Improper connection of HDMI cable or SDI cable	Check HDMI cable or SDI cable connectors
	Signal format of input video error	Check if the signal format of input video meet the signal requirements of IDH2-3308
	Input format error	Check if the input signal format can recognized by IDH2-3308
Fail to scan any input programs	Improper connection of BNC cable at data input.	Check if the cable is properly connected.
	BNC cable problem.	Check if the cable is properly worked, or change the cable.
Fail to scan programs in specific input	Source device is not working properly	Check malfunction in the source device
IP output succeeding device cannot receive program	Improper connection of data output network cable	Connect the data output network cable.
	Wrong connection of data output network cable	Check if the device data output port is connected with succeeding device on the same LAN.
IP output succeeding device cannot receive the data of a certain output stream	The succeeding device work abnormally	Check the succeeding device (usually as IPQAM)
	Network parameter of stream cannot match	<p>13. Modify the receiving destination IP address and port No. of succeeding device, to make it matched with network configurations.</p> <p>14. Modify the network configurations of this output stream, to make it matched with the receiving TS's IP address and</p>

		port No.
Error bit, pausing, or alarm prompt buffer overflow are appeared in ASI output program	System bit rate too small	Modify the system bit rate, to make it to be larger than the total output program, without alarm information.
Serious error bit appears in all IP output programs	Other data flow in network too large	Clear the other data flow in network, and it is best to remove other irrelevant hosts.
Abnormal color or shaking screen in encoding output program	Incorrect input video format	Ensure that input video format is corresponds to actual input format.
Alarm prompts that system error	Hardware components of device damaged	Return to factory for hardware maintenance.