TELELYNX

TELELYNX
Integrated Digital Headend

- POWER
- KB LOCK
- STATUS
- COMM

OK ESC DV3

IDH2 8000 Series

90-230Vac 50/60HZ

CVBS L R CVBS L R   CVB L R CVB L R   CVB L R CVB L R

CVBS L R CVBS L R   CVB L R CVB L R   ASI OUT 1 ASI OUT 2 TS IP CONTROL

MODEL IDH2-9000

DVB T2 S2 C   HDMI   H.264 MPEG-4/AVC

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1. Introduction

The Integrated Headend is applied to perform DVB DTV broadcast system, MMDS, DVB data broadcast system, Video on demand system, and so on. It up to support 10 analog input ports.

User can browse the basic information and modify the system configuration via the front panel. User can configure all parameters via the IE Browser.

2. Products Illustration

2.1 The front panel:
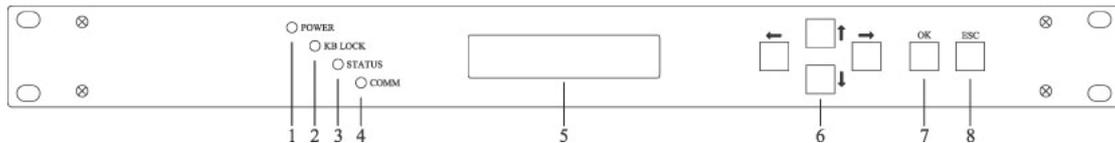
Fig. 2.1 Front Panel

1 — Indicator of Power
2 — Indicator of Keyboard Lock
3 — Indicator of Status
4 — Indicator of Network Communication
5 — LCD display
6 — Direction Key

     ↑   Up or Increase
     ↓   Down or Decrease
     ←   Left
     →   Right

7 — Ok to confirm
8 — ESC to exit or cancel

2.2 The rear panel:
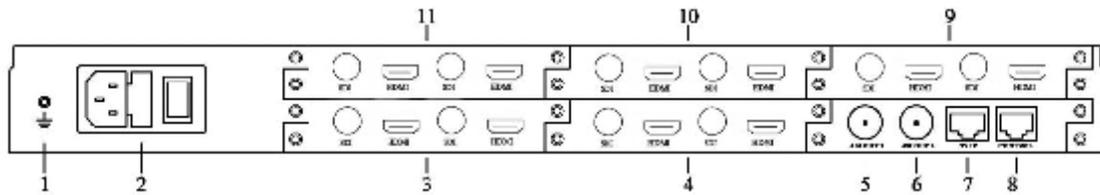
Fig. 2.2 Rear Panel

1	一	Grounding point
2	一	Power socket and switch
3	一	SLOT 4, 2 Channel HD Encoder Card
4	一	SLOT 5, 2 Channel HD Encoder Card
5	一	ASI Output 1
6	一	ASI Output 2
7	一	TS IP Port, RJ45，100 Base-T Ethernet connection port
8	一	Control Port, RJ45，100 Base-T Ethernet connection port
9	一	SLOT 3, 2 Channel HD Encoder Card
10	一	SLOT 2, 2 Channel HD Encoder Card
11	一	SLOT 1, 2 Channel HD Encoder Card

2.3 Installation

1、This product should be mounted horizontally, and grounding or earthing mounted devices should be maintained reliably.

2、Exactly connect your power supply, signal source and other equipment to this product.

3、If you want to use the Head-end Netmanager, Please connect RJ45 to your network.

4、Please check out the standard of power before you power on this product.

3. Operations via Keyboard

3.1 Basic Operations

Turn on the power switch after checking the system connections. The following information will be displayed on screen:

```
Model name & V1.00
EN(10)+MX+IP
```

The initial status of the keyboard is locked, and you have to unlock it before operation. To unlock it, please press "OK" key, "OK" key, "ESC" key and "ESC" key sequentially and promptly. The keyboard may also be locked after it has not been operated for a certain period of time.

After unlocking, press "↑", "↓" keys to move around the main menu. Press "←","→" keys to move around the sub-menu. Press "OK" key to enter the selected sub-menu. Press "OK" key to modify parameters of the selected item.

Available values of parameter will be flashing and can be selected by "←", "→" keys when you modify the item. In case of a continually changeable parameter, use "←", "→" keys to move the cursor and press "↑", "↓" keys to change the value. Press "ESC" key to give up the modification.

After modification, press "OK" key to confirm it.

3.2 Menu Structure

```
                        ┌─ Slot1 Type ──────── HD AVC ENC   1-1
                        │
                        ├─ Slot2 Type ──────── HD AVC ENC   2-1
                        │
                        ├─ Slot3 Type ──────── Unknow Card   3-1
                        │
                        │
                        │
                        ├─ Slot6 Type ──────── Main Card    6-1
Model Name    V1.00 ────┤
Serial Number           │                     ┌─ Host IP Address  7-1
                        │                     │
                        │                     ├─ Host Net mask    7-2
                        ├─ Host IP Setting ───┤
                        │                     ├─ Host Gateway     7-3
                        │                     │
                        │                     └─ Host MAC         7-4
                        │
                        │                     ┌─ Save Default     8-1
                        │                     │
                        └─ Advanced Setting ──┤─ Load  Default    8-2
                                              │
                                              └─ Restore Initial  8-3
```
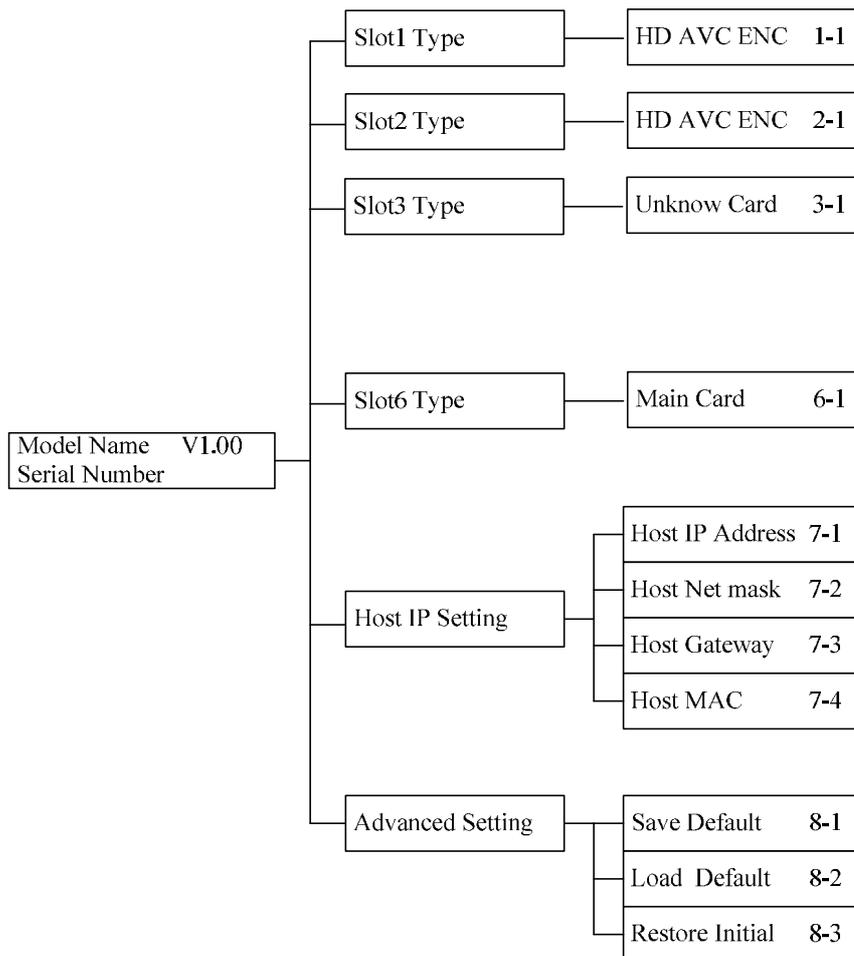
The above chart illustrates the device menu tree. Parameters of Encoder, IP Setting, Communication and Advanced Setting can be modified. Alarm Info and Serial Number cannot be modified. You can browse and operate it via keyboard of the front panel.

3.3 Menu Definition

3.3.1 Slot Type

"Slot n Type   n-1": n from 1 to 5, means slot 1 to slot 5, it will display the card type. Now it support H.264 HD digital encoder card, MPEG-2 SD analog encoder card, H.264 SD digital encoder card, H.264 SD analog encoder card. If there is no any card inserted, it will display "Unknown Card".

"Slot 6 Type   6-1": Slot 6 is only support main card.

3.3.2 Host IP Setting

"IP Address   7-1": IP Address setting.

"Subnet Mask   7-2": Subnet Mask setting.

"Default Gateway   7-3": Default Gateway setting. If your server which installed the head-end manager and the device are not in the same subnet, the device need transmit any data to server through the gateway.

"Server Address   7-4": Server IP Address setting. The device will auto send the alarm info to this server.

"Physical Address   7-5": Physical Address setting. It is a unique value in any network.

For examples:

   1. The device and the server are in the same subnet:

Device   192.168.1.100

Server   192.168.1.10
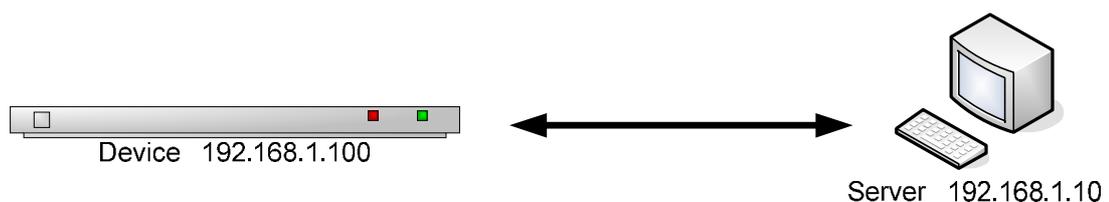
2. The device and the server are not in the same subnet:

Gateway 192.168.1.1/192.168.0.1

Device   192.168.1.100

Server   192.168.0.10
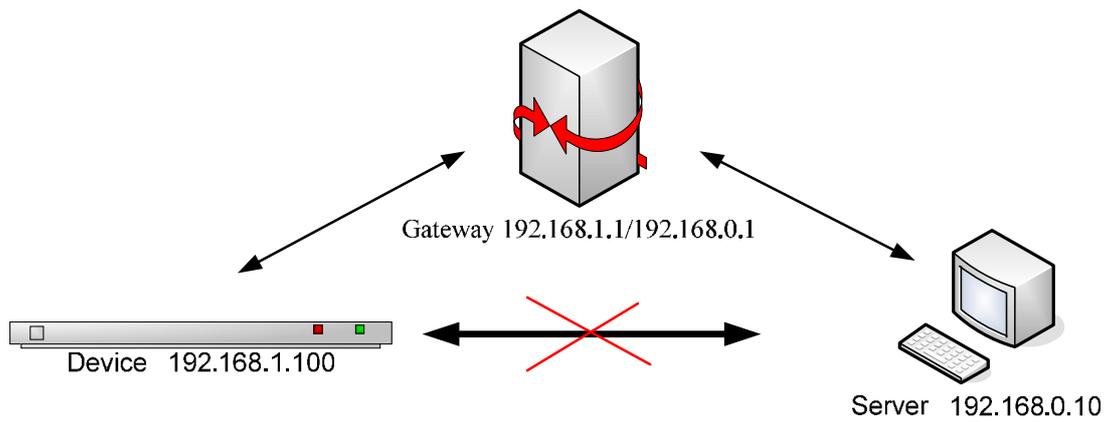
3.3.3 Advanced Setting

"Save Default   8-1":   Save   the   current   configuration   as   default
configuration.

"Load Default   8-2":   Recall the default configuration which has been
saved.

"Restore initial   8-3":   Recall   the   original   configuration   which   was
configured by manufactory.

4.   Operations via IE Browser

4.1 Browse Device

Type the host IP Address in IE Browser, the manager will displayed. The Device Status, Name, hardware version, software version and IP Address are also showed as the picture.
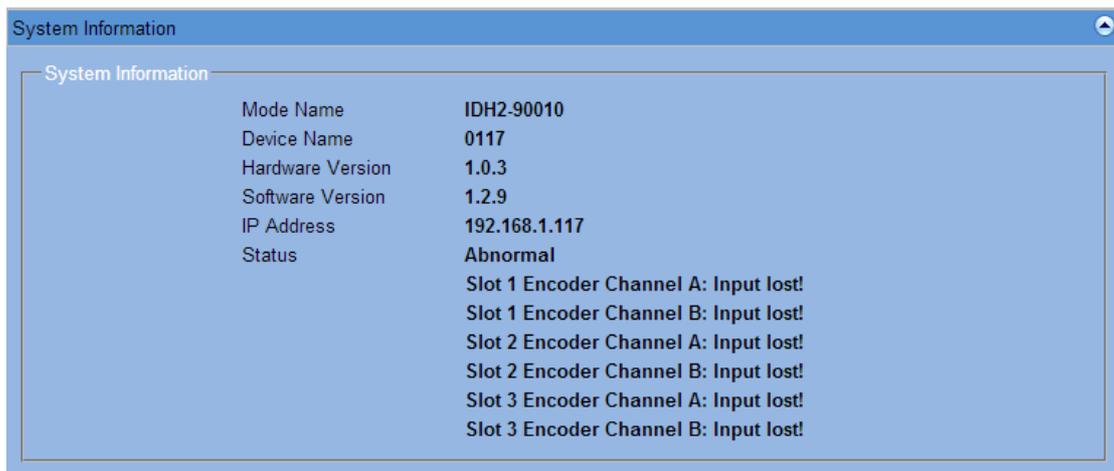
The left menu tree shows all slot card type and some advanced menu.

4.2 HD encoder card

Slot 1 to slot 5 are encoder cards. The left window will display the card type. It support H.264 HD digital encoder card, MPEG-2 SD analog encoder card, H.264 SD digital encoder card, H.264 SD analog encoder card. If there is no any card inserted, it will display blank. Now let us see the H.264/MPEG-4 HD encoder card setting.

4.2.1 System Parameters

Input: There are 2 types: HDMI and SDI.

System Bitrate: The range is from 800 to 22000Kbps.

Output Mode: CBR or VBR.

Service Name: The max length is 20 Bytes.

4.2.2 Video Parameters

Video Resolution: Not editable, only display the input video resolution. If there is no input signal, it displays "No signal input".

AVG Bitrate: The average video bitrate. The range is from 800 to 20000Kbps.

Max/Min Bitrate: The maximal/minimal video bitrate, only valid in VBR mode. The maximal video bitrate is from 1500 to 22000Kbps, the minimal video bitrate is from 600 to 18000Kbps.

Video GOP: User can choose the video GOP mode. There are 4 modes: Automatic, IBBP, IPPP or IBP.

4.2.3 Audio Parameters

Audio Bitrate：User can choose the audio bitrate. There are 7 types of audio bitrate: 32, 64, 128, 192, 256, 320, 384Kbps.
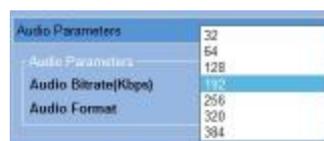
Audio Gain：User can choose the audio gain. There are 5 types of audio gain: -12, -6, 0, +6dB, +12dB.

Audio Format: User can choose the audio format. There are 2 types of formats: MPEG-1 Layer II and MPEG-2 AAC.

4.3 Main Slot Setting

There are two sub-menus in main control card: Main Basic parameters and Main TS IP Parameters.

4.3.1 Main Basic Parameters:

Host IP Parameters: Means net manager controller port, including Host IP Address, subnet mask, gateway IP address, Trap IP address.

Output Bitrate: It means the output bitrate of multiplexer channel. It is same for ASI port and IP port.

Output Source: User can select the source of the ASI output port. "Slotn-ChannelA/B" means SPTS, Mux means MPTS. Now it only support Mux output.

TS ID: Only for mux channel. The value range is from 1 to 65534.

Mux Program: Only for mux channel. User can select which programs would be in mux channel. When the Checkbox is checked, this program would be in mux channel.

The mux channel parameters are same as ASI output port and IP output port.

4.3.2 Main TS IP Parameters:

This tab would display according to the real encoder card. The parameters of one slot would be invisible if there is no any encoder card in this slot.
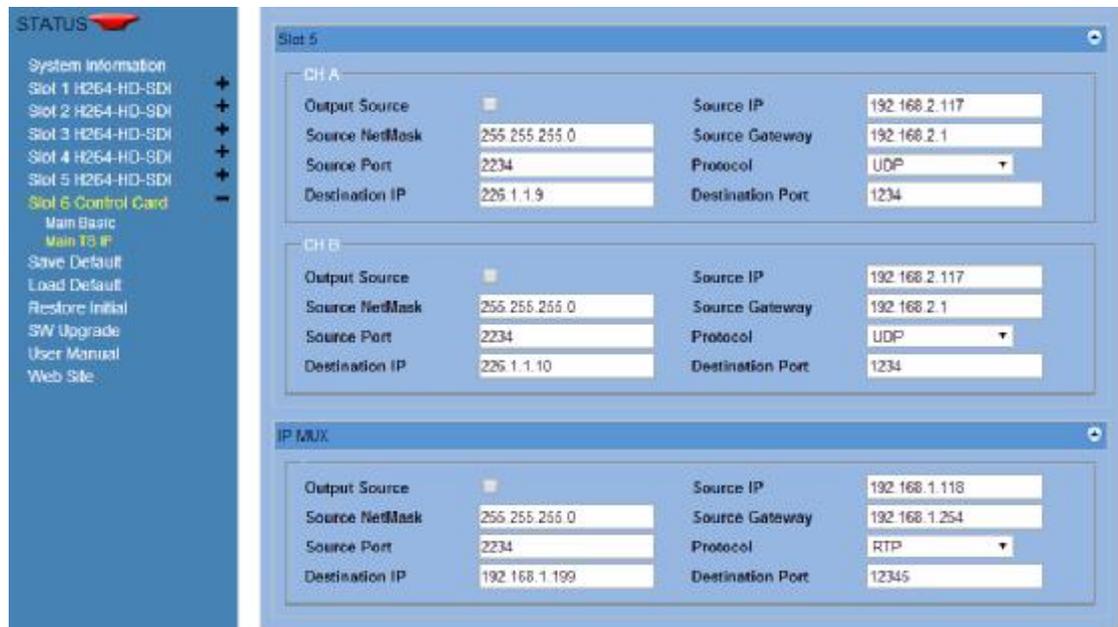
Slot1: According Encoder Slot1, there are two groups of IP parameters in this tab. The source of Channel A is Encoder Slot1 Channel A. The source of Channel B is Encoder Slot1 Channel B.

Output Source: "Not Used" means disable this IP channel. Otherwise pass through the encoder channel. Only support SPTS.

Source IP: A parameter of IP packet. It means the local IP address for this IP channel.

Source Port: A parameter of IP packet. The value is from 1024 to 65534.

Protocol: The protocol of IP packet. There are two types, one is UDP, and the other is RTP.

Destination IP: A parameter of IP packet.

Destination Port: A parameter of IP packet. The value range is from 1024 to 65534.

Slot2: Same as Slot1.

Slot3: Same as Slot1.

Slot4: Same as Slot1.

Slot5: Same as Slot1.

IP Mux: The parameters of multiplexer channel.

Output Source: "Not Used" means disable this IP channel. "Mux" means the output stream is a multiplexed stream. About this stream, user can edit it in "Mux Parameters".

Others parameters are same as Slot1.

4.4 Advanced Operations

4.4.1 Save Default

Save current parameters to device as default parameters.

4.4.2 Load Default

Load default parameters as current parameters of device.

4.4.3 Restore Initial

Restore device to initial parameters setup when delivery.

4.4.4 SW Upgrade

Update device's firmware to add new functions or fix bugs.

5. Technical specification

5.1 Surrounding specification

Surrounding specification	
Temperature Range 　　Working Temperature 　　Storing Temperature	 0℃~50℃ -20℃~70℃
Power Supply	100~240VAC，47~63Hz
Power	<45W

5.2 Mechanical standard

Mechanical standard	
Height	44mm（IRU）
Width	482mm
Depth	330mm
Weight	About 6kg

5.3 ASI interface

ASI interface	
Output	2 output ports, 1 main, 1 backup
Plug	BNC
Input Impedance	75 Ohm
Packet Length	188/204
Bit-rate	Output: 1-100Mbps

5.4 Video

Video	
Encode Mode	MPEG-2 MP@ML
Video Format	NTSC/PAL
Input Mode	CVBS
A/D Precision	10 bit

5.5 Audio

Audio	
Encode Mode	MPEG-1 Layer II or MPEG-2 AAC
Sampling Rate	48 kHz
Audio Bitrate	32/64/128/192/256/320/384 kbps
Input Mode	Analog
Plug	RCA

5.6 Ethernet for TS

Ethernet	
Plug	RJ-45
Type	10/100Base-T
Protocol	TS Over IP, UDP/RTP, Support Multicast

5.7 Ethernet for control

Ethernet	
Plug	RJ-45
Type	10/100Base-T