
IDH2-80010-SE

User's Guide

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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:

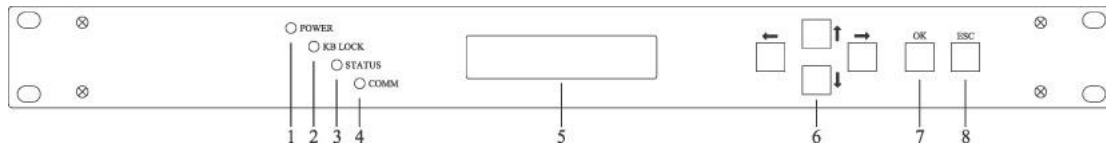


Fig. 2.1 Front Panel

- 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:

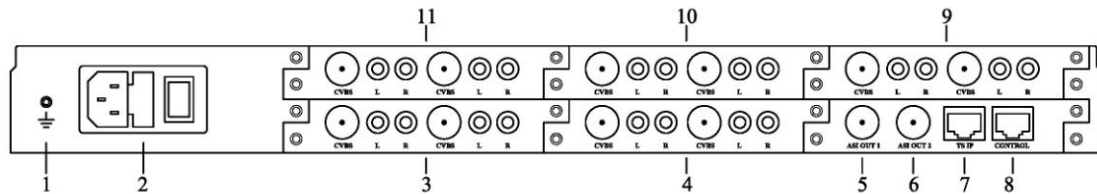


Fig. 2.2 Rear Panel

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

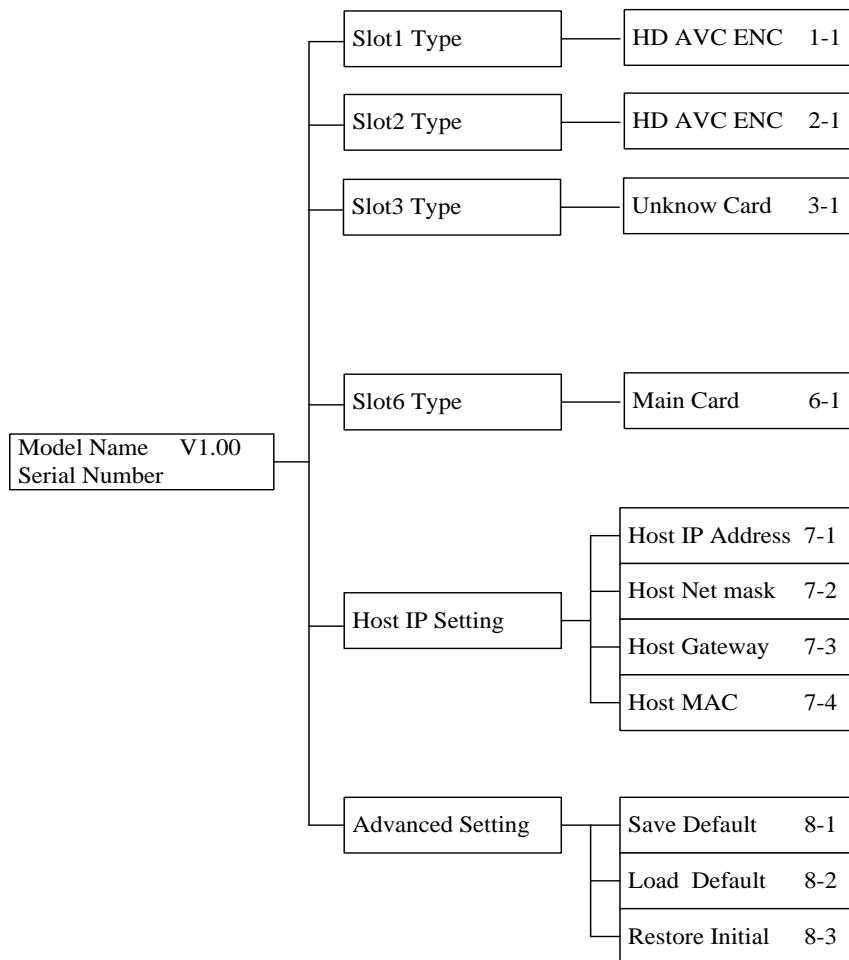
The initial status of the keyboard is locked, and you have to unlock it before operation. To unlock it, please press "OK" key, "OK" key, "ESC" key and "ESC" key sequentially and promptly. The keyboard may also be locked after it has not been operated for a certain period of time.

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



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.

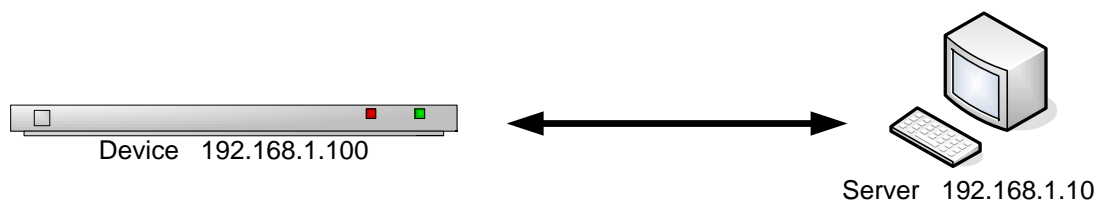
“Default Gateway 7-3”: Default Gateway setting. If your server which installed the head-end manager and the device are not in the same subnet, the device need transmit any data to server through the gateway.

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

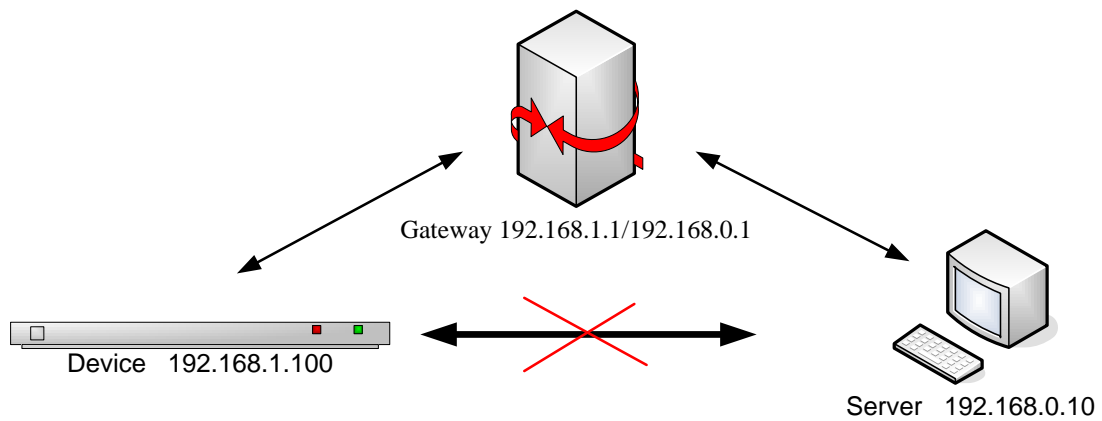
“Physical Address 7-5”: Physical Address setting. It is a unique value in any network.

For examples:

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



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



3.3.3 Advanced Setting

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

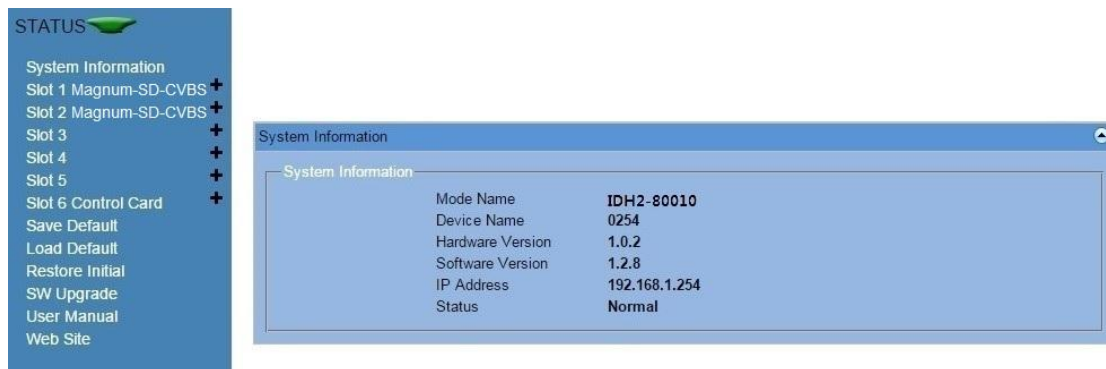
“Load Default saved. 8-2”: Recall the default configuration which has been saved.

“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 Magnum SD 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 Magnum H.264/MPEG-2 SD encoder card setting.

STATUS

System Information

Slot 1 Magnum-SD-CVBS

Channel A

Channel B

Slot 2 Magnum-SD-CVBS +

Slot 3 +

Slot 4 +

Slot 5 +

Slot 6 Control Card +

Save Default

Load Default

Restore Initial

SW Upgrade

User Manual

Web Site

Magnum-SD-CVBS[Channel A] Apply

System Parameters

System Parameters

Encoder Type MPEG2

System Bitrate 3800

Output Mode CBR

Service ID 11

TS ID 1

Service Name TV11

Service Provider Name TV-Channel

PMT PID 111

PCR PID 112

VID PID 113

AUD PID 114

Video Parameters

Video Parameters

Video Resolution No Signall

AVG Bitrate 3000

Video GOP Automatic

Max Bitrate 3200

Min Bitrate 2800

Video Brightness 50

Video Saturation 50

Video Contrast 50

Video Hue 50

Audio Parameters

Audio Parameters

Audio Bitrate(Kbps) 192

Audio Gain 0

Audio Format MPEG-1 Layer II

4.2.1 System Parameters

Encoder Type: There are 2 types: MPEG-2 and H.264.

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.

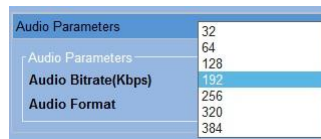
Max/Min Bitrate: The maximal/minimal video bitrate, only valid in VBR mode. The maximal video bitrate is from 1500 to 22000Kbps, the minimal video bitrate is from 600 to 18000Kbps.

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



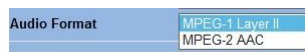
4.2.3 Audio Parameters

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.

The screenshot shows a web interface for configuring system parameters. The main content area is titled 'Basic Parameters' and includes an 'Apply' button. It is organized into three expandable sections:

- Host IP Parameters:** Contains fields for Host IP (192.168.1.254), Host NetMask (255.255.255.0), Host Gateway (192.168.1.1), Host MAC Address (12-34-56-78-D0-FC), and Trap IP Address (192.168.1.255).
- ASI Output Parameters:** Contains 'Output Bitrate' (38000) and 'Output Source' (MUX).
- MUX Parameters:** Contains 'TS ID' (1) and a 'Mux Program' section with four checked checkboxes: slot1-ChannelA, slot2-ChannelA, slot1-ChannelB, and slot2-ChannelB.

A sidebar on the left, labeled 'STATUS', provides navigation options for system information, slots 1-5, slot 6 control card (Main Basic, Main TS IP), and various system management functions like Save Default, Load Default, Restore Initial, SW Upgrade, User Manual, and Web Site.

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.

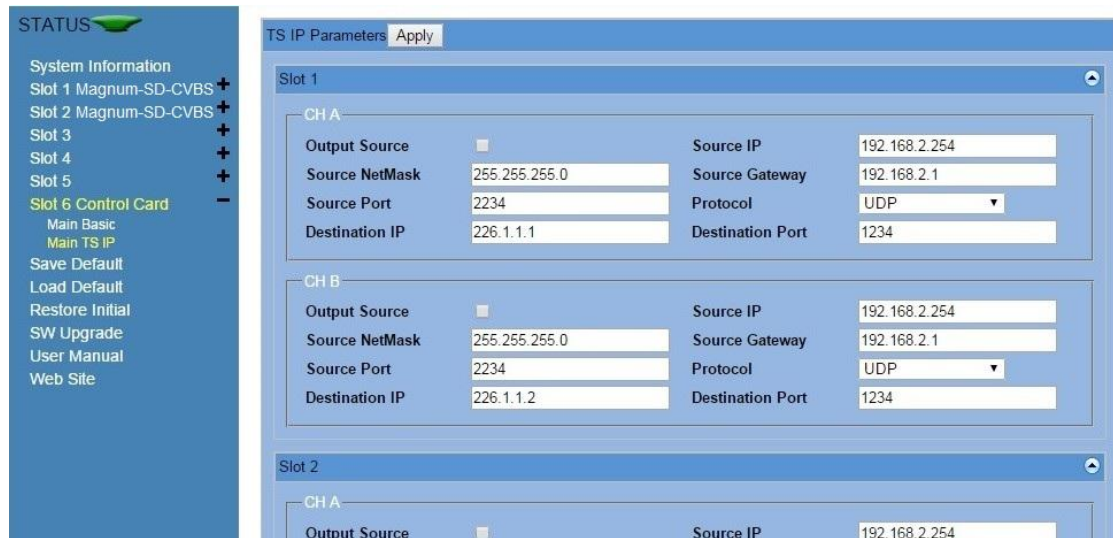
TS ID: Only for mux channel. The value range is from 1 to 65534.

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.

The screenshot shows a configuration window titled "Slot 2" with three sections: CH A, CH B, and IP MUX. Each section contains a grid of configuration parameters.

CH A		CH B		IP MUX	
Output Source	<input type="checkbox"/>	Output Source	<input type="checkbox"/>	Output Source	<input checked="" type="checkbox"/>
Source NetMask	255.255.255.0	Source NetMask	255.255.255.0	Source NetMask	255.255.255.0
Source Port	2234	Source Port	2234	Source Port	2234
Destination IP	226.1.1.3	Destination IP	226.1.1.4	Destination IP	226.1.1.11
Source IP	192.168.2.254	Source IP	192.168.2.254	Source IP	192.168.2.254
Source Gateway	192.168.2.1	Source Gateway	192.168.2.1	Source Gateway	192.168.2.1
Protocol	UDP	Protocol	UDP	Protocol	UDP
Destination Port	1234	Destination Port	1234	Destination Port	1234

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	0°C~50°C
Storing Temperature	-20°C~70°C
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