

User Manual----TBS2601

Contents

1. Overview.....	2
1.1 Application.....	2
1.2 Technical Specification.....	2,3
2. Settings.....	3
2.1 IP setting.....	4
2.2 Network Setting.....	5
2.3 HDMI Main Stream Setting.....	6
2.4 HDMI Second Stream Setting.....	7
2.5 CVBS Main Steam Setting.....	8
2.6 CVBS Second Steam Setting.....	9
2.7 Audio Expand.....	9
2.7.1Audio Setting.....	10
2.7.2 OSD Setting.....	10
2.7.3 HDMI color.....	11
2.7.4 Image Setting.....	11
2.8 System	12
2.8.1 System settings.....	12
2.8.2 Change Password.....	12
2.8.3 Upgrade settings.....	13
2.9 RTMP protocol setting.....	13,14
3. Status.....	15,16,17

1. Overview

TBS2601 HD HDMI encoder is a professional high-definition video coding box, which equipped with 1 HDMI channel input and 1 CVBS input and dual stream RJ45 output. TBS2601 supports MPEG-4 AVC/H.264 High Profile code format input and dual stream H.264 format, audio ACC format output.

1.1 Application

- IPTV;
- Digital Signage;
- Video Conference;
- Replace HD Video Capture Card;
- Hotel TV system;
- Live Broadcast;
- Teaching/Campus Broadcast;
- Recording System;
- NVR (Net Video Recorder);

1.2 Technical Specification

Video

Input	1x HDMI;1x CVBS
HDMI Resolution	1920×1080_60i/60P, 1920×1080_50i, 1280×720_60p, 1280×720_50p
Encoding	H.264/AVC Main Profile/High Profile ,Audio AAC
Data Rate	16KBIT/S~12MBIT/S
Rate Control	CBR/VBR
GOP Structure	IBBP
Advanced Pretreatment	De-interlacing, Noise Reduction, Sharpening

Audio

Encoding	AAC, MP3
Bit-rate	32K/48K/64K/96K/128K/160K/192K
Sampling precision	24 bit
Data Rate	64Kb/s ~ 384Kb/s

System

Ethernet/RJ45	1000 Base-T Ethernet interface
Protocol	HTTP, UTP, RTSP, RTMP
Control Interface	WEB

General Spec

Dimensions	120mm*105*40mm
Weight	0.25kg
Working Temperature	0~45℃

2. Settings

On WEB setting page, modifying IP address of the computer is needed. Default IP address of the HDMI HD encoder is 192.168.1.168

Reset & Initialization: When the HDMI HD encoder is powered up, you can reset and initialize it by pressing & holding the RST button for 10 seconds, then it will restart automatically. And IP address will be initialized to 192.168.1.168

2.1 IP setting

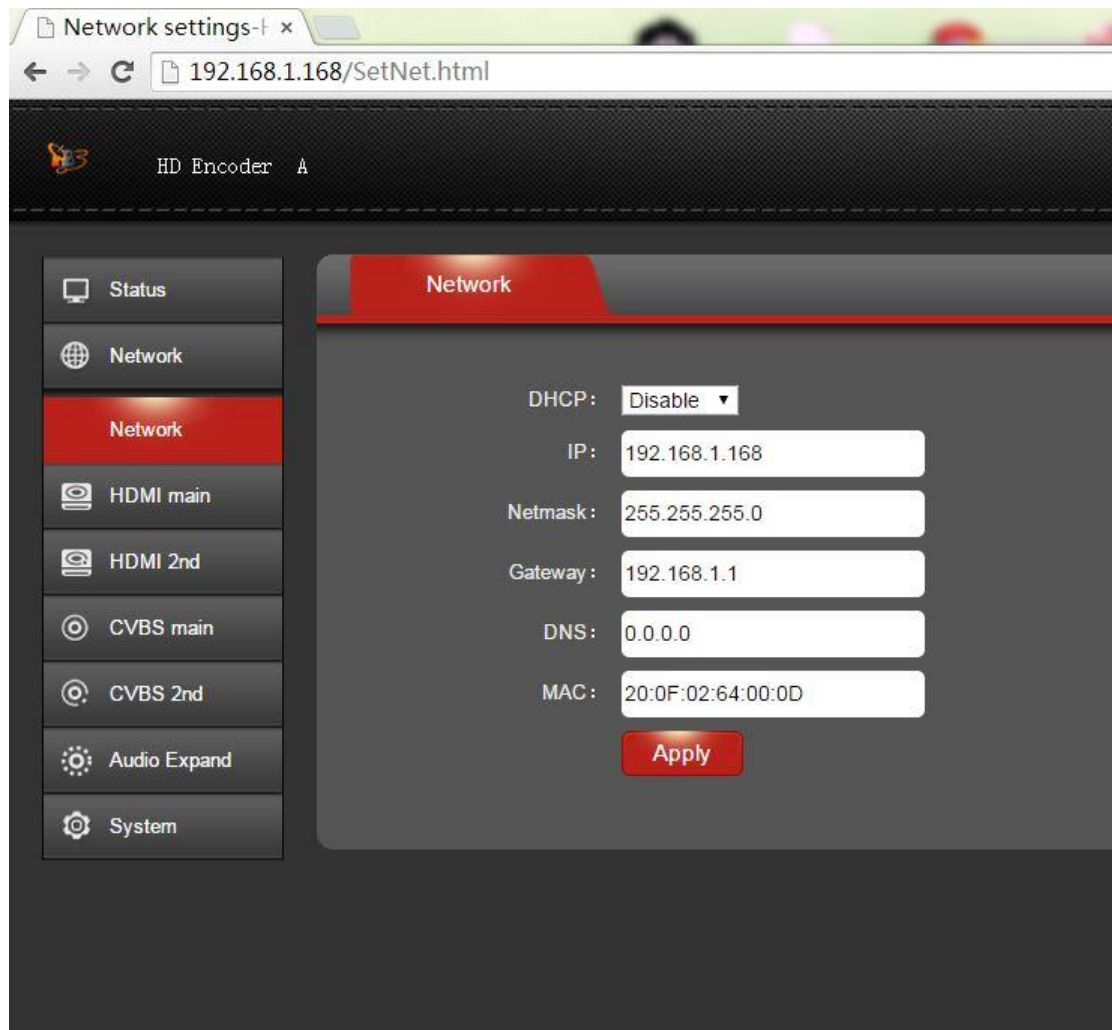
Computer IP address: 192.168.1.* (Note: "*" is any number ranging from 0 to 254 except 168)

Open up IE, input "192.168.1.168" to go to WEB interface with User Name: admin and Password: admin



2.2 Network Setting

Default IP address is 192.168.1.168. If you forget the IP address after changing it, please press the RST button for 10 seconds to restart it when the machine is powered up, then it will restore factory default settings.



Notes: After network setting is done, you need to reboot the device to make it work.

2.3 HDMI Main Stream Setting

You can enable "HTTP", "RTSP" or "Multicast IP" for your preference, and after all the data are filled in, please remember to click on button "Apply".

Notes: Above data can be adjusted based on your practical application.

you can enable one of those 3 protocols based on your own preference.

2.4 HDMI Second Stream Setting

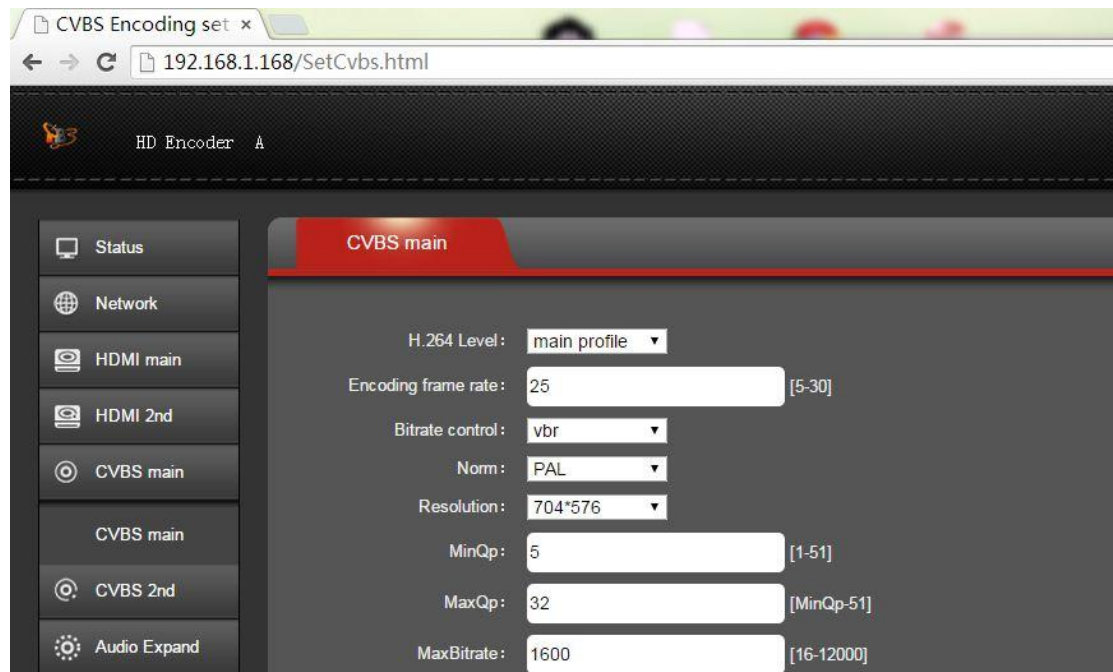
HDMI second stream setting is similar with HDMI main encoding setting

Notes: Above data can be adjusted based on your practical application.

Notes: Above configuration parameter is the same with main stream

2.5 CVBS Main Steam Setting

You can enable "HTTP", "RTSP" or "Multicast IP" for your preference, and after all the data are filled in, please remember to click on button "Apply".

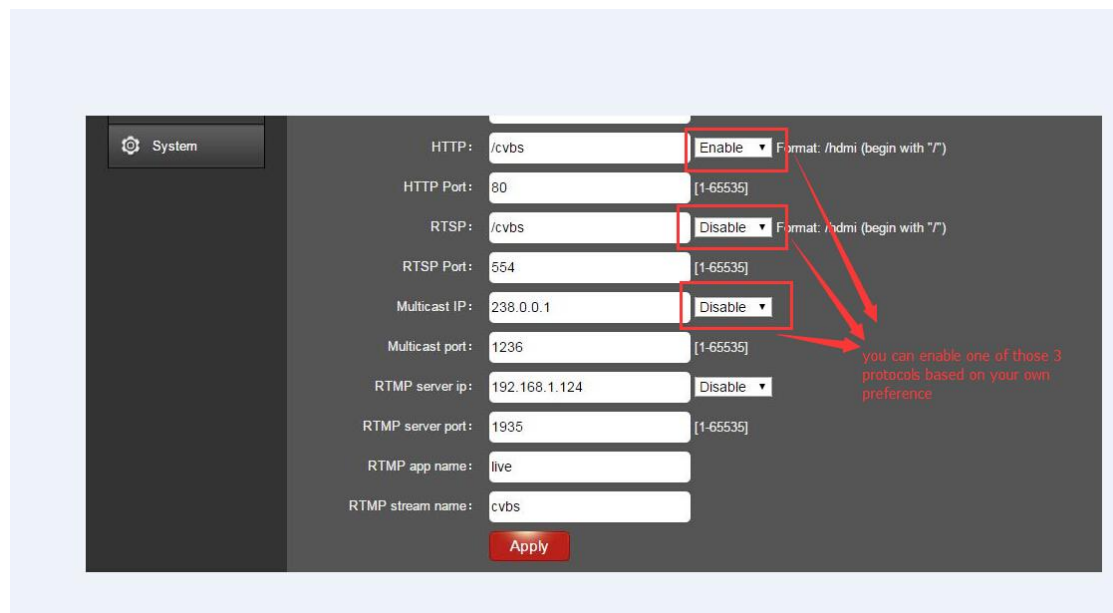


The screenshot shows a web browser window with the address bar displaying "192.168.1.168/SetCvbs.html". The page title is "CVBS Encoding set". The main content area is titled "CVBS main" and contains the following settings:

- H.264 Level: main profile
- Encoding frame rate: 25 [5-30]
- Bitrate control: vbr
- Norm: PAL
- Resolution: 704*576
- MinQp: 5 [1-51]
- MaxQp: 32 [MinQp-51]
- MaxBitrate: 1600 [16-12000]

A sidebar on the left contains navigation links: Status, Network, HDMI main, HDMI 2nd, CVBS main (selected), CVBS main, CVBS 2nd, and Audio Expand.

Notes: Above data can be adjusted based on your practical application.



The screenshot shows the "System" settings page. The left sidebar has a "System" icon. The main content area contains the following settings:

- HTTP: /cvbs [Enable] Format: /hdm (begin with "/")
- HTTP Port: 80 [1-65535]
- RTSP: /cvbs [Disable] Format: /hdm (begin with "/")
- RTSP Port: 554 [1-65535]
- Multicast IP: 238.0.0.1 [Disable]
- Multicast port: 1236 [1-65535]
- RTMP server ip: 192.168.1.124 [Disable]
- RTMP server port: 1935 [1-65535]
- RTMP app name: live
- RTMP stream name: cvbs

Red boxes highlight the "Enable", "Disable", and "Disable" dropdown menus. Red arrows point from these boxes to a red text box that says: "you can enable one of those 3 protocols based on your own preference". An "Apply" button is located at the bottom of the settings area.

2.6 CVBS Second Stream Setting

CVBS second stream setting is similar with CVBS main stream setting

Notes: Above data can be adjusted based on your practical application.

Notes: Above configuration parameter is the same with main stream

2.7 Audio Expand

You can modify “Audio Setting”, “OSD Setting”, “HDMI color” and “image setting” under this section, but if you do not want to modify it, you can just keep the original data.

2.7.1 Audio Setting

The screenshot shows a web browser window with the address bar displaying "192.168.1.168/SetAudio.html". The page title is "System settings-HI". The main content area has a dark background with a red header bar labeled "Audio Encoder". On the left side, there is a vertical menu with icons and labels: "Status", "Network", "HDMI main", "HDMI 2nd", "CVBS main", "CVBS 2nd", and "Audio Expand". The "Audio Encoder" section contains the following settings:

- Audio bitrate: 48000 (dropdown)
- Audio channel: L+R (dropdown)
- Audio Codec: AAC (dropdown)
- Resample: Disable (dropdown)
- RTSP audio encode: AAC (dropdown)

An "Apply" button is located at the bottom right of the settings area.

2.7.2 OSD Setting

The screenshot shows a web browser window with the address bar displaying "192.168.1.168/SetAudio.html#". The page title is "System settings-HI". The main content area has a dark background with a red header bar labeled "OSD". On the left side, there is a vertical menu with icons and labels: "Status", "Network", "HDMI main", "HDMI 2nd", "CVBS main", "CVBS 2nd", and "Audio Expand". The "OSD" section contains the following settings:

- X: 100 (input field) [0-1920]
- Y: 100 (input field) [0-1080]
- Font size: 32 (input field) [8-72]
- alpha: 100 (input field) [0-128]
- text: (input field)

An "Apply" button is located at the bottom right of the settings area.

2.7.3 HDMI color

System settings-HI x
192.168.1.168/SetAudio.html#

HD Encoder A

Status
Network
HDMI main
HDMI 2nd
CVBS main
CVBS 2nd

HDMI color Setting

Brightness: 50 [0-100] Default value:50
Contrast: 50 [0-100] Default value:50
Hue: 50 [0-100] Default value:50
Saturation: 50 [0-100] Default value:50

Apply

2.7.4 Image Setting

System settings-HI x
192.168.1.168/SetAudio.html#

HD Encoder A

Status
Network
HDMI main
HDMI 2nd
CVBS main
CVBS 2nd
Audio Expand
Audio Setting

quality Setting

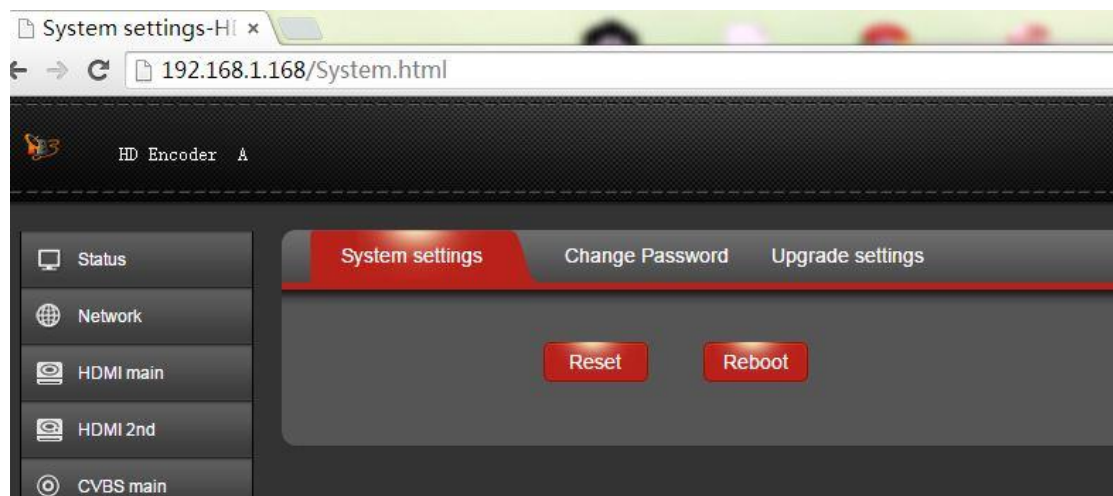
Noise: close
Sharpening: close
Sharpening strength: 0 [-4-5]
Filtering: open
Filtering A: 0 [0-3]
Filtering B: 0 [0-255]
Filtering C: 0 [0-4]

Apply

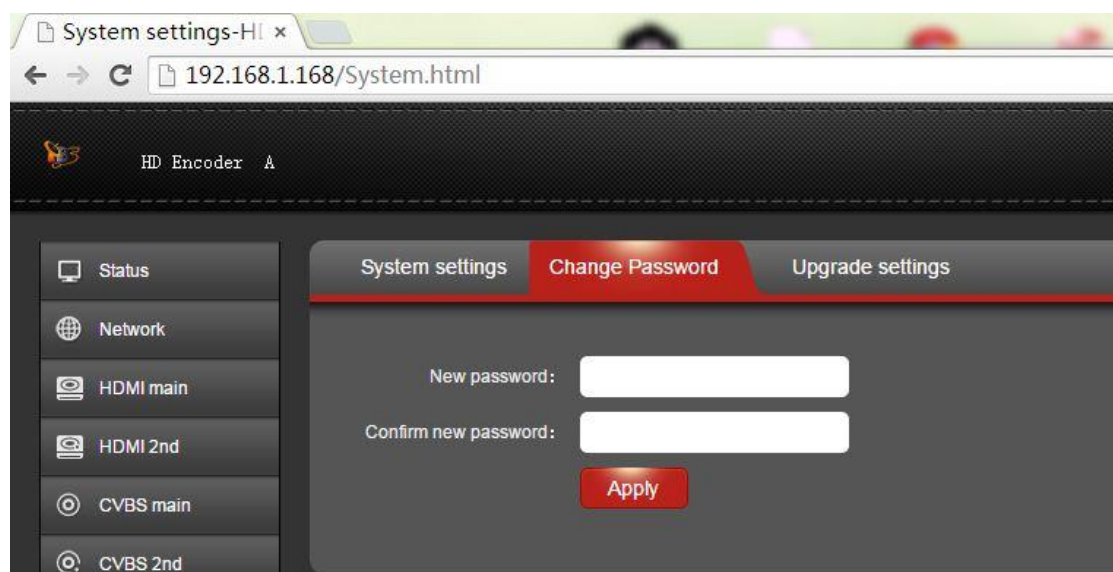
2.8 System

You can do "System settings", "Change Password" and "Upgrade settings" under this section.

2.8.1 System settings



2.8.2 Change Password



2.8.3 Upgrade settings



2.9 RTMP protocol setting

RTMP server ip: 192.168.1.123 Enable ▾

RTMP server port: 1935 [1-65535]

RTMP app name: live

RTMP stream name: hdmi

ONVIF: Disable ▾

Apply

RTMP server ip: 192.168.1.123 Enable ▾

RTMP server port: 1935 [1-65535]

RTMP app name: live

RTMP stream name: hdmi

ONVIF: Disable ▾

Apply

2.9.1 H.264 level: baseline main/ high/ profile. If you want support RTMP, you should choose: baseline profile.

2.9.2 RTMP protocol: enable and able can choose

2.9.3 RTMP server IP: Input your corresponding serve IP

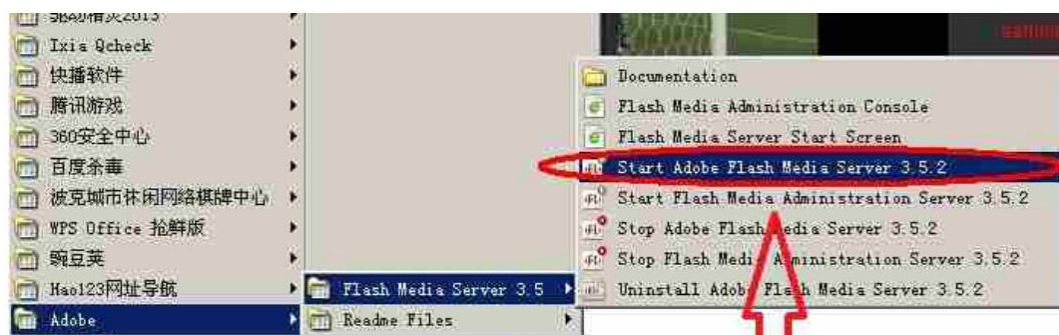
2.9.4 RTMP App Name: user-defined

2.9.5 RTMP stream name: user-defined

2.9.6 Sever Testing

2.9.6.1 Install the software: Flash+Media+Server 3.5, there is no need to input series number, both user name and password are 1

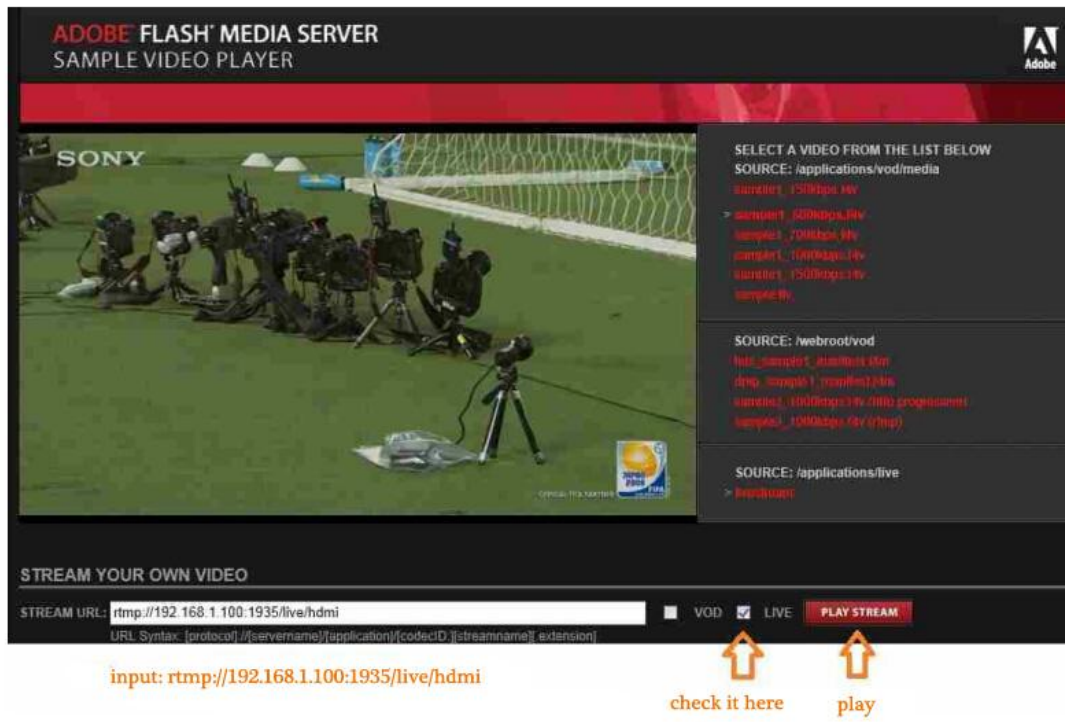
2.9.6.2 Start the background software



this software runs in background

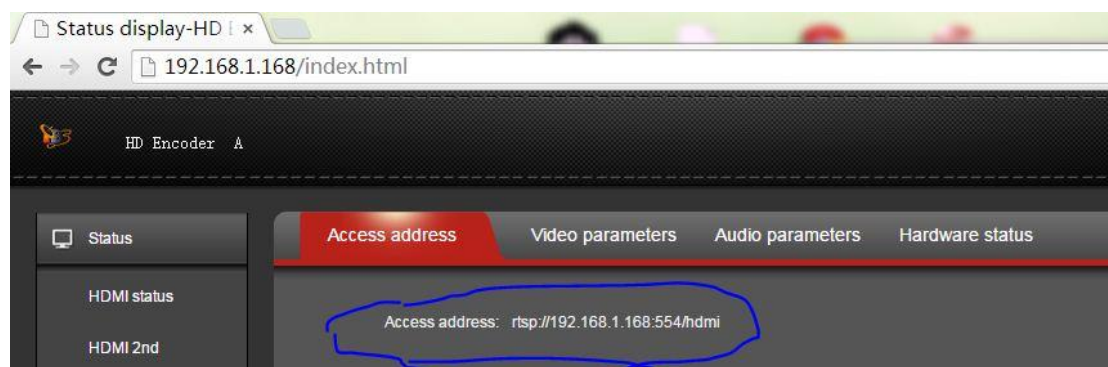
2.9.6.3 Go to folder "FlashPlayer", find "VideoPlayer.html" and open it

2.9.6.4 Input: rtmp://ip address/rtmp/hdmi, then choose "live" to see the images, or input rtmp://192.168.1.100:1935/live/hdmi to choose "LIVE", then click "Play stream"

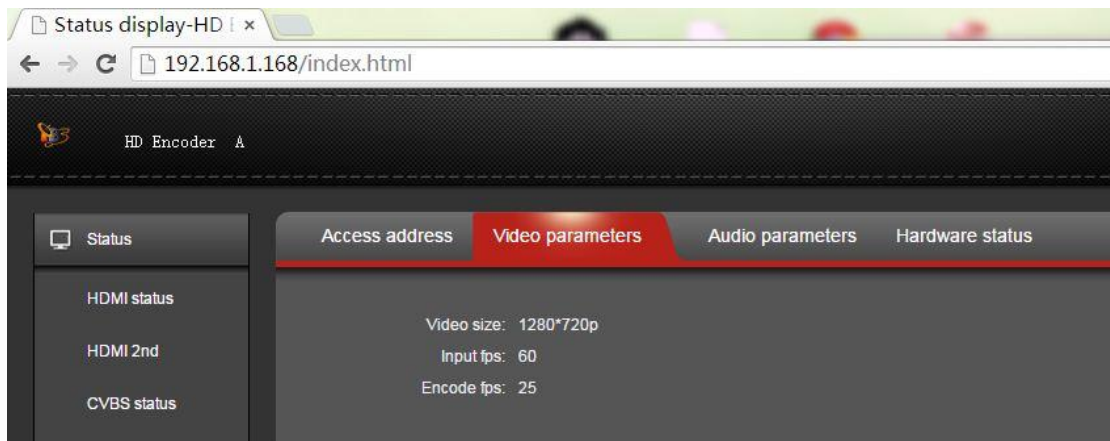


3. Status

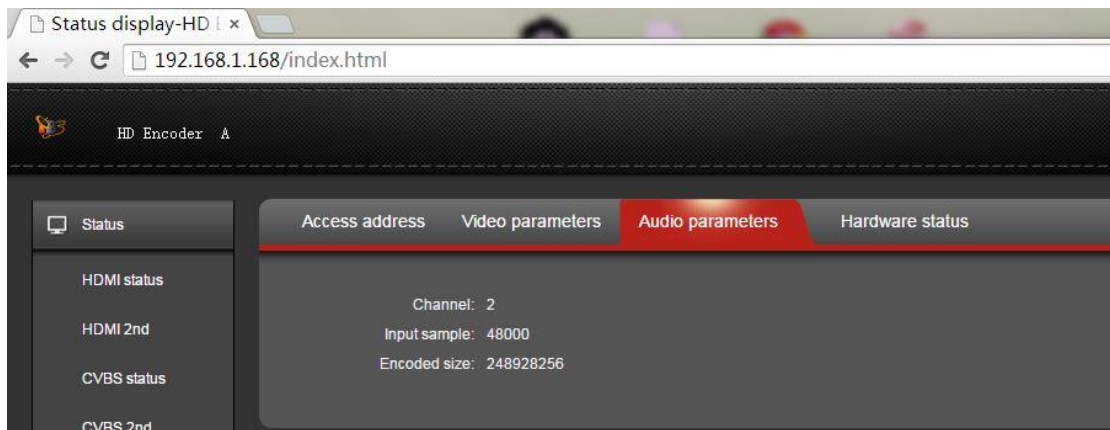
After HDMI main stream setting, HDMI second stream setting, CVBS main steam setting, and CVBS second steam setting are done, you will be able to see their access address, and you can directly copy it to the VLC player software for decoding.



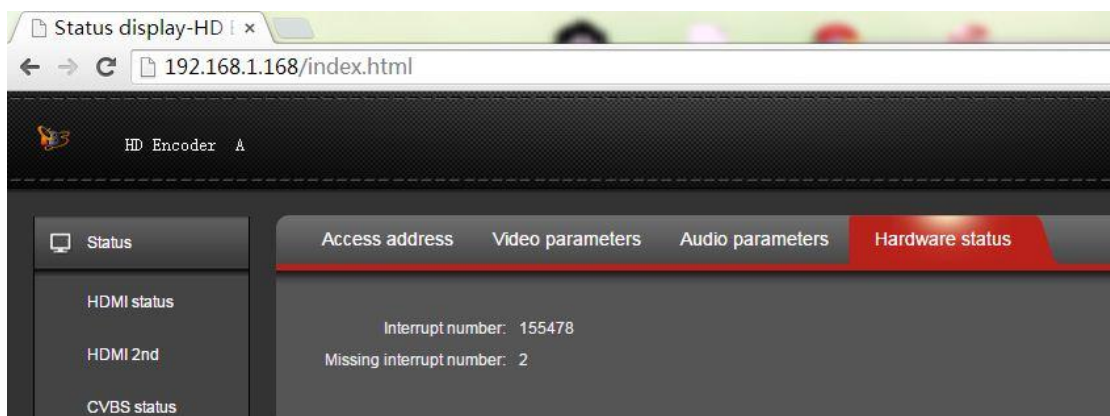
--Access Address: it can be directly copied to the VLC player software for decoding.



--Video parameters: Video signal parameters that inputted in.



--Audio parameters: Audio signal parameters that inputted in.



--Hardware status: Increasing intervals indicates it has video input. If it displays as 0, it means there is no video input, then you need to check the input signal.

If HDMI main & second stream or CVBS main & second stream is not set, then you will see "Access address: disabled" which shown as the picture below, then you have to go to reset them based on the user guides shown on "2.3 HDMI Main Stream Setting" "2.4 HDMI Second Stream Setting", "2.5 CVBS Main Steam Setting" and "2.6 CVBS Second Steam Setting".

