User Guide-TBS2603

Contents

1. OVERVIEW ...........................................................................................................................................2

1.1 APPLICATIONS...................................................................................................................................2

1.2 TECHNICAL SPECIFICATIONS ........................................................................................................2

2. SETTINGS ...............................................................................................................................................3

2.1 IP SETTING.........................................................................................................................................3

2.2 NETWORK SETTING..........................................................................................................................4

2.3 HDMI MAIN STREAM SETTING .........................................................................................................4

2.4 HDMI SECOND STREAM SETTING ....................................................................................................5

2.5 CVBS MAIN（NOTE:TBS2603 NOT USE THE FUNCTION） ..............................................................6

2.6 CVBS 2ND（NOTE:TBS2603 NOT USE THE FUNCTION）.................................................................6

2.7 AUDIO EXPAND...............................................................................................................................6

2.7.1 Audio Setting ...................................................................................................................................7

2.7.2 HDMI OSD Setting .........................................................................................................................7

2.7.3 HDMI color Setting .........................................................................................................................8

2.7.4 CVBS OSD Setting（Note:TBS2603 not use the function） .........................................................9

2.7.5 CVBS color Setting（Note:TBS2603 not use the function） .........................................................9

2.7.6 Image Setting ...................................................................................................................................9

2.8 SYSTEM ................................................................................................................................................10

2.8.1 System settings ..............................................................................................................................10

2.8.2 Change Password ..........................................................................................................................11

2.8.3 Upgrade settings ............................................................................................................................11

2.8.4 Version ............................................................................................................................................13

2.9 RTMP PROTOCOL SETTING ............................................................................................................14

2.9.1 H.264/H.265 level ..........................................................................................................................14

2.9.2 RTMP server IP .............................................................................................................................14

2.9.3 RTMP App Name ..........................................................................................................................14

2.9.4 RTMP stream name .......................................................................................................................14

2.9.5 Sevver Testing ...............................................................................................................................15

3. STATUS ................................................................................................................................................15
1. Overview

TBS2603 H.265/H.264 HD HDMI encoder is a professional high-definition video coding box, which equipped with 1 HDMI channel input and dual stream RJ45 output. TBS2603 supports MPEG-4 AVC/H.264/H.265 High Profile code format input and dual stream H.264/H.265 format, audio AAC format output.

1.1 Applications

---- 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 Specifications

<table>
<thead>
<tr>
<th>Video</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>1x HDMI (1.3a)</td>
</tr>
<tr>
<td>HDMI Resolution</td>
<td>1920×1080_60i/60P, 1920×1080_50i, 1280×720_60p, 1280×720_50p and below</td>
</tr>
<tr>
<td>Encoding</td>
<td>H.264/AVC Main Profile/High Profile ; H.265/HEVC Baseline Profile; Audio AAC</td>
</tr>
<tr>
<td>Data Rate</td>
<td>0.8Mbps~12Mbps</td>
</tr>
<tr>
<td>Rate Control</td>
<td>CBR/VBR</td>
</tr>
<tr>
<td>GOP Structure</td>
<td>IBPP</td>
</tr>
<tr>
<td>Advanced Pretreatment</td>
<td>De-interlacing, Noise Reduction, Sharpening</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audio</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Encoding</td>
<td>AAC, MP3</td>
</tr>
<tr>
<td>Sampling Rate</td>
<td>Auto</td>
</tr>
<tr>
<td>Bit-rate</td>
<td>48K/64K/96K/128K/160K/192K/256k</td>
</tr>
<tr>
<td>Sampling Precision</td>
<td>16bit</td>
</tr>
<tr>
<td>Data Rate</td>
<td>64Kb/s ~ 384Kb/s</td>
</tr>
</tbody>
</table>
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 on, you can reset and initialize it by pressing & holding the RST button for 10 seconds, and 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 IE, input "192.168.1.168" to go to WEB operate interface
Name: root
Password: root

Authentication Required
http://192.168.1.2 requires a username and password.
Your connection to this site is not private.

User Name: root
Password: ****
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 defaults.

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, unicast IP, Multicast IP, RTP or RTMP server IP by 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.

2.4 HDMI Second Stream Setting
HDMI second stream setting is similar to HDMI main stream setting.

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

Notes: Above configuration parameter is the same to main stream

2.5 CVBS main (Note: TBS2603 not use the function)

2.6 CVBS 2nd (Note: TBS2603 not use the function)

2.7 Audio Expand

You can modify "Audio Setting", "HDMI OSD Setting", "CVBS OSD Setting", "HDMI color", "CVBS color" and "Image Setting" under this section (this HDMI Encoder does not have CVBS interface, so CVBS color setting is not needed)

Or you can just keep the original data without making any changes.
2.7.1 Audio Setting

2.7.2 HDMI OSD Setting
2.7.3 HDMI color Setting
2.7.4 CVBS OSD Setting  （Note:TBS2603 not use the function）

2.7.5 CVBS color Setting  （Note:TBS2603 not use the function）

2.7.6 Image Setting
2.8 System

You can configure "System settings", "Change Password", "Upgrade settings" and check "Version" information under this section.

2.8.1 System settings
2.8.2 Change Password

This setting includes two steps - "upload" and "upgrade". You should upload the updating file first, and then proceed with the next step - upgrading.

**Step 1:** Click button “Choose File” to select the updating file in your computer.

After the file is selected successfully, you will see the file name shown in front of button "upload", then please click “upload” to continue.
If the file is uploaded successfully, you will find a prompt pop up as below, then please click “OK” to continue.

Step 2: After the file is uploaded, please click button "upgrade". You can check the update status during the whole process.
If upgrade is successful, you will see a window pop up "The system successfully updated", and then please click “OK”.

2.8.4 Version

You can check version information under this section.
2.9 RTMP protocol setting

2.9.1 H.264/H.265 level

Baseline main / high / profile: If you want support RTMP, you should choose: baseline profile (H.265 only supports baseline profile).

2.9.2 RTMP server IP

Input your corresponding serve IP

2.9.3 RTMP App Name

User-defined

2.9.4 RTMP stream name

User-defined
2.9.5 Sever Testing

2.9.5.1 Install the software: Flash Media Server 3.5. There is no need to input series number; both user name and password are 1

2.9.5.2 Start the background software

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

2.9.5.4 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 and HDMI second stream 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: Display video signal parameters that inputting in
Audio parameters: Display audio signal parameters that inputting 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 you found "Access address: disabled" as the below picture, you have to reset HDMI main stream or HDMI second stream by following the user guides about "2.3 HDMI Main Stream Setting" and "2.4 HDMI Second Stream Setting".