User Guide-TBS2630

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1. Overview

TBS2630 is a professional Multi channel HD H.264/H.265 HDMI encoder, which is our newest HD audio & video encoding device with powerful functionality, supports 8/16 channels HDMI stream of H.264/H.265 encoding output and the AAC, Mp3 audio format. From any HDMI input source, it generates H.264/ H.265- encoded stream compliant with HTTP/RTSP/RTP/RTMP/ UDP protocols.

The product can be applied to education, health care, IPTV, conference, remote education, news interview, banking, transportation and other industries.

1.1 Applications

---- IPTV;
---- Digital Signage;
---- Video Conference;
---- Replace HD Video Capture Card;
---- Hotel TV system;
---- Live Broadcast;
---- Teaching/Campus Broadcast;
1.2 Technical Specifications

<table>
<thead>
<tr>
<th><strong>Input</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Input</td>
<td>8/16 x HDMI 1.3a</td>
</tr>
<tr>
<td>Audio Input</td>
<td>HDMI embedded audio</td>
</tr>
<tr>
<td>AC IN</td>
<td>110V~240V</td>
</tr>
<tr>
<td>AC Rate</td>
<td>60/50Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Output</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Output</td>
<td>12V/12.5A</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>96W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Video</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI Resolution:</td>
<td>1920x1080/1680x1050/1280x720/1600x1200/960x540/720<em>576/70 4</em>576 etc</td>
</tr>
<tr>
<td>Encoding</td>
<td>BASELINE PROFILE (for H.264 and H.265)</td>
</tr>
<tr>
<td></td>
<td>MAIN PROFILE (for H.264 only)</td>
</tr>
<tr>
<td></td>
<td>HIGH PROFILE (for H.264 only)</td>
</tr>
<tr>
<td>Data Rate</td>
<td>0.8Mbps~12Mbps;</td>
</tr>
<tr>
<td>Rate Control</td>
<td>CBR/VBR, 16KBIT/S~12MBIT/S</td>
</tr>
<tr>
<td>GOP Structure</td>
<td>IBBP</td>
</tr>
<tr>
<td>Advanced Pretreatment</td>
<td>De-interlacing, Noise Reduction, Sharpening</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Audio</strong></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>32K/48K/64K/96K/128K/160K/192K</td>
</tr>
<tr>
<td>Sampling Precision</td>
<td>16 bit</td>
</tr>
<tr>
<td>Data Rate</td>
<td>64Kb/s ~ 384Kb/s</td>
</tr>
</tbody>
</table>

--- Recording System;

--- NVR (Net Video Recorder);
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, and then it will restart automatically. Meanwhile, IP address will be initialized to 192.168.1.168.

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

TBS2630 haven’t CVBS function, so CVBS main and CVBS second steam setting are not needed.

2.1 IP Setting

The TBS2630 IP address of HDMI encoder are 192.168.1.*(2~17).

If you access the setting interface of 16 ports HDMI encoder, you just need change the *(from 2 to17).

Take one of 16 ports HDMI encoder for instance. (IP: 192.168.1.2).

Open up IE, input "192.168.1.2" to go to WEB interface with User

**Name:** root

**Password:** root
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.

2.4 HDMI Second Stream Setting

HDMI second stream setting is the same with HDMI main encoding setting
Notes: Above configuration parameter is the same with main stream

2.5 Audio Expand

You can modify “Audio Setting”, “OSD Setting”, “HDMI color” and “image setting” under this section (this HDMI Encoder does not have CVBS interface, so CVBS color setting is not needed), but if you do not want to modify it, you can just keep the original data.
2.5.1 Audio Setting
2.5.2 HDMI OSD Setting
2.5.3 HDMI color
2.5.4 Image Setting

2.6 System

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

2.6.2 Change Password
2.6.3 Upgrade settings

This setting includes two steps-"upload" and "upgrade", you need to upload the updating file first, and then proceed with 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.

(Note : The update package name is “update.tar.bz2” )
And after the file is uploaded successfully, you will see a note mentioning successfully uploaded, then please click “OK” to continue.

**Step 2:** After the file is uploaded, please click button "upgrade", and you will also see update status during the whole process.
After upgrade is successful, you will see a note mentioning "The system successfully updated", then please click “OK”.

2.6.4 Version

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

2.7.1 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).
2.7.2 RTMP server IP

Input your corresponding serve IP (like WOWZA, FMS, NGINX... servers’ IP address)

2.7.3 RTMP user name

Registered on RTMP server like WOWZA, FMS...

2.7.4 RTMP password

Registered on RTMP server like WOWZA, FMS...

2.7.5 RTMP App Name

User-defined

2.7.6 RTMP stream name

User-defined

2.7.7 Sever Testing

2.7.7.1 Install the software

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

2.7.7.2 Start the background software
2.7.7.3 Go to folder "FlashPlayer", find "VideoPlayer.html" and open it

2.7.7.4 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.

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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 stream or HDMI 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" and "2.4 HDMI Second Stream Setting".