# User Manual----TBS2600 SDI encoder

# Contents

1. Overview	2
1.1 Application	2
1.2 Technical Specification	2,3
2. Settings	3
2.1 IP setting	3,4
2.2 Network Setting	4,5
2.3 SDI Stream Setting	6
2.4 SDI Second Stream Setting	7
2.5 Audio Expand	7,8
2.6 System	8
2.6.1 System settings	9
2.6.2 Change Password	9
2.6.3 Upgrade settings	10
2.7 RTMP protocol setting	10,11,12
3. Status	12,13,14

## 1. Overview

TBS2600 HD SDI encoder is a professional high-definition video coding box, which equipped with 1 SDI channel input and dual stream RJ45 output, what's more, it has direct SDI output which can output original data. TBS2600 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 SDI
SDI 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	De-interlacing, Noise Reduction, Sharpening
Pretreatment	

#### 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, UDP, RTSP, RTMP, ONVIF
Control Interface	WEB

#### **General Spec**

Dimensions	146mm x 122mm x 42mm
Weight	0.25kg
Working	<b>0~45</b> ℃
Temperature	

### 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

Network setting of TBS2600 HD SDI encoder is the same with TBS2216 HD HDMI encoder , here we use the picture showing network setting of TBS2216 HD HDMI encoder as template . 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.

1	🗅 Network settings-+ × 📃						
+	÷	C 192.168.	1.168/SetNet.html				
	<b>\$</b> 33	HD Encoder	A				
	Q	Status	Network				
	۲	Network					
		Notwork	DHCP:	Disable 🔻			
		Network	IP:	192.168.1.168			
	0	HDMI main	Netmask :	255.255.255.0			
	[]]	HDMI 2nd	Gateway :	192.168.1.1			
	0	CVBS main	DNS:	0.0.0.0			
	6	CVBS 2nd	MAC:	20:0F:02:64:00:0D			
	ö	Audio Expand		Apply			
	٥	System					

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

#### 2.3 SDI 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".

ры пом	htMMI Encoding settings ×					
← ⇒	C 🗋 192	.168.1.168/SetHdmiE.htm	1			<del>ර</del>
	HD Encoo	ler A				Language: English 🔻
Q	Status	SDI main				
۲	Network					
0	SDI main	channel name :	chan			
	ODI main	H.264 Level :	high profile	•		
	SDI main	Encoding frame rate :	25	[5-3		
0	SDI 2nd	Bitrate control :	cbr	•		
(Ö)	Audio Expand	Key interval :	30	[5-2	00]	
٢	System	Encoded size :	auto	•		
		Bitrate :	3200	[16-	12000]	
		Package :	A V			

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

HTTP:	/sdi	Disable 🔻 Format. /sdl (begin with "/")
HTTP Port:	80	[1-65536]
RTSP:	/sdi	Enable 🔻 Format (sdi (begin with "/")
RTSP Port :	554	[1-65535]
RTSP TCP :	TCP V	
Multicast IP :	238.0.0.1	Disable •
Multicast port :	1234	[1-65535] you can enable one of those 3 protocols
RTMP server ip :	192.168.1.123	Disable
RTMP server port :	1935	[1-65535]
RTMP app name :	live	
RTMP stream name :	sdi	
ONVIF :	Disable 🔻	
	Apply	

#### 2.4 SDI Second Stream Setting

SDI second stream setting is similar with SDI main stream setting

7	🗅 HIMI Encoding settings- 🗙 📃								
~	← → C [] 192.168.1.168/SetHdmiExtE.html							5	
		HD Enco	oder A					L	anguage: English
	Q	Status		SDI 2nd					
		Network							
	0	SDI main		H.264 Level :	main profile	•			
	0	SDI 2nd		Encoding frame rate :	25	_	[5-30]		
	-			Bitrate control :	cbr	•			
		SDI 2nd		Encoded size :	704x576	•			
	:0:	Audio Expand		Bitrate :	3200		[16-12000]		

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

🎯 System	HTTP :	/sdi_ext	Enable 🔻 Format: /sdi (begin with "/")
1	HTTP Port :	80	[1-65535]
	RTSP:	/sdi_ext	Disable 🔻 Format. Indi (begin with "/")
	RTSP Port :	554	[1-65535]
	Multicast IP :	238.0.0.1	Disable -
	Multicast port :	1235	[1-65535] you can enable one of those 3
	RTMP server IP :	192.168.1.123	Disable  preference preference
	RTMP server port:	1935	[1-85535]
	RTMP app name :	live	
	RTMP stream name :	sdi_ext	
		Apply	

Notes: Above configuration parameter is the same with main stream

#### 2.5 Audio Expand

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

	🕒 System settings-HD Enco 🗙 🔼						
÷	← → C 🗋 192.168.1.168/SetAudioE.html						
		HD Enco	ler A				
	Q	Status	Audiio Encoder				
	۲	Network					
	0	SDI main	Audio input: SDI audio ▼				
	6	SDI 2nd	Audio channel: L+R T				
	:0:	Audio Expand	Audio Codec: AAC 🔻				
		Audio Setting	Resample: Disable • RTSP audio encode : AAC •				
		OSD Setting	Apply				
		SDI color					
		image Setting					
	٢	System					

### 2.6 System

You can do "System settings", "Change Password" and "Upgrade settings" under this section. Those 3 settings are the same with TBS2216 HD HDMI encoder, here we use the picture showing those settings of TBS2216 HD HDMI encoder as template.

### 2.6.1 System settings

🗅 System settings-	-HI ×	A	
← → C 🗋 192.	168.1.168/System.html		
10 Encode	r A		
🖵 Status	System settings	Change Password Upgrade settings	
Metwork			
P HDMI main		Reset Reboot	
HDMI 2nd			
O CVBS main			

# 2.6.2 Change Password

System settings-HI ×										
← → C 🗋 192.168.1.168/System.html										
10 Encoder A										
C Status	System settings	Change Password	Upgrade settings							
Network										
HDMI main	New passwo	rd:								
HDMI 2nd	Confirm new passwo	rd:								
O CVBS main		Apply								
CVBS 2nd										

2.6.3 Upgrade settings

System settings-HI ×									
← → C 🗋 192.168.1.16	58/System.html								
10 Encoder A									
🖵 Status	System settings Change Password Upgrade se	ettings							
Metwork									
HDMI main	Upgrade settings: 选择文件 未选择任何文件								
HDMI 2nd	Upload								
CVBS main									

# 2.7 RTMP protocol setting

RTMP server ip	p: 192.168.1.123 Enable ▼
RTMP server por	t: 1935
RTMP app name	e: live
RTMP stream name	e: <mark>hdmi</mark>
ONVIE	E: Disable V
	Арріу
RTMP server ip:	192.168.1.123 Enable •
RTMP server port:	1935 [1-65535]
RTMP app name:	live
RTMP stream name:	hdmi
ONVIF:	Disable 🔻
	Арріу

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

you should choose: baseline profile.

2.7.2 RTMP protocol: enable and able can choose

#### 2.7.3 RTMP server IP: Input your corresponding serve IP

#### 2.7.4 RTMP App Name: user-defined

#### 2.7.5 RTMP stream name: user-defined

#### 2.7.6 Sever Testing

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

#### 2.7.6.2 Start the background software



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

**2.7.6.4** 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 SDI main stream setting and SDI 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.

	HD End	oder A				
Q	Status	Acc	ess address	Video parameters	Audio parameters	Hardware sta
	SDI status SDI 2nd		Access addres	:s: rtsp://192.168.1.168:554/s	di	
۲	Network					

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

/	C Status display-HD Encod ×									
← → C [192.168.1.168										
		HD Enc	oder A	۸ 				I		
	Q	Status		Access address	Video parameters	Audio parameters	Hardware status			
		SDI status		Video	size: 1920*1080p					
		SDI 2nd	Input fps: 25							
	۲	Network		Encode	e fps: 25					
		PDI moin								

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

	🕒 Status display-HD Encod 🗙 🦲									
<	← → C [] 192.168.1.168									
		HD Eno	coder A							
	Q	Status		Access address	Video pa	arameters	Audio parameters	Hardware status		
		SDI status		с	hannel: 2					
		SDI 2nd		Input s	ample: 4800i	0				
	۲	Network		Encod	ed size: O					
	0	ODI main								

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

C Status display-HD Encod x									
← → C 🗋 192.168.1.168/indexE.html									
		HD Enc	coder .	A					
	Q	Status		Access address	Video parameters	Audio parameters	Hardware status		
		SDI status SDI 2nd		Interrupt num Missing interrupt num	nber: 25433306 nber: 2				
		Network							
	$\odot$	SDI main							

--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 SDI main stream or SDI 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 SDI Main Stream Setting" and "2.4 SDI Second Stream Setting".

