

# **FMUSER USER MANUAL** For H.264/H.265 High Definition HD **IPTV Streaming Encoder** This manual is compatible for the following models: --FBE200-H.264-LAN (Not include WIFI and HLS) --FBE200-H.264 (include WIFI and HLS)

--FBE200-H.265 (include WIFI and HLS)

\*Some functions mentioned in this manual are applied to corresponding models, not to all models listed, thus this manual shall never be used as a promise for all functions available on all models.

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#### 1. Overview:

FMUSER FBE200 series encoders are featured by highly integrated and cost-effective design which enabled them to be widely used in a variety of digital distribution systems, such as construction of professional broadcast level IPTV&OTT system, hospital and hotel IPTV systems, remote HD multi-window video conferences, remote HD education and remote HD medical treatments ,Streaming Live Broadcast etc.

The FMUSER FBE200 H.264 /H.265 IPTV Streaming Encoder supports 1 extra audio input through 3.5mm jack except from the HDMI input, the two channels can be input at the same time.

This device supports three IP stream output, each output can be different resolutions, among which the maximum resolution for the Main Stream is 1920\*1080, for the Side Stream is 1280\*720 and for the Third stream is 720\*576. These three streams all support the IP protocols output of RTSP / HTTP/ Multicast / Unicast / RTMP.

FMUSER FBE200 IPTV Encoder can deliver H.264/ H.265/ video streams with multi channels of IP output which are independent from each other, to various servers for IPTV & OTT applications, such as Adobe Flash Server(FMS), Wowza Media Server, Windows Media Server, RED5, and some other servers based on UDP / RTSP / RTMP / HTTP / HLS / ONVIF protocols. It also supports VLC decode.

This device also have SDI versions, there are 4 in 1 version and 16 in 1 version inputs made in professional 19' Rack chassis, please feel free to contact us if you need them.

If you want to promote your own brand, we can also do OEM for you.

\*We reserve the right to upgrade the appearance or functions of the product without extra notice.

## **1.1 Applications**

--Digital TV Broadcasting System

--RJ45 Digital TV Programs Transmission

--Hotel TV System

--Head-end system of Digital TV branch network

--CATV Broadcasting system

--Edge side of Digital TV backbone network

--IPTV and OTT head end system

## **1.2 Technical Specifications**

## Input

Video input	1 x HDMI (1.4a ,1.3a) (support HDCP protocol, or 1 x SDI for option)
HDMI input	1920×1080_60i/60p, 1920×1080_50i/50p, 1280×720_60p,1280×720_50p
Resolution	576p,576i,480p,480i and below
Audio input	1 x 3.5mm Stereo L / R, Support 32K ,44.1K audio signal sources.

#### Video

Video Encode	H.264 MPEG4/AVC Basicline / Main Profile / High Profile, H.265	
Output	1920x1080,1280x720,850x480,720x404,704x576,640x480,640x360,	
Resolution	480x270	
Biterate Ctrl	CBR / VBR	
Color adjust	Brightness, Contrast, Hue, Saturation	
OSD	Chinese and English OSD ,BMP LOGO	
Filter	Mirror, flip, Deinterlace, Noise reduction, Sharpen, Filtering	

#### Audio

Audio input	Support resampling 32K, 44.1K
Audio encode	AAC-LC, AAC-HE, MP3, G.711
Audio gain	Adjustable for -4dB to +4dB
Sampling rate	Adaptive, selectable of re-sample
Bit Rate	48k,64k,96k,128k,160k,192k,256k

#### Streaming

Protocol	RTSP,UDP Multicast, UDP Unicast, HTTP ,RTMP, HLS, ONVIF
FIOLOCOI	TATSF, ODF MULLICASL, ODF OFFICASL, THTF, INTRE, TES, ONVIT

<b>Fmusê</b> r

FMUSER INTERNATIONAL GROUP INC.Web: www.fmuser.orgRTMPStreaming media server, as: Wowza, FMS,Red5,Youtube, Upstream,<br/>Nginx, VLC, Vmix, NVR etc.Three streamsSupport main stream, sub stream and 3rd stream, support web page<br/>preview video, Broadcast, VOD, IPTV and OTT, Mobile/ web, Set top box<br/>applicationsData Rate0.05-12MbpsFull-duplex<br/>modeRJ45,1000M / 100M

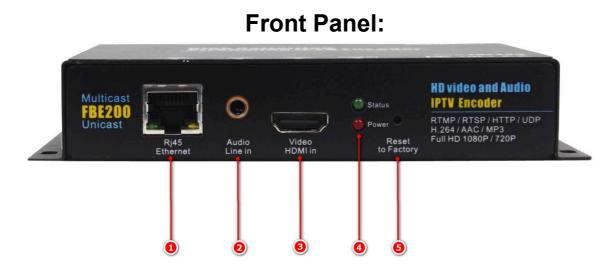
#### System

Web server	Web Control Default IP: http://192.168.1.168 user: admin pwd: admin	
Web UI	English	
Support	Microsoft standard flow driven architecture (WDM architecture), Micros	
	WMENCODER, Windows VFW software architecture and WDM mode	

#### General

Power supply	110VAC±10%, 50/60Hz; 220VAC±10%, 50/60Hz
DC Power input:	12V or 5V by Micro-USB
Consumption	less than 0.30W
Operating temperature:	045°C (operation), -2080°C (storage)
Dimensions	146mm(W)x140mm(D)x27mm(H)
Package Weight	0.65KG

## **1.3 Appearance**



- 1. RJ45 100M / 1000M Cable Network
- 2. 3.5mm Stereo Audio Line in
- 3. HDMI Video in
- 4. Status LED / Power LED:

-The red light is the indicator for power supply.

-The green light is for working status, it lights up when the device is running normally and well connected to internet; Otherwise it'll be OFF.

-Press the reset key to restart the device when green light flashes, then the green light goes off.

5. Reset to Factory setting.

-Restore factory settings, the device starts normally, press the button and hold 5 seconds, the green light flashes 6 times until the green light turns off the device to restart, and then release the button to complete the factory settings.



#### FBE200-H.264-LAN





- 1. 2.4G WIFI Antenna Interface--SMA-K (FBE200-H.264-LAN doesn't have this interface.)
- 2. Micro USB Power Port (5V,optional)
- 3. DC Power Port (12V)

## **1.4 Quick Guide for Connecting part**

When you are the first time to use FMUSR FBE200 encoder, please do a quick with the following procedures:

- 1. Use the HDMI cable to connect the DVD and FBE200 encoder, get the DVD playing.
- 2. Use the RJ45 cable to connect the computer and the FBE200 encoder. Add the 192.168.1.\* to your computer setting of TCP/IP protocols.
- 3. Plug in 12V power for the FBE200 encoder.
- 4. Open VLC Media Player. Click "Media," then "Open Network Stream."
- 5. Type in the URL of "rtsp://192.168.1.168:554/main"
- 6. Click "Play." The stream will begin to play.

Please go to <a href="http://bbs.fmuser.com">http://bbs.fmuser.com</a> and get a step by step tutorial.

#### 2 Login web manager

## 2.1 Computer IP setting

- > The default IP address for FMUSER FBE200 HDMI Encoder is 192.168.1.168.
- > Your computer' IP address must be 192.168.1.XX for connecting with Encoder.

(Note: "XX" can be any number ranging from 0 to 254 except 168.)

eneral	
	d automatically if your network supports and to ask your network administrator for
Obtain an IP address auton	natically
O Use the following IP address	18:
IP address:	192 . 168 . 1 . 219
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192 .168 . 1 . 1
O Obtain DNS server address	automatically
() Use the following DNS serv	/er addresses:
Preferred DNS server:	192 .168 . 1 . 1
Alternate DNS server:	· · · ·
	Advanced

#### 2.2 Connect to FMUSER FBE200 Encoder

> Connect your computer to FMUSER FBE200 through network line cable.

>Open IE browser, input "192.168.1.168" to visit FMUSER FBE200 HDMI Encoder's WEB administrator page.

User Name: admin Password: admin



P -

*e* http://**192.168.1.16**8/

ndows Security	
The server 192.168.1.168 is asking for your user name server reports that it is from ts_box.	e and password. The
Warning: Your user name and password will be sent authentication on a connection that isn't secure.	using basic
admin	
Remember my credentials	
	DK Cancel

#### 3 Status

You will be able to see all status information of the FEB200 encoder, which includes stream URLs, encode parameters, HDMI signal information, audio capture information and audio encode parameters, as well as video preview and color adjustment interface, etc. And you can directly copy them to the VLC player software for decoding.

Status	Network M	edia Acc	ess System			
Device status	1	Audio info 🙋				
Device ID:	0A10160825000083	Audio input:	HDMI audio			
Device version:	20161209	Audio sample(hz):	48000	main stre	am ext stre	am 🗼 3rd stream
Video info:	1080P50	Audio channel:	2	6		
Interrupt count:	146315	Resample(hz):	48000	•		0
Lost count:	31	Encode:	AAC-LC			
Audio status:	enable	Bitrate(bps):	48000		<u></u>	
Audio count:	989652992			The second second		
1ain stream	3	Extended stre	am 🕢	1239		
Resolution:	102081000					
	1920,1080	Resolution:	720*480		-	
	rtsp://192.168.1.168:554/ma		720*480 rtsp://192.168.1.168:554/e	xt		
RTSP:		in RTSP:		xt		
RTSP: TS over IP:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com	in RTSP: TS over IP:	rtsp://192.168.1.168:554/e		50	[0-100
RTSP:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010	in RTSP: TS over IP:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled	Brightness:		[0-100
RTSP: TS over IP: RTMP: Encode:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com /lwe2/xczy-gyu0-dawk H.264	in RTSP: TS over IP: RTMP:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264			[0-100
RTSP: TS over IP: RTMP:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com /lwe2/xczy-gyu0-dawk H.264	in RTSP: TS over IP: RTMP: Encode:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR	Brightness:	50	
RTSP: TS over IP: RTMP: Encode:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com /lwe2/xczy-gyu0-dawk H.264 CBR	in RTSP: TS over IP: RTMP: Encode: Encode ctrl:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR 30	Brightness: Contrast: Hue:	50 50	[0-100 [0-100
RTSP: TS over IP: RTMP: Encode: Encode ctrl:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com /lwe2/xczy-gyu0-dawk H.264 CBR 30	in RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR 30	Brightness: Contrast:	50 50	[0-100
RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com /lwe2/xczy-gyu0-dawk H.264 CBR 30 2048	in RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR 30 1024	Brightness: Contrast: Hue:	50 50	[0-100 [0-100
RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS: Bitrate(kbps):	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com //we2/xczy-gyu0-dawk H.264 CBR 30 2048	in RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS: Bitrate(kbps):	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR 30 1024 H.264	Brightness: Contrast: Hue: Saturation:	50 50 50	[0-100 [0-100 [0-100 <b>default</b>
RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS: Bitrate(kbps): Bitrate(kbps): Resolution:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com //we2/xczy-gyu0-dawk H.264 CBR 30 2048	in RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS: Bitrate(kbps): Encode: Encode ctrl:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR 30 1024 H.264 CBR	Brightness: Contrast: Hue: Saturation:	50 50 50 <b>apply</b>	[0-100 [0-100 [0-100 <b>default</b>
RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS: Bitrate(kbps): Bitrate(kbps): Resolution: RESP:	rtsp://192.168.1.168:554/ma udp://@238.0.0.1:6010 rtmp://a.rtmp.youtube.com //we2/xczy-gyu0-dawk H.264 CBR 30 2048 720*480	in RTSP: TS over IP: RTMP: Encode: Encode ctrl: FPS: Bitrate(kbps): Encode: Encode ctrl:	rtsp://192.168.1.168:554/e udp://@238.0.0.2:6030 disabled H.264 CBR 30 1024 H.264 CBR 30	Brightness: Contrast: Hue: Saturation:	50 50 50 <b>apply</b>	[0-100 [0-100 [0-100 <b>default</b>

Fmuse	HD live b
Status	Network N
Device status Device ID:	0A10161107000273
Device version:	20161015
Video info:	1080P50
Interrupt count:	0
Lost count:	0
Audio status:	enable
Audio count:	0

## 3.1 Device Status:

- 1) Device ID
- 2) Device Version: The Firmware version.

3) Video info: Video signal parameters that inputted in.

4) Interrupt Count: 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.

5) Lost Count: This figure is generally very small, a large number of lost frames, the video card, it is necessary to detect the input program source is normal

6) Audio Status:

7) Audio Count: Increasing audio count it has 3.5mm input. If it displays as 0, it means there is no video input, then you need to check the input signal.

If you are an experienced user, for more information about the counter

#### Please go to <a href="http://bbs.fmuser.com">http://bbs.fmuser.com</a>

#### 3.2 Audio info

- Audio input: Currently Audio input (HDMI or line in)
- 2) Audio sample(HZ):
- 3) Audio Channel :
- 4) Resample(HZ): disable / 32k /44.1k
- 5) Encode: AAC-LC / AAC-HE / MP3
- 6) Bit rate(bps):48000-256000bps

## broadcast box

Media	Acc	ess	Syste
Audio	info 2		
		HDMI audio	
Audio s	ample(hz):	48000	
Audi	o channel:	2	
Res	ample(hz):	48000	
	Encode:	AAC-LC	
Bit	trate(bps):	48000	



## 3.3 Main Stream / Extended stream / 3<sup>rd</sup> stream

Main stream	3	Extended stre	eam 🕘
Resolution:	1920*1080	Resolution:	720*480
RTSP:	rtsp://192.168.1.168:554/main	RTSP:	rtsp://192.168.1.168:554/ext
TS over IP:	udp://@238.0.0.1:6010	TS over IP:	udp://@238.0.0.2:6030
RTMP:	disabled	RTMP:	disabled
Encode:	H.264	Encode:	H.264
Encode ctrl:	CBR	Encode ctrl:	CBR
FPS:	30	FPS:	30
Bitrate(kbps):	2048	Bitrate(kbps):	1024
Brd stream		Encode:	H.264
Resolution:		Encode ctrl:	CBR
RTSP:	rtsp://192.168.1.168:554/3rd	FPS:	30
TS over IP:	udp://@238.0.0.3:6050	Bitrate(kbps):	1024
RTMP:	disabled		

- 1) Resolution: 1920\*1080 -----Output stream resolution.
- 2) RTSP: rtsp://192.168.1.168:554/main ---- it can be directly copied to the VLC player software for decoding.
- 3) TS over IP: ----Http / Unicast / Multicast, only work one at same time.

http://192.168.1.168:80/main	Http output
	11 1 1 1

udp://@238.0.0.2:6010 ---- Unicast output

udp://@192.168.1.160:6000 ---- Multicast output

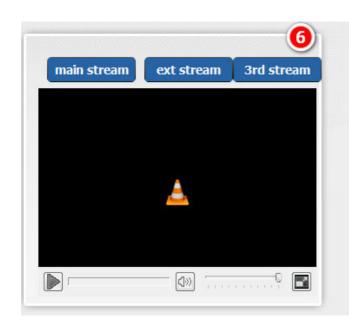
RTMP: rtmp://a.rtmp.youtube.com/live2/xczy-gyu0-dawk-\*\*\*\*
 ---- Your YouTube RTMP address

- 5) Encode: H.264
  - ----H.264 / H.265 (some model only H.264)
- 6) Encode ctrl: CBR
- 7) FPS: 30
- 8) Bit rate(kbps): 2048

Extended Stream ----2<sup>nd</sup> output stream

3rd Stream

----CBR / VBR





## 3.4 Live video show

Only use in Firefox browser and you need install the Vic plugin\_add-ons of vlc. Download it at http://www.videolan.org/vlc/





#### 3.5 Video Color and Brightness setting

If you had open the HLS, you may try the hls address to set on your

HLS URL: http://192.168.1.168:8080

## 4 Network Setting

Network page display and network address and related parameters modification.



Modifications will take effect upon restart of the device.

- Set FMUSER FBE200 encoder's IP address according to your LAN IP. For example, if your LAN IP is 192.168.8.65, FBE200 IP should be set to 192.168.8.XX ("XX" can be any number ranging from 0 to 254 except from 168). FMUSER FBE200 should be in the same Network environment as your LAN IP.
- 2) If you don't have LAN ,you can try to use WIFI connection by setting the WIFI ID and the password (This setting is applicable only to the versions with WIFI).

The wifi is only for 2.4G, if you found the wifi can not connect, try to reset find out the router open

2.4G ,sometimes they work for 5.8G.

Status	Network	Media	Access S	ystem		
letwork			V	VIFI		
IP mode:	manual	T		WIFI IP:	192.168.1.150	
IP:	192.168.1.168			WIFI netmask:	255.255.255.0	
Netmask:	255.255.255.0			WIFI gateway;	192.168.1.1	
Gateway:	192.168.1.1			WIFI Essid:	fmuser	
MAC:	00:01:78:19:00:53			WIFI Encryption:	WPA/WPA2	٠
DNS0:	114.114.114.114			WIFI password:	hellofmuser	
DNS1:	235.5.5.5					

- 3) Click "set up" button to save the new setting.
- 4) After network setting is done, you need to reboot the device to make it work.

\*\* Reset and Initialization, if you forgot the IP address you've set, please reset to factory.

- a) Press and hold the Reset button for 5 seconds to reset and initialize the FMUSER FBE200 HDMI Encoder.
- b) After reset, FMUSER FBE200 will restore factory setting with IP address of 192.168.1.168.

## 5 Media Setting

Media page includes video encoding parameters for the stream setting, such as Mirror, flip and deinterlace setting, output OSD subtitles and bmp LOGO, as well as audio input setting, Audio resampling, audio encode, volume control etc.

Fmuse	HD liv	ve broad	cast box			English 👻
Status	Network	Media	Access	System		
Media				Volume:	default	······
	HDMI audio	•		Mirror&Flip:	Disable	
Resample(hz):	disable	▼ L+		Deinterlace:	Disable	
Audio encode:	AAC-LC	<b>→</b> 48	kbps 🔻		apply	
Main media				Ext media		
Encode:	H.264	•		Encode:	H.264	•
Encode profile:	main profile	•		Encode profile:	main profile	•
Resolution:	auto	•		Resolution:	720x480	*
FPS(fps):	30	[5-6	50]	FPS(fps):	30	[5-60]
GOP:	60	[10	-180]	GOP:	60	[10-180]
Bitrate ctrl:	CBR	•		Bitrate ctrl:	CBR	
Bitrate(kbps):	2048	[50	-12000]	Bitrate(kbps):	1024	[50-12000]
	apply				apply	
Main OSD				Ext OSD		
Text:		Dis	sable 🔻	Text:		Disable 💌
	apply				apply	
Main LOGO				Ext LOGO		
BMP:		Dis	sable 🔻	BMP:		Disable 👻
	apply				apply	
3rd media				3rd stream 09	SD&LOGO	
Encode:	H.264	*		Text:		Disable 💌
Encode profile:	main profile	•			apply	
Resolution:	720x480	•				
FPS(fps):	30	[5-6	50]	BMP:	-	Disable 💌
GOP:	60	[10	-180]		apply	
Bitrate ctrl:	CBR	•				
Bitrate(kbps):	1024	[50	-12000]			
	apply					
				~~~~~		



## 5.1 Media setting

#### Status Network Media Media Audio input: HDMI audio -HDMI Resample(hz): line in L+R -Audio encode: AAC-LC 48kbps • Media Status Network Media Audio input: HDMI audio -▼ L+R ▼ Resample(hz): disable L+I Audio encode: AAC-LC --Left Right

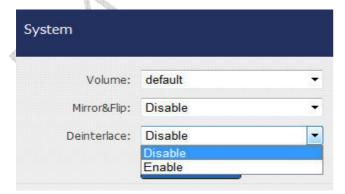
Status	Network	Media	
Media			
Audio input:	HDMI audio	•	
Resample(hz):	disable	💌 l	L+R ▼
Audio encode:	disable 32k 44.1k	4	48kbps 🔻
Status	Network	Media	
Media			
Audio input:	HDMI audio		
	disable		L+R 🔻
Resample(hz):	anounte		
Resample(hz): Audio encode:	AAC-LC		48kbps 🔹

#### Audio LR: L+R/Left/Right

#### Audio encode: AAC-LC/AAC-HE/MP3

em		System		
Volume:	default	Volume:	default	•
Mirror&Flip:	-4 -3	volume.	delault	
	-2	Mirror&Flip:	Disable	-
Deinterlace:	-1		Disable	
	default +1	Deinterlace:	TVIIII OI	
	+2 +3		Flip	
media	+3		Mirror&Flip	

#### Volume: form -4--+4db



#### Video Mirror Flip: disable/mirror/flip/mirror Flip

#### Deinterlace: Disable/Enable

Disable: when you use 1080p, 720p...input

Enable: When you use 1080i, 720i, 576i input

## 5.2 Main media setting (video)

> Not all models support both H.264 and H.265 at the same time, you can choose the corresponding ones based on your need.

If you want to support RTMP you should choose the baseline profile ,H.265 only supports baseline profile, if to use HLS , please make sure to set it to Baseline.

Main media			Main media		
Encode:	H.264	<b>T</b>	Encode:	H.264	•
Encode profile:	main profile		Encode profile:	main profile	•
Resolution:	baseline main profile		Resolution:	auto	•
FPS(fps):	heigh profile 30	[5-60]	FPS(fps):	30	[5-60]
GOP:	60	[10-180]	GOP:	60	[10-180]
Bitrate ctrl:	CBR	•	Bitrate ctrl:	CBR	-
Bitrate(kbps):	2048	[50-12000]	Bitrate(kbps):	CBR VBR	[50-12000]
	apply			apply	

#### Encode Profile: baseline/main profile/high profile

Bit rate: CBR / VBR

Encode:	H 264	-
Literati		
Encode profile:	main profile	•
Resolution:	auto	-
	1920x1080	
FPS(fps):	1600×900	[5-60]
	1440x1050 1440x900 <b>25-40FPS</b>	
GOP:	1360x768	[10-180]
	1280x720	
Bitrate ctrl:	1280×800	
	1280x768	
Bitrate(kbps):	1024x768	[50-12000]
	1024x576 25-50FPS	
	960x540	
	850x480 800x600	
Main OSD	720x576	
Main 050	720x540	
Text:	720x480	Disable
	720x404	
	704x576	
-	640×480	_
Main LOGO	640x360 480x270	
	auto	
BMP:	auto	Disable

Resolution: main media has more choices.

If you set the resolution to 1280x720, The FPS should be lower than 50.

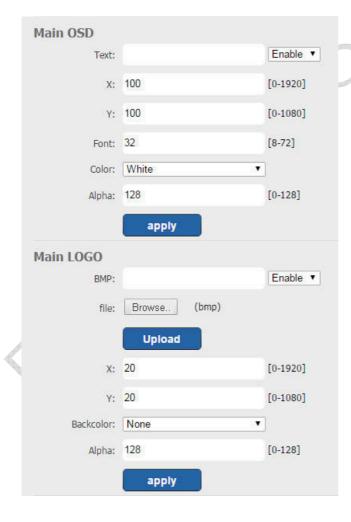
Bit rate: Live Stream RTMP 1500-3000kbps

IPTV 1920\*1080p 4000-12000kbps

FPS depends on your output resolution, it can't exceed the input frame rate. Otherwise the image will appear to have dropped frames. We advice you to set 25 fps normally.



Main media		
Encode:	H.264	-
Encode profile:	main profile	3
Resolution:	auto	-
FPS(fps):	1920x1080 1600x900 1440x1050	[5-60]
GOP:	1440x900 Main Stream 1360x768	[10-180]
Bitrate ctrl:	1280x720 1280x800 1280x768	
Bitrate(kbps):	1024x768 1024x576 960x540 850x480 800x600	[50-12000]
Main OSD Text:	720x576 720x540 720x480 720x404 704x576 640x480	Disable 🔻
Main LOGO BMP:	640x360 480x270 auto	Disable 🔻



#### Main Stream is from 1360\*768 to 1920\*1080

Extended Stream is from 800\*600 to 1280\*720

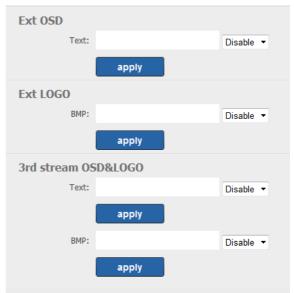
3rd Stream is from 480\*270 to 720\*576

## 5.3 OSD setting

You can write a text as a OSD.

Or upload a \*.bmp file as a LOGO.

Try to set the X-axis and Y-axis you want to show the OSD and LOGO.



6 Access :

FBE200 supports protocol of HTTP, RTSP, Unicast IP, Multicast IP, RTMP and ONVIF. You can choose any of them on the access page according to your application.

Fmuse	HD live	e broa	idcast box			English 👻
Status	Network	Media	Access	System		
Service Info				TS Packet:	B •	
HLS select:		•		HTTP Port:	80	
UDP Mode:		•		RTSP Port:	554	UDP -
TS Mode:	ffmpeg	<b>.</b>				
				KTSP audio.	AAC or MP3	
Main RTMP				Ext RTMP		
	URL Mode	•	Enable 🔻		Classic Mode 👻	Enable 🔻
RTMP URL:	rtmp://a.rtmp.youtul	be.com/live		RTMP Server:	rtmp://a.rtmp.youtube.com	
	-			RTMP Port:		
	Set up					
				Application:	/live2	
				Stream:	/xczy-gyu0-dawk-ak4u	
				User:		
				Password:		
					Set up	
Main stream				Ext stream		
RTSP:	/main		Enable 🔻 (as:/main)	RTSP:	/ext	Enable - (as:/ext)
HTTP:	/main		Disable 🔻 (as:/main)	HTTP:	/ext	Disable - (as:/ext)
Unicast:	192.168.1.160		Disable 🔻	Unicast:	192.168.1.161	Disable 🔻
Unicast port:	6000			Unicast port:	6020	
Multicast:	238.0.0.1		Enable 🔻	Multicast:	238.0.0.2	Enable 👻
Multicast port:	6010			Multicast port:	6030	
	Set up				Set up	
3rd stream				3rd RTMP		
RTSP:	/3rd		Enable 🔻 (as:/3rd)	RTMP:	URL Mode 👻	Disable 🔻
HTTP:	/3rd		Disable 👻 (as:/3rd)	RTMP URL:	rtmp://	
Unicast:	192.168.1.162		Disable 🔻		Set up	
Unicast port:	6040					
Multicast:	238.0.0.3		Enable 🔻			
Multicast port:	6050					
	Set up					



6.1 Service Info

Setting the HLS, HTTP Port, TS mode, RSTP port and Audio.

Status	Network	Media	Access	System			
Service Info				TS Packet:	B	•	
HLS select:	Close	•					
UDP Mode:	Auto			HTTP Port:	80		
TS Mode:	ffmpeg	•		RTSP Port:	554		UDP -
				RTSP audio:	AAC or MP3	•	
					Set up		
					-		

HLS select: Some models supports HLS, you can select HLS for corresponding stream in the downlist.

UDP mode: Auto(for 1000M/100M),A(for 100M,B(for 10M) ,some IPTV STB has only 100M internet bandwidth, if you find it doesn't work well by multicast, please change it to B.

6.2 RTMP Setting			
4-1- DTMD			
Tain RTMP: URL Mode	Ext RTMP RTMP:	Classic Mode 🗸	Enable 🔻
RTMP URL: rtmp://a.rtmp.youtube.com/live2	RTMP Server:	rtmp://c.rtmp.youtube.com	-
Set up	RTMP Port:	1935	
	Application:	/live3	
	Stream:	/xczy-gyu0-dawk-8cf1	
	User:		
	Password:		
		Set up	

RTMP URL Mode: Use the RTMP address in one line, not separate lines.

For example: rtmp://a.rtmp.youtube.com/live2/xczy-gyu0-dawk-8cf1

RTMP Classic Mode: as shown in the picture. Please don't forget to input the "/" in the address.

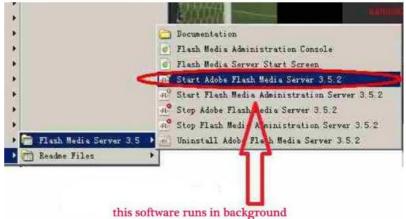
After all the parameters are filled in based on your needs, click "Set up" to save the settings, and reboot the device.

> H.264/H.265 level Baseline main / high / profile: If you want support RTMP, please choose baseline profile or main profile. > Sever Testing:

-- Set the FBE200 encoder RTMP address to the FMS server address:

rtmp://192.168.1.100:1935/live/hdmi

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



-- Go to folder "Flash Player", find "VideoPlayer.html" and open it

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

ADOBE FLASH' MEDIA SERVER SAMPLE VIDEO PLAYER	Aco.
	SELECT A VIDEO FROM THE LIST BELOW           SUBRCE: sapplications/vod/media           subret: sapplications/vod/media           SUBRCE: webrootvod           Missamper: sammers and           Subrec: sapplications/in/sign           subret: sapplications/in/sign           SUBRCE: webrootvod           Missamper: sammers and           subret: sample: sammers and           subret: sample: sammers and           subret: sample: sammers and           subret: sample: sammers and           SUBRCE: sample: sammers and           subret: sammer
STREAM YOUR OWN VIDEO	
STREAM URL: http://192.168.1.100.1935/live/hdmi URL Syntax: [protocol] //servemanie/jeppication/[codeciD][streamname][edension] input: rtmp://192.168.1.100:1935/live/hdmi	■ VOD N LIVE PLAYSTRAM

You can enable "HTTP", "RTSP" or "Multicast IP" as needed. After all the data are settled, click the button "Apply" .



## 6.3 Main Stream Setting

You can enable one of "HTTP", "Unicast" or "Multicast" as needed, after all the data is settled, click "set up".

Fmusé	HD liv	ve broadca	ast box			English •
Status	Network	Media	Access	System		
Service Info HTTP Port: UDP Mode: TS Mode:	80 Auto ffmpeg			RTSP Port: RTSP audio:	554 AAC or MP3 Set up	UDP V
	URL Mode rtmp://a.rtmp.youtu Set up	You	an enable	RTMP URL:	URL Mode rtmp:// Set up	▼ Disable ▼
HTTP: Unicast: Unicast port:	192.168.1.160 6000 238.0.0.1			Unicast port:	/ext 192.168.1.161 6020 238.0.0.2	Enable  (as:/ext) Disable (as:/ext) Disable Enable

Notes: All the data above can be adjusted based on your practical application.

You can enable one of these 3 protocols as you need.

#### 6.4 Ext Stream and 3rd stream

Same setting like Main stream.

## 6.5 How many Streams can work on the FBE200 at one time?

Every stream can work with RTMP, RTSP, and http/unicast/multicast) at the same time.

So if it full runs, it will be work 3\*3=9 streaming at one time. (3 x RTMP, 3 x RTSP, 3 one of (http, Unicast, Multicast).

tain RTMP RTMP:	URL Mode 🗸	Enable	Ext
1 RTMP URL:	rtmp://a.rtmp.youtube.com/live2		
8	Set up		
lain stream			Ext
2 RTSP:	/main	Enable	(; s:/main)
	/main	Disable 1	(as:/main)
3 HTTP:			(IS, ITIGIT)
	192.168.1.160	Enable	One of the 3
	()))))))))))))))))))))))))))))))))))))		One of the 3
Unicast: Unicast port:	()))))))))))))))))))))))))))))))))))))		One of the 3 (Http ,Uincast ,Multicast)

## 7 System Setting

You can modify the device ID and administrator password on the system setting page, as well as upgrading the firmware, restoring the factory settings, restarting the encoder and other functions.

Upgrade: Upgrade the firmware; you can download the newest firmware on bbs.fmuser.com.

Reset password: change the login password, which must be Less than or equal to 12 characters.

Reset: Reset all setting to the factory.				Reboot: Warm boot		
Fmus	er HD liv	ve broadca	ast box			
Status	Network	Media	Access	System		
Device ID: Device ID	: 0A1016110700027: Modify	3		Reset password New password: Confirm password: Modify		
Upgrade Current version Firmware	()	3		System Reset Reboot		



#### **About Reboot**

If you use the button of apply, modify, it will run immediately, not need for reboot.



If you use the button of upgrade, set up, a reboot is needed, you can click the reboot button or re-plug the power sourcee.



#### 8 Order Guide

Model No.	Chassis	Encoding	Input	wireless	other
FBE200-H.264-LAN	Small box	h.264	1 x HDMI or SDI in		_
T DL200-I1.204-LAN			3.5mm Stereo in	_	
FBE200-H.264	Small box	h.264	1 x HDMI or SDI in	2.4g WIFI	HLS
FBE200-N.204			3.5mm Stereo in	2.49 WIFI	
FBE200-H.265	Small box	h.264	1 x HDMI or SDI in		HLS
FBE200-0.200	Smail box	/ h.265	3.5mm Stereo in	2.4g WIFI	
FBE204-H.264	19' 1U Rack	h.264	4 x HDMI or SDI in	-	_
FDE204-N.204			3.5mm Stereo in		
FBE204-H.265	19' 1U Rack	h.264	4 x HDMI or SDI in		
FBE204-F.205	19 TU Rack	/ h.265	3.5mm Stereo in	_	—
	19' 3U Rack	h.264	16 x HDMI or SDI in		
FBE216-H.264		11.204	3.5mm Stereo in	_	_
		h.264	16 x HDMI or SDI in		
FBE216-H.265	19' 3U Rack	/ h.265	3.5mm Stereo in	-	-

## 9 Troubleshooting

1) Black screen, nothing output from the streaming.

-Check the Status (Refer to 3.1) , if you find the interrupt count is 0 or there is no automatic increase, check the HDMI (SDI) cable and video source.

2) There are some horizontal red short lines on the Screen.

-Replace a new and good HDMI cable.

3) The picture freeze like a still shot of the movie for a few seconds and then it resumes playing.

-Check the Status of video input and refer to 5.2 (FPS) .

- 4) Freezing playing with VLC on the computer, but playing well on another computer.
- -Check the CPU usage status of the computer, usually the problem is the computer CPU is running too full.
- 5) Others, like blurred screen....

Go to the <u>http://bbs.fmuser.com</u>, there is a solution to help you correct the problem on live streaming.

#### 10 Get Help ( http://bbs.fmuser.com )

All FMUSER products are equipped with 10 years technical support. If you have any questions related to our products, please visit <u>http://bbs.fmuser.com</u> and submit a help post, our engineer will reply you quickly.

#### How to get help fast?

In order to save time and get better understanding of the problems, please provide the information as below, this will help us to get a solution faster.

- a. The full page Screenshots of status
- b. The full page Screenshots of media
- c. The full page Screenshots of access
- d. What is the problem

If you have any application for encoders, you are welcomed to share your application case with us.

That is all, enjoy your streaming.

Tomleequan

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