

# Magicbox HD501pro

## H.265 H.264 4K@60fps IPTV Encoder



Magicbox-HD501Pro, H.265/H.264 4K 60FPS HD-MI Encoder, making live 4K video delivery available for satellite, cable terrestrial and fiber networks. It offers optimal ultra-low-bitrate and open-standard H.265/H.264 today's streaming demands. Low cost and easy-to-use video streaming appliance designed for professional video producer, the unit employs precision encoding technology originally reserved for professional transmission.

Equipped with 1 channel HD-MI input, max resolution up to 3840\*2160 4K@60fps. It can deliver H.265/H.264 encoding video streams to various servers, such as Adobe Flash Server, Wowza Server, Windows Media Server and some other servers based on UDP/RTSP/RTMP/RTMPS/HTTP/HLS protocols.

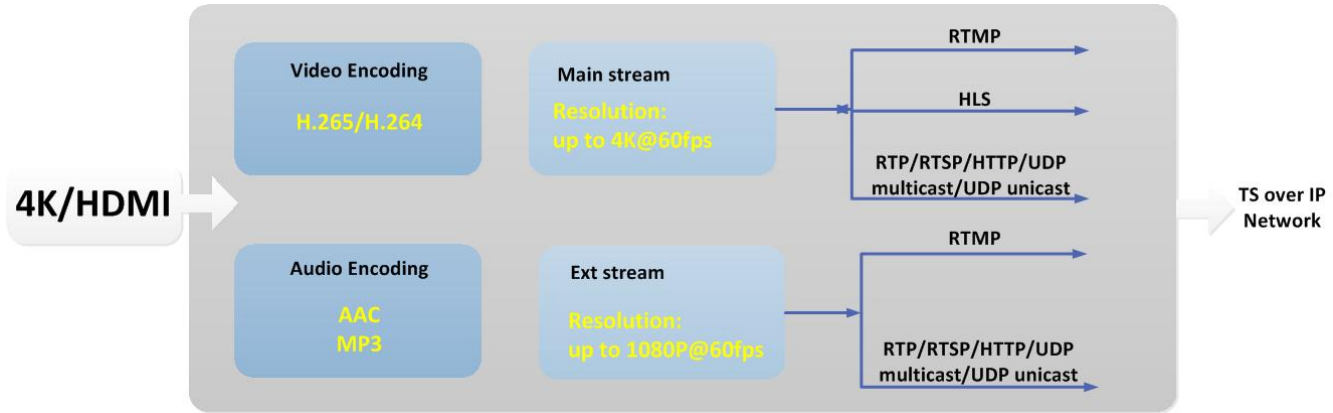
### Features

- 1 channel 4K HD-MI 2.0 (HDCP 2.2) Input
- HD-MI loop out
- Two Protocol, Bitrate, Resolution, Profile per HD-MI Source Outputs
- Main streaming up to 4k@60fps; the second streaming up to 1080p@60fps
- Support multi protocol output, RTSP, RTP, RTMP, RTMPS, HLS, Onvif, one of HTTP/UDP multicast/UDP unicast protocol out simultaneously
- support push stream to RTSP server
- LAN2 is the main network port for data output, LAN1 is only used as a secondary configuration management port
- Compatible with streaming media servers such as Wowza / FMS / RED5, cooperate with streaming media server to push TS stream to realize live video
- DHCP to obtain IP automatically, support restore, version upgrade and remote maintenance
- Support simultaneous display of one computer and multiple devices
- HD-to-SD downscale conversion
- support insert picture LOGO, BMP format
- Support CBR and VBR mode
- WEB Management
- Easy-to-Use System Management

### Main Application

- 4K/HEVC digital TV Broadcast
- Low Bitrate Video and audio compression transmit
- IPTV, conference, remote education
- Back haul/Monitoring for Broadcasters

Principle Chart



## TECHNICAL SPECIFICATIONS

### Video Inputs

Resolution	1*4K HD-MI 2.0 (HDCP 2.2) input 4096*2160/1680*1056/1920x1080
Frame rate	5-60 Frames per second

### Audio Inputs

Processes first two channels of audio embedded in HD-MI input signal  
Unbalanced analog stereo input via 1/8" (3.5mm) jack(option)

### OUTPUTS

HD-MI	HD-MI LOOP out
IP Output type	RJ45 providing 100/1000Base-T Ethernet with Static or DHCP addressing
Protocol	RTMP/RTMPS/RTSP/HTTP/RTP/UDP/HLS Unicast, Multicast, Onvif
Multi-Screen	Up to 2 channels High def. and any resolution of streams simultaneously out

### Users Interface

Computer Based control	HTTP via standard PC or web browser using Command Center. The simple Control API and SDK is also available to programmers to create their own application
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### Pre-processing

Frame rate	30/60FPS
Image insertion	OSD insertion (BMP) and Font color change
Package	ffmpeg/VLC
Buffer Mode	188x7,188x6
Smart encode Mode	smooth bitrate/low delay/b frame
Low latency	UDP protocol: $\leq$ 500ms TCP: 1~3S SDK: $\leq$ 100ms

### H.265/H.264 Video Encoding

Bitrate mode	VBR, CBR
Key interval	30-180, multiple of 30
First stream	3840*2160/2560*1600,2560*1440,

### Second Stream

H.265 encoding	2048*1152, 1920*1080, 1680*1056, 1280*720,1024*576,960*540, 850*480, 720*576,720*540,720*480,720*404, auto 1920*1080, 1280*720,960*540,848*480, 800*450,720*576,720*540,720*408,720*404, 704*576, 640*480, 640*360,480*270, 384*216, 352*288, 320*240, 320*180, auto MPEG-H HEVC (ISO/IEC.23008-2)
H.264 Profile	Main Profile Level 4.1 (4:2:0 8-bits)
Video Bitrate	high/main/baseline
Fluctuate Level	16kbps to 50Mbps
Support Variable bit rate	1.2, 2.0, 3.0, 4.0, 5.0 Level
Key Interval	Support Average max/min data rate controls Deblocking Filter
Encode Frame Rates	30-180, multiple of 30
RTMP	Encode frame rates representing 1:1, 1/2 and 1/4 of the input frames rates are supported
RTMP MODE	URL/IP mode
	video+audio/video only/audio only

### Audio Encoding

Audio input	line in, HD-MI audio
Audio encoding	AAC (LC-AAC, HE-AAC), G.711(Only RTSP)
Bit Rates	Range from 24 kbps to 320 kbps
Resample Rate	32Khz, 44.1Khz
Audio Channel	L+R, L, R
Resampling rate	32000/44100/48000
Audio gain	-20/-10/close/5/10dB
RTSP audio encode	AAC/G.711

### Color Setting

Brightness	[0-100] Default value: 50
Contrast	[0-100] Default value: 50
Hue	[0-100] Default value: 50
Saturation	[0-100] Default value: 50
Image Record	Noise, Sharpening, Filtering on/off

### Control

Adaptive Base T Ethernet, RJ45, auto-negotiation  
Management via Web  
Language English/Chinese

### Environment

Power Supply	+12V ~2A
Power consumption	5W
Operation temperature	-20 -60°C (-4 -140°F)
Operating humidity	<90%, non-condensing
Dimensions	178mm x 102mm x 28mm
Weight	0.35kg