

# Magicbox HD501plus

## compact H.265 HEVC 4K IPTV encoder

4K  
ULTRA HDH.264  
MPEG-4/AVCH.265  
HEVCPOE  
POE power supply

Magicbox HD501plus single channel HDMI 4K HEVC Encoder opens the next level of video experiences for customers of premium broadcast, cable and satellite, mobile and OTT/IPTV services. Low cost and easy-to-use video streaming appliance designed for professional video producers, the unit employs precision encoding technology originally reserved for professional transmission.

With HDMI loop out and TF card recording function, the Magicbox HD501plus encoder content in real time via HEVC H.265, today's most advanced compression standard, 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/SRT/Onvif/GB28181 protocols.

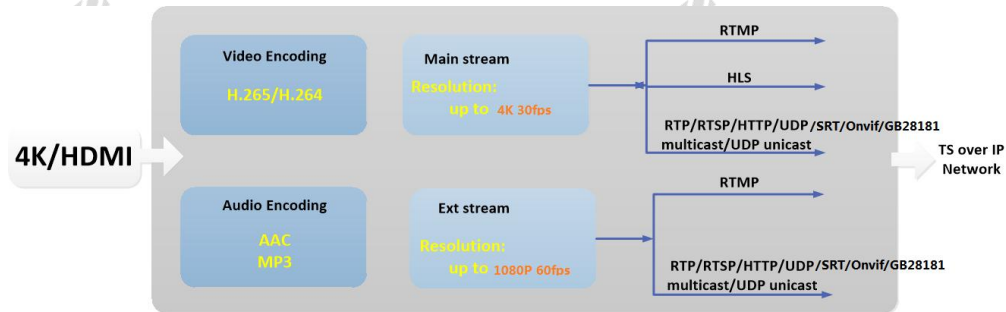
### Features

- 1 channel 4K HDMI(HDCP) Input
- HDMI loop out
- Two Protocol, Bitrate, Resolution, Profile per HDMI Source Inputs
- Supports real time 4K@30fps, 1080P, 720P, 567P, 480P@60fps encoding and other resolution
- Support multi protocol output, RTSP, RTP, RTMP, RTMPS, HLS, Onvif, GB28181, one of HTTP/UDP multicast/UDP unicast protocol out simultaneously
- support push stream to RTSP server
- Support the standard flow driven architecture of Microsoft , (the WDM architecture)
- Support simultaneous display of one computer and multiple devices
- High/Main/Baseline Profile, AAC, MP3 audio encoding
- HD-to-SD downscale conversion
- Support recording TS streams on USB drives (FAT-32 and exFAT formats)
- support insert picture LOGO, BMP format.
- Video recording function (storage in TF card)
- Support CBR and VBR mode
- **POE power supply optional**
- WEB Management
- Low power consumption, low heat dissipation, supporting 7 \* 24 hour uninterrupted operation
- Easy-to-Use System Management
- passed the EU CE certification

### 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 HDMI (HDCP) input ; 3840*2160/2048*1152/1920x1080p/ 1280x720p/720*576P/640*480
frame rate	30~60 Frames per second 1080p @ 60/59.94/50 Frames per second

### Audio Inputs

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

### OUTPUTS

HDMI	HDMI LOOP out
IP Output type	RJ45 providing 10/100/1000Base-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	5~60FPS
Image insertion	OSD insertion(BMP) and Font color change
Package	ffmpeg/VLC
Buffer Mode	188x7,188x6
smartencode Mode	smooth bitrate/low delay/b frame
Low latency	UDP protocol: ≦ 500ms TCP: 1~3S SDK: ≦ 100ms

### H.265/HEVC Video Encoding

Bitrate mode	VBR, CBR
Key interval	30-180, multiple of 30
first stream	3840*2160/2560*1600, 2560*1440, 2048*1152, 1920*1080, 1680*1056, 1280*720,1024*576,960*540, 850*480, 720*576,720*540,720*480,720*404, auto
Second Stream	1280*720, 960*540, 848*480, 800*450 720*576, 720*540,7200*408, 720*404, 704*576, 640*480, 640*360, 480*270, 384*216,352*288,320*240,320*180,auto
H.265encoding	MPEG-H HEVC (ISO/IEC 23008-2) Main Profile Level 4.1 (4:2:0 8-bits) 16kbps to 50Mbps
Video Bitrate	1.2, 2.0, 3.0, 4.0, 5.0 Level
Fluctuate Level	Support Variable bit rate Support Average max/min data rate controls Deblocking Filter

### Encode Frame Rates

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

### H.264/MPEG-4 Part 10 (AVC) Video Encoding

Bitrate mode	VBR, CBR
First stream	Fluctuate Level 3840*2160/2560*1600, 2560*1440, 2048*1152, 1920*1080, 1680*1056, 1280*720,1024*576,960*540, 850*480, 720*576,720*540,720*480,720*404, auto
first stream	1920*1080,1280*720, 960*540, 848*480, 800*450 720*576, 720*540,7200*408, 720*404, 704*576, 640*480, 640*360, 480*270, 384*216,352*288,320*240,320*180,auto
Second Stream	high/main/baseline Encode frame rates representing 1:1, 1/2 and 1/4 of the input frames rates are supported
H.264 Profile	H.264 Main Profile/High Profile/Baseline Profile
Encode Frame Rates	16kbps to 50Mbps
Encoding Profiles	1.2, 2.0, 3.0, 4.0, 5.0 Level
Video Bitrate	Support Variable bit rate
Fluctuate Level	Support Average max/min data rate controls Deblocking Filter
Key Interval	30-180, multiple of 30

### Audio Encoding

Audio input	line in, HDMI audio
Audio encoding	AAC(LC-AAC,HE-AAC), MP3, G711(Only RTSP)
Bit Rates	Range from 48 kbps to 256 kbps
Resample Rate	32Khz, 44.1Khz
Audio Channel	L+R, L, R
Resampling rate	32000/44100
Audio gain	-20/-10/close/5/10dB
RTSP audio encode	AAC/G711

### 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	+5V ~2A
Power consumption	5W
Operation temperature	-20 -60°C
Storage temperature	-40-70°C
Dimensions	150mm x 102mm x 28mm
Weight	0.35kg