

Magicbox HD5

H.265 4K Video IPTV Streamer



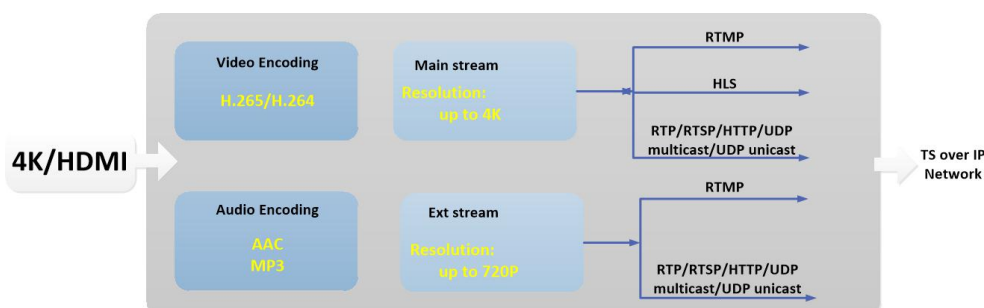
Magicbox HD5 4K HEVC Encoder opens the next level of video experiences for customers of premium broadcast, cable and satellite, mobile and OTT/IPTV services. Low cost and easy-to-use video streaming appliance designed for professional video producers, the unit employs precision encoding technology originally reserved for professional transmission. The product has the function of supporting 1/8/16 channels 4K HDMI of H.265/H.264 encoding output and the AAC audio format.

Making live UHD delivery available for satellite, cable terrestrial and fiber networks, the Magicbox HD5 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/HTTP/HLS protocols.

Features

- 1 channel 4K HDMI(HDCP) Input, 8, 16 channels optional
- Two Protocol, Bitrate, Resolution, Profile per HDMI Source Inputs
- Supports real time 4K@30fps encoding
- Supports 1080P, 720P, 567P, 480P@60fps encoding and other resolution
- Support multi protocol output, RTSP, RTP, RTMP, HLS, Onvif, one of HTTP/UDP multicast/UDP unicast protocol out simultaneously
- Support the standard flow driven architecture of Microsoft , (the WDM architecture)
- Support the WMENCODER of Microsoft.
- Supports both HEVC and H.264 – built for the future without losing support for legacy receivers/decoders
- Be compatible with Windows VFW software architecture and WDM pattern
- Support simultaneous display of one computer and multiple devices
- High/Main/Baseline Profile, AAC, MP3 audio
- Audio bitrate: 24-256kbps
- HD-to-SD downscale conversion
- support insert picture LOGO, BMP format.
- Input Resolution support 3840*2160/2560*1440/2048*1152/1920x1080p/1920x1080i/1280x720p/720*576i/720*576p/640*480i equal resolution (adjustable)
- Video recording function (storage in SD card)
- Next-generation HEVC / H.265 compression reduces network bandwidth by up to 50% compared to H.264
- Web page video preview function, facilitate the implementation of adjustment
- Pristine video quality and motion fluency
- Superior video quality at ultra-low bitrates
- Support CBR and VBR mode
- WEB Management
- Easy-to-Use System Management

Principle Chart



Main Application

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

TECHNICAL SPECIFICATIONS

Video Inputs

	1*4K HDMI (HDCP) input ; 8, 16 channels optional
Resolution	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

IP Output type	RJ45 providing 10/100/1000Base-T Ethernet with Static or DHCP addressing;
Protocol	RTMP/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
PMT ID	1~65535
Transport ID	256~3840
Stream ID	256~3840
Program ID	customize
SDT name	customize
Buffer Mode	188x7,188x6
smartencode Mode	smooth bitrate/low delay/lb 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*540,720*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)
Video Bitrate	16kbps to 50Mbps
Fluctuate Level	1.2, 2.0, 3.0, 4.0, 5.0 Level Support Variable bit rate Support Average max/min data rate controls

Deblocking Filter

Encode Frame Rates	Encode frame rates representing 1:1, ½ and ¼ of the input frames rates are supported
RTMP	URL/IP mode
RTMP MODE	video+audio/video only/audio only

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

Bitrate mode	VBR, CBR
Fluctuate Level	1.2, 2.0, 3.0, 4.0, 5.0 Level
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*540,720*408, 720*404, 704*576, 640*480, 640*360, 480*270, 384*216,352*288,320*240,320*180,auto
H.264 Profile	high/main/baseline
Encode Frame Rates	Encode frame rates representing 1:1, ½ and ¼ of the input frames rates are supported
Encoding Profiles	H.264 Main Profile/High Profile/Baseline Profile
Video Bitrate	16kbps to 50Mbps
Fluctuate Level	1.2, 2.0, 3.0, 4.0, 5.0 Level Support Variable bit rate 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	Noise, Sharpening, Filtering
Record	on/off

Control

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

Power Supply	+12V -2A(Compact size)
Power consumption	5W
Operation temperature	0 -50°C (32 -122°F)
Storage temperature	-40-70°C (-40-158°F)
Dimensions	110mm x 100mm x 40mm (Compact)
Weight	1.0kg (Compact)