MagicKit

H.265/H.264 4K 60FPS HD-MI Encoder

MagicKit, 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/HTTP/HLS protocols.

Features

- 1 channel 4K HD-MI 2.0 (HDCP 2.0) Input
- HD-MI loop out
- Two Protocol, Bitrate, Resolution, Profile per HD-MI Source Inputs
- Supports real time 4K@60fps
- Support multi protocol output, RTSP, RTP, RTMP, HLS, Onvif, one of HTTP/UDP multicast/UDP unicast protocol out simultaneously
- 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

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TECHNICAL SPECIFICATIONS

Video Inputs

	1*4K HD-MI 2.0 (HDCP 2.0) input
Resolution	3840*2160/2048*1152/1920x1080p/ 1280x720p/720*576P/640*480
frame rate	30/60 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 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

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: ≦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)
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
First stream	Fluctuate 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*540,7200*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, HD-MI audio
Audio encoding	AAC (LC-AAC, HE-AAC), MP3, G711(Only RTSP)
Bit Rates	Range from 24 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

Environment

Power Supply	+12V ~2A
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
Weight	0.3kg

