

Magicbox HD7 plus

dibsys

Multi-function encoding decoding and transcoding all-in-one device

H.264
MPEG-4/AVC

H.265
HEVC

4K
ULTRA HD



Magicbox HD7 Plus series is a multi-functional all-in-one device, including encoding decoding and transcoding. When you use it, you can select the corresponding function input and output port to achieve the function what you need.

It supports web management and also you can install an APP on your Android phone to manage the device which can help you manage more easily.

Magicbox HD7 Plus with **Three functions**: The first function, HD-MI to IP H.264/H.265 **encoding** with HD-MI loop out. The second function, IP input to HD-MI&CVBS output , H.264/H.265 **decoding** output, HD-MI output support up to UHD/4K. The third function, support IP to IP **transcoding**, support IP protocol conversion and H.264 h.265 mutual conversion. Support RTSP/HTTP/UDP/RTMP/RTMPS/HLS/RTP /SRT protocols. Also the encoding and decoding can work simultaneously, support PIP function.

Magicbox HD7 Plus series with its powerful functions can be widely used in education, health care, IPTV, conference, remote education, news interview, banking, transportation and other industries. This is a cost-effective and functional choice for customers who need encoder, decoder, transcoder devices but do not need use them in the same time.

Key Features

- 1module: Compact; 4/8 modules: 1RU; 16 modules: 3RU
- Running in HD-MI To IPTV encoding and IPTV to HD-MI Decoding simultaneously
- Encode, Decode, Transcode Integrate in One Device
- Up to 64 channels 1080p@60fps transcoding in 16 modules
- Support HD-MI looping, different resolution output
- both HEVC and H.264 video encoding
- WINDOWS, LINUX operating systems supported
- Support HTTP/HLS/RTSP/RTP/RTMP/RTMPS/SRT, HTTP/UDP unicast, multicast and other protocols
- RTMP protocol supports adding user and password functions
- Dual streams out, Each HD-MI input source simultaneously support one channel up to 1920x1080p Full HD and one channel 1280x720 HD output
- PIP function supported in Encode+decode mode
- Video packaging mode: mode A: FFMPEG; Mode B: VLC
- English/Chinese OSD insert, and OSD rolling
- Support QR function, Livexapp remote management
- support resolution customizable
- Support DHCP automatically get IP, One-key recovery, version upgrade and remote maintenance
- Support No Video Signal Coding
- come into effect as soon as it is set up, no need to restart
- Support USB3.0 storage, SATA storage interface
- HD-to-SD downscale conversion
- Support CBR and VBR mode
- Low power design
- WEB Management

TECHNICAL SPECIFICATIONS

Encoding Mode

Video Inputs

HD-MI (support HD-CP) 2 channels per module, up to 16 modules

OUTPUTS

IP Output type RJ45 providing 100/1000Base-T Ethernet with Static or DHCP addressing;
 Protocol RTMP, RTMPS, RTSP, HTTP, UDP, HLS, SRT
 Multi-cast (number of clients may vary from 3 to 10)
 Multi-Screen Up to 2 channels High def. and any resolution of streams simultaneously out per
 Frame rate @30/60 fps

H.265/HEVC Video Encoding

Bitrate mode VBR, CBR
 Key interval 5-200 support
 resolution customizable first stream 3840*2160, 2048*1152, 1920*1080, 1280*720, 1024*576, 850*480, 720*576, 704*576, 640*480, 640*360, auto
 Second Stream 1280*720, 800*450, 720*576, 720*408, 704*576, 640*480, 640*360, 352*288, 320*240, 320*180, auto
 H.265 encoding MPEG-H HEVC (ISO/IEC 23008-2) Main Profile Level 4.1 (4:2:0 8-bits) 100kbps to 12Mbps
 Video Bitrate Encode Frame Rates Encode frame rates representing 1:1, 1/2 and 1/4 of the input frames rates are Supported

Bitrate of Res.
 720x576 (D1) 200-500kbps
 1080x720p (HD) 800-2000kbps
 1920x1080p (Full HD) 1000-2500kbps

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

Bitrate mode VBR, CBR
HD-MI
 First stream 3840*2160, 2048*1152, 1920*1080, 1280*720, 1024*576, 850*480, 720*576, 704*576, 640*480, 640*360, auto
 Second Stream 1280*720, 800*450, 720*576, 720*408, 704*576, 640*480, 640*360, 352*288, 320*240, 320*180, auto
Bitrate of Res.
 1080x720p (HD) 1500-2500kbps
 1920x1080p (Full HD) 3000-5000kbps
 Video Bitrate 16kbps to 12Mbps

Audio Encoding

Audio encoding AAC, MP3, LC AAC, HE AAC, G711(Only RTSP)
 Bit Rates Range from 48 kbps to 256 kbps
 Resample Rate 32KHz, 44.1KHz
 Audio Channel L+R, L, R

Decoding Mode

Video Inputs

Inputs 4*IP per module, up to 16 modules
 IP streaming support RTSP/HTTP/UDP/RTMP/HLS/RTP/SRT protocol
 Decoding source URL, P2P, SDK
Progressive
 1920x1080 @ 60/30/25/24 Frames per second
 1280x720 @ 60/50 Frames per second

OUTPUTS

Resolution HD-MI(HD-CP)+CVBS output 3840*2160/2048*1152/1920x1080p/1280x720p/720*576P/640*480
 NOTE below 720P resolution, support CVBS decoding

H.264/H.265 Video decoding

Bitrate mode VBR, CBR
 Resolution 3840*2160/2560*1600, 2560*1440, 2048*1152, 1920*1080, 1280*720, 1024*576, 850*480, 720*576, 704*576, 640*480, 640*360, auto
 Decode Frame Rates Decode frame rates representing 1:1, 1/2 and 1/4 of the input frames rates are supported
 maximum decoded frame rate is 60fps when input resolution is 1920x1080
 Decoding Profiles H.264 BASELINE PROFILE / H.265 BASELINE PROFILE
 H.264 MAIN PROFILE / H.265 MAIN PROFILE
 H.264 HIGH PROFILE / H.265 HIGH PROFILE
 Video Bitrate 5-20Mbps
 Decoding Controls 2.0, 3.0, 3.1, 4.0, 4.1 Level
 Support Variable bit rate
 Support Average max/min data rate controls
 Deblocking Filter
 Key Interval 5-200

Audio decoding

Audio decoding AAC, MP3
 Bit Rates Range from 48 kbps to 256 kbps
 Resample Rate 32KHz, 44.1KHz
 Audio Channel L+R, L, R

Transcoding Mode

Inputs/Outputs

Inputs 4*IP per module, up to 16 modules
 Connector Type One RJ45 100/1000M Ports for IP streaming and Control GUI
 IP Protocol MPEG-TS(SPTS) Over IP input
 TS Over RTP/RTSP/HTTP
 UDP/IP (Unicast and Multicast)
 RTMP(Flash)
 HTTP Live streaming Apple HLS (m3u8)
 SRT
 2 different IP protocol out per Transcoding Channel

Video Transcoding

Input:
 MPEG-4 AVC HP@L4.0, HP@L4.2 (HD)
 MPEG-4 AVC MP@L3.0 (SD)
 MPEG-4 AVC HP@L4.0, HP@L4.2 (HD)
 MPEG-4 AVC MP@L3.0 (SD)
MPEG-H HEVC (ISO/IEC 23008-2)

Output:
 MPEG-4 AVC HP@L4.0, HP@L4.2 (HD)
 MPEG-4 AVC MP@L3.0 (SD)
 MPEG-4(HIGH/MAIN /Baseline)
MPEG-H HEVC (ISO/IEC 23008-2)

Video Format

Input:
 1920x1080P@60FPS/50FPS/30FPS/25FPS/24FPS,
 1080x720P@60FPS/50FPS,
 720x576P@50FPS, 720x480P@60FPS, PAL, NTSC

Output:
 30~60fps @ 1920x1080P,1680x1200P,1600x900P,
 1440x1050P,1440x900P,1360x768P,1280x720P,
 1280x800P,1280x768P,1024x768P,1024x576P,
 960x540P, 584x480P, 800x600P, 720x576P, 720x540P,
 720x480P, 720x404P, 720x400P, 704x576P, 640x480P,
 640x360P, 480x270P, 416x240P, auto

H.265/HEVC Transcoding Bitrate of Res.

720x576 (D1) 800-1000kbps
 1080x720p (HD) 1500-3000kbps
 1920x1080p (Full HD) 3500-6000kbps
 Video Bitrate 16kbps to 12Mbps

Audio Transcoding

Audio encoding AAC, MP3, LC AAC, HE AAC, G711(Only RTSP)
 Bit Rates Range from 48 kbps to 256 kbps
 Resample Rate 32KHz, 44.1KHz
 Audio Channel L+R, L, R

General

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)

Pre-processing

Frame rate from 5fps to 60fps
Image insertion OSD insertion, text OSD, Custom Location

5 different Modes

Encoding Mode
Decoding Mode
Transcoding Mode
Encoding + Decoding
Encoding + Loop

HD-MI input with another HD-MI resolution out or CVBS out
720*576i60hz-- PAL
720*480i-50Hz---NTSC

Control

Language RS485

1000M Base T Ethernet, RJ45,auto-negotiation
Management via Web
English/Chinese
Cloud Platform Control

Environment

Power Supply +12V (Compact size), 220V (1RU/3RU)
Power consumption 28W
Operation temperature 0 -50°C (32 -122°F)
Storage temperature -40-70°C (-40-158°F)
Dimensions 110mm x 100mm x 40mm (Compact)
430mm x 250mm x 45mm (1RU)
484mm x 365mm x 148mm (3RU)
Weight 1.0kg (Compact); 4.0kg (1RU); 7.5kg (3RU)

Ordering Information

1 module --- Magicbox HD701Plus
4 modules --- Magicbox HD704Plus
8 modules --- Magicbox HD704Plus
16 modules --- Magicbox HD716Plus

Main Application

- Low Bitrate Video and audio compression transmit
- H.264/HEVC digital TV Broadcast decoding/encoding/transcoding
- IPTV, conference, remote education
- Backhaul/Monitoring for Broadcasters



