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# IP to HDMI/VGA H.264/H.265 Video Decoder

## Model: MagicBox HD101/104/116

## Product Profile

**MagicBox HD1** series are lowest cost and easy-to-use video streaming appliance designed for professional video producers who need to simultaneously HD and SD stream a live event.The decoder is a professional high and standard definition video coding product. The product has the function of supporting 1 channel IP video capture, generate dual stream of h.264/h.265 decoding output and the AAC audio format. The product has high integration and reasonable price. From any IP input source such as a camera or switcher, generates an H.264-decoded stream compliant with RTSP/HTTP/UDP/RTMP/HLS/RTP protocols. The product can be applied to education, health care, IPTV, conference, remote education, news interview, banking, transportation and other industries.

**MagicBox HD1** series can deliver H.264/H.265 HEVC decoding video streams to various servers, such as Adobe Flash Server, Wowza Server, Windows Media Server and some other servers base on RTSP/HTTP/UDP/RTMP/HLS/RTP protocols.

## Features

- IP Inputs per module
- HDMI+VGA out put
- Dual streams in, each IP input source simultaneously support up to 1920x1080p Full HD and one channel 1280x720 HD output
- Each channel stream can simultaneously support any one of the RTSP/HTTP/UDP/RTMP/HLS/RTP protocol Input
- Support the standard flow driven architecture of Microsoft ,(the WDM architecture),Support Be compatible with Windows VFW software architecture and WDM pattern
- Support simultaneous display of one computer and multiple devices
- H.264 /H.265 video decoding; MP3, AAC audio decoding
- Video bit rates:16-12000kbps
- Audio bitrate: 48-256kbps
- HD-to-SD downscale conversion
- Superior video quality at ultra-low bitrates, generally video bitrate advised SD about 680kbps, 720p about 1mbps,1080p about 3mbps for lowest bitrate
- Support CBR and VBR mode

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- WEB Management
- Easy-to-Use System Management

## Main Application

- IPTV, conference, remote education
- Backhaul/Monitoring for Broadcasters

## Technical Specifications

| | | |
|---|---|---|
| **Inputs** | | |
| **Video inputs** | IP streaming support RTSP/HTTP/UDP/RTMP/HLS/RTP protocol | |
| | Progressive<br>1920x1080 @ 60/30/25/24 Frames per second<br>1280x720 @ 60/50 Frames per second<br>Interlaced<br>Video Input Format is Auto-Detected | |
| **Audio inputs** | Processes first two channels of audio embedded in ip input signal<br>Unbalanced analog stereo input via 1/8” (3.5mm) jack(**option**) | |
| **Outputs** | | |
| HDMI(hdcp)+VGA output | | |
| **Multi-Screen** | Up to 2 channels High def. and any resolution of streams simultaneously in each HD Source outputs, and decode SD/720x480/NTSC format video | |
| **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** | | |
| **Image setting** | Video adjustments(Brightness, contrast, Saturation, Hue) | |
| **Frame rate** | from 5fps to 60fps | |
| **Image insertion** | OSD insertion | |
| **Enhancement filter** | Deinterlacing; Noise reduction; Sharpening; Visual Optimizing;Filtering | |
| **H.265/H.264 Video decode** | | |
| **Bitrate mode** | VBR,CBR | |
| **Resolutions** | First stream | 1920*1080,1280*720,1024*576,850*480,720*576<br>704*576,640*480,640*360,auto |

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|---|---|---|
| | Second Stream | 1280*720,800*450,720*576,720*408,704*576,640*480,640*360,352*288,320*240,320*180,auto |
| **Decode Frame Rates** | Decode frame rates representing 1:1, ½ and ¼ of the input frames rates are supported<br>Note that the maximum decoded frame rate is 60fps when input resolution is 1920x1080 | |
| **Decoding Profiles** | H.264 BASELINE PROFILE / H.265 BASELINE PROFILE<br>H.264 MAIN PROFILE / H.265 MAIN PROFILE<br>H.264 HIGH PROFILE / H.265 HIGH PROFILE | |
| **Video Bitrate** | 16kbps to 12Mbps | |
| **Decoding Controls** | 2.0, 3.0, 3.1, 4.0, 4.1 Level<br>Support Variable bit rate<br>Support Average max/min data rate controls<br>Deblocking Filter | |
| **Key Interval** | 5-200 | |
| **MPEG-4 AAC Audio Decoder** | | |
| **Audio Decoding** | AAC,MP3(Option) | |
| **Bit Rates** | Range from 48 kbps to 256 kbps | |
| **Resample Rate** | 32Khz,44.1Khz | |
| **Audio Channel** | L+R,L,R | |
| **Environment** | | |
| **Warranty** | 3 years with free telephone support | |
| **Power Supply** | +12V(Compact size)<br>220V(1RU,3RU) | |
| **Power consumption** | 28W | |
| **Operation temperature** | 0 -50°C (32 -122°F) | |
| **Storage temperature** | -40-70°C (-40-158°F) | |
| **Dimensions** | 146mm x 100mm x 45mm(Compact)<br>484mm x 315mm x 44mm(1RU)<br>484mm x 315mm x 135mm(3RU) | |
| **Weight** | 1.0kg(Compact); 4.0kg(1RU); 7.5Kg(3RU) | |
| **Hardware specifications** | | |
| Models | Inputs | Outputs | RU |
| **MagicBox HD101** | 1x1000M RJ45 | 1xHDMI+VGA | Compact |
| **MagicBox HD104** | 4x1000M RJ45 | 4x HDMI+VGA | 1RU |
| **MagicBox HD116** | 16x1000M RJ45 | 16xHDMI+VGA | 3RU |

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