MAGEWELL

USB Capture HDMI Gen 2 Technical Specifications

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Supported OS

- Windows
  - Windows 7/8/8.1/10/Server 2008/Server 2008 R2/Server 2012/Server 2016 (x86 & x64)
- Linux (support x86, x64 & ARM architecture)
  - Ubuntu 12.04/14.04/16.04/17.04/17.10 (x86 & x64)
  - CentOS 6.5/7 (x86 & x64)
  - Fedora 25/26/27 (x86 & x64)
  - Red hat 6.5 and above (x86 & x64)
  - Other Linux OS with kernel version 2.6.35 and above
- Mac
  - OS X 10.9/10.10/10.11
  - macOS 10.12/10.13
- Chrome OS

Recommended OS (tested)

- Windows
  - Windows 7 Ultimate/8.1 Enterprise/10 Enterprise/Server 2008 R2 DataCenter/Server 2012 R2 DataCenter/Server 2016 R2 DataCenter (x86 & x64)
- Linux
  - Ubuntu 12.04/14.04/16.04 (x86 & x64)
  - Ubuntu 17.04/17.10 (x64)
  - CentOS 6.5/7.2 (x86 & x64)
  - Fedora 25/26 (x64)
  - Red hat 6.5 (x86 & x64)
- Mac
  - OS X 10.9.5/10.10/10.11.2/10.11.3/10.11.4
  - macOS 10.12/10.13.2/10.13.3

Supported APIs

- Windows
  - DirectShow
  - Wave API/DirectSound/WASAPI
- Linux
  - V4L2
  - ALSA
- OS X/macOS
  - QuickTime
  - AV Foundation

Supported Software

- VLC
- VirtualDub
- OBS
- XSplit

- vMix
- VidBlaster
- Wirecast
- Microsoft Media Encoder
- Adobe Flash Media Encoder
- Any other DirectShow, V4L2, QuickTime, AV Foundation based encoding or streaming software

Input Interfaces

- HDMI
  - DVI-D 1.0
  - HDMI 1.4a

Host Interface

- USB 3.0
  - compatible with USB 2.0
  - compatible with USB 3.1 Gen 1

Input features

- Support for input video resolutions up to 2048x2160

HDMI Specific Features

- 165MHz HDMI receiver
- Adaptive HDMI equalizer support for cables lengths up to 30M
- Support for customized EDID
- Support for extraction of AVI/Audio/SPD/MS/VS/ACP/ISRC1/ISRC2/Gamut InfoFrames
- Full colorimetry support
- Support for 8/10/12-bit color depth
- Support for RGB 4:4:4，YCbCr 4:4:4，YCbCr 4:2:2 color sampling
- Support for 2 channel IEC60958 audio streams
- Support for extraction of audio formation information & channel status data
- Support for extraction of video timing information
- Support for extraction of 3D format information
- Support for Side-by-Side Half, Top-and-Bottom, Frame Packing 3D mode.

Video Capture format

- Support for capture resolutions up to 2048x2160
- Support for capture frame rates up to 120fps (Actual capture frame rate can be limited by the USB bandwidth and internal working frequency. Typical capture frame rates on the Intel USB3.0 controller are as follows.)
  - 1920x1080 YUY2 (up to 75fps)
  - 1920x1080 RGB24 (up to 60fps)
- Support for YUY2 & UYVY 4:2:2 8-bit
- Support for RGB24 & RGB32 4:4:4 8-bit
- The default capture format is YUY2. More capture formats can be set using USB Capture Utility.

Video Processing Features

- Video processing pipelines with 160 Mpixels/s processing bandwidth
- Video cropping
- Video scaling
- Video de-interlacing
  - Weave
  - Blend top & bottom field
  - Top field only
  - Bottom field only
- Video aspect ratio conversion
  - Auto or manual selection of input aspect ratio
  - Auto or manual selection of capture aspect ratio
  - Three aspect ratio conversion modes: Ignore (Anamorphic), Cropping or Padding (Letterbox or Pillarbox)
- Video color format conversion

    - Auto or manual selection of input color format & quantization range
    - Auto or manual selection of capture color format, quantization range & saturation range
    - Support for RGB, YCbCr 601, YCbCr 709 color formats
    - Support for Limited or Full quantization range
    - Support for Limited, Full & ‘Extended gamut’ saturation range
- Video frame rate conversion
- Vertical flip and mirror

Multiple devices on one computer

- Support for connecting multiple USB devices to one system
- Support for setting the device serial number as the device name shown in the system using USB Capture Utility

SDK

- The USB Capture SDK provide functions including signal status extraction, capture configuration, etc.

Firmware Upgrade

- Multiple devices in one system can be upgraded simultaneously

LED Indicator

- Status LEDs indicate the working state of each channel:
    - Pulsing slowly: idle
    - On: input signal locked
    - Off: input signal unlocked
    - Double blinks: memory failed or FPGA configuration failed

Form Factor

- 92.2mm (L) x 40.2mm (W) x 12.3mm (H)

Accessories

- USB 3.0 cable

Power Consumption

- 5V max current: ~0.5 A
- max power consumption: ~2.5 W

Working Environment

- Operating temperature: 0 to 50 deg C
- Storage temperature: –20 to 70 deg C
- Relative Humidity: 5% to 90% non-condensing