MAGEWELL

USB Capture SDI Plus Technical Specifications

Specifications are based on current hardware, firmware and software revisions, and are subject to change without notice.

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Supported OS

- Windows 7/8/8.1/10/2008/2008 R2/2012 (x86 & x64)
- Linux (Ubuntu 12.04–16.10, CentOS 7)
- OS X 10.9–10.11
- macOS 10.12

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

- BNC
  - SD/HD/3G SDI
- 3.5mm audio jack
  - unbalanced Line In interface

Output interface

- USB 3.0
  - compatible with USB 2.0
  - compatible with USB 3.1 Gen 1
- 3.5mm audio jack
  - unbalanced Line Out interface
- BNC
  - SDI loop-through interface

Input features

- Support for up to 2048x1080 input resulution

SDI Specific Features

- Integrated cable equalizer supporting cable lengths up to 140M for 3G-SDI signals
- Support for SD/HD/3Ga/3Gb/3Ga-DL/3Gb-DS standards
- Support for 2K (2048x1080) mode
- Support for RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2 color sampling
- Support for 10/12-bit color depth
- Support for extraction of SMPTE 352 payload identifier
- Support for up to 8 (mono) audio channels at 48KHz
- Support for extraction of audio formation information & channel status data
- Limited support of 3Gb-DS: only the first stream can be captured
- Limited support for capture of the first link of dual link interfaces:
  - YCbCr 4:2:2 10-bit 1080p 50/59.94/60: captured as 1080i 50/59.94/60

- YCbCr 4:4:4 10-bit: captured as 4:2:2
- RGB 4:4:4: R/B sub-sampled

Analog Audio Features

- Extract the embedded SDI audio and output via 3.5mm unbalanced Line out
- Capture analog audio via 3.5 mm unbalanced Line In interface

Video Capture format

- Support for capture resolutions up to 2048x1080
- Support for output frame rates up to 60fps. (Actual output frame rate can be limited by the USB bandwidth.
- Support for YUY2 4:2:2 8-bit
- More capture format 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
  - Wave
  - 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 output 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 output color format, quantization range & saturation range
  - Support for RGB, YCbCr 601, YCbCr 709, YCbCr 2020 color formats
  - Support for Limited or Full quantization range
  - Support for Limited, Full & 'Extended gamut' saturation range
- Video frame rate conversion

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: idle, input signal locked, memory failed or FPGA configuration failed.

Form Factor

- 110.7mm (L) x 56.8mm (W) x 17mm (H)

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