

Pro Capture Quad HDMI

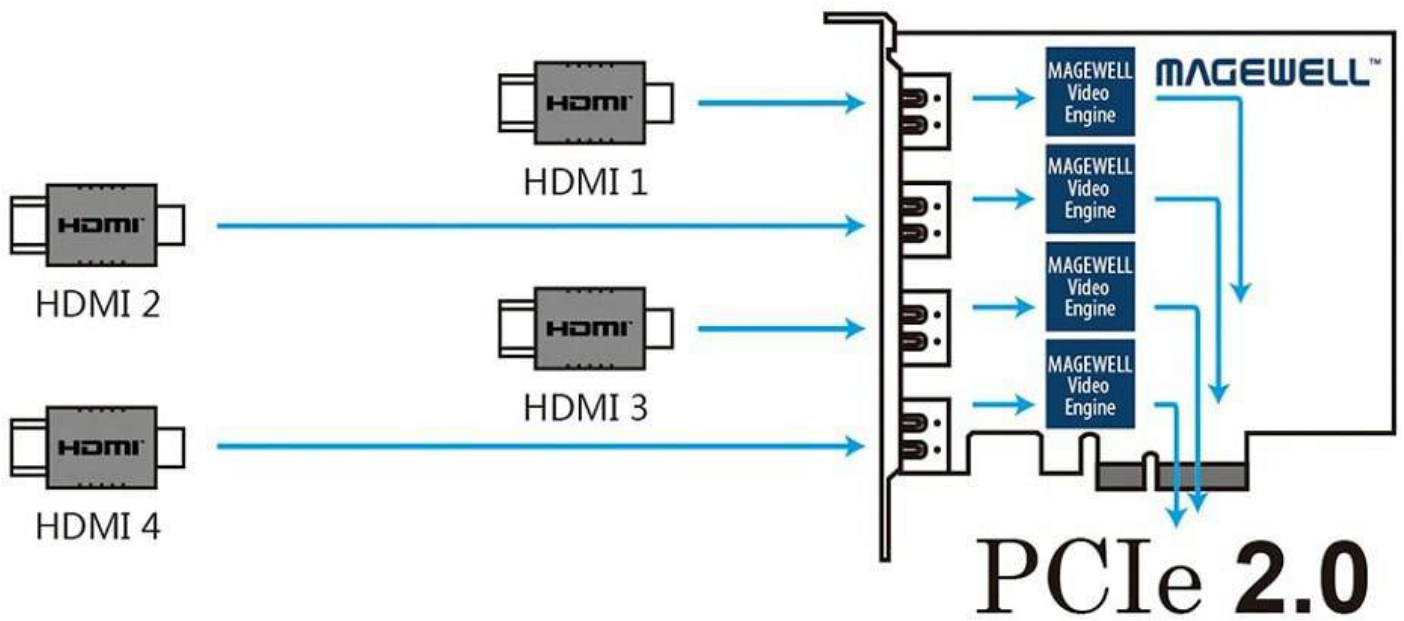
# Pro Capture Quad HDMI

Four-channel HD capture card

- HDMI x 4 + embedded audio x 4



## Interface



# Features



PCIe 2.0



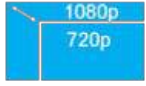
Capture 2k x 2k



Compatible with Windows



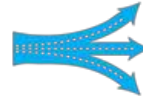
Compatible with Linux



Up/down Scaling



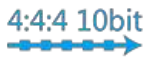
Deinterlacing



Multiple Streaming



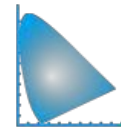
Automatically Detecting Input Signal



High-fidelity Video Processing Pipeline



Image Control



Various Output Color Spaces



SG-DMA Transmission Mode



Multiple Devices on One Host



Hardware Time Stamp



Mounting Hole



Rotary Switch



High-speed Memory



LED Indicator



Firmware Upgrade



Common Driver



Continuously Work for 24h x7

## Pro Capture Quad HDMI

Supported OS	Windows 7/8/8.1/2008/2008 R2/2012 (x86 & x64) Linux (V4L2 kernel driver source code under NDA, supports x86, x64 & arm architecture)
Supported APIs	Windows <ul style="list-style-type: none"><li>• DirectShow</li><li>• DirectKS</li><li>• Wave API/DirectSound/WASAPI</li></ul> Linux <ul style="list-style-type: none"><li>• V4L2</li><li>• ALSA</li></ul>
Supported Software	VLC VirtualDub OBS xSplit vMix VidBlaster Wirecast Microsoft Media Encoder Adobe Flash Media Encoder Any other DirectShow/V4L2 encoding/streaming software
Input Interfaces	4x HDMI type A <ul style="list-style-type: none"><li>• DVI 1.0</li><li>• HDMI 1.4a</li></ul>
Output Interfaces	PCIe Gen2 x4
Input Features	Support for input video resolutions up to 2048x2048 pixels
HDMI Specific Features	225MHz 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/IRSC1/ISRC2/Gamut InfoFrames Full colorimetry support Support for 8/10/12-bit color depths Support for RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2 color sampling Support for up to 8-channel IEC60958/IEC61937 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 extraction of Sony/Canon DSLR time code
Video Output Formats	Support for output image resolutions up to 2048x2048 pixels Support for output frame rates up to 120fps. (Actual output frame rate can be limited by PCIe bandwidth, and at higher image resolutions – above 1280x1024 – by the pixel clock of the on-board video processing hardware. eg. Max frame rate at 1920x1080 = ~80fps. ) Support for 4:2:0 8-bit output formats: NV12, I420, YV12 Support for 4:2:2 8-bit output formats: YUY2, YUYV, UYVY Support for 4:4:4 8-bit output formats: V308, IYU2, V408, BGR24, BGR32 Support for 4:4:4 10-bit output formats: V410, Y410 More output formats are supported via Pro Capture SDK for DirectKS
Video Processing Features	Two video processing pipelines with ~180Mpixels/s processing bandwidth for each one Full 10-bit video processing 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
- Video OSD composition
  - Support for PNG OSD image (up to 2048x2048)
  - Support for dynamic loading of RGBA OSD image via SDK

**Multiple Cards per System**      Support for multiple cards plugged to one system  
 On-board rotary switch to set card number, with 16 positions from 0 to F  
 System hardware device tree will display "01: Pro Capture AIO" when rotary switch is set to 1, and so on  
 The video and audio device names displayed in your software will include the card number (set by the rotary switch)

**Multiple Output Streams**      Unlimited output streams for any one input channel  
 Independent cropping, aspect ratio, color format, resolution, frame rate, de-interlacing and color adjustment settings for each individual stream

**Ultra Low Latency Support**      Latency of 64 video lines  
 Partial notification mode in SDK

**Timestamp & A/V Synchronization**      Hardware based 100ns high resolution clock  
 Audio frames (192 audio samples) & video frames are stamped with hardware clock  
 Hardware clock can be synchronized across cards (via SDK)

**Video Output SG-DMA**      ~400MB/s per channel DMA bandwidth in PCIe 2.0 system  
 ~200MB/s per channel DMA bandwidth in PCIe 1.0 system  
 Support for auto detection of Intel tiled GPU surface  
 Support for DirectGMA for AMD video adapter chipsets  
 Support for GPUDirect for Nvidia video adapter chipsets

**SDK**      Pro Capture SDK for DirectShow for easy integration (Windows)  
 Pro Capture SDK for DirectKS for maximum flexibility & performance (Windows)

**Windows Driver Tweaks**      All options can be controlled by three levels of registry key: global level, product level and device level  
 Video, Audio, Crossbar filter names can be customized via registry keys

**Firmware Upgrade**      Multiple cards in one system can be upgraded simultaneously  
 Cards can be upgraded without a system power shutdown (In most cases, even a reboot is not needed)

**LED Indicator**      Status LEDs indicate the working state of each channel: idle, input signal locked, memory failed or FPGA configuration failed.

**Form Factor**      Normal profile PCIe x4 Add-on Card  
 112.15mm x 102.92mm (without PCI bracket)

**Power Consumption**      Max current at 12V ~1.1 A  
 Max current at 3.3V ~0.9 A  
 Max power consumption ~15.9 W

Working Environment

Operating temperature: 0 to 40 deg C

Storage temperature: -20 to 70 deg C

Relative Humidity: 5% to 90% non-condensing