Pro Capture Dual HDMI 4K Plus LT Technical Specifications

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Recommended OS

- Windows 10/11/Server 2016/Server 2019/Server 2022/Server 2025 (x86 & x64) and above
- Linux x86, x64 & ARM architecture, with 2.6.35 and above
- Mac OS X 10.9 and above
- macOS 10.12 and above

Supported APIs

- Windows
  - DirectShow
  - DirectKS
  - Wave API/DirectSound/WASAPI
- Linux
  - V4L2
  - ALSA
- macOS
  - AVCaptureSession
  - AudioUnit

Supported Software

- VLC
- VirtualDub
- OBS
- XSplit
- vMix
- VidBlaster
- Wirecast
- Microsoft Media Encoder
- Adobe Flash Media Encoder
- Any other DirectShow/V4L2/AVCaptureSession encoding/streaming software

Input Interfaces

- 2x HDMI
  - DVI-D 1.0
  - HDMI 2.0

Host Interface

- PCIe Gen2 x8

Loop-through Interface

- 2x HDMI
  - DVI-D 1.0

    - HDMI 2.0

Input Features

- Support for input video resolutions up to 4096x2160 pixels

HDMI Specific Features

- 594MHz HDMI receiver
- Adaptive HDMI equalizer
- Support for customized EDID
- Support for extraction of AVI/Audio/SPD/MS/VS/ACP/ISRC1/ISRC2/Gamut/HDR/VBI 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 via SDK
- 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
- Support for Side-by-Side Half, Top-and-Bottom, Frame Packing 3D mode.
- Support for HDR10

Video Capture Formats

- Support for capture image resolutions up to 4096x2160 pixels
- Support for capture frame rates up to 144fps (Actual capture frame rate can be limited by PCIe bandwidth & image resolution)
- Support for 4:2:0 8-bit capture formats: NV12, I420, YV12
- Support for 4:2:2 8-bit capture formats: YUY2, YUYV, UYVY
- Support for 4:4:4 8-bit capture formats: V308, IYU2, V408, BGR24, BGR32
- Support for 4:4:4 10-bit capture formats: V410, Y410
- More capture formats are supported via Magewell Capture SDK

Video Processing Features

- Two video processing pipelines with ~720Mpixels/s processing bandwidth for each one
- Full 10-bit video processing
- 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, 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 4096x2160)
    - 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 Dual HDMI 4K+ LT” 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 Capture Streams

- Unlimited capture 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 Capture SG-DMA

- ~1600MB/s per channel DMA bandwidth in PCIe 2.x system
- ~800MB/s per channel DMA bandwidth in PCIe 1.x 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

- Magewell Capture SDK for easy integration, maximum flexibility and performance

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)
- Safe upgrade. If power off or system break down occur when the firmware is being upgraded, it will automatically restore to the initial version.

LED Indicator

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

Form Factor

- Normal profile PCIe x8 Add-on Card
- 127.89mm x 102.92mm (without PCI bracket)

Power Consumption

- Max current at 12V: ~ 1.32 A
- Max current at 3.3V: ~ 1.94 A
- Max power consumption: ~ 22 W

Working Environment

- Operating temperature: 0 to 60 deg C
- Storage temperature: –20 to 70 deg C
- Relative Humidity: 5% to 90% non-condensing