# DeckLink 4K Extreme 12G

Advanced digital cinema capture card featuring full frame DCI 4K input and output via 12G-SDI! You get dual link multi rate 12G-SDI connections that work with SD, HD and Ultra HD even in Ultra HD 60p, as well as full frame DCI 4K at 4096 x 2160 resolution up to 25p! Capture 10-bit YUV or full color bandwidth 12-bit RGB. Includes AES/EBU audio, up, down and cross conversion, plus built in 3D stereoscopic output at full bandwidth 4:4:4:4 RGB! No other capture and playback card supports more video formats and video connections!

## Connections

<table>
<thead>
<tr>
<th><strong>SDI Video Inputs</strong></th>
<th><strong>2 x 12Gb/s SD/HD/2K/4K.</strong> Supports single/dual link 4:2:2/4:4:4. 2D/3D switchable.</th>
<th><strong>SDI Video Outputs</strong></th>
<th><strong>2 x 12Gb/s SD/HD/2K/4K.</strong> Supports single/dual link 4:2:2/4:4:4. 2D/3D switchable.</th>
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<tr>
<td><strong>Analog Video Inputs</strong></td>
<td><strong>1 x Component YUV on 3 BNCs switchable to S-Video or Composite. Component supports HD and SD.</strong></td>
<td><strong>Analog Audio Outputs</strong></td>
<td><strong>2 Channels of professional balanced analog audio via XLR connectors.</strong></td>
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<td><strong>Optical Fiber Inputs/Outputs (Optional)</strong></td>
<td><strong>2 x 12Gb/s Optical Fiber.</strong></td>
<td><strong>AES/EBU Audio Inputs</strong></td>
<td><strong>2 Channels unbalanced with sample rate converter.</strong></td>
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<td><strong>AES/EBU Audio Outputs</strong></td>
<td><strong>2 Channels unbalanced.</strong></td>
<td><strong>SDI Audio Inputs</strong></td>
<td><strong>16 Channels embedded in SD/HD/2K/4K.</strong></td>
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<td><strong>HDMI type A connector with support for 2160p60.</strong></td>
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<td><strong>HDMI Video Outputs</strong></td>
<td><strong>HDMI type A connector with support for 2160p60.</strong></td>
<td><strong>HDMI Audio Inputs</strong></td>
<td><strong>8 Channels embedded in SD/HD/4K.</strong></td>
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<td><strong>HDMI Audio Outputs</strong></td>
<td><strong>8 Channels embedded in SD/HD/4K.</strong></td>
<td><strong>Sync Input</strong></td>
<td><strong>Tri-Sync or Black Burst.</strong></td>
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<tr>
<td><strong>Device Control</strong></td>
<td><strong>Sony™ compatible RS422 deck control port. Serial ports TxRx direction reversible under software control.</strong></td>
<td><strong>Computer Interface</strong></td>
<td><strong>PCI Express 8 lane generation 2, compatible with 8 and 16 lane PCI Express slots with HDMI or SDI mezzanine card.</strong></td>
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DeckLink 4K Extreme 12G - Technical Specifications
Supported Codecs


Software

Software Included
DaVinci Resolve, Media Express, Disk Speed Test, LiveKey, Blackmagic Desktop Video Utility and Blackmagic driver on Mac OS and Windows. Media Express, Blackmagic Desktop Video Utility and Blackmagic driver on Linux.

Internal Software Upgrade
Firmware built into software driver. Loaded at system start or via updater software.

Physical Installation
PCI Express 8 lane generation 2, compatible with 8 and 16 lane PCI Express slots on Mac OS, Windows and Linux. Mac OS systems require a Mac Pro computer with PCI Express slots. Please check the Support pages to see the full system requirements.
Software Applications

- DaVinci Resolve
- Fusion
- Final Cut Pro X
- Adobe Premiere Pro CC
- Avid Media Composer
- Adobe After Effects CC
- Avid Pro Tools
- Steinberg Cubase
- Autodesk Smoke
- Adobe Photoshop CC


Standards

### SD Video Standards
- 525i59.94 NTSC, 625i50 PAL

### HD Video Standards
- 720p50, 720p59.94, 720p60
- 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
- 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30
- 1080i50, 1080i59.94, 1080i60

### 2K Video Standards (SDI Only)
- 2K DCI 23.98p, 2K DCI 24p, 2K DCI 25p
- 2K DCI 23.98PsF, 2K DCI 24PsF, 2K DCI 25PsF

### Ultra HD Video Standards
- 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

### 4K Video Standards
- 4K DCI 23.98p, 4K DCI 24p, 4K DCI 25p (playback only)

### 3D Video Standards SDI
- 720p50, 720p59.94, 720p60
- 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080i50, 1080i59.94, 1080i60
- 2K DCI 23.98p, 2K DCI 24p, 2K DCI 25p
- 2K DCI 23.98PsF, 2K DCI 24PsF, 2K DCI 25PsF

### 3D Video Standards HDMI
- 720p50, 720p59.94, 720p60
- 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080i50, 1080i59.94, 1080i60

### SDI Compliance

### SDI Metadata Support
- RP 188/SMPTE 12M-2 and closed captioning.

### Audio Sampling
- Television standard sample rate of 48 kHz at 24-bit.
SDI Video Sampling
4:2:2, 4:4:4

SDI Color Precision
8, 10, 12-bit RGB 4:4:4 in all modes up to UHD 30p, and 8, 10-bit YUV 4:2:2 in all modes

Color Space
REC 601, REC 709, REC 2020

HDR Support
HDR metadata packing, HLG and PQ transfer characteristics. (HDMI supports static HDR metadata only)

HDMI Video Sampling
4:4:4, 4:2:2 and 4:2:0

HDMI Color Precision
8, 10 and 12-bit (Deep Color).

HDMI Configuration
HDMI 2.0b supports Deep Color and HDR. Automatically configures to connected display.

Multiple Rate support
HDMI and SDI video connections are switchable between SD/HD/2K and 4K. Component analog video connections are switchable between SD and HD.

Copy Protection
HDMI input is unable to capture from copy protected HDMI sources. Always confirm copyright ownership before capture or distribution of content.

Processing

Ultra HD Down Conversion
Built in, high quality hardware down converter outputs Ultra HD to HD with down converted signal on SDI outputs C & D and HDMI output when connected to an HD only TV.

HD to SD Down Conversion
HD to SD with down converted signal on SDI output B, Component and Composite NTSC/PAL. SD output selectable between letterbox, anamorphic 16:9 and center cut 4:3.

HD Up Conversion
Built in, high quality hardware up conversion from SD to 720HD or 1080HD on playback. Selectable between 4:3 pillarbox, 14:9 zoom and 16:9 zoom. HD outputs via HD-SDI, HDMI and component analog.

HD Cross Conversion
Built in, high quality hardware cross conversion from 720HD to 1080HD, 1080HD to 720HD on playback.

Real Time Effects
DaVinci Resolve, Final Cut Pro X internal effects. Premiere Pro CC Mercury Playback Engine effects. Avid Media Composer internal effects.

Colorspace Conversion
Hardware based real time on output.

3D Processing
Dual stream and frame packed capture and playback.

Physical Specifications
Operating Systems

Mac 10.13 High Sierra, Mac 10.14 Mojave or later.
Windows 7, 8.1 and 10, all 64-bit.
Linux

Power Requirements

Power Consumption
30 Watts

EMC Certifications
FCC, CE and C-Tick

Environmental Specifications

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<th>Operating Temperature</th>
<th>Storage Temperature</th>
<th>Relative Humidity</th>
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<tr>
<td>5° to 40° C (41° to 104° F)</td>
<td>-20° to 45° C (-4° to 113° F)</td>
<td>0% to 90% non-condensing</td>
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What's Included

DeckLink 4K Extreme 12G
HDMI mezzanine card
SD card with software and manual
Breakout cable for analog and RS-422 control.
External power cable

Warranty

3 Year Limited Manufacturer's Warranty.
Blackmagic Design Authorized Reseller