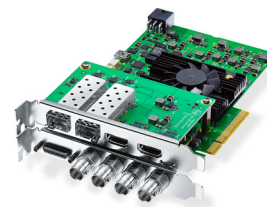


## DeckLink 4K Extreme 12G



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

#### SDI Video Inputs

2 x 12Gb/s SD/HD/2K/4K. Supports single/dual link 4:2:2/4:4:4. 2D/3D switchable.

#### SDI Video Outputs

2 x 12Gb/s SD/HD/2K/4K. Supports single/dual link 4:2:2/4:4:4. 2D/3D switchable.

#### Analog Video Inputs

1 x Component YUV on 3 BNCs switchable to S-Video or Composite. Component supports HD and SD.

#### Analog Video Outputs

1 x Component YUV on 3 BNCs switchable to S-Video and Composite. Component supports HD and SD.

#### Analog Audio Inputs

2 Channels of professional balanced analog audio via XLR connectors.

#### Analog Audio Outputs

2 Channels of professional balanced analog audio via XLR connectors.

#### Optical Fiber Inputs/Outputs (Optional)

2 x 12Gb/s Optical Fiber.

#### AES/EBU Audio Inputs

2 Channels unbalanced with sample rate converter.

#### AES/EBU Audio Outputs

2 Channels unbalanced.

#### SDI Audio Inputs

16 Channels embedded in SD/HD/2K/4K.

#### SDI Audio Outputs

16 Channels embedded in SD/HD/2K/4K.

#### HDMI Video Inputs

HDMI type A connector with support for 2160p60.

#### HDMI Video Outputs

HDMI type A connector with support for 2160p60.

#### HDMI Audio Inputs

8 Channels embedded in SD/HD/4K

#### HDMI Audio Outputs

8 Channels embedded in SD/HD/4K.

#### Sync Input

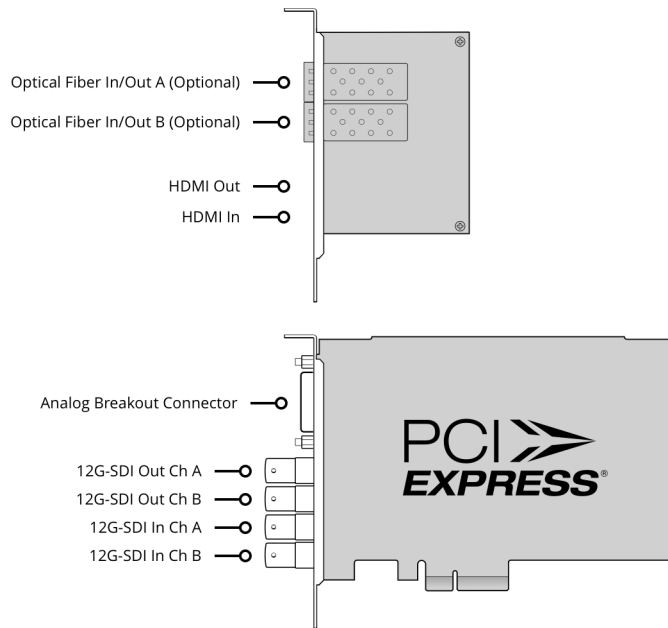
Tri-Sync or Black Burst.

#### Device Control

Sony™ compatible RS422 deck control port. Serial ports TxRx direction reversible under software control.

#### Computer Interface

PCI Express 8 lane generation 2, compatible with 8 and 16 lane PCI Express slots with HDMI or SDI mezzanine card.



## Supported Codecs

AVC-Intra, AVCHD, Canon XF MPEG2,  
 Digital SLR, DV-NTSC, DV-PAL,  
 DVCPRO50, DVCPROHD, DPX, HDV,  
 XDCAM EX, XDCAM HD, XDCAM  
 HD422, DNxHR & DNxHD, Apple  
 ProRes 4444, Apple ProRes 422 HQ,  
 Apple ProRes 422, Apple ProRes LT,  
 Apple ProRes 422 Proxy,  
 Uncompressed 8-bit 4:2:2,  
 Uncompressed 10-bit 4:2:2,  
 Uncompressed 10-bit 4:4:4.

## 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.

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## 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

**Other supported applications include:** The Foundry Nuke, Grass Valley Edius, Steinberg Nuendo, Sony Catalyst Production Suite, Tools On Air Just: Play & Live & In, Softron MovieRecorder & MReplay, Adobe Flash Media Live Encoder, Telestream Wirecast, Livestream Producer, Resolume Arena, Magix Vegas Pro & Movie Edit Pro Premium, Corel VideoStudio Pro, CyberLink PowerDirector, Vidblaster X & Studio & Broadcast, Uniplay One & CG, CasparCG Server, Magicsoft CG, Xsplit Broadcaster, Imagine Communications Velocity & InfoCaster, DevTek Easy Media Suite, Metus Ingest, Boinx Software MimoLive, Cinegy Capture Pro, vMix Live, Renewed Vision ProPresenter, Ventuz Director, Class X Liveboard & Coral CG, Glookast Capturer, Open Broadcaster Software Studio, Nautilus NEMO3D, Derivative TouchDesigner, Assimilate Scratch, Burst Video WebClip2Go & [REC]Marker, Autodesk Flame, Zoom.

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## 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,  
1080PsF23.98, 1080PsF24,  
1080PsF25, 1080PsF29.97, 1080PsF30  
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

SMPTE 259M, SMPTE 292M, SMPTE  
296M, SMPTE 372M, SMPTE 425M,  
SMPTE 435, SMPTE 2081, SMPTE  
2082, SMPTE 2082-10, SMPTE 2108-1,  
ITU-R BT.656 and ITU-R BT.601.

### SDI Metadata Support

RP 188/SMPTE 12M-2 and  
closed captioning.

### Audio Sampling

Television standard sample rate of 48  
kHz at 24-bit.

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**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.

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**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.

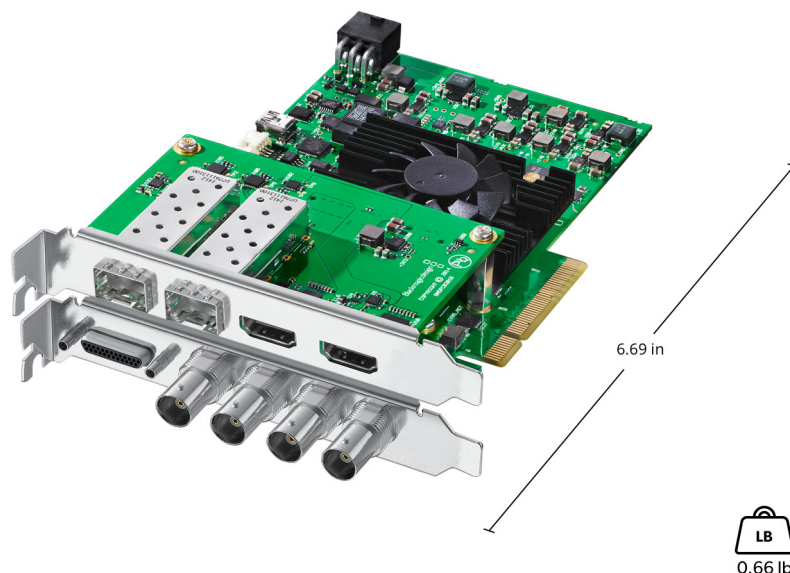
**Colorspace Conversion**

Hardware based real time on output.

**3D Processing**

Dual stream and frame packed capture and playback.

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**Physical Specifications**

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## Operating Systems



Mac 10.14 Mojave,  
Mac 10.15 Catalina or later.



Windows 8.1 and 10, both 64-bit.



Linux

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## Power Requirements

### Power Consumption

30 Watts

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## Environmental Specifications

### Operating Temperature

5° to 40° C (41° to 104° F)

### Storage Temperature

-20° to 45° C (-4° to 113° F)

### Relative Humidity

0% to 90% non-condensing

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## What's Included

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

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## Warranty

3 Year Limited Manufacturer's Warranty.

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