UltraStudio 4K Extreme 3 is the world's most advanced capture and playback solution for PCI Express and Thunderbolt computers! It features incredibly fast 40Gb/s Thunderbolt 3, advanced 12G-SDI and HDMI 2.0 connections for working at up to 60 frames per second with deep color, 12-bit RGB, support for HDR workflows via HDMI 2.0a and extremely large 4K frame sizes. Featuring the widest range of analog and digital connections, UltraStudio 4K Extreme 3 is compatible with virtually any camera, deck, router or display. There's even an extremely powerful hardware encoder built-in that supports realtime H.265 encoding!

$2,995

Connections

SDI Video Inputs

SDI Video Outputs

SDI Rates
270Mb, 1.5G, 3G, 6G, 12G.

Optical SDI
Supports 2 optional SMPTE modules.

SDI Video Loop
4 x reclocked SD/HD/2K/4K linked to corresponding inputs.

SDI Video Repeated Outputs

Analog Video Inputs
1 x Component YUV on 3 BNCs, 1 x composite NTSC/PAL on 1 BNC.

Analog Video Outputs
1 x Component YUV on 3 BNCs, 1 x composite NTSC/PAL on 1 BNC.

Analog Audio Inputs
4 Channels of professional balanced analog audio via XLR connectors and 2 channels of consumer unbalanced via RCA connectors.

Analog Audio Outputs
4 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 on BNC connector.

AES/EBU Audio Outputs
2 Channels unbalanced on BNC connector.

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 2.0 type A connector with support for 2160p60

HDMI Video Outputs
HDMI 2.0 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.

Mic Input
1 x 48V microphone input via XLR connector. Phantom Power switchable via software control.

Timecode Input
1 x XLR Input.

Timecode Output
1 x XLR Output.
**Sync Input**
1 x Reference input. Tri-Sync or Black Burst.

**Sync Output**
1 x Reference Loop Output. Tri-Sync or Black Burst.

**Computer Interface**
Thunderbolt™ 3 (Mac OS and Windows), PCI Express 4 lane generation 2.

**Power**
2 x built-in international AC power supply with IEC C14 inlet. 120-240V, 50-60Hz.

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**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. Software driver loads upgrades at system start or via updater software.

Software Applications

![DaVinci Resolve](image)
DaVinci Resolve

![Fusion](image)
Fusion

![Final Cut Pro X](image)
Final Cut Pro X

![Adobe Premiere Pro CC](image)
Adobe Premiere Pro CC

![Avid Media Composer](image)
Avid Media Composer

![Adobe After Effects CC](image)
Adobe After Effects CC

![Avid Pro Tools](image)
Avid Pro Tools

![Steinberg Cubase](image)
Steinberg Cubase

![Steinberg Nuendo](image)
Steinberg Nuendo

![Adobe Photoshop CC](image)
Adobe Photoshop CC

Other supported applications include:

*HDR and REC 2020 playback and capture is application dependent, check with your software vendor.*

SDI Video Standards

SD Video Standards
525i59.94 NTSC, 625i50 PAL
<table>
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<th>HD Video Standards</th>
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<td>1080p29.97, 1080p30, 1080p47.95,</td>
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<td>Television standard sample rate of</td>
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<td>48 kHz and 24-bit.</td>
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<td>1080p60</td>
<td>1080PsF23.98, 1080PsF24,</td>
<td>SDI Video Sampling</td>
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<tr>
<td>1080PsF25, 1080PsF29.97, 1080PsF30</td>
<td>1080PsF25</td>
<td>4:4:4, 4:2:2</td>
</tr>
<tr>
<td>1080i50, 1080i59.94, 1080i60</td>
<td>1080i50, 1080i59.94, 1080i60</td>
<td>SDI Color Space</td>
</tr>
<tr>
<td></td>
<td>2Kp29.97 DCI, 2Kp30 DCI, 2Kp47.95 DCI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2Kp49.95 DCI, 2Kp48 DCI, 2Kp50 DCI,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2Kp59.94 DCI, 2Kp60 DCI</td>
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<tr>
<td></td>
<td>2KPsF23.98 DCI, 2KPsF24 DCI,</td>
<td>HDR metadata packing, HLG and PQ</td>
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<td>2KPsF25 DCI, 2KPsF29.97 DCI,</td>
<td>transfer characteristics.</td>
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<td>2KPsF30 DCI</td>
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<td>Ultra HD Video Standards</td>
<td>2160p23.98, 2160p24, 2160p25,</td>
<td>SDI Configuration</td>
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<td>2160p29.97, 2160p30, 2160p47.95,</td>
<td>SDI output is configurable for Quad</td>
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<td></td>
<td>2160p48, 2160p50, 2160p59.94,</td>
<td>Link 3Gb/s via Blackmagic Desktop</td>
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<td></td>
<td>2160p60</td>
<td>Video Utility.</td>
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<tr>
<td>4K Video Standards</td>
<td>4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI,</td>
<td>When using single link 12Gb/s on</td>
</tr>
<tr>
<td></td>
<td>4Kp29.97 DCI, 4Kp30 DCI, 4Kp47.95 DCI</td>
<td>SDI A or dual link 6Gb/s on SDI A</td>
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<tr>
<td></td>
<td>4Kp49.95 DCI, 4Kp48 DCI, 4Kp50 DCI,</td>
<td>and B, SDI C and D will output</td>
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<tr>
<td></td>
<td>4Kp59.94 DCI, 4Kp60 DCI</td>
<td>downconverted HD.</td>
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<td>SDI Compliance</td>
<td>SDI Compliance</td>
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<td></td>
<td>SMPTE 259M, SMPTE 274M, SMPTE 292M,</td>
<td>SDI output is unconfigurable for</td>
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<td></td>
<td>SMPTE 372M, SMPTE 424M, SMPTE 425M,</td>
<td>Quad Link 3Gb/s via Blackmagic</td>
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<tr>
<td></td>
<td>SMPTE 2048-1, SMPTE 2081-10, SMPTE</td>
<td>Desktop Video Utility.</td>
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<tr>
<td></td>
<td>2081-11, SMPTE 2082-10, SMPTE ST2108-</td>
<td>When using single link 12Gb/s on</td>
</tr>
<tr>
<td></td>
<td>1, ITU-R BT.656 and ITU-R BT.601.</td>
<td>SDI A or dual link 6Gb/s on SDI A</td>
</tr>
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</table>

HDMI Video Standards

<table>
<thead>
<tr>
<th>SD Video Standards</th>
<th>3D Video Standards</th>
<th>HDMI Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>525i59.94 NTSC, 625i50 PAL</td>
<td>720p50, 720p59.94, 720p60</td>
<td>HDMI 2.0b supports Deep Color and</td>
</tr>
<tr>
<td>HD Video Standards</td>
<td>1080p23.98, 1080p24, 1080p25,</td>
<td>HDR. Automatically configures to</td>
</tr>
<tr>
<td></td>
<td>1080p29.97, 1080p30, 1080p47.95,</td>
<td>connected display.</td>
</tr>
<tr>
<td></td>
<td>1080p48, 1080p50, 1080p59.94,</td>
<td>Multiple Rate Support</td>
</tr>
<tr>
<td></td>
<td>1080i50, 1080i59.94, 1080i60</td>
<td>HDMI and SDI video connections</td>
</tr>
<tr>
<td>Ultra HD Video Standards</td>
<td>2160p23.98, 2160p24, 2160p25,</td>
<td>are switchable between SD/HD/UHD</td>
</tr>
<tr>
<td></td>
<td>2160p29.97, 2160p30, 2160p47.95,</td>
<td>and 4K. Component analog video</td>
</tr>
<tr>
<td></td>
<td>2160p48, 2160p50, 2160p59.94,</td>
<td>connections are switchable between</td>
</tr>
<tr>
<td>4K Video Standards</td>
<td>2160p60</td>
<td>SD and HD.</td>
</tr>
<tr>
<td></td>
<td>4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI,</td>
<td>Copy Protection</td>
</tr>
<tr>
<td></td>
<td>4Kp29.97 DCI, 4Kp30 DCI, 4Kp47.95 DCI</td>
<td>HDMI input is unable to capture</td>
</tr>
<tr>
<td></td>
<td>4Kp49.95 DCI, 4Kp48 DCI, 4Kp50 DCI,</td>
<td>from copy protected HDMI sources.</td>
</tr>
</tbody>
</table>
Hardware Frame Buffer


Color Precision

8, 10, 12-bit RGB 4:4:4 up to 2160p30 and 8, 10-bit YUV 4:2:2 in all standards.

Computer Capture

2 x Thunderbolt 3 for Mac and Windows plus PCI Express Gen 2 for Mac, Windows and Linux. Includes Blackmagic Desktop Video SDK.

Control

Built in Control Panel
14 buttons for input selection. 5 inch color display.

Device Control
2 x RS-422 deck control.

Processing

Encoding
Hardware based real time H.265 encoder.

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
Built in, high quality hardware down converter outputs 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 Cross Conversion
Built in, high quality hardware cross conversion from 720p to 1080HD and 1080HD to 720p on playback.

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

Colorspace Conversion
Hardware based real time.

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

Physical Installation
Requires a computer with either a Thunderbolt port or available PCI Express slot. Blackmagic PCI Express Cable Kit available separately for high speed PCI Express Gen 3 connection. Please check support pages to see the full system requirement.
Operating Systems

- Mac 10.14 Mojave, Mac 10.15 Catalina or later.
- Windows 7, 8.1 and 10, all 64-bit.
- Linux

Power Requirements

2 x Internal 120 - 240V AC

EMC Certifications

FCC, CE and C-Tick.

Physical Specifications

Environmental Specifications

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>Storage Temperature</th>
<th>Relative Humidity</th>
</tr>
</thead>
<tbody>
<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>
</tr>
</tbody>
</table>

What's Included

- UltraStudio 4K Extreme 3
- SD card with software and manual
Warranty

3 Year Limited Manufacturer's Warranty.

Blackmagic Design Authorized Reseller