

## Teranex 3D Processor



Teranex 3D is designed to handle stereoscopic 3D conversions up to 1080HD. You get analog and digital connections such as dual link 3G-SDI, component and composite in/out, HDMI and more. There are 4 channels of AES/EBU audio or 2 channels of balanced audio, along with consumer HiFi audio input connections.

**\$3,995**

### Connections

#### SDI Video Input

1x BNC (IN A) 10bit SD, HD, 3Gb/s HD, 2K switchable. Usable for encoded 3D HDSDI input.

1x BNC (IN B) 10bit SD, HD, 3Gb/s HD and 2K switchable. Usable as dual link HDSDI for 4:2:2 or 4:4:4 connection or 3 Gb/s for HDSDI 4:4:4 or 2K. Also usable for dual stream 3D (Right Eye) input.

#### SDI Video Input Loop

1x BNC (IN A Loop) – Reclocked, 10bit SD, HD, 3 Gb/s HD, 2K switchable.

1x BNC (IN B Loop) – Reclocked, 10bit SD, HD, 3 Gb/s HD, 2K switchable.

#### SDI Video Output

1x BNC (OUT A) 10bit SD, HD, 3Gb/s HD and 2K switchable. Usable for encoded 3D HDSDI output.

2x BNC (OUT B) 10bit SD, HD, 3Gb/s HD and 2K switchable. Usable as dual link HDSDI for 4:2:2 or 4:4:4 connection or 3 Gb/s for HDSDI 4:4:4 or 2K. Also usable for dual stream 3D (Right Eye) output and encoded 3D HDSDI output.

#### Analog Video Input

3x BNC Component YUV on 3 BNCs switchable to Composite. Component supports HD and SD.

#### Analog Audio Input

2x XLR - 2 channels balanced analog audio input (XLRs are shared with AES/EBU audio input).

2x RCA connectors support input of unbalanced analog audio for consumer equipment.

#### Analog Audio Output

2x XLR - 2 channels balanced analog audio output (XLRs are shared with AES/EBU audio output).

#### AES/EBU Audio Input

2 x XLR - 2 pairs (4 channels) professional 110Ω balanced digital audio input (XLRs are shared with analog inputs).

#### AES/EBU Audio Output

2 x XLR - 2 pairs (4 channels) professional 110Ω balanced digital audio output (XLRs are shared with analog outputs).

#### SDI Audio Input

16 channels in SD, HD, 3Gb/s HD and 2K. (16 channels in HD and 2K, and 8 channels in SD for capture via Thunderbolt port)

#### SDI Audio Output

16 channels in SD, HD, 3Gb/s HD and 2K. (16 channels in HD and 2K, and 8 channels in SD for playback via Thunderbolt port)

#### Dolby Support Optional

Dolby® E/AC-3 support in frame rate conversions with the optional Dolby® E/AC-3 decode and encode modules. Dolby metadata support using RS-485 on DB-9.

#### Timecode Input

Support for VITC/ATC

1x XLR for LTC Input

#### Timecode Output

Support for VITC/ATC

1x XLR for LTC Output (passthrough only)

#### Multi Rate Support

SDI, HDMI and component analog video connections are switchable between standard definition and high definition. SDI switches between 270 Mb/s standard definition SDI, 1.5 Gb/s HD-SDI and 2K SDI and 3 Gb/s HD-SDI. HDMI connections are switchable between standard definition, high definition and 3D high definition with frame packing.

#### Reference Input

1x BNC - Black Burst or Tri-level sync

#### Device Control

Sony™ compatible RS-422 deck control port. Serial ports TxRx direction-reversible under software control.

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### Analog Video Output

3x BNC Component YUV on 3 BNCs switchable to Composite. Component supports HD and SD.

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### HDMI Video Input

1x HDMI type A connector including 3D frame packing support.

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### HDMI Video Output

1x HDMI type A connector including 3D frame packing support.

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### HDMI Audio Input

8 channels, embedded.

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### HDMI Audio Output

8 channels, embedded.

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### Optical Fiber Connection (optional)

None.

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### Dolby Support Built-In

Dolby® AC-3 pass through in all conversions. Dolby® E pass through except during video frame rate conversions.

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### Computer Interface

1x USB 2.0 mini B port for software updates.

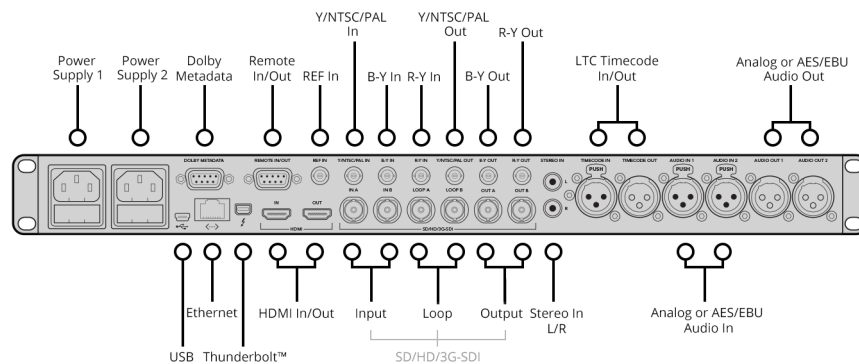
1x RJ45 10/100 Ethernet for remote control and configuration.

1x Thunderbolt port for capture and playback of video and audio.

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### Processor Interface

Illuminated pushbuttons, status LEDs and LCD with easy to use onscreen menus.



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## Standards

### SD Format Support

525i59.94 NTSC, 625i50 PAL

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### 1.5G-SDI HD Format Support

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

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### 3G-SDI HD Format Support

1080p50, 1080p59.94, 1080p60 level B only

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### 2K Format Support

2K DCI 23.98p, 2K DCI 24p  
2K DCI 23.98PsF, 2K DCI 24PsF

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### SDI Compliance

SMPTE 259M, SMPTE 292M, SMPTE 296M,  
SMPTE 372M, SMPTE 425M

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### Audio Sampling

Television standard sample rate of 48kHz and 24-bit HD, 20-bit SD.

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### Video Sampling

4:2:2 and 4:4:4 switchable

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### Color Precision

10-bit

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### Color Space

REC 601, REC 709

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### HD-SDI 3D Support

Top and bottom, side by side, line by line, dual stream.

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### HDMI 3D Support

Top and bottom, side by side, line by line, frame packing.

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### SDI Format Support

525 NTSC, 625 PAL, 720HD, 1080HD and 2K 2048 x 1080 switchable.

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### Analog Format Support

525 NTSC, 625 PAL, 720HD and 1080HD switchable.

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### Analog Component

NTSC/PAL 10-bit and 16x Over-sampled Output.

HD 10-bit and 4x Over-sampled Output.

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### Analog Composite

NTSC/PAL 10-bit and 16x Over-sampled Output.

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### HDMI Color Precision

4:2:2 10-bit

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### 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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### **SDI Metadata Support**

VITC/ATC support, SMPTE 12M. Video indexing support including WSS, RP186 and AFD, SMPTE 2016. Closed captioning support for conversions to and from 608 and 708, SMPTE 334M. (Capture and playback via Thunderbolt port supports RP188, VANC using up to 3 lines of video in file including closed captioning.)

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## Conversions

IN \ OUT	OUT																													
	525i59.94 NTSC	625i50 PAL	720p50	720p59.94	720p60	1080p23.98	1080PsF23.98	1080p24	1080PsF24	1080p25	1080PsF25	1080p29.97	1080PsF29.97	1080p30	1080PsF30	1080i50	1080p50	1080i59.94	1080p59.94	1080i60	1080p60	2K DCI 23.98p	2K DCI 23.98PsF	2K DCI 24p	2K DCI 24PsF	2160p23.98	2160p24	2160p25		
525i59.94 NTSC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
625i50 PAL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
720p50	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
720p59.94	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
720p60	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p23.98	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080PsF23.98	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p24	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080PsF24	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p25	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080PsF25	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p29.97	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080PsF29.97	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080PsF30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080i50	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p50	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080i59.94	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p59.94	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080i60	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
1080p60	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 23.98p	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 23.98PsF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 24p	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 24PsF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2160p23.98																														
2160p24																														
2160p25																														

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## Processing

### Aspect Ratio Conversion

Real time variable and fixed aspect ratio conversion including proprietary "SMART" aspect.

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### Real Time Video Processing

Includes noise reduction, cadence detection with insertion/removal and cadence correction, scene cut detection, color correction, and proc amp control.

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### Real Time 3D Processing

3D synchronization, patent pending 2D to 3D simulation and 3D camera align.

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### Real Time Effects during playback on a computer with Thunderbolt™ technology

Apple Final Cut Pro™ internal effects. Adobe® Premiere Pro CC® Mercury Playback Engine effects. Avid Media Composer 6™ internal effects.

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### Format Conversion

Real time up conversion, down conversion, cross conversion and SD/HD standards conversion on capture. Most conversions are also available on 3D formats.

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### Color Space Conversion

Hardware based real time.

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### Test Patterns

SMPTE 75% Bars; full-field color bars 75%; convergence grid; multi-burst; black.

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## Software

### Software Included

Desktop Video software installs Media Express, Disk Speed Test, LiveKey, Blackmagic system preferences and Blackmagic driver for video capture and playback via the converter's Thunderbolt port.

Blackmagic UltraScope software for waveform monitoring from the converter's Thunderbolt port.

### Installation

Connected via a Thunderbolt cable (not included) to computers with Thunderbolt technology for video capture and playback.

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### Software Control

Software control utility included free for changing settings via Windows 7 or Windows 8 and Mac OS X.

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### Internal Software Upgrade

Automatically upgrades when new software is connected via USB 2.0.

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## Operating Systems



Mac OS X 10.11 El Capitan, macOS Sierra or later.



Windows 8.1 or Windows 10.

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## Physical Specifications



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## Physical Installation

1 rack unit size. Less than 8 inches deep.

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## Power Requirements

### **Power Supply**

2x built-in international AC power supplies with IEC C14 inlets for failover redundancy. 100-240V, 50-60Hz.

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### **Typical Power Consumption**

58 watts

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## Environmental Specifications

### **Operating Temperature**

5° to 50° C (41° to 122° 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

Teranex 3D Processor

Software CD

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## Warranty

12 Months Limited Manufacturer's Warranty.

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