

Teranex AV



Teranex AV is specifically designed with new features for live events and professional AV installations, as well as broadcast and post production workflows. You get 1,089 up, down, cross and standards conversions for all formats up to 2160p60, along with Teranex's patented algorithms and legendary image quality. Teranex AV offers low latency, and features a still store for adding logos and graphics, a live freeze frame and can generate a reference signal. You get professional 12G-SDI and quad SDI connections which can be used simultaneously, consumer HiFi, XLR audio, HDMI in, loop and outputs, and more! There are even metal brackets at the rear to prevent cables and connections from getting damaged when installed in tight locations!

Connections

SDI Video Inputs

1x BNC (IN A) – 10-bit SD, HD, 2K, 3G HD levels A and B, 6G and 12G Ultra HD auto switching.

1x BNC (IN B) – 10-bit SD, HD, 2K, 3G HD levels A and B, 6G and 12G Ultra HD auto switching. Usable as 2nd input or for dual link input for 4:2:2 3G or 6G Ultra HD

SDI Video Input L oops

1x BNC (IN A Loop) – Reclocked, 10-bit SD, HD, 2K, 3G HD, 6G and 12G Ultra HD auto switching.

1x BNC (IN B Loop) – Reclocked, 10-bit SD, HD, 2K, 3G HD, 6G and 12G Ultra HD auto switching.

SDI Video Outputs

1x BNC (OUT A) – 10-bit SD, HD, 2K, 3G HD levels A and B, 6G and 12G Ultra HD auto switching.

1x BNC (OUT B) – 10-bit SD, HD, 2K, 3G HD levels A and B, 6G and 12G Ultra HD auto switching. Usable as dual link output for 4:2:2 3G or 6G Ultra HD.

Quad SDI Video Outputs

4x BNC (Channels A, B, C, D) - 10-bit 3G-SDI Quad Link or Quad HD Split for Ultra HD p50/59.94/60; 10-bit 1.5G-SDI Quad HD Split for Ultra HD p23/24/25/29/30. For other output formats, these connectors will supply four replicated SDI outputs.

HDMI Video Inputs

1x HDMI 2.0 type A connector. YUV or RGB, auto switching.

HDMI Video Loop Inputs

1x HDMI 2.0 type A connector. Active Input loop.

HDMI Video Outputs

1x HDMI 2.0 type A connector. YUV or RGB, user selectable.

SDI Audio Inputs

16 channels in SD, HD, 3G HD, 2K and Ultra HD.

SDI Audio Outputs

16 channels in SD, HD, 3G HD, 2K and Ultra HD.

HDMI Audio Inputs

8 channels in SD, HD, 3G HD, 2K and Ultra HD.

HDMI Audio Outputs

8 channels in SD, HD, 3G HD, 2K and Ultra HD.

Optical Fiber Connection (optional)

1x SMPTE optical fiber SFP socket.

Optical Fiber Video Inputs

1x 10bit SD, HD, 3G HD, 2K, Ultra HD auto switching.

Optical Fiber Video Outputs

1x 10bit SD, HD, 3G HD, 2K, Ultra HD auto switching.

Optical Fiber Audio Inputs

16 channels in SD, HD, 3G HD, 2K and Ultra HD.

Optical Fiber Audio Outputs

16 channels in SD, HD, 3G HD, 2K and Ultra HD.

Analog Audio Inputs

2x XLR - 2 channels professional balanced analog audio (XLRs are shared with AES/EBU inputs) .
2x RCA - stereo unbalanced analog audio on RCA connectors for consumer equipment.

AES/EBU Digital Audio Inputs

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

Dolby® Support Built In

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

Timecode Inputs

Support for VITC/ATC. No support for LTC.

Timecode Outputs

Support for VITC/ATC. No support for LTC.

Multi Rate Support

SDI connections are switchable between standard definition, high definition and Ultra HD. SDI switches between 270 Mb/s standard definition SDI, 1.5 Gb/s HD-SDI and 2K SDI, 3G HD, 6G and 12G Ultra HD.

Reference Input

1x BNC - Black Burst in SD or Tri-level sync in HD.

Reference Output

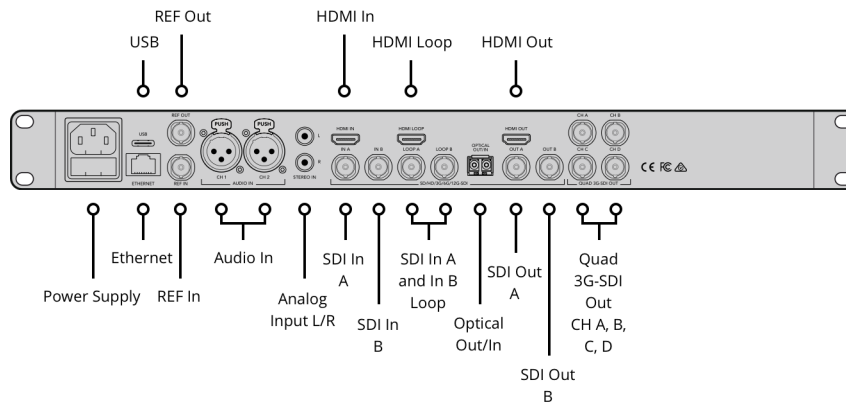
1x BNC - Internal reference generator providing blackburst or tri-level sync output at the current output frame rate.

Computer Interface

1 x USB type C port for software updates. 1 x RJ45 Gigabit Ethernet for remote control and configuration.

Processor Interface

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



Standards

SD Video Standards

525i59.94 NTSC, 625i50 PAL

1.5G-SDI HD Video Standards

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

3G-SDI HD Video Standards

1080p50, 1080p59.94, 1080p60 levels
A and B

2K Video Standards

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

Ultra HD Video Standards

2160p23.98, 2160p24, 2160p25,
2160p29.97, 2160p30, 2160p50,
2160p59.94, 2160p60

SDI Compliance

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

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.

Audio Sampling

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

Video Sampling

4:2:2

Color Precision

10-bit

Color Space

REC 601, REC 709

HDMI Color Precision

4:2:2 10-bit

Copy Protection

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

SDI Video Standards

525 NTSC, 625 PAL, 720HD, 1080HD, 2K DCI and Ultra HD 3840 x 2160 switchable.

Conversions

	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	2160p29.97	2160p30	2160p50	2160p59.94	2160p60					
525i59.94 NTSC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•				
625i50 PAL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
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720p59.94	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
720p60	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
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1080p30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
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1080p60	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 23.98p	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 23.98PsF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2K DCI 24p	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2K DCI 24PsF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p23.98	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p24	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p25	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p29.97	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p50	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p59.94	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2160p60	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Processing

Aspect Ratio Conversion

Real time variable and fixed aspect ratio conversions.

Real Time Video Processing

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

Low Latency Processing

Real time processing with 2 frame latency, available for select format conversions.

Format Conversion

Real time up conversion, down conversion, cross conversion and SD/HD/Ultra HD standards conversion.

Colorspace Conversion

Hardware based real time

Still Store

Capture a video frame into non-volatile memory from the current input signal or freeze frame buffer.

Freeze Frame

Temporarily freeze incoming live video.

Test Patterns

SMPTE 75% Bars; full field color bars 75%; convergence grid; multiburst; black with selectable audio tones and selectable horizontal pattern motion.

Output Switching

Output may be switched between the input video, internal black, user still frame or a freeze frame from the input video. The transition rate between output choices has a range of 0 to 5 seconds. A transition forces a dissolve through black.

Software

Software Control

Teranex Setup software control application included free of charge for changing settings via Windows 8.1, Windows 10 and Mac.

Internal Software Upgrade

Via USB type C using the included Teranex Setup application.

Operating Systems

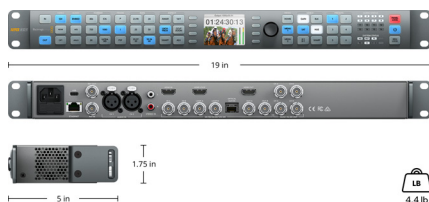


Mac 10.14 Mojave,
Mac 10.15 Catalina or later.



Windows 8.1 and 10.

Physical Specifications



Power Requirements

Power Supply

1 x built-in international AC power supply with IEC C14 inlet. IEC power cable required. 100-240V, 50-60Hz

Typical Power Consumption

42 watts

Environmental Specifications

Operating Temperature

0° to 40° C (32° to 104° F)

Storage Temperature

-20° to 45° C (-4° to 113° F)

Relative Humidity

0% to 90% non-condensing

What's Included

Teranex AV

SD card with software and manual

2 x Bumper guards with 4x M4 screws

Warranty

12 Month Limited Manufacturer's Warranty.

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