NOKIA OZO

Real-time 3D 360 stitching software for all productions. From multi-cam broadcasts using standard 4k workflows to single camera live-streams from a laptop.

OZO Live is a real-time broadcast solution that delivers live virtual reality experiences over SDI and IP. The software runs on standard hardware, and delivers a variety of resolutions, including standard UHD and up to a maximum of 4K per eye stereo over dual SDI. OZO Live integrates seamlessly with your existing 4K SDI broadcast equipment. Select monoscopic 2D or stereoscopic 3D and use standard switchers, color correctors, audio mixers, and other support gear for a full professional broadcast multi-cam production workflow. For more scaled down projects, OZO Live also easily enables live-streaming from a single camera to Facebook or YouTube directly from a laptop. Quick to set up, easy to use, and highly reliable, OZO Live immerses you in an event as if it's happening around you.

BENEFITS

Real-time broadcast control

OZO Live enables real-time 3D 360° stitching, spatial audio mixing, monoscopic and stereoscopic video outputs, and a host of professional controls - All in a powerful, easy-to-use user interface.

Mission critical reliability

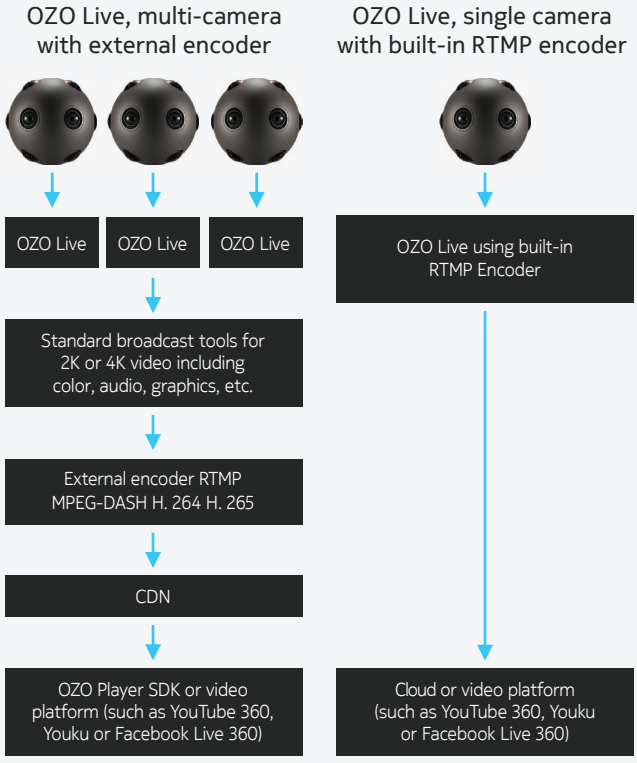
Frame accurate, reliable and stable for hours upon hours at a time, OZO Live has proven itself in the field at some of the world's biggest events.

Works within your workflow

OZO Live works with your existing 4K broadcast equipment, allowing for seamless and straightforward production. Scalable multi-camera support via standard workflows enable you to broadcast events of any size.

Available for Ubuntu and Windows

OZO Live is now available for both Linux and Windows OS. This enables broad coverage of usage type from multi-camera productions to single camera live streaming from a laptop.



FEATURES AND FORMATS

Video Output Features	Resolution options: 4096x4096 (RTMP), Custom up to 4096x4096, 3840x2160 UHD (16:9), 3840x1920 (2:1), 2560x1440 QHD (16:9), 1920x1080 Full HD (16:9), 1920x960 (2:1) Format options: stereoscopic 360 dual output, stereoscopic 360 T/B, stereoscopic 180 L/R, monoscopic 360 Projection options: equirectangular, lambert, cube map (mono only) RTMP streaming encoding for live streaming to platforms such as YouTube 360 or Facebook (Native support)
Spatial Audio Mixing	Position external sources in both elevation and azimuth and create multiple (per camera) spatial audio mixes. Output in multiple audio. Formats from same mix. Dante Soundcard support.
Audio Output Features	2.0, 5.1, 7.1 Binaural Ambisonics (First Order) Pass through (48kSps 24 bit)
Stitching Features	Real-time automatic and manual per-seam focus Real-time per-seam multi-point convergence control Real-time, per seam location and width control Real-time variable-width blending
Color Correction Features	Convenient clickable UI Global real-time black level, white level, and gamma, per channel Automated white level and black level matching across lenses Per-lens manual offsets of all settings
Image Controls	Illumination setting Static and temporal de-noising Vignette control Digital panning Inverted mount recognized automatically
Encoder Support	Encode RTMP directly from OZO Live h.265/HEVC main profile support Support h.264 profiles, main, baseline and high Support GOP size Output monitoring while streaming

SUPPORTED HARDWARE

Components	Specification	Notes
CPU	Single i7-7700 2.8GHZ Processor	
GPU	Single GTX 1080 Ti card (recommended HW that guarantees all feature support)	Single GTX 1070 card (minimum HW that supports most features)
RAM	16GB DDR4, 2133 GHZ or better	
SDI input connectivity	Blackmagic Decklink Mini Recorder, Mini Recorder 4K, SDI 4K, Studio 4K. Blackmagic Hyperdeck Pro, Blackmagic Ultrastudio 4K, Blackmagic UltraStudio Mini Recorder	SDI connectivity over PCIe SDI connectivity over Thunderbolt 2 (Windows only)
SDI output connectivity	AJA Corvid 88, AJA KONA 4, AJA Corvid 44 (AJA driver 12.4.x), BlackMagic DeckLink SDI 4K, Mini Blackmagic DeckLink Mini Monitor 4K, BlackMagic Decklink Studio 4K	SDI connectivity over PCIe
	Blackmagic UltraStudio 4K	SDI connectivity over Thunderbolt 2 (Windows only)
Network Card	Gigabit Ethernet	
Audio connectivity	Four Audio Dante PCIe card (Windows and Linux), Virtual Soundcard driver from Audinate (Windows only) ALSA soundcard (Linux), ASIO (Windows), Standard Windows recognized audio driver	
Operating System	Ubuntu 16.04 LTS Windows 10 Pro	