

Sony's 3D Production System

SONY
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Superior 3D Creative Content Workflow for
Cinema Production and Live Shooting

Sony Digital Cinema
4K

HDCAM SR™

R
SERIES

In recent years, digital technologies for stereoscopic three dimensional (3D) cinema production and live shooting have progressed rapidly, and the market for 3D entertainment is growing exponentially.

At the movies, at sporting events, concerts and in many other locations, audiences are now eager for even-more sophisticated levels of 3D impact and realism. To answer this demand requires solutions that support a more efficient 3D content creation workflow.

Sony's solutions are the perfect choice. For years, Sony has provided a wide range of professional products for 3D video content, from shooting to projecting, and has gained unrivalled experience in developing products for high-end content production, such as digital cinema and television commercials. With Sony's excellent reputation among professionals, its innovative technologies and its accumulated experience, you're assured of superior 3D creative content at every stage of the workflow.

Sony's 3D System Solution Advantages

Stereoscopic images are created by capturing images from the position of both the right and left human eyes.

For the human brain to recognize these images as 3D, the right eye has to receive the right image, and the left eye has to receive the left image. This is achieved by using 3D shutter or 3D polarized filter glasses. For a 3D experience with superior impact and realism, images must be captured in high resolution. Both images must also be handled with perfect synchronization through every stage of the workflow, from production to transmitting; recording, editing, and final projection onto the screen.

The HDCAM-SR format adopted by the SRW-1/RPC-1 portable recorder and SRW-5800 digital recorder is ideal for 3D content creation. Key qualifications are its high picture quality, and Dual Stream recording mode allows these recorders to simultaneously capture the images of two cameras at a very high picture quality level, making it possible for users to achieve 3D stereo shooting. Other ground-breaking 3D content creation products from Sony include the MVS-8000G and the new MVS-8000X production switchers, both of which can simultaneously handle data in Dual Stream mode, and the SRX-R320 digital cinema projector that delivers 3D images to the screen.

3D stereo shooting solutions

Cameras:

To build a 3D camera rig requires high-performance cameras that are more compact and more versatile than regular cameras. Sony provides an extensive lineup of studio cameras that can be utilized for 3D stereo shooting, such as the well-reputed HDC-1500R Series studio cameras, the HKC-T1500 CCD block extension adaptor, which can be operated independently from its camera body, and the newly developed HDC-P1 multi-purpose camera, a POV-style HD camera that's ideal for 3D shooting applications.

HDC-P1 multi-purpose camera -Key Features-

- Sony's first 2/3-inch (16.9-mm) 2.2-megapixel full-HD CCD POV-style camera with very high quality
- Compact body: just 86 mm (3 1/2 inches) in width
- Supports a wide range of capturing formats: 1080/59.94i, 1080/50i, 720/59.94p, and 720/50p
- Optional HZC-PSFP1 software adds capturing formats 4:2:2 1080/23.98PsF, 24PsF, 25PsF, and 29.97PsF
- Motorized filter servo system (two disks: ND and CC)
- Same control system as HDC Series studio cameras

ACQUISITION

CORRECTION

3D Camera System with 3D Rig



Stereo Image Processor

MPE-200 with MPES-3D01 software



HDCAM-SR VTR



Recorders:

As previously mentioned, the HDCAM-SR format adopted by the SRW-1/SRPC-1 portable recorder is ideal for 3D content creation. This recorder provides the highly effective capture of 3D images from two cameras.

In Dual Stream mode, the images from two cameras can be recorded simultaneously. And in 3D Field Sequence mode, it's easy to monitor 3D images in the field using a compatible 3D monitor.

Stereo image processor:

To greatly simplify the 3D shooting workflow, Sony offers the highly sophisticated MPE-200 multi-image processor with optional MPES-3D01 stereo image processor software. By combining the MPE-200 with MPES-3D01 software, users can analyze 3D images and make fine adjustments. High-quality 3D images can be created by combining a simple camera rig with this 3D processing solution.

This solution also delivers versatility. The MPE-200 with MPES-3D01 software provides a variety of monitoring methods for captured 3D images such as a 50% mix, above below, anaglyph, difference, and side-by-side.

3D monitor:

For 3D video monitoring, Sony offers two types of high performance professional LCD monitor: LMD-4251TD*1 and LMD-2451TD*2. These professional monitors incorporate a micro polarizer screen attached to the LCD panel, and are supplied with passive glasses. Thanks to these lightweight circular polarizer 3D-system glasses, users can view excellent flicker-free 3D images which helps them to engage in 3D production operations with less stress. The hallmarks of these monitors are their highly acclaimed Sony-unique ChromaTRU color matching technology, and a full-HD (1920 x 1080) resolution professional LCD panel with an excellent wide viewing angle - developed without compromise because user convenience has top priority.

With their dual-stream HD-SDI*3 interface, these two professional monitors support 1080/59.94i, 1080/50i, 1080/24PsF, and 1080/23.98PsF formats.

*1 1067-mm (42-inch), viewing area measured diagonally.

*2 613-mm (24-inch), viewing area measured diagonally.

*3 An optional dual-stream HD-SDI input adaptor is required.

3D editing solutions

In addition to the SRW-1/RPC-1 portable recorder, the SRW-5800 digital videocassette recorder mentioned previously, and the SRW-5100 digital videocassette player, are ideal for 3D content workflow.

Both the SRW-5800 and the SRW-5100 enable highly effective editing procedures in linear or non-linear editing rooms.

3D live solutions

In addition to solutions for 3D cinema production, Sony also delivers 3D content creation solutions for live use such as live shooting at stadium sporting events and concerts.

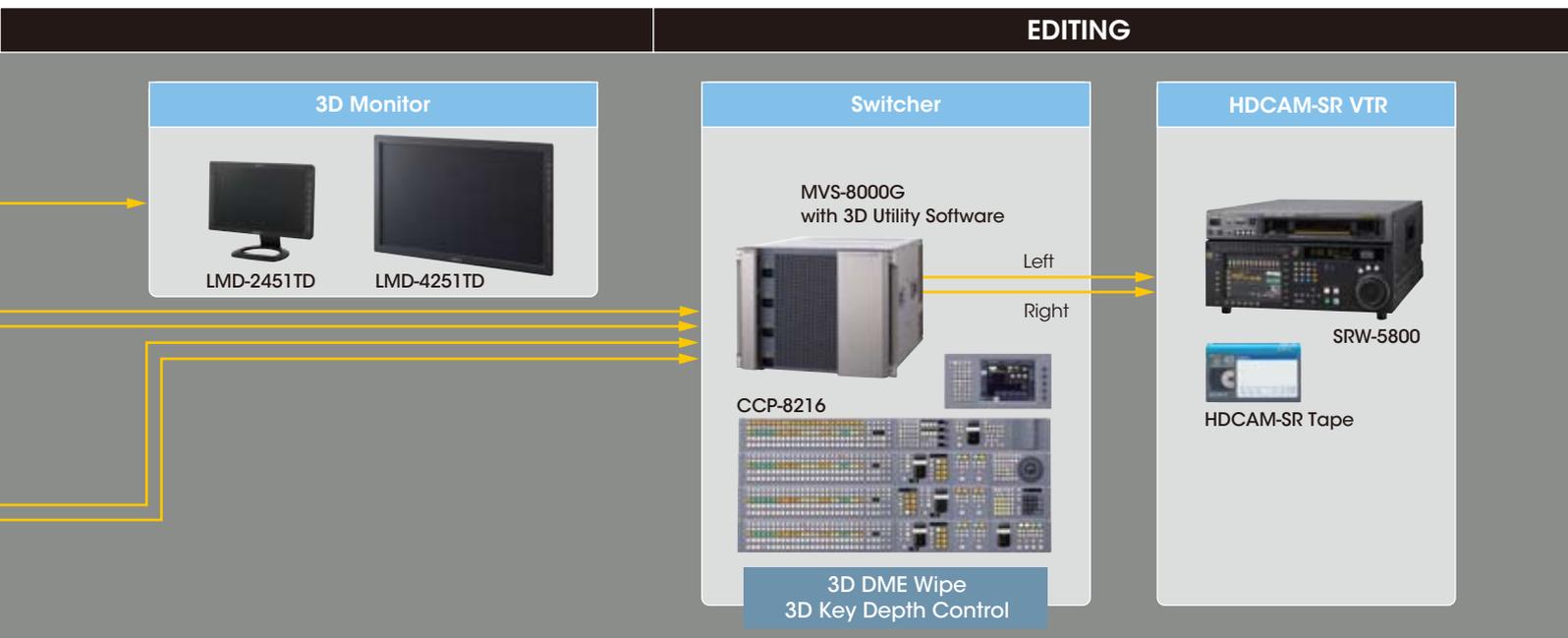
The acclaimed MVS-8000G and MVS-8000X production switchers provide a simple 3D live production system with high operability. By installing an optional software, the MVS-8000G can handle 3D signals easily without complex link setting.

Crosspoint assignment for right eye and left eye signals can be set as a pair of signals.

However parallax value of their signals can be adjusted independently.

The MVS-8000X is the high-end model of the MVS-8000 series production switchers with 3D and 3Gbps/1080p real-time processing capability.

Both switchers can stream right eye and left eye images in full-HD 1920 x 1080, and output these images to a 3D monitor or 3D projector.



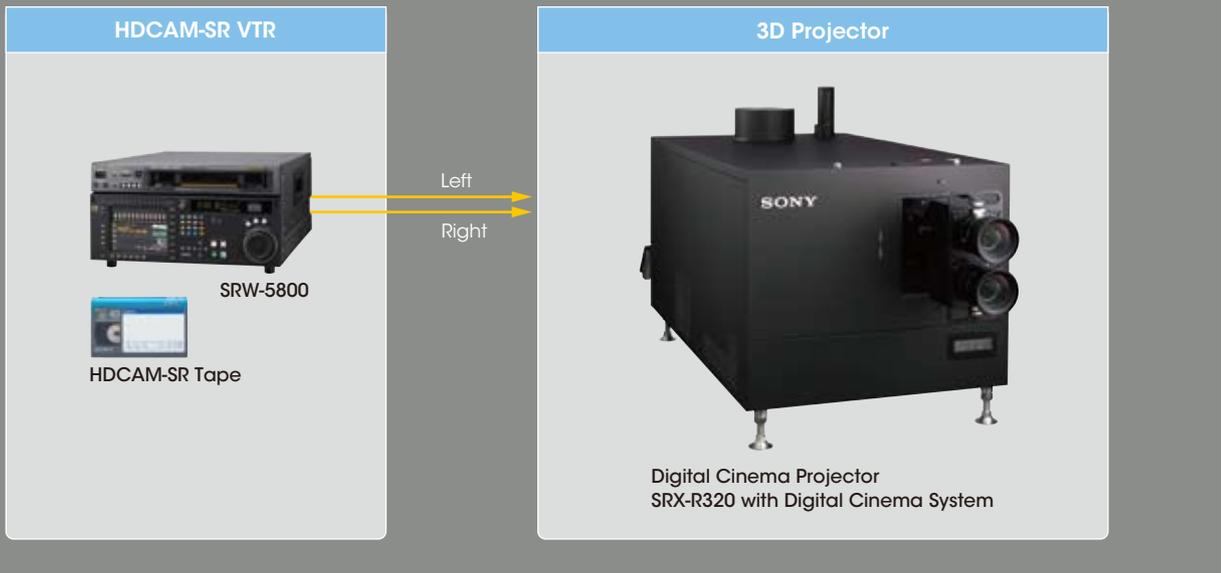
3D cinema showing system solutions - SRX-R320

Sony offers an ultra-high-resolution projector system that efficiently delivers 3D images to the screen. The SRX-R320*1 4K SXRD projector combined with the LMT-300 Media Block server achieves crisp 3D images*2 on screens up to 15 meters (50 feet)*3 in width at 4.5 ft-L brightness. It allows full 2K resolution for the left eye and right eye simultaneously, resulting in a high-brightness, high-quality stereoscopic cinema presentation that - in particular - offers more faithful reproduction of motion in 3D.

The LMT-300 Media Block is a digital cinema server that can play back DCI DCP (Digital Cinema Package) files, and enables the SRX-R320 to project digital cinema programs.

- *1 The 3D dual lens adaptor is required. For detailed information, please contact your nearest Sony office.
- *2 To produce 3D images on screen, 3D filters are required (available from 3D system integrators).
For detailed information on 3D filters, please contact your nearest Sony office.
- *3 Screens up to 15 meters (50 feet) wide are supported, when 3D images are presented in Side Masking mode.
Screen up to 12 meters (40 feet) wide are supported, when 3D images are presented in Top-bottom Masking mode.
For detailed information on supported screen sizes, please contact your nearest Sony office.

3D SCREENING



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The HDC-T1500R, HDC-P1, HKC-T1500, MPE-200, SRW-5800, MVS-8000G, SRX-R320, and LMT-300 are produced at Sony EMCS Corporation's Kosal Technology Center and at the Sony UK Ltd. Digital Technology Center Pencoed, which have received ISO14001, the Environmental Management System certification.

