



NAB 2014 – DEG FLOOR REPORT

The 2014 NAB (National Association of Broadcasters) Show held recently at the Las Vegas Convention Center featured a wide array of emerging technologies, along with the latest production hardware and delivery platforms. According to the figures from NAB, this year's attendance rose four percent to just more than 98,000 guests, while exhibit space increased seven percent to 945,000 square feet.

Just as with last year's show, major announcements pertaining to 4K Ultra HD backbone and work flow were everywhere. These included everything from a variety of new cameras and editing equipment to the latest developments in laser digital cinema projectors and high dynamic range displays.

Both Dolby and Technicolor generated buzz by promoting their respective approaches to higher dynamic range content, which dramatically improves contrast, color and brightness. According to reports, this also spawned a multi-industry meeting among delegates from ATSC, CEA, NCTA and SMPTE, in an attempt to standardize specifications. It also drove numerous debates about whether high dynamic range is more important than resolution, when it comes to next generation video content.

In regards to content, Nanotech Entertainment announced that they had signed an agreement with Multicom to transfer and distribute 30 films in 4K which will be available on Nanotech's Ultra Flix streaming service. Netflix also said that they have formally begun testing their upcoming 4K streaming service with Samsung, which is expected to be deployed by late spring. And, Sony demonstrated live 4K streaming in conjunction with Cisco, Time-Warner Cable and Vixs.

The U.S. based Advanced Television Systems Committee (ATSC) announced that they will propose their next generation 4K compatible ATSC 3.0 DTV system next spring with over-the-air trials beginning late this summer.

Below is a summary of some of the highlights on display at the Las Vegas Convention Center:



Aja is focused on expanding the functionality of their Ki Pro Quad portable video recorder which is designed for 4K/2K/HD workflow. Their Corvid Ultra and TruZoom processor offers real time scaling in 16:9 to HD from any 4K source.

The company also introduced their CION 4K camera which supports up to 4096x2160 resolution and features a complete workflow system that includes PL lenses, mounts and editing software.



Abekas showed their newest Mira production server which supports 4K Ultra HD recording and playback, as well as media file import and export.



The company used NAB to showcase Micro-4K, its low cost 4K to HD downconverter that includes a 4K input and offers HDMI and SDI outputs at up to 1080p.



Blackmagic Design launched a wide range of Ultra HD 4K broadcast products, including a new line of cameras. In addition to a URSA 4K digital film model with EF mount that supports low cost DSLR lenses and a 4K Studio Camera, the company unveiled an inexpensive 4K Production Camera which they claim is the world's most portable and comes with built-in SSD recording and touch screen display.

Blackmagic also showcased a complete 4K production studio which includes their ATEM switcher, router, upconverter and Ultra HD compatible recording deck.



Digital signage manufacturer BrightSign unveiled their new XD230 4K media player during NAB. It will support MPEG-DASH, which enables high quality 4K streaming over the internet.



Christie Digital Systems demonstrated their new 4K cinema projector with laser light engine. The new three-chip DLP model has been specifically designed to deliver brighter 3D images and support high frame rate productions.



Canon once again showed its EOS C500 camera which can output 10-bit 4K, or 12-bit/10-bit 2K video and supports virtually all of Canon's EF Cinema Series lenses. They also introduced a 30 inch 4K reference display (DP-V3010), which supports Digital Cinema and Ultra HD applications and realizes high dynamic range, extended detail and true black levels.



The company introduced their Aladin MKII 4K live broadcast lens control system which was used successfully at both the French Open and 2013 Soccer Champions League games.



Cisco joined with Sony to conduct what both companies claimed was the first public demonstration of 4K live streaming. The content was captured in New York on a Sony F55 camera and encoded in HEVC using Cisco's Videoscape AnyRes system. The stream was then transported to Las Vegas over a fiber network where it was decoded via a Cisco STB and displayed on a Sony Ultra HD TV.



DBi used NAB to launch their MediaFire automated master control system which can support 4K, HD and SD content; along with mobile and web delivery.



Dolby demonstrated its new Dolby Vision imaging technology which provides both movie and broadcast creatives with a new set of tools that achieve "close to real life" color gamut and brightness, along with a dynamic range of up to 10,000 nits.

The company also highlighted a complete Dolby Vision workflow which includes a Color Mapping process that insures accurate color reproduction on every Dolby Vision display.



Ericsson highlighted their AVP 4000 system encoder which can be utilized with a variety of codecs for multiple applications, including SD, HD and Ultra HD.

ENVIO

The company showcased its Muse HEVC Live which is designed to optimize compression for higher resolution files in both 4K and 1080p.



Evertz once again displayed a complete 4K distribution system at NAB, including their HEVC encoder; master clock generator; down converter; router and universal controller.

The logo for Fujinon, featuring the word "FUJINON" in a bold, black, sans-serif font, enclosed within a thin black rectangular border.

Fujinon North America chose NAB to debut its new HK Premier PL 14-35mm zoom lens which is ideal for both ENG use and the latest small 4K cameras.

The logo for For-A, featuring the word "FOR.A" in a bold, black, sans-serif font. The letter "A" is stylized with a red triangle pointing upwards and to the right, and a registered trademark symbol (®) is located to the upper right of the "A".

For-A showcased its FT-ONE high speed camera that is designed for super-slow motion acquisition with 4K resolution at up to 900 frames per second.



GoPro demonstrated its Hero3 Black camera which offers both 4K and 2.7K cinema options. It also supports 1080p video and can capture 12, 7 or 5 mega pixel still images.

The logo for Harmonic, featuring the word "harmonic" in a lowercase, blue, sans-serif font. A small blue circle is positioned above the letter "i".

Harmonic featured a live 4K Ultra HD 2160/60p demonstration in its booth, along with a new ATSC 3.0 ready multi-function/multi-format encoding platform. The company also announced that this will ultimately be integrated into its existing ProMedia Express software which enables HEVC file transcoding and handles a variety of content, including Ultra HD on-demand streaming.

The logo for Harris Broadcast, featuring the word "HARRIS" in a bold, black, sans-serif font. A red diagonal line starts from the bottom left and points towards the letter "A".

Harris Broadcast highlighted once again a 4K system that meets production requirements for both studio and remote applications. The system includes compatible servers, routers and other peripheral equipment.

The logo for Ikegami, featuring the word "Ikegami" in a bold, blue, sans-serif font.

Ikegami demonstrated their Super Hi Vision 8K camera technology which was also highlighted in the NHK exhibit. In addition, the company showed its new HDK-97 broadcast camera which was developed in collaboration with ARRI and features advanced digital cinema capabilities.



Intel demonstrated in the Thunderbolt Product Showcase their capability to support 4K video production, as part of a system featuring the latest Apple Mac Pro and Aja set top box.



Matrox demonstrated their Avio KVM extenders, a combination transmitter/receiver that extends one uncompressed 4K video or two uncompressed HD videos. They also spotlighted Mojito 4K, a quad 3G-SDI video card which can be used with Adobe software.



The Panasonic System Communications Company highlighted three cameras, including the PL-mount Varicam 35 which employs a single 35 mm sensor and can shoot in 4K at up to 120 frames per second. The company also showed their Lumix GH4 DSLR which comes with enhanced pro features, including both Digital Cinema (4096x2160) and Ultra HD (3840x2160) 4K recording.

Panasonic also premiered an 84 and 98 inch 4K professional LED display and introduced a 31 inch 4096 x 2160 LCD monitor (the 4LH310s) which offers 10 bit color reproduction and 10 bit image processing for each RGB color.



RED Digital Cinema displayed a variety of products, including their latest wide dynamic range RED Epic Dragon camera with 6K resolution. The company also showed other cameras, including the Scarlett Mysterium which offers 5K still image and 4K video capture.

RED also demonstrated their REDRAY professional 4K cinema player, which stores 4K, HD or 3D video on a 1TB drive, along with up to 7.1 channels of audio.



The company highlighted its Clipster Digital Intermediate Workstation that supports High-Frame Rate DCP workflow (including Dolby Atmos) and mastering at up to 4K resolution. Rohde and Schwarz also showed the newest version of their VENICE Media Hub, which features 4K playback.



Schneider highlighted their new Zenon FF-Prime lenses which have been specifically designed to support 4K and 5K acquisition.



Snell used NAB to introduce its IQQMD00 4K UHD downconverter and also displayed their Kahuna 360 switcher that offers 4K capability and supports any combination of SD, HD and UHD content.

SONY

Sony Electronics Professional Solutions Division showcased their complete line of F65, F55, F5 and FS700 4K production cameras, along with their Z100 4K camcorder

The company also introduced the Alpha 7S full frame digital camera which they claim is the first to utilize the entire width of a full-frame image sensor for 4K acquisition. The camera works with a growing number of E-mount lenses and achieves up to 3840x2160 resolution. It also features new sensor technology that provides wide sensitivity (ISO 50-409,602) and high dynamic range.

Sony also demonstrated its latest 8K x 2K "picture stitching" technology, along with a 4K server and a complete line of 4K switchers and production monitors.



Thomson Video demonstrated its new HEVC encoder that achieves full 4K resolution at only 12 Mbps, making it ideal for next generation OTT applications.



Vizrt used NAB to tout its Viz Engine software which renders both 2D and 3D scenes in real time, producing high quality images in 4K, HD or SD resolution.