

JVC Develops World's First Full-Coverage, High-Resolution Super Hi-Vision Projector

- ***Triple D-ILA display device system renders videos in 35 megapixels***
- ***10,000 lumens of brightness, 5,500:1 contrast ratio***

Tokyo, Japan, May 12, 2009 – JVC (Victor Company of Japan, Limited) is pleased to announce the development of world's first full-coverage, high-resolution Super Hi-Vision¹ D-ILA projector. Featuring 10,000 lumens of brightness and an unsurpassed 5,500:1 contrast ratio for a D-ILA projector, the unit employs a triple D-ILA display device system and JVC's proprietary technology makes it possible to render video in a resolution of 35 megapixels. The Super Hi-Vision D-ILA projector also features world class environmental friendliness, using adaptive pixel correlation technique to display images at a one-and-a-half times brighter and three times higher contrast ratio than conventional D-ILA projectors while slashing power consumption in half.

1: Super Hi-Vision (SHV) is an experimental digital video format currently under development by NHK; each Super Hi-Vision image is approximately 33 megapixels (7,680 x 4,320 pixels) and supports 60 frame/second sequential scanning and 22.2 multichannel sound. Image format complies with the ITU-R BT.1769 and SMPTE 2036 international standards.

Primary features

1. The projector is fully compatible with the Super Hi-Vision standard (7,680 x 4,320) being promoted by NHK. Conventional Super Hi-Vision projectors render images with 4,000 TV lines using an 8.29-megapixel (3,840 x 2,160) single display device and leveraging adaptive pixel correlation technique to adjust the RGB green component; this means that the red and blue components are not fully covered. The new projector, however, uses a 35-megapixel (8,192 x 4,320) D-ILA single display panel that provides full coverage of each RGB component to 4,000 TV lines.
2. The new projector generates a high light output of 10,000 lumens - or one-and-a-half times greater than two conventional DLA-SH4K models - and provides sufficient brightness for displays as wide as 400 to 600 inches, each pixel approximately 1 sq. mm in size.



< Super Hi-Vision D-ILA Projector >

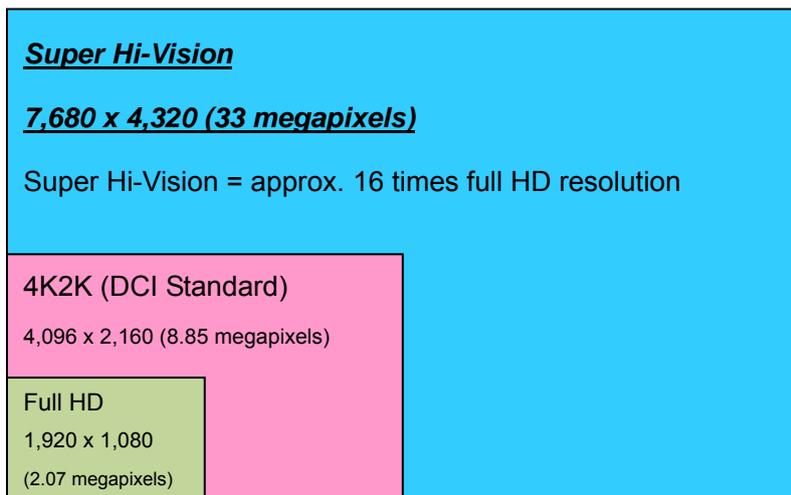
3. Whereas large-scale projectors typically have contrast ratios ranging between 1,000 and 2,000:1, the new D-ILA projector features a 5,500:1 contrast ratio to render super high-resolution images.
4. Conventional models are equipped with two 2,000-watt lamps to generate 7,000 lumens of brightness, but the Super Hi-Vision D-ILA Projector uses a single 3,000-watt lamp capable of 10,000 lumens, reducing power consumption by 50% and lamp cost by 60%.
5. Super Hi-Vision requires about 40 times more data than a standard high-definition image, so connecting a Super Hi-Vision unit to a conventional transmission system - HD-SDI, for example - requires at least 64 coaxial cables. JVC's new projector uses 36bit HDMI deep color specification to deliver data as a standardized image interface at a rate of 76 gigabits per second over just 16 coaxial cables - or one-fourth the previous amount - while offering greater flexibility of layout. Each RGB color also benefits from 12bit graduation expression.
6. As an alternative to HDMI signals that have a maximum transmission length of about 5m, the new projector's optical interface delivers Super Hi-Vision signals over a longer distance. Developed in house by JVC, the optical transmission device employs four optical fibers to achieve high-stability, low-cost transmission.
7. By developing and applying JVC's popular registration adjustment mechanism for adaptive pixel correlation launched with the DLA-SH4K projector in 2008, registration is adjusted according to a scale of one to ten pixels.
8. The on-off switch is the only button on the projector unit, all other functions being controlled through a networked PC; this design promotes ease of maintenance and high operational flexibility given that projectors are generally installed in hard-to-reach locations.

Development Background

In 1996, JVC embarked on the development of Ultra High Definition image systems as the successor to High-Vision Definition. The company developed the first 7.86-megapixel (3,840 X 2,048 pixels) 4K2K D-ILA device in fall 2000 and began supplying projectors containing this device for research applications in March 2001. In June 2007, JVC developed a 1.27-inch 4K2K D-ILA device having a 6.8µm pixel pitch and resolution of 4,096 x 2,400 pixels, and in February 2008 it began marketing a newly commercialized professional D-ILA projector - the DLA-SH4K - incorporating that device. JVC has also been contributing to research and development of Ultra High Definition image systems at home and abroad by cooperating in the standardization of Digital Cinema Initiative (DCI) 4K2K specifications and by providing projectors for the Super Hi-Vision 8K4K system currently being developed by NHK.

Although the use of Full HD continues to spread among households worldwide, research and development into new television broadcasting standards that go beyond HD is gathering steam, and significant efforts are being made to satisfy growing demand for next-generation high-definition imaging solutions for applications ranging from digital cinema and presentations to monitoring/control and health care.

JVC's new full-coverage, high-resolution Super Hi-Vision D-ILA Projector satisfies this growing demand for ultra-high-definition imaging by providing the world's highest resolution. In addition to the contribution that the projector will make to the advance of Japan's broadcast television industry, JVC is certain that this new product can also contribute to the commercialization of Super Hi-Vision.



< Resolution comparison of full HD 4K2K and Super Hi-Vision (simulation) >

Primary Specifications

Display device	Three D-ILA display devices (RGB)
No. of pixels (H x V)	8,192 x 4,320 pixels (SHV: 7,680 x 4,320)
Light source lamp	3,000W xenon lamp
Brightness	10,000 ANSI lumens (3.3lm/w)
Contrast ratio	5,500 : 1
ANSI contrast ratio	400 : 1
Input format	60fps progressive scan
Input interface	HDMI (deep color) x 16 channel SMPTE-2036 compatible
Input/display graduation	12bits per RGB color
Optical engine	1.7 inch wire grid optical engine
Power source	AC single layer 200V
Power consumption	3,500W
Dimensions (W x D x H) mm.	1,080 x 1,250 x 456
Weight	168kg

Note: On October 1, 2008, Victor Company of Japan, Limited (JVC) and Kenwood Corporation integrated their management to establish JVC KENWOOD Holdings, Inc. by means of a share transfer.

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