SONY

Press Release

Sony Unveils the World's First Camcorders in New High-Definition Format - AVCHD
DVD-based Handycam® HDR-UX1/E and hard disk-based Handycam® HDR-SR1/E

Hong Kong, August 9, 2006 – Sony Corporation of Hong Kong Limited (Sony) today announced the launch of the world's first high-definition (HD) AVCHD camcorders – the DVD-based Handycam® HDR-UX1/E and the hard disk-based Handycam® HDR-SR1/E. The launch of these HD camcorders extends Sony's leadership and demonstrates its commitment to develop HD products with the highest quality for the consumer market.

Jointly developed by Sony Corporation and Matsushita Electric Industrial Co. Ltd, the new AVCHD format enables recording and playback of movies and still images in HD on various media including DVD disc and hard disk. The AVCHD format allows quick random access to the contents of the data for easy search. It features resolution up to 1080i, highly efficient MPEG-4 AVC/H.264 video codec,, HD 16:9 widescreen, 5.1 channel Dolby® Digital audio and multi-channel digital audio. Contents in the AVCHD disc can be viewed on various devices such as Blu-ray disc-enabled VAIO personal computer and DVD drives with bundled software supporting AVCHD format.

"The development of AVCHD has once again demonstrated Sony's commitment to make HD closer to customers' lifestyle. Thanks to this new technological breakthrough and the launch of the AVCHD disc-based camcorder HDR-UX1/E and AVCHD hard disk drive camcorder HDR-SR1/E, customers can enjoy HD picture quality with their favourable media including tape, DVD disc and hard disk drive," said Mr. Kunihiko Kawakita, Division Managing Director, Hong Kong Marketing Company, Sony Corporation of Hong Kong Limited.

The HDR-UX1/E and HDR-SR1/E offer a flexible choice to record movies in 1080i HD AVCHD or standard definition. The HDR-UX1/E uses 8cm DVD disc as the storage format while the HDR-SR1/E records onto an internal 30GB hard disk. Both models are equipped with Sony's image sensor, the ClearVid CMOS Sensor and Sony's own signal processing circuit, Enhanced Imaging Processor, to realize natural colours and rich details close to the perception of the human eye. Complement with 5.1 channel Surround Sound recording, users can indulge in an immersive experience of sights and sounds during playback.

HDR-UX1/E – Recording 1080i High Definition video direct to DVD

With four picture quality recording options available for HD videos, users can choose to record in 5 Mbps (HD-LP) for a longer recording time or the option for the super high picture quality in 12 Mbps (HD-HQ+). In addition, the HDR-UX1/E supports the 8cm DVD+R DL (Double Layer) using 5 Mbps (HD-LP) mode or 12 Mbps (HD-HQ+) mode for high quality recording up to 60 minutes and 27 minutes of HD video respectively. It is also compatible with other commonly used formats such as 8cm DVD-R, DVD-RW and DVD+RW.

HDR-SR1/E – Built-in 30GB hard disk for long recording hours in 1080i High Definition

The HDR-SR1/E offers highly extended recording times with its integrated 30GB hard disk and multiple HD recording options for approximately 11 hours in 5 Mbps (HD-LP) mode. It can also record in Supreme-Quality (HD-XP) mode, which can accommodate to approximately 4 hours of HD video at 15 Mbps bit rate for outstanding details, clarity and colours.

As memories are precious, Sony has implemented the HDD Smart Protection System in the HDR-SR1/E to safeguard stored videos and images. A 'shock absorber' is wrapped around the hard disk to protect it from any shocks, and hence preventing any damage to the body as well as data loss. Every time when the 3G Sensor Shock Resistance detects a drop level of more than 15cm, the hard disk drive Handycam® will be automatically switched off, avoiding any damage to the HDD head. In addition, if the hard disk drive Handycam® is dropped during recording, the photo-recording power stays on until it fell onto the ground, with images temporarily stored in the Video Stream Buffering area to avoid image loss.

The HDR-SR1/E comes with bundled software for easy backup including the convenient 'One Touch Disc Burn' function to create finished discs of video recordings with a single button on the camcorder. If the contents are captured in standard definition, data will be transferred to the PC and automatically burned as a DVD. HD video will be processed with AVCHD format on DVD media.

HDR-UX1/E and HDR-SR1/E – Multi-connectivity and playback option

Direct connection for the HDR-UX1/E and HDR-SR1/E to a HD TV is possible via the HDMI (HD Multimedia Interface) port, component jack or to a PC via standard USB 2.0, which provides quick playback of the captured HD videos. For viewing on PC DVD drive, the bundled AVCHD playback software is required to be installed to play the disc recorded in AVCHD format. The disc can also be played on either AVCHD-compatible Blu-ray drive or stand-alone Blu-ray player/recorder.

Order Now

Pre-registration for the HDR-UX1/E and HDR-SR1/E runs from August 9 to September 7, 2006 on Sony Style Web site (www.sonystyle.com.hk), Sony 24-hour tele-sales hotline at 2345-2966, Sony Style Hong Kong, Sony Style Mong Kok and Sony Shops. Pre-ordering for the HDR-UX1/E and HDR-SR1/E runs from September 8 to September 26, 2006. The HDR-UX1/E and HDR-SR1/E will be available in the end of September and early October at HK$10,980 and HK$11,980 respectively.

AVCHD Licensing and Supporting Companies

On July 13, 2006, Panasonic and Sony announced jointly the commencement of licensing for "AVCHD" the HD digital video camera recorder format, as well as expansion of the format's specifications. The two companies have been promoting this format extensively throughout the industry and the following companies have expressed their support for "AVCHD."

<AVCHD Supporting Companies> (Company names in alphabetical order)

Consumer Electronics Manufacturers:

CANON INC.

PIONEER CORPORATION

SAMSUNG ELECTRONICS CO.,LTD.

SHARP CORPORATION

Non-liner Editing Software Suppliers [software supporting AVCHD]

Adobe Systems Incorporated	[Adobe Production Studio]
CyberLink Corporation	[PowerDVD, PowerDirector]
InterVideo, Inc.	[WinDVD]
Nero AG	[Nero 7 Premium (Nero 7 Ultra Edition)]
Sonic Solutions	[Easy Media Creator 9]
Sony Media Software	[Vegas 7.0]
Ulead Systems, Inc.	[Video Studio, DVD MovieWriter]

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HDR-UX1/E: HD & Standard Definition (SD) Recording Modes

		PICTURE QUALITY MODE							
		AVCHD 5M (LP)		AVCHD 7M (SP)		AVCHD 9M (HQ)		AVCHD 12M (HQ+)	
		SINGLE LAYER	DOUBLE LAYER	SINGLE LAYER	DOUBLE LAYER	SINGLE LAYER	DOUBLE LAYER	SINGLE LAYER	DOUBLE LAYER
HD	AVERAGE BIT RATE	*5 Mbps*		*7 Mbps*		*9 Mbps*		*12 Mbps*	
	APPROXIMATE VIDEO RECORDING TIME	*32 Mins*	*60 Mins*	*25 Mins*	*45 Mins*	*20 Mins*	*35 Mins*	*15 Mins*	*27 Mins*

		PICTURE QUALITY MODE					
		LP		SP		HQ	
		SINGLE LAYER	DOUBLE LAYER	SINGLE LAYER	DOUBLE LAYER	SINGLE LAYER	DOUBLE LAYER
SD	AVERAGE BIT RATE	*5 Mbps*		*7 Mbps*		*9 Mbps*	
	APPROXIMATE VIDEO RECORDING TIME	*60 Mins*	*110 Mins*	*30 Mins*	*55 Mins*	*20 Mins*	*35 Mins*

*** HQ+ mode is not available for SD recording mode*

HDR-SR1/E: High Definition & Standard Definition Recording Modes

		PICTURE QUALITY MODE			
		AVCHD 5M (LP)	AVCHD 7M (SP)	AVCHD 9M (HQ)	AVCHD 15M (XP)
HD	AVERAGE BIT RATE	*5 Mbps*	*7 Mbps*	*9 Mbps*	*15 Mbps*
	APPROXIMATE VIDEO RECORDING TIME	*11 Hrs*	*8 Hrs 30 Mins*	*7 Hrs*	*4 Hrs*

		PICTURE QUALITY MODE		
		LP	SP	HQ
SD	AVERAGE BIT RATE	*5 Mbps*	*7 Mbps*	*9 Mbps*
	APPROXIMATE VIDEO RECORDING TIME	*20 Hrs 50 Mins*	*10 Hrs 50 Mins*	*7 Hrs 20 Mins*

*** XP mode is not available for SD recording mode*

About Hong Kong Marketing Company

Hong Kong Marketing Company (HKMC), a division of Sony Corporation of Hong Kong Limited, provides sales, marketing and after sales services for Sony's consumer electronics products as well as broadcast and professional products in Hong Kong and Macau. For more information on Sony's products and services, please visit its web site on www.sony.com.hk.

Fact Sheet for the HDR-UX1/E and HDR-SR1/E

AVCHD Format

The new AVCHD format delivers HD image recording and playback in 1080i or 720p signals using a variety of media including 8cm DVD and hard disk.

The AVCHD uses MPEG-4 AVC/H.264 codec for video compression that is twice as efficient as MPEG-2 and MPEG-4 technologies. Dolby® Digital is used for audio codec. When Dolby Digital is used, a 5.1channel recording can be created.

Outlines of AVCHD format

Recording Media		8cm DVD			
Wave Length of LASER		650nm			
VIDEO	Video Signal	1080/60i 1080/50i 1080/24p	720/60p 720/50p 720/24p	480/60i	576/50i
	Number of Pixels (Horizontal x Vertical)	1920 x 1080 1440 x 1080	1280 x 720	720 x 480	720 x 576
	Aspect Ratio	16:9	16:9	4:3, 16:9	4:3, 16:9
	Compression Method	MPEG-4 AVC/H.264			
	Sampling Frequency for Luminance Signal	74.25MHz 55.7MHz	74.25MHz	13.5MHz	13.5MHz
	Sampling Format	4:2:0			
	Quantization Bit Rate	8bits (Luminance / Chrominance)			
AUDIO	Compression Method	Dolby Digital (AC-3)		Linear PCM	
	Bit Rate after Compression	64 - 640 kbps		1.5Mbps (2 channels)	
	Audio Mode	1 - 5.1 channel		1 - 7.1 channel	
System		MPEG-2 Transport Stream			
System Bit Rate		up to 18Mbps			

ClearVid CMOS Sensor and Enhanced Imaging Processor

The HDR-UX1/E and HDR-SR1/E feature Sony's originally-developed "ClearVid CMOS Sensor" and the Enhanced Imaging Processor to deliver high picture quality images. Both models deliver higher resolution, higher sensitivity, and record movies with bright colours and fine details (approximately 2.1 mega pixels at gross movie mode; 1.4 effective mega pixels at movie mode (16 : 9) ; approx. 2 effective mega pixels at still mode (4 : 3)). Moreover, advanced functions such as dual recording (simultaneous recording of video and still images), and smooth slow recording are achieved.

Advantages of the ClearVid CMOS Sensor: high resolution, high sensitivity/ low noise, smear-free and wide dynamic range (ClearVid CMOS Sensor + Enhanced Imaging Processor).

Enhanced Imaging Processor is Sony's own signal processing circuit developed by utilizing advanced signal processing technology, which Sony has accumulated throughout the years. It processes large amounts of data that the ClearVid CMOS Sensor reads and allows to record precise and clear images.

The Enhanced Imaging Processor, which uses newly developed signal processing algorithms to process the 2.1 mega pixels output from the ClearVid CMOS Sensor, giving users ultra high resolution still images of 4.0 mega pixels (2304 x 1728).

Smooth Slow Recording

By capturing at a field rate four times of the normal recording mode*, quick motions that the human eye cannot capture can now be recorded in smooth slow motion mode. This feature is achieved by the ClearVid CMOS Sensor and the high-speed signal processing technology Enhanced Imaging Processor. The instance a bat hits the ball, the drops of water as water splashes, or the moment the athlete reaches the finishing line at a sports festival can be captured as film-like scenes in slow motion mode.

*240 (NTSC) / 200 (PAL) fields per second

Dual Recording (Simultaneous Recording of Movie and Still Images)

Dual recording enables the capturing of high-resolution 2.3 mega pixels (2016 x 1134)^ still images even while recording in movie mode. Due to the limitations in reading speed of conventional image sensors, still images taken while recording in video mode could be recorded in only VGA size, and in order to capture high-resolution still images, the recording mode has to be changed. Dual recording function has been achieved through the Enhanced Imaging Processor, which processes huge amount of pixel data that the ClearVid CMOS Sensor reads.

^ 2.3 mega pixels (16:9 wide) / 1.7 mega pixels (4:3)

Assignable Ring Feature

Essential functions like focus, exposure, AE shift or white balance shift can be assigned to the Control Ring using camcorder menu. Whenever users need to make a manual adjustment, simply with a touch of a button on the side of the lens, the ring will then be activated, enabling users to have complete control.

3.5-inch Wide Clear Photo LCD Plus

Clear Photo LCD Plus further improves the visibility of existing LCDs, enabling more detailed and colourful photography of objects in dark or bright places. Clear Photo LCD Plus provides high resolution (over 200K dots) and displays the image in a sharp and crisp manner. Furthermore, by using Sony's original high luminance/Wide colour gamut technology, the colour reproduction and contrast are up to 1.6 times better than the previous LCDs. This means it is easier to clearly confirm the photographic subject and compose the photo when shooting. Also, the LCD Plus is able to deliver a sharper image during playback.

HDMI

The HDMI specification enables image, audio and control signals to be transmitted with one cable, reducing the number of cables and terminals required to transfer data. It is the input/output interface of uncompressed HD digital video and multi-channel audio. It is developed from "DVI" digital interface which was used in connecting PCs and displays. The HDMI is now the standard format for HDTV and consumer electronics devices like DVD player and recorder.

Specification Sheet for the HD AVCHD Handycam® Camcorders HDR-UX1/E and HDR-SR1/E

HDR-UX1/E	HDR-SR1/E

• Supports 8cm DVD+R DL, DVD+RW, DVD-R and DVD-RW discs
• Variable Bit Rate (VBR) Recording:
  o HD: AVCHD 5M (LP) / AVCHD 7M (SP) / AVCHD 9M (HQ) / AVCHD 12M (HQ+)
  o SD: LP / SP / HQ
• ClearVid CMOS Sensor (2.1 mega pixels)
• Enhanced Imaging Processor
• Max. 4.0 mega pixels Still Image Capture
• Dual Recording
• Smooth Slow Recording
• Carl Zeiss® Vario-Sonnar® T* Lens (Filter Diameter: 30mm）
• 10x Optical Zoom / 80x Digital Zoom
• SteadyShot(New Active Image Area Method)
• Super NightShot® / NightShot®
• Colour Slow Shutter
• Auto Lens Cover
• Wide Colour Viewfinder
• 3.5 inch 211k dots Clear Photo LCD Plus
• Touch Panel
• Data Code
• REC START/STOP and Zoom Buttons on the LCD Frame
• Program AE
• Fader
• Digital Effect
• Picture Effect
• TELE MACRO
• Intelligent Flash
• 16:9 Wide Still Image Recording
• Playback Zoom (only for still images)
• Down-conversion function
• USB2.0 Hi-Speed Compatible
• Memory Stick Duo™ Compatible
• Battery Info, Info Lithium Battery
• Active Interface Shoe
• PictBridge™ Compliant
• HDMI
• Dimensions：76 x 89 x 165mm
• Weight：660g (Excluding battery and DVD disc)
	• Built-in 30GB Hard Disk Drive
	• Variable Bit Rate (VBR) Recording:
	  o HD: AVCHD 5M (LP) / AVCHD 7M (SP) / AVCHD 9M (HQ) / AVCHD 15M (XP)
	  o SD: LP / SP / HQ
	• ClearVid CMOS Sensor (2.1 mega pixels)
	• Enhanced Imaging Processor
	• Max. 4.0 mega pixels Still Image Capture
	• Dual Recording
	• Smooth Slow Recording
	• Carl Zeiss® Vario-Sonnar® T*Lens (Filter Diameter: 30mm）
	• 10x Optical Zoom / 80x Digital Zoom
	• SteadyShot(New Active Image Area Method)
	• Super NightShot® / NightShot®
	• Color Slow Shutter
	• Auto Lens Cover
	• Wide Colorr Viewfinder
	• 3.5 inch 211k dots Clear Photo LCD Plus
	• Touch Panel
	• Data Code
	• REC START/STOP and Zoom Buttons on the LCD Frame
	• Program AE
	• Fader
	• Digital Effect
	• Picture Effect
	• TELE MACRO
	• Intelligent Flash
	• 16:9 Wide Still Image Recording
	• Playback Zoom (only for still images)
	• Down-conversion function
	• USB2.0 Hi-Speed Compatible
	• Memory Stick Duo™ Compatible
	• Battery Info, Info Lithium Battery
	• Active Interface Shoe
	• PictBridge™ Compliant
	• HDMI
	• Dimensions：78 x 84 x 165 mm
	• Weight：640g

Features and specifications are subject to change without notice.