

### PRESS Release

#### **JVC Europe Limited**

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# GZ-HD6, GZ-HD5 New JVC HD Everio Camcorders Offer High-performance, Compact Design & 1080p50 HDMI Output

New GZ-HD6 and GZ-HD5 are the world's first 1920 x 1080 Full HD hard disk camcorders with 1080 progressive 50fps HDMI output for Full HD 50p displays.



Note: This release refers to products that conform to European specifications

January 30, 2008 – JVC today announced a pair of new high definition Everio hard disk camcorders that offer industry-leading picture quality in a dramatically reduced size. The new JVC GZ-HD6 and GZ-HD5 HD camcorders are 45 percent smaller than JVC's previous top-end HD camcorder, the GZ-HD7, without any sacrifice in image quality.

To provide the best possible quality, both new HD camcorders feature a FUJINON HD lens, a progressive scan 3CCD imaging system and JVC's HD Gigabrid engine that delivers 1920 x 1080 Full HD recording. In addition, they offer 1080p 50 frame per second output via HDMI 1.3 with x.v.Colour™. Collectively these technologies capture and maintain optimum image quality for videos and stills through every stage, from the lens on through to recording. Both camcorders offer

a long recording time in 1920 x 1080 Full HD – 10 hours for the 120GB GZ-HD6 and five hours for the 60GB GZ-HD5. They record up to 24 (GZ-HD6) or 12 (GZ-HD5) hours in the 1440 LP mode. Recordings are stored on either the built-in hard disk drive or on an inserted microSD card (optional). Both models also offer a microphone input and a wide range of manual controls. The black GZ-HD6 also features a lens hood and headphone jack. The smaller and silver GZ-HD5 weighs just 565 grams with battery.

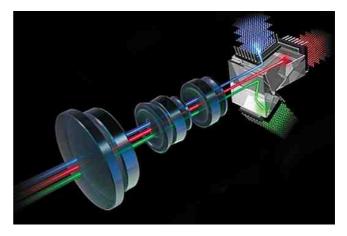
The GZ-HD6/HD5 also come supplied with a full set of Windows® applications for editing and authoring to DVD and Blu-ray disc, as well as plug-in software to facilitate data import into various Macintosh applications. And to make it easy to share and archive recordings, JVC will continue to offer the CU-VD40 Everio SHARE STATION for HD which enables one-button burning of video data to DVD.

#### **FUJINON HD Lens**

The HD Everio GZ-HD6/HD5 feature an F1.8-F1.9 10x zoom lens that offers nearly the same brightness throughout its 39.5~395 35mm equivalent (f=3.3mm~33mm) zoom range by virtue of its three aspherical lens elements, one made of indexed glass. In addition, the lens surface is coated with a new Electronic Beam Coating (EBC) that greatly reduces degradation caused by light reflecting off the lens surfaces, leading to greater light transmission and reduced flaring and ghosting. This HD lens was specifically designed by FUJINON, a leader in the professional camera lens market for HD moving images, in conjunction with JVC engineers to offer optimal characteristics for the camcorder's Progressive Scan 3CCD system. In addition, to ensure precise prism/CCD registration, JVC has incorporated FUJINON mounting technology used in professional camcorders.

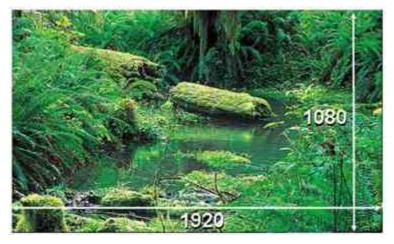
#### **Progressive Scan 3CCD System**

For bright, realistic colours the HD Everio camcorders use three 1/5-inch CCDs – one each for the primary colours red, green and blue, incorporating 16:9 progressive scan CCDs. This voluminous raw information is then processed using pixel shift technology to essentially quadruple the pixel count to create an even more detailed image, providing 2.27 Megapixels total and 2.14 Megapixels effective resolution.



#### 1920 x 1080 Full HD Recording

Using the highest quality FHD recording mode, the user can record approximately 10 hours (120GB model) or 5 hours (60GB model) of full HD 1920x1080 MPEG2 Transport Stream video with MPEG 1 Layer 2 audio. This is truly native HDTV resolution that requires no conversion on the part of the display device to show high definition images.

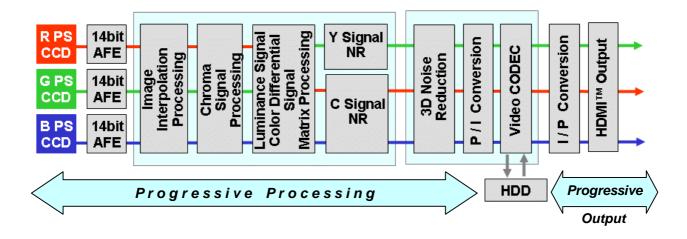




Also, because it records in the MPEG2 Transport Stream video format, HD Everio recordings can be archived onto Blu-ray discs using provided software and a high definition Blu-ray recorder.

#### **HD Gigabrid Engine**

JVC's new HD Gigabrid video engine, which processes in full 1920x1080 progressive video, is the result of years of experience in signal-processing technology, and uses five digital noise-reduction algorithms as well as signal processing to improve vertical scan resolution by approximately 30 percent over JVC's previous interlace technology for an extremely clear and sharp image.



#### 1080p 50 Frame per second Progressive Output Function

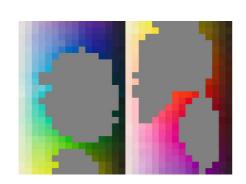
By enabling output of a 1080p 50 fps progressive signal, this function enables HD Everio's recordings to be enjoyed on high-end displays. Using the same high power DynaPix technology as in JVC advanced displays, conversion to1920x1080p at 50 fps provides seamless natural video, free of motion judder during fast action activities, jaggy lines on angles, and moiré patterns on fine

detail when zooming. 1920x1080 HD discs played back via the camera from the CU-VD40 SHARESTATION are also converted to 50 fps progressive.



## HDMI™ (V.1.3. with x.v.Colour™)

JVC HD Everio Camcorders record using x.v.Colour<sup>™</sup> technology. In this universal standard x.v.Ycc, known as x.v.Colour<sup>™</sup>, provides more accurate colour reproduction with more detail and shades that looks more natural to the human eye. It can display 100 percent of the colours that the human eye is capable of perceiving, whereas the traditional sRGB system can only display approximately 55 percent. The difference in colour reproduction performance is especially noticeable in greens and yellows. These new HD Everio camcorders output to televisions directly using HDMI<sup>™</sup> (V.1.3. with x.v.Colour<sup>™</sup>).





sRGB only covers 55% of visible colours

x.v.Ycc covers 100% of visible colours

x.v.Colour and its logo are registered trademarks

Graphics provided by: JEITA (Japan Electronics and Information Technology Industries Association)

#### Optical Image Stabilization (OIS)

To preserve the Full HD quality, the HD Everio features optical image stabilization, avoiding the signal degradation caused by electronic image stabilization, which might be particularly noticeable in HD footage. In short, HD Everio matches its high-definition recording capability with a proven HD lens section that has proven its value in the broadcast industry.





Focus Assist

Zebra Function

#### **Various Shooting Assist Functions**

While HD Everio camcorders offer fully automated operation for point-and-shoot simplicity, they also offer a wide range of manual controls. These include a manual focus ring, manual white balance,

exposure control, shutter priority mode, aperture priority mode and sharpness control. In addition, a Focus Assist function displays the edge of the in-focus elements in colour while the rest of the image is black-and-white, making it easy to check which image elements are in focus. And a Zebra function displays a striped pattern across highlight areas on the image in the LCD monitor, making it easier to manually set the exposure.

#### **High Capacity HDD (Hard Disk Drive)**

Depending on the model, HD Everio camcorders feature either an embedded 120GB or 60GB hard disk drive, allowing upwards of 10 hours (120GB model) or five hours (60 GB model) recording at the highest quality FHD mode. In addition to this mode, three more are offered to let the user choose the appropriate mode for any situation. These is an SP mode with a resolution of 1440x1080 and maximum bit rate of 22 Mbps., LP mode offering the same resolution but at a slower maximum bit rate of 15 Mbps., and an HDV-i.LINK streaming compatible constant bit rate 1440 CBR mode.

Record Mode	Record Resolution	CODEC Video/Audio	System Bit Rate	Recording Time (120GB / 60GB)
FHD Mode	1920x1080i	MPEG2-TS / MP2 (MPEG1 Layer 2)	Variable Bit Rate (VBR): Max 30Mbps Ave. 26.6Mbps	approx. 10hr / 5hr
SP Mode	1440x1080i	MPEG2-TS / MP2 (MPEG1 Layer 2)	VBR: Max 22Mbps Ave. 19Mbps	approx. 14hr / 7hr
LP Mode	1440x1080i	MPEG2-TS / MP2 (MPEG1 Layer 2)	VBR: Max 15Mbps Ave. 11Mbps	approx. 24hr / 12hr
1440CBR* Mode	1440x1080i		Constant Bit Rate (CBR): 27Mbps	approx. 10hr / 5hr

<sup>\*</sup>For HDV compatible stream via i.LINK

#### PC-less Archiving using Exclusive DVD Burner

By connecting the GZ-HD6/HD5 directly to the optional CU-VD40 HD Everio SHARE STATION via USB, , the user can burn HD 12cm DVD discs to make backups and permanent archives of selected scenes in any desired order with just a few simple steps. There are several options for selecting clips to be burned to disc -- all clips, manual selection of specific clips, clip files not yet

copied, by date, video playlists created in-camera and comprised of multiple user-selected clips, or by event type for those clips that have been tagged with an icon representing an event category (e.g. birthday, baby, graduation, vacation, etc.).





#### **Full Complement of Interfaces**

HD Everio camcorders are equipped with three digital interfaces – USB, HDMI and Firewire/i.LINK. USB is primarily for file saving, HDMI for digital viewing on large screen displays, and Firewire/i.LINK streams high definition video in full resolution or the 1440CBR mode. High definition video streamed by Firewire/i.LINK in the 1440CBR mode is HDV-compatible and allows footage to be edited using HDV-compatible software (functionality might be limited with some applications). HD recorded material is down-converted for output in DV over Firewire/i.LINK, or in standard definition via the analogue component/ S-Video/ composite output.

#### **High Value Software Supplied**

For editing and archiving via PC, the HD Everio comes with the CyberLink BD Solution software suite for Windows. This includes PowerDirector for HD video editing, PowerProducer for authoring high definition Blu-ray discs and DVD-Video discs, and PowerCinema for HD file management and playback. Also included is a plug-in that works up to 1920x1080i with Apple iMovie HD and Final Cut Pro video software for the Macintosh.

#### **Specifications**

Model name	GZ-HD6	GZ-HD5			
Audio/video recording and playback format	MPEG-2 TS/ MPE	MPEG-2 TS/ MPEG-1 Audio Layer II			
Image sensor	1/5-inch, 0.57 mega-pixel CCD x 3 (Effective area: Video: 0.53 mega-pixel each) CCD Block output 2.27 Megapixel (2.14 Megapixel effective)				
Lens (35mm lens equiv.)	Video: F Wide(1.8)-Tele(1.9): f=3.3mm-33mm (35mm lens equiv.: 39.5mm-395mm) Optical 10x Zoom (digital 200x zoom)				
Filter diameter	43.0 mm (0.75 mm pitch)				
Minimum brightness	7 Lux (Auto Slow-shutter: 1/30, sensitivity up: AGC)				

Microphone	Stereo		
Monitor	207,000-pixel 2.8-inch colour LCD (16:9 wide screen)		
Viewfinder	269,000-pixel 0.57	7-inch colour LCD	
Still Format	JPEG (supports DCF, DPOF a	nd PRINT Image Matching III)	
Hard disk capacity	120 GB	60 GB	
Interfaces	HDMI output, USB mini-connector, S output terminal, AV output (φ3.5mm mini plug) terminal, component output cable, Firewire/ i.LINK output, microSD card slot		
Power Source	(AC adapter) DC 11.0V, (Battery) DC 7.2V		
Approx. power consumption	7.1 W	6.9 W	
Dimensions	79 x 73 x 138 mm	78 x 73 x 130 mm	
(W x H x D)	(including maximum extrusion)	(including maximum extrusion)	
	505g (1lb 1.8oz),	480g (1lb 0.9oz),	
Approx. weight	590g (1lb 4.8oz)	565g (1lb 3.9oz)	
	while shooting including battery	while shooting including battery	

## Approx. continuous shooting time (typical time including zoom in parentheses)\*3

Battery type	Model	BN-VF815	BN-VF823
Using LCD monitor	HD5	1 hour and 25 min. (40 min.)	2 hours and 5 min (1 hour)
Osing LCD monitor	HD6	1 hour and 20 min. (40 min.)	2 hours (1 hour)

#### Approx. video shooting capacity\*3

Image size	1920 x 1080 pixels		1440 x 1080 pixels	
Image mode	FHD	SP	LP	1440CBR
GZ-HD6 (120GB)	10 hours	14 hours	24 hours	10 hours
GZ-HD5 (60GB)	5 hours	7 hours	12 hours	5 hours
microSDHC card		25 min.		
(sold separately) 4GB	-	20 IIIII.	₹.	-

<sup>\*3</sup> Continuous shooting time and typical shooting time are approximate. To record video, a microSDHC card with Class 4 or higher performance is required. microSD memory cards (256MB to 2GB) and microSDHC memory cards (4GB) have been tested for the following brands: Panasonic, Toshiba, SanDisk, ATP. Note that using other media may result in recording failure or data loss. For compatibility of memory cards, please consult an authorized JVC dealer.

# Approx. number of stills\*4

Image size	1920 x 1080 pixels	1440 x 1080 pixels	1024 x 768 pixels	640 x 480 pixels
Image mode	Fine/ Standard	Fine/ Standard	Fine/ Standard	Fine/ Standard
512MB	535/ 840	705/ 1110	1415/ 2225	3465/ 6235
1GB	1065/ 1670	1405/ 2205	2810/ 4115	6870/ 9999
2GB	2115/ 3225	2785/ 4380	5575/ 8765	9999/ 9999
4GB	4220/ 6445	5565/ 8750	9999/ 9999	9999/ 9999

<sup>\*4</sup> Number of still pictures is approximate.

#### **Provided Accessories**

To be announced

#### **CD-ROM Contents**

- "Digital Photo Navigator (for Windows®)"

  CyberLink BD Solution™ "Power Cinema™ NE for Everio (for Windows®)"

  "PowerDirector™ 6NE (for Windows®)" "PowerProducer™ 4NE (for Windows®)"
- QuickTime component for Everio (for Macintosh) "

# PC Connection Kit Requires the Following OS

#### <Windows<sup>®</sup>>

**Digital Photo Navigator** 

CyberLink BD Solution™

Microsoft <sup>®</sup>: Windows <sup>®</sup> XP Home Edition(SP2) / Professional(SP2) (Pre-install model)

\*It must be equipped with a standard USB 2.0 interface.

Microsoft <sup>®</sup>: Windows<sup>®</sup> Vista™ Home Basic / Home Premium (32-bit edition, pre-installed)

CPU: Intel<sup>®</sup> Pentium<sup>®</sup> 4, at least 3.2GHz

Intel<sup>®</sup> Core™Duo, at least 1.66GHz recommended.

Intel® Pentium® Mat least 1.8GHz

RAM Windows® XP: At least 512 MB, at least 1GB recommended

Unused space on hard disk drive: Approx. 750 MB or up needed. When creating a Blu-ray disc, 30GB or up is required. (60GB or up is recommended).

#### <Macintosh>

"QuickTime component for Everio"

Hardware: Macintosh with 1.25GHz or faster PowerPC G4/G5, or Intel<sup>®</sup> Processors. (Intel<sup>®</sup> Core<sup>™</sup>Duo at least 1.66GHz recommended)

\*: It must be equipped with a standard USB 2.0 interface.

OS: Mac OS X (10.4.4 to 10.4.11,10.5.1)

RAM: at least 512 MB, at least 1GB recommended

- Above conditions do not guarantee operations of all PCs with provided USB 2.0 interfaces.
- Above conditions are as of January 30, 2008. They are subject to change.
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- Product outer design and specifications may be changed without notice.
- Details will be available in the JVC catalogue and on the JVC website.

#### **CU-VD40 Everio DVD Burner -- Specifications**

) A / I= :I =	Interface		USB 2.0		
While connecting with Everio	Discs that CU-VD40 supports*5		DVD-R, DVD-RW, DVD-R DL		
	Recording format Video		Data	Data	
GZ-HD5/HD6	Still		Data		
02 1100/1100	Interface cable		Provided USB cable	)	
	Interface		USB 2.0 or USB 1.1		
	Data buffer capacity			2 MB	
			DVD-R	Max. x8	
		Writing	DVD-RW	Max. x4	
			DVD-R DL	Max. x4	
	Data transmission		DVD-R	Max. x12	
	speed		DVD-RW	Max. x12	
	op o o o		DVD-R DL	Max. x8	
		Reading	CD-R	Max. x10	
			CD-RW	Max. x10	
			DVD-ROM	Max. x5	
		14/1/	CD-ROM	Max. x10	
	Compatible discs*10	Writing	DVD-R, DVD-RW, DVD-R DL		
		Reading		deo, DVD-R, DVD-RW, DVD-R DL, CD Extra, Video CD, Mixed CD, CD-R,	
		Reading	CD-ROW, CD-DA, C	CD Extra, video CD, ivilxed CD, CD-N,	
				ne Edition / Professional (pre-installed)	
	1	OS		Home Basic/Home Premium (32-bit	
While			edition, pre-installed		
connecting	os	CPU	Intel®Pentium® III 800 MHz or up		
with PC			(Pentium <sup>®</sup> 4 2GHz o	r up recommended)	
		RAM	128 MB or up (256 MB or up recommended)		
	Interface cables		Provided USB cable with Everio		
	Support software		CyberLink PowerP	Producer 4NE (provided with Everio, for	
			DVD creation)	. ,	
			CyberLink Power2G	io 5.5 Lite (provided, for data writing)	

	Support discs		Discs created by connecting the burner and the Everio camcorder	
Playback			Discs created with provided software (such as MPEG2)	
functions	Output terminals		HDMI output: Auto->480p->1080i->720p	
Tariotiono	,		Component video output: 480i->480p->1080i->720p	
			Composite video: 480i	
			Analogue Audio output: Stereo	
	DVD-R		JVC, TDK, Verbatim, SONY	
Recommended discs* <sup>6</sup>		DVD-RW	JVC	
		DVD-R DL	JVC, Verbatim	
Dimensions (W x H x D)			171 mm x 56 mm x 262 mm	
Weight		·	Approx. 1.4 kg	
Standard current			1.7A	

<sup>\*5:</sup> The CU-VD40 does not support 8-cm discs.

- HDMI cable is not included with the CU-VD40.
- The CU-VD40 does not support Macintosh.
- Microsoft<sup>®</sup> and Windows<sup>®</sup> are registered trademarks of Microsoft Corporation in the United States and other countries.
- Other names of companies and products are registered trademarks of those companies.
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Or contact your local JVC PR representative in your country – more info on www.jvc-europe.com

<sup>\*6:</sup> Depending on the disc the CU-VD40 may not function optimally, so using manufacturers' media mentioned above that was tested with the CU-VD40 is recommended.