

JVC

4K Memory Card Camera Recorder

GY-HC500

4K 4:2:2 10-bit Recording
For Professional UHD Productions



4K

HDR
High Dynamic Range

ProRes

SD
HG

SD
XC

Product photo shown with optional microphone.

CONNECTED CAM™

The Best Productions Begin with Uncompromising Quality

The GY-HC500 is a handheld 4K professional camcorder for production that offers uncompromised image quality. Shoot 4K UHD with HDR, J-Log 1, and record to SSD (solid state drive) media in 10-bit Apple ProRes 422 at 4K UHD up to 60p/50p frame rates. You can also record UHD 30p/25p/24p, full HD or proxy files to SDHC/SDXC media. The GY-HC500 CONNECTED CAM features high performance FHD live streaming with low latency and a full complement of IP remote control and viewing features. It's truly the most advanced and versatile camcorder in its price range.

CONNECTED CAM™

Product photo shown with optional microphone.



4K UHD 60p/50p Apple ProRes 422 10-bit Recording

ProRes



Product photo shown with optional microphone.

The GY-HC500 can record in Apple ProRes 422 for attention-grabbing 4K 60p/50p image creation. Apple ProRes 422 HQ offers virtually lossless intra-frame compression, which speeds up post-production. Footage is recorded in native file formats that are understood by most major editing applications without transcoding. This is helpful for efficient workflow of editing and post process. The 4:2:2 format also provides richer color information and 10-bit recording delivers rich gradations—a definite advantage for grading work after recording.

Estimated recording time (Approx. min.)

4K UHD 60p/50p (at highest bit rate)	SSD Capacity		
	2TB	1TB	500GB
Apple ProRes 422 HQ	151/180	75/90	38/45
Apple ProRes 422	226/271	113/135	56/68
Apple ProRes 422 LT	324/388	162/194	81/97

Note:
Apple ProRes 422 recording requires SSD media and the optional KA-MC100G media adapter.

SSD Enables Extended Time 4K UHD 60p/50p Shooting

Large-capacity, readily-available SSDs (SATA M.2 SSD Type2280) are compatible, so extended-time 4K UHD up to 60p/50p video recording is possible. Just plug it into the camera's extended slot (using the optional SSD adapter KA-MC100G). SSD media delivers excellent sequential read speed to tackle professional workload. High-speed transfer of huge amounts of recorded footage is possible.

SSD
Solid State Drive



Note: • Approved SSD media should be used. More detailed information is available on the JVC website.
• HD format recording to SSD is a planned future upgrade.

HDR via HLG/J-Log 1

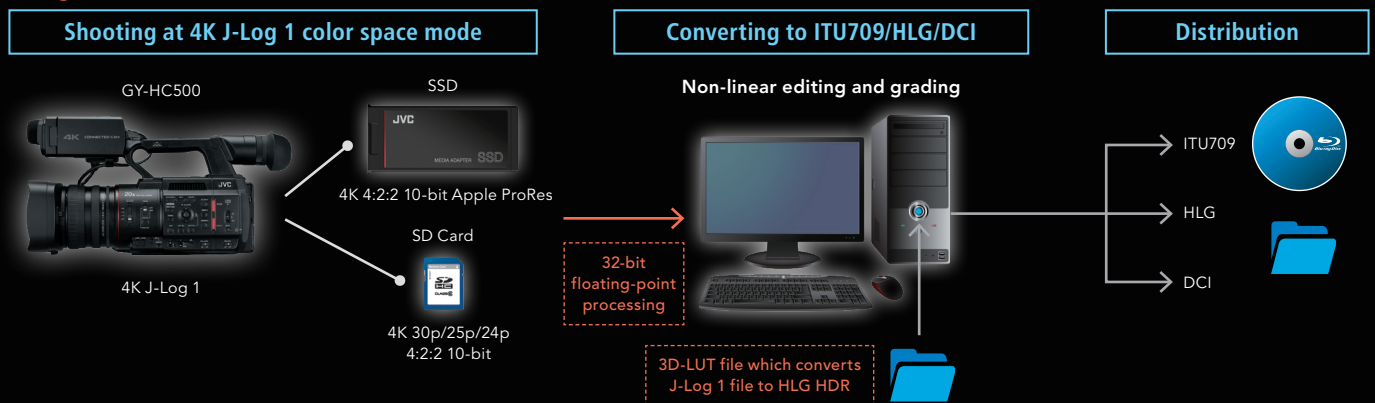


The GY-HC500 is equipped with a HDR compatible HLG (Hybrid Log Gamma) mode and JVC's proprietary J-Log 1 Gamma mode. These enable high dynamic range capture of a broad color spectrum with 10-bit recording for better color grading and to avoid banding. Footage recorded in HLG mode will deliver a full HDR image when viewed on HLG-compatible monitors. The J-Log 1 mode delivers wide latitude and a high dynamic range of 800%. In the field, it's possible to record while checking the image on the GY-HC500's LCD screen or viewfinder to get a grasp of the final output.

[HLG Workflow]

GY-HC500 supports HLG recording which enables simple HDR workflow without color grading. Avoiding clipped highlights or shadows, images are more realistic and vibrant. BT.2020 which offers wider color gamut is also supported.

[J-log 1 Workflow]



High-Speed Recording for 1080p Slow Motion Playback

High-speed recording (1920x1080) at up to 120fps (59.94Hz)/100fps (50Hz) is available for smooth slow motion playback (up to 1/5 slow at 24p mode). It helps create artistic effects and lets you watch replays to examine sporting skills.



Various Codecs and Recording Formats

With a variety of recording formats, the GY-HC500 provides professionals with unprecedented flexibility to meet production standards through a wide range of workflows.

Note: Apple ProRes 422 is recorded to only SSD.

Video Codec	Mode (Bit rate)	Resolution	File format
Apple ProRes 422	4K UHD 59.94p/50p/29.97p/25p/23.98p Apple ProRes 422 HQ 10-bit Apple ProRes 422 10-bit Apple ProRes 422 LT 10-bit	3840 x 2160	QuickTime
	4K UHD 29.97p/25p/23.98p 4:2:2 10-bit / 4:2:0 8-bit	3840 x 2160 (150Mbps / 70Mbps)	QuickTime
	HD 4:2:2 10-bit / 4:2:0 8-bit, others	1920 x 1080, 1280 x 720 (70Mbps / 50Mbps / 35Mbps)	
	SD	720 x 480 / 576 (8Mbps)	
MPEG-4 AVC/ H.264	Web (Proxy)	960 x 540, 480 x 270 (3 to 1.2Mbps)	QuickTime

For Sports System

MPEG-4 AVC/ H.264	Exchange (U model)	1920 x 1080 (12Mbps)	MP4
	MP4 (E/EC model)	1280 x 720 (8Mbps)	

1" CMOS 4K Image Sensor



The GY-HC500 features a 1-inch CMOS 4K image sensor for uncompromised cinema and video production. This large sensor delivers a superior dynamic range, high S/N ratio and high sensitivity (F11 at 2000lx), contributing artistic visual expression including shallow depth of field 'bokeh' capability.

1-Inch
CMOS

20x Optical/40x Dynamic Zoom Lens with Manual Functions

20x
Zoom Lens



The GY-HC500 is equipped with a newly developed wide-angle 20x optical zoom lens to offer optimal magnification for shooting. When shooting in HD mode, Dynamic Zoom combines optical zoom and pixel mapping from a 4K image sensor to create seamless and lossless 40x zoom. Take total control of the scene with triple large rings for zoom, focus, and iris for smooth shooting. Other features include an optical image stabilizer and chromatic aberration correction.



Original image at wide end

20x Optical Zoom

Extremely Practical Auto Focus and Assist Functions

The Auto Focus and Focus Assist functions of the GY-HC500 provide the highly accurate, stable focusing that is essential for 4K shooting. Moreover, its broad customizability enables it to perform in a variety of shooting situations.

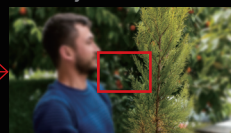
- Customizable AF: AF speed, AF sensitivity, AF area, and Near Limiter can be adjusted as needed.
- Customizable AF Assist: Turning the focus ring varies the function depending on the Focus/Assist mode status to fully control focusing.

- One Button Control: "PUSH AUTO/LOCK" button enables you to lock focus, or engage AF for as long as you keep the button pressed, etc., for one-button focus control according to the focus mode you have selected.
- Advanced Face Detection

Face Detection: ON



Face Only AF: OFF



When the face turns away and face detection fails, focus comes into the subject in the background.

Face Only AF: ON



When face detection fails, focusing automatically switches to MF while maintaining the focus on the position of the face.

Robust Body and Excellent in Weather Resistance

Its robust body makes the GY-HC500 ready to work in harsh environments and situations. Excellent construction in weather resistance enables image gathering in the field with confidence.

Switchable IR Shooting

IR filter can be switched disabled (Infrared ON) to increase infrared sensitivity for shooting in extremely low illuminance.

As a CONNECTED CAM series camcorder, the GY-HC500 features JVC's latest IP communications engine giving you various IP functions. Use the host USB terminal with a 4G LTE/3G modem or Wi-Fi adapter connected for wireless communication, or use the RJ-45 wired LAN terminal for direct IP communication. Fully utilize the camcorder's powerful CONNECTED CAM features for quality live streaming and IP remote operation from anywhere to the world.

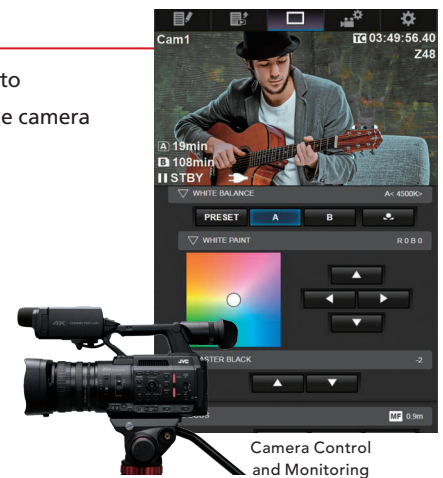
HD Live Streaming up to 24Mbps with Low Latency

The GY-HC500 is capable of streaming LIVE HD/SD and proxy video/audio files via network up to 24Mbps with low latency. High quality, stable streaming is possible from the field using just the camera itself*. No need to carry a heavy backpack or external boxes.

*With an appropriate network connection

IP Remote Control with Viewing

When the camera is IP connected, vital camera operations can be remotely controlled via wireless or wired LAN from a tablet, smartphone, or computer anywhere in the world. Remote control functions include lens and camera settings as well as registering zoom presets and IP connection settings.



Auto FTP

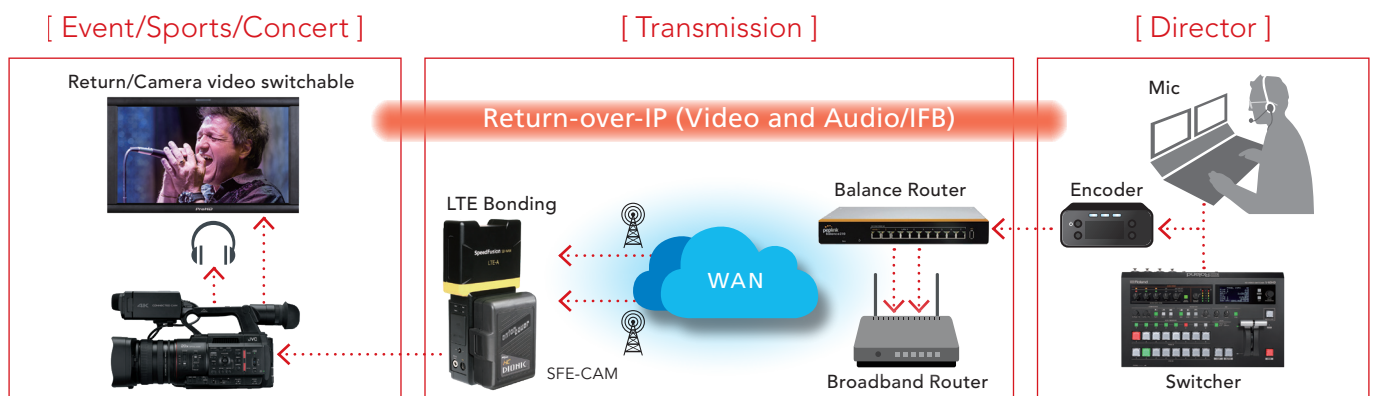
It's possible to upload video clips to an FTP server via IP. Auto FTP function allows you to start uploading a recorded clip without opening the menu screen.



Return over IP

It's possible for the person in front of the camera to engage in a 2-way interview with return video and audio while streaming live to air via IP network. This allows reporters to wirelessly receive directions from the station, and camera operators to re-adjust framing as directed from another location. Multi-camera applications are supported as well.

Spec: MPEG-4 AVC/H.264 RTSP/RTP 1280 x 720 60p/50p, Audio AAC 88K (IFB: Icecast AAC 48K)



Dual SD Card Slots for Versatility and Efficiency

GY-HC500 offers dual SDHC/SDXC card slots to let you record 4K 30p/25p/24p or HD video on readily available, affordable media. Unique features using two cards include:

- **Series (relay) recording mode:** Continuous recording card by card.
- **Dual (simultaneous) recording mode:** Recording to two cards with the same format for backup or multi-purpose.
- **Backup recording mode:** While the Rec trigger is used to REC and STOP recording on one card, the other card can act as a continuous backup that overrides the pause function*.

*During simultaneous backup recording in HD mode, the duplicate file records in the same file format and bit rate as the original.

Card slot selector

Dual SD card slots



Usability and Connectivity



Product photo shown with optional microphone.

Dimensions



Product photo shown with optional microphone.

Accessories



GY-HC500 / GY-HC550 Comparison

		GY-HC500	GY-HC550
Codec	MPEG-2/MXF	No	Yes
Hardware	GPS	No	Yes
	Wireless LAN 2.4G/5G	With optional USB dongle	Built-in
IP	Zixi protocol	No	Yes
Broadcast Overlay		No	Yes

Specifications

GENERAL SPECIFICATIONS	Power	DC12V (AC adapter), DC7.2V (battery)	
	Power consumption	Approx. 24W (Default setting)	
	Dimensions (W x H x D)	188mm x 227mm x 437mm (with lens hood)	
	Weight	3.6kg (with lens hood and battery)	
	Operation temperature	0°C to 40°C	
	Storage temperature	-20°C to 50°C	
	Operating humidity	30% to 80%	
	Storage humidity	Under 85%	
CAMERA	Image sensor	1" (effective) CMOS, effective number of pixels: approx 9.35 million	
	Synchronizing	Internal synchronization	
	Stabilizer	Optical image stabilizer	
	Sensitivity	F11 at 2000lx 89.9% reflectance	
	Lens	F2.8 (wide) to F4.5 (tele), f=9.43mm to 188.6mm (f=28mm to 560mm (35mm equivalent))	
	Filter diameter	82mm	
	Shutter speed	1/6 (48Hz), 1/7.5 (60Hz) to 1/10000	
	Gain	-6, -3, 0, 3, 6, 9, 12, 15, 18, 21, 24 Lolux (30, 36) dB, AGC	
	ND filter	OFF, 1/4, 1/16, 1/64	
	Viewfinder	0.4" LCOS approx 3.68M pixels Quad VGA (1280 x 960), 1280 x 720 at 16:9	
VIDEO/AUDIO RECORDING	LCD monitor	3.97" LCD approx. 1.15M pixels WVGA (800 x 480), 800 x 450 at 16:9	
	Recording media	SDHC/SDXC memory card x 2	4K (150Mbps): UHS-1 U3, 4K (70Mbps)/HD (70Mbps/50Mbps): Class 10, HD (35Mbps): Class 6, SD: Class 4, Web: Class 4, High-Speed: UHS-1 U3, Exchange (U model)/MP4 (E model): Class 4
		SSD (Solid State Drive) Type M.2 SATA	With KA-MC100G (optional)
	Video codec	Apple ProRes 422, MPEG-4 AVC/H.264	
	File format	QuickTime, MP4	
	Audio recording	LPCM 2ch, 48kHz/24-bit/16-bit , μ -Law 2ch (Web), AAC 2ch (Exchange/MP4), Detail information is shown in Recording Formats chart below.	
LIVE VIDEO STREAMING	Protocol	RTMP, MPEG2-TS/UDP, MPEG2-TS/TCP, MPEG2-TS/RTP, RTSP/RTP	
	Resolution and bit rate	HD	1920 x 1080 (59.94p/50p) 24/20/16/12/8Mbps 1920 x 1080 (59.94i/50i/29.97p/25p) 20/16/12/8/5/3Mbps 1280 x 720 (59.94p/50p) 20/16/12/8/5/3Mbps 1280 x 720 (29.97p/25p) 8/5/3/1.5Mbps
		SD	720 x 480 (59.94i) (U model), 720x576 (50i) (E/EC model) 8/5/3/1.5/0.8/0.3Mbps
		Low	640 x 360 (59.94p/50p) 3/1.5Mbps 640 x 360 (29.97p/25p) 3/1.5/0.8/0.3Mbps
	Audio	AAC 2ch 128Kbps (1.5Mbps over), 64Kbps (0.8Mbps under)	
INTERFACES	Video/audio output	3G-SDI output (BNC x 1) (up to 1920 x 1080 60p 4:2:2 10-bit), HDMI output x 1 (up to 3840 x 2160 60p 4:2:2 10-bit)	
	Audio input	XLR x 2 (MIC, +48V/LINE), ϕ 3.5mm mini jack x 1	
	Headphone	ϕ 3.5mm mini jack x 1	
	Remote	ϕ 2.5mm mini jack x 1	
	Time code input/output	RCA x 1	
	USB	HOST x 1 (network connection, USB 2.0)	
	Ethernet	RJ-45 x 1	
	Extended slot	KA-MC100G and for future expansion purpose	
PROVIDED ACCESSORIES	Battery (BN-VC296G) x 1, AC adapter, power cable, lens hood		

Recording Formats

System	Video format	Resolution	Frame rate		Sampling	Bit rate	Audio	Rec time (min.)		
4K UHD	Apple ProRes 422 HQ	3840 x 2160	59.94p/50p/29.97p/25p/23.98p		4:2:2 10-bit	1768/1475/884/737/707Mbps	LPCM 2ch 48kHz/24bit	75/90/150/180/188	1TB SSD	
	Apple ProRes 422					1178/983/589/492/471Mbps		113/135/225/270/282		
	Apple ProRes 422 LT					821/684/410/342/328Mbps		162/194/323/387/403		
	QuickTime (MPEG-4.AVC/H.264)	3840 x 2160	29.97p/25p/23.98p		4:2:2 10-bit	150Mbps	LPCM 2ch 48kHz/24bit	56		
					4:2:0 8-bit	150Mbps	LPCM 2ch 48kHz/16bit	56		
70Mbps							119			
HD	QuickTime (MPEG-4.AVC/H.264)	1920 x 1080	59.94p/50p		4:2:2 10-bit	70Mbps (422 XHQ)			64GB SD Card	
			59.94p/59.94i/50p/50i/29.97p/25p/23.98p			50Mbps (422 XHQ)				
		1280 x 720	59.94p/50p							
			1920 x 1080	59.94p/59.94i/50p/50i/29.97p/25p/23.98p		4:2:0 8-bit	50Mbps (XHQ)			
		1280 x 720		59.94i/50i/29.97p/25p/23.98p			35Mbps (UHQ)			
			Exchange (U model) MP4 (E/EC model)	1920 x 1080 1280 x 720	59.94p (U model only) / 50p (E/EC model only)		4:2:0 8-bit	12Mbps (LP)		628
		8Mbps (LP)						892		
		SD	QuickTime (MPEG-4.AVC/H.264)	720 x 480 (U model)	59.94i		4:2:0 8-bit	8Mbps (HQ)		LPCM 2ch 48kHz/16bit
	720 x 576 (E/EC model)			50i						
	720 x 480			59.94i						
WEB (Proxy)	QuickTime (MPEG-4.AVC/H.264)	720 x 576	50i		4:2:0 8-bit	8Mbps (HQ)	μ-law 2ch 16kHz	881		
		960 x 540	29.97p/25p/23.98p			3Mbps (HQ)		2518		
		480 x 270	29.97p/25p/23.98p			1.2Mbps (LP)		5392		
High-Speed	QuickTime (MPEG-4.AVC/H.264)	1920 x 1080	120fps	59.94p	4:2:2 10-bit	70Mbps (XHQ422)	LPCM 2ch 48kHz/24bit	(Differs by setting)		
			100fps	50p						
			120fps	59.94p/29.97p/23.98p		50Mbps (XHQ422)				
			100fps	50p/25p						
			120fps	59.94p/29.97p/23.98p	4:2:0 8-bit	50Mbps (XHQ)	LPCM 2ch 48kHz/16bit			
			100fps	50p/25p						
			120fps	29.97p/23.98p						
			100fps	25p		35Mbps (UHQ)				

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*Simulated pictures.
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