

JVC

4K Memory Card Camera Recorder

GY-HC550 GY-HC500

CONNECTED CAM™



Photo shows GY-HC550 with optional microphone.

SRT
SECURE
RELIABLE
TRANSPORT

ZX

4K

HDR
High Dynamic Range

ProRes

MPEG-2

SD

XC

Ready for Various Recording Needs

H.265/HEVC Streaming

Apple ProRes 422 Recording

Multi-Purpose Slot for Expandability

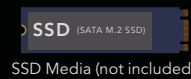


H.265/HEVC

KA-EN200G: H.265/HEVC Streaming Adapter

SSD
Solid State Drive

KA-MC100G: SSD Media Adapter



With the optional KA-EN200G H.265/HEVC Streaming Adapter attached, high-quality and efficient IP video transmission is possible.

- H.265 compression produces similar or better image quality than H.264 at 50% of bitrate.
- Supports contribution quality of 4:2:2 10-bit HEVC encoding.
- Encodes HDR video with HLG or J-LOG Gamma LUTs.
- Supports UDP, Zixi and SRT streaming protocols.

You can use a large-capacity, readily-available SSD (SATA M.2 SSD Type2280)* as recording media. Just insert it in the optional KA-MC100G and attach to the camera. SSD media delivers excellent sequential read speed to tackle professional workload and its high-capacity extends recording time of 4K UHD video. High-speed transfer of huge amounts of recorded footage is also available.

* Approved SSD media should be used. Refer to the JVC website for detailed information.

ProRes

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

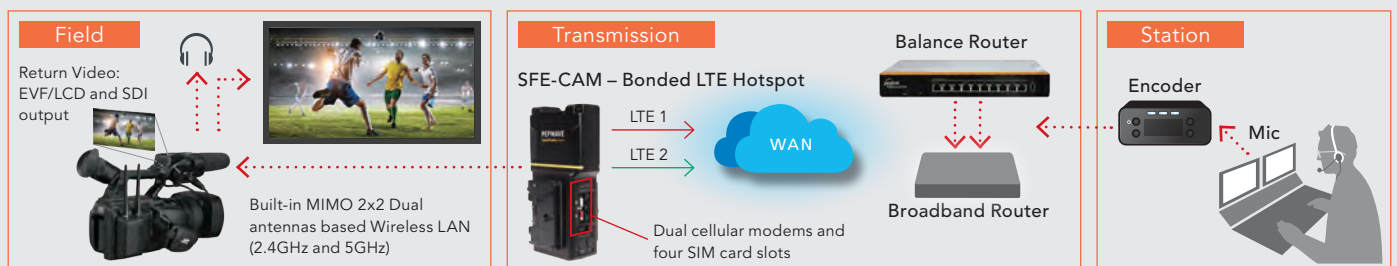
By using the SSD media, ProRes 422 recording becomes possible for attention-grabbing 4K/HD 60p/50p image creation. ProRes 422 offers virtually lossless intra-frame compression, which speeds up post-production. Footage is recorded in native file formats that are understood by most major editing applications 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.

Backup Recording to SSD

Backup recording to record ordinary Rec Start/Stop-controlled footage in the SD Card of slot A while recording all data on the SSD even when slot A is paused.

■ IFB and Return Video over IP (RTSP/RTP, Zixi [GY-HC550], Icecast (Audio))

The GY-HC550/HC500 features built-in IFB and Return Video decoders capable of receiving the H.264 stream over the Internet via RTSP "Pull" protocol (Return Video) and Icecast streams for the IFB. The camera can receive either IFB or Return Video, not both simultaneously. Return Video is displayed in the viewfinder and LCD and output via SDI when the pre-assigned button "Return Video" is pressed once. The second press would return the LCD/EVF/SDI to the live video output. The HDMI output does not switch to Return Video and outputs live video all the time.



SFE-CAM is a bonded cellular hotspot that connects interactively to multiple GY-HC550/HC500 camcorders and features Peplink's patented SpeedFusion™ technology. SFE-CAM bonds multiple cellular and wireless LAN connections enabling the user to send digital video at greater speeds than you could with a single modem. Provided with dual cellular modems with redundant SIM slots and dual band Wireless LAN, you can use up to four different providers for bandwidth bonding.



Ready for Quality, Reliable Streaming

Variety of QoS Technologies

- Zixi
- SRT
- SMPTE 2022-1



SRT
SECURE
RELIABLE
TRANSPORT

Various Protocols for QoS including SRT, Zixi*, and SMPTE 2022-1

For quality, reliable streaming, the CONNECTED CAM camcorders feature various QoS (Quality of Service) capabilities including Zixi, SRT and SMPTE 2022-1. Forward error correction (FEC), automatic repeat request (ARQ), and adaptive bitrate control are supported to ensure error-free video delivery in packet loss environments such as when streaming over cellular networks.



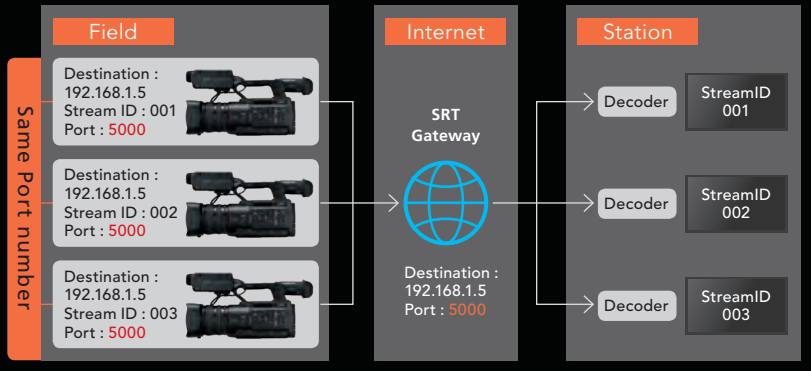
* Zixi is not available with GY-HC500. For GY-HC550, Zixi and SRT protocols do not co-exist as it requires exclusive firmware to install. Choose either protocol to use when installing initially.

SRT – Powerful Video Transport Protocol

SRT (Secure Reliable Transport) is a video transport protocol that optimizes video streaming performance even under unstable networks. With ARQ and FEC support, SRT brings together encryption, packet loss recovery, and jitter prevention to preserve the integrity and quality of video streaming.

SRT Stream ID for Added Security

Stream ID protects a video channel from unauthorized access. The SRT decoder only accepts streams with embedded, encoder-specified Stream IDs and all other streams are ignored. To receive multiple streams differentiated by unique Stream IDs, only a single port is necessary so that the additional security is assured when delivering video over public networks.



Broadcast Info Overlay on HD Video and Streaming GY-HC550

Watermark (Imported, movable)

“LIVE” mark (Pre-installed or imported)

TEXT 1: Program name, etc.

Logo (Imported)

TEXT 2: News title, Reporter name, etc. Time Temperature, etc.

Real-time broadcast information overlays are available for HD recorded video or streamed video without an external CG or production switcher.

- This feature is not available in 4K or SD mode.
- Overlay designs can be created in various language characters using JVC’s SDP Generator (free software).

IP Remote Control with Viewing

Various camera operations can be controlled via wireless/wired LAN from a smartphone, tablet and PC.

Auto/Progressive FTP

During shooting, recorded video clips are automatically uploaded to the server.

NTP (Network Time Protocol)

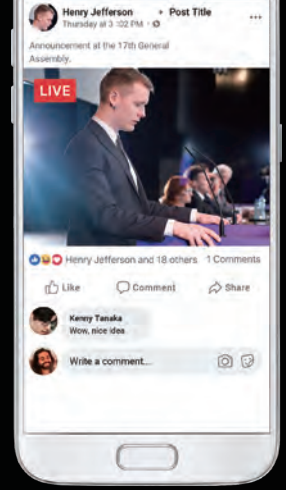
The combination of GY-HC550/HC500 and KM-IP6000/IP4100 provides an affordable multi-camera live production solution with Network Time Protocol. Suitable for compact live production and streaming studios to deliver live events such as concerts, sports, ceremonies, and conferences.

VITC (Vertical Interval Time Code)

Can use the industry-standard TC, compatible with Haivision, VITEC, and other decoders.

Built-in GPS GY-HC550

Enables location information to be recorded or streamed as metadata.



Go Live Streaming on the Social Network!

The GY-HC550/HC500 offers the "Easy Setup" function for YouTube Live and Facebook Live via simple step-by-step menu operations.

Easy Setup for YouTube Live

You can select scheduled or immediate streaming (Schedule On/Off setting) for YouTube Live.

Easy Setup for Facebook Live

Just follow the camcorder's menu settings and you can easily get ready to stream over the Facebook Live.

RTMPS Support (Real Time Message Protocol over Secure Sockets Layer)

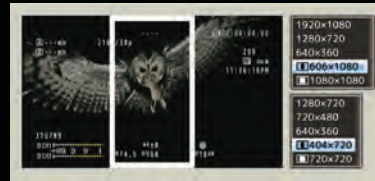
Facebook Live requires all encoders to use the RTMPS protocol. Count on the GY-HC550/HC500 that supports more resolution and bitrate formats of the RTMPS protocol.

JVC is a member of "Facebook Live Solution Partners".
<https://www.facebook.com/formedia/solutions/facebook-live>



Vertical and Square Streaming for the Social Network

Vertical or square angle of view can be selected for streaming to the applicable social network services.



White guidelines will appear on the LCD and viewfinder.



Streaming Format Availability

Conditions: [1] Record Format:H.264, [2] without overlay and timestamp, [3] without KA-EN200G

Resolution	1920x1080														606x1080, 1080x1080		1280x720													
	60p, 50p <small>(Not available in MPEG2 recording)</small>						60i, 50i				30p, 25p				60p, 50p, 30p, 25p <small>(Not available in MPEG2 recording)</small>	60p, 50p			30p, 25p											
Type	MPEG2-TS/UDP	MPEG2-TS/TCP	MPEG2-TS/RTSP	Zixi	SRT (FEC Off)	SRT (FEC On)	RTMP	RTMPS	Facebook Live (RTMPS)	YouTube Live (RTMP)	MPEG2-TS/UDP	MPEG2-TS/TCP	MPEG2-TS/RTSP	RTSP	Zixi	SRT	RTMP	RTMPS	Facebook Live (RTMPS)	YouTube Live (RTMP)	MPEG2-TS/UDP	MPEG2-TS/TCP	MPEG2-TS/RTSP	RTSP	Zixi	SRT	RTMP	RTMPS	Facebook Live (RTMPS)	YouTube Live (RTMP)
Bitrate	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
24Mbps																														
20Mbps																														
16Mbps																														
12Mbps																														
8Mbps																														
5Mbps																														
3Mbps																														
1.5Mbps																														
0.8Mbps																														
0.3Mbps																														

Resolution	404x720, 720x720		720x480 or 720x576				640x360																	
	60p, 50p <small>(Not available in MPEG2 recording)</small>		60i, 50i				60p, 50p				30p, 25p													
Type	RTMP	RTMPS	Facebook Live (RTMPS)	YouTube Live (RTMP)	MPEG2-TS/UDP	MPEG2-TS/TCP	MPEG2-TS/RTSP	RTSP	Zixi	SRT	RTMP	RTMPS	Facebook Live (RTMPS)	YouTube Live (RTMP)	MPEG2-TS/UDP	MPEG2-TS/TCP	MPEG2-TS/RTSP	RTSP	Zixi	SRT	RTMP	RTMPS	Facebook Live (RTMPS)	YouTube Live (RTMP)
Bitrate	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
24Mbps																								
20Mbps																								
16Mbps																								
12Mbps																								
8Mbps																								
5Mbps																								
3Mbps																								
1.5Mbps																								
0.8Mbps																								
0.3Mbps																								

KA-EN200G: H.265/HEVC Streaming Format

Resolution	1920x1080						1280x720									
	60p, 50p			30p, 25p			60p, 50p			30p, 25p						
Color depth, Sampling	4:2:2, 10-bit		4:2:0, 8-bit		4:2:0, 10-bit		4:2:2, 10-bit		4:2:0, 8-bit		4:2:0, 10-bit		4:2:2, 10-bit		4:2:0, 8-bit	
Type	MPEG2-TS/UDP	Zixi	SRT	MPEG2-TS/UDP	Zixi	SRT	MPEG2-TS/UDP	Zixi	SRT	MPEG2-TS/UDP	Zixi	SRT	MPEG2-TS/UDP	Zixi	SRT	
Bitrate	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
24Mbps																
20Mbps																
16Mbps																
12Mbps																
8Mbps																
5Mbps																
3Mbps																
1.5Mbps																
0.8Mbps																
0.3Mbps																

Attention: Zixi is not available with GY-HC500. For GY-HC550, Zixi and SRT protocols do not co-exist as it requires exclusive firmware to install. Choose either protocol to use when installing initially.

1-Inch CMOS

1" CMOS 4K Image Sensor

The GY-HC550/HC500 features a 1-inch CMOS 4K image sensor for uncompromised image quality. This large sensor delivers a superior dynamic range, high S/N ratio and high sensitivity (F11 at 2000lx). Details are crisp and accurate throughout the entire image plane.

20x Zoom Lens

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

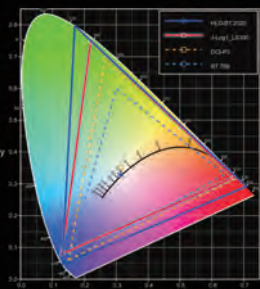
A wide angle 20x optical zoom lens for flexible magnification. When shooting in HD mode, Dynamic Zoom combines optical zoom and pixel mapping from a 4K image sensor to create seamless and lossless 40x zoom. An optical image stabilizer and chromatic aberration correction are also available.



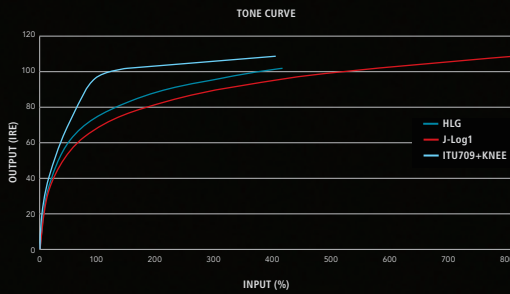
HDR High Dynamic Range

HDR via HLG/J-Log 1

HLG & J-Log 1 Color Gamut



J-Log 1 and Rec709+Knee Gamma



The GY-HC550/HC500 is equipped with an 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 camera's LCD screen or viewfinder to get a grasp of the final output.

[HLG Workflow]

GY-HC550/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.

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.

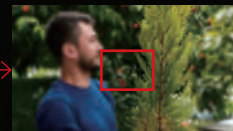
Extremely Practical Auto Focus and Assist Functions

The Auto Focus and Focus Assist functions 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.

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

Designed to work in harsh environments, its weather-resistant robust body enables image gathering in the field with confidence.

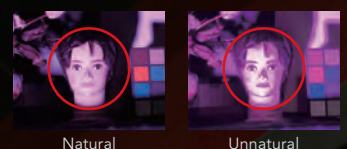


Switchable IR Shooting

IR filter can be switched disabled (Infrared ON) to increase infrared sensitivity for shooting in extremely low illuminance. The IR shooting function can be assigned to the "USER" button.

Auto Color Matrix Adjustment under LED Light

Auto Color Matrix Adjustment reproduces natural images when shooting under LED lighting in Full Auto mode.



Remote Zoom Ease

"Remote Zoom Ease" provides zoom operation sensitivity on the wired remote, similar to the zoom lever on the camcorder handle.

CONNECTED CAM STUDIO

LIVE STREAMING PRODUCTION SUITE

KM-IP6000 (6-input) / KM-IP4100 (4-input)

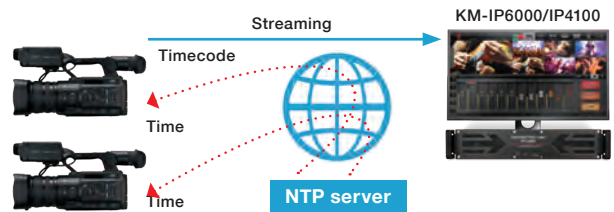
KM-IP6000/IP4100 Series is the centerpiece of a complete IP workflow for news, sports, worship and education. This self-contained control room features a production switcher that offers instant-replays and slow motion with an intuitive touch-screen operation.



- HD-SDI input, IP stream input, NDI input (x6 for KM-IP6000, x4 for KM-IP4100)
- Integrated JVC camcorder remote control
- Up to 1920x1080 30p/25p or 1280x720 60p/50p streaming @ 10Mbps max
- RTMP & MPEG-TS simultaneous output
- Internal character generator with templates
- 4 layers of DSK – CG/images/animations with transparency

- Replay and Slow Motion
- Return over IP
- SRT Compatible
- Multi-Camera Synchronization

Equipped with multi-camera synchronization, Network Time Protocol synchronized encoders.



- Zero Config Capability

Provides automatic detection of JVC camcorders within the same LAN group, and simple setting up of connections with the KM-IP6000/KM-IP4100.

IP REMOTE CONTROL PANEL

RM-LP250S (Joystick version) / RM-LP250M (Encoder version)



RM-LP250S/LP250M is an IP based remote control panel for CONNECTED CAM models (GY-HC500 Series and GY-HC900 Series). It enables versatile control of iris functions and other camera settings with ethernet connection (RJ-45).

- RM-LP250S: Can control a single camera
- RM-LP250M: Can control up to 3 cameras

Basic System Configurations



Controlling 3 cameras with a controller and a mixer.

Item	Model	Description	Qty
1	RM-LP250M (Encoder)	IP Remote Control Panel	1
2	GY-HC500	4K Memory Card Camera Recorder	3
3	KM-IP4100	LIVE STREAMING PRODUCTION SUITE	1
4	Monitor	(for use with KM-IP4100)	1

Item	Model	Description	Qty
5	Monitor		1
6	Microphone		1
7	Control	LAN Cable	6
8		HUB (PoE+ for RM-LP250M)	1
9	Internet Connection	Broadband Router (to connect the Internet)	

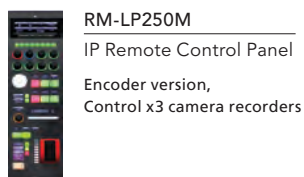
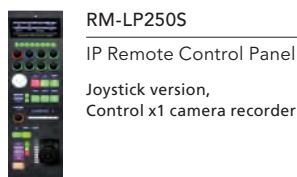
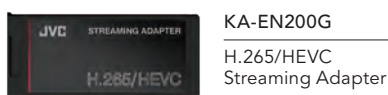
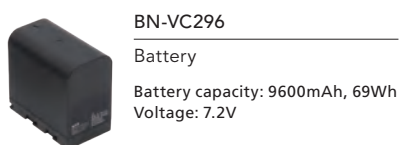
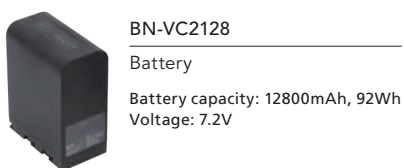
GY-HC550 / GY-HC500 Comparison

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

* Select either one at initial firmware installation.



Accessories



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, without wireless LAN antenna unit)	
	Temperature	Operating: 0°C to 40°C, Storage: -20°C to 50°C	
CAMERA	Humidity	Operating: 30% to 80%, Storage: Under 85%	
	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	
LCD monitor	3.97" LCD approx. 1.15M pixels WVGA (800 x 480), 800 x 450 at 16:9		
VIDEO/AUDIO RECORDING	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	ProRes 422, MPEG-4 AVC/H.264, MPEG-2 [GY-HC550]	
	File format	QuickTime, MP4, MXF [GY-HC550]	
	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	MPEG2-TS/UDP, MPEG2-TS/TCP, MPEG2-TS/RTSP, RTSP, Zixi, SRT, RTMP, RTMP, RTMPS, Facebook Live (RTMPS), YouTube Live (RTMP)	
	Resolution and bit rate	>> Refer to "Streaming Format Availability" chart on page 3 for details.	
	Return over IP	RTSP/RTP, Zixi [GY-HC550], Icecast (Audio)	
INTERFACES	Audio	AAC 2ch 128Kbps (1.5Mbps over), 64Kbps (0.8Mbps under)	
	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-EN200, KA-MC100G, and for future expansion purposes	
Wireless LAN [GY-HC550]	Built-in (2.4GHz/5GHz) MIMO with dual external antennas		
PROVIDED ACCESSORIES	Battery (BN-VC296) x 1, wireless LAN antenna x 2 [GY-HC550], AC adapter, power cable, lens hood, vent hood		

Various Codcs and Recording Formats

System	Video format	Resolution	Frame rate	Bit rate	Audio	Rec time (min.)		
4K UHD	ProRes 422 HQ	3840 x 2160	59.94p/50p/29.97p/25p/23.98p	1768/1475/884/737/707Mbps	LPCM 2ch 48kHz/24bit	67/80/134/161/167		
	ProRes 422			1178/983/589/492/471Mbps		101/121/201/240/251		
	ProRes 422 LT			821/684/410/342/328Mbps		144/173/288/345/359		
HD	QuickTime (MPEG-4.AVC/H.264)	3840 x 2160	2997p/25p/23.98p	150Mbps	LPCM 2ch 48kHz/24bit	50		
				150Mbps		50		
	ProRes 422 HQ	1920 x 1080	59.94p/50p/29.97p/25p/23.98p	4:2:2 10-bit	440/367/220/184/176Mbps	LPCM 2ch 48kHz/24bit	240/290/480/570/600	
					293/245/147/122/117Mbps		360/430/710/850/890	
					70Mbps (422 XHQ)		105	
					50Mbps (422 XHQ)		145	
					50Mbps (XHQ)		147	
					35Mbps (UHQ)		207	
	QuickTime/MXF (MPEG-2 Long GOP) [GY-HC550]	1920 x 1080	59.94p/50p/29.97p/25p	4:2:0 8-bit	35Mbps (HQ)	LPCM 2ch 48kHz/16bit	206	
					25Mbps (SP)		283	
12Mbps (LP)					580			
8Mbps (LP)					794			
Exchange (U model) MP4 (E/EC model)	1920 x 1080	59.94p (U model only) / 50p (E/EC model only)	4:2:0 8-bit	12Mbps (LP)	AAC 2ch 48kHz/16bit	580		
				8Mbps (LP)		794		
SD	QuickTime (MPEG-4.AVC/H.264)	720 x 480 (U model)	59.94i	4:2:0 8-bit	LPCM 2ch 48kHz/16bit	785		
		720 x 576 (E/EC model)	50i					
WEB (Proxy)	QuickTime (MPEG-4.AVC/H.264)	1280 x 720	60p/50p	4:2:0 8-bit	μ -law 2ch 16kHz	1040		
		720 x 480	59.94i			760		
		720 x 576	50i			2160		
		960 x 540	2997p/25p/23.98p			4720		
		480 x 270	2997p/25p/23.98p					
High-Speed	QuickTime (MPEG-4.AVC/H.264)	1920 x 1080	120fps	59.94p	4:2:2 10-bit	LPCM 2ch 48kHz/24bit	(Deffers by setting)	
			100fps	50p				
			120fps	59.94p/29.97p/23.98p	4:2:2 10-bit	70Mbps (XHQ422)		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	4:2:0 8-bit	35Mbps (UHQ)		LPCM 2ch 48kHz/16bit
			100fps	25p				

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