

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

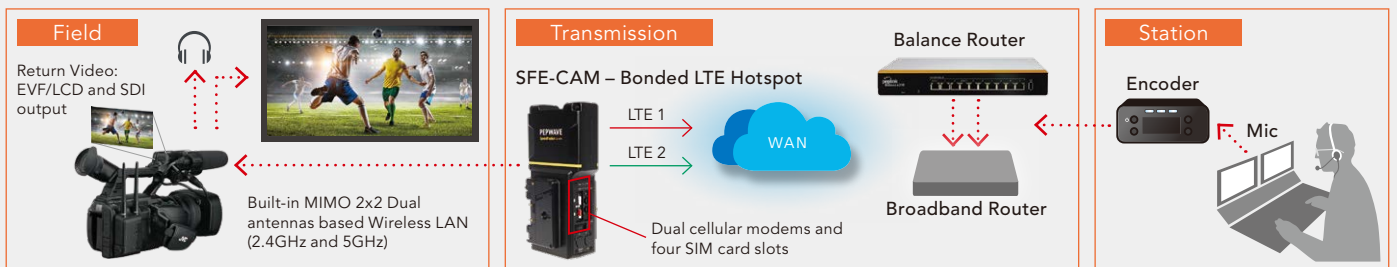
By using the SSD media, ProRes 422 recording becomes possible for attention-grabbing 4K/HD 60p/50p image creation. ProRes 422 offers virtually lossless intra-frame compression, which speeds up post-production. Footage is recorded in native file formats that are understood by most major editing applications 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 (SRT, RTSP/RTP, Zixi [GY-HC550], Iccast (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 Iccast 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



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

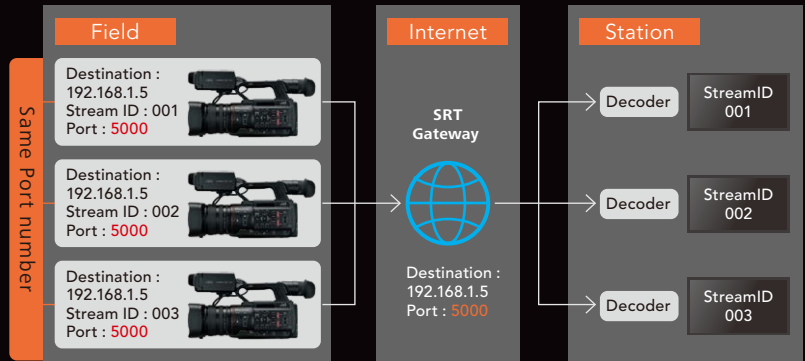
For quality, reliable streaming, the CONNECTED CAM camcorders feature various QoS (Quality of Service) capabilities including Zixi, SRT and SMPTE 2022-1. Forward error correction (FEC), automatic repeat request (ARQ), and adaptive bitrate control are supported to ensure error-free video delivery in packet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

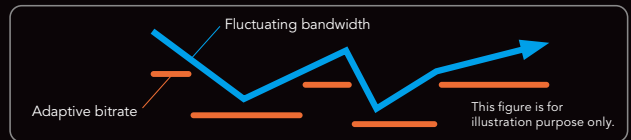
SRT Stream ID for Added Security

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.



SRT Network Adaptive Bitrate

Sender is able to monitor the delivery status, and can spontaneously adjust to achieve the optimum bit rate.



SRT PCR (Program Clock Reference) Fast Mode

"Standard" and "Fast" modes available. Fast mode offers low latency with delay time shortened by about 100ms to 200ms than that of Standard. (Tested using JVC BR-DE900)

Broadcast Info Overlay on HD Video and Streaming

GY-HC550



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.

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

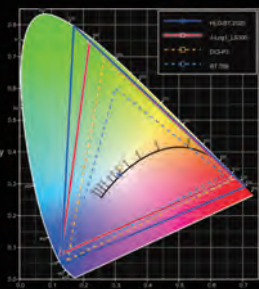
A wide angle 20x optical zoom lens for flexible magnification. When shooting in HD mode, Dynamic Zoom combines optical zoom and pixel mapping from a 4K image sensor to create seamless and lossless 40x zoom. An optical image stabilizer and chromatic aberration correction are also available.



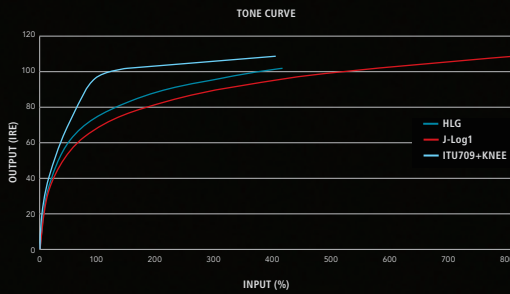
HDR High Dynamic Range

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.

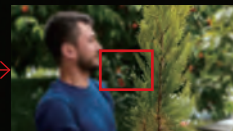
Extremely Practical Auto Focus and Assist Functions

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



Face Only AF: ON



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

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.

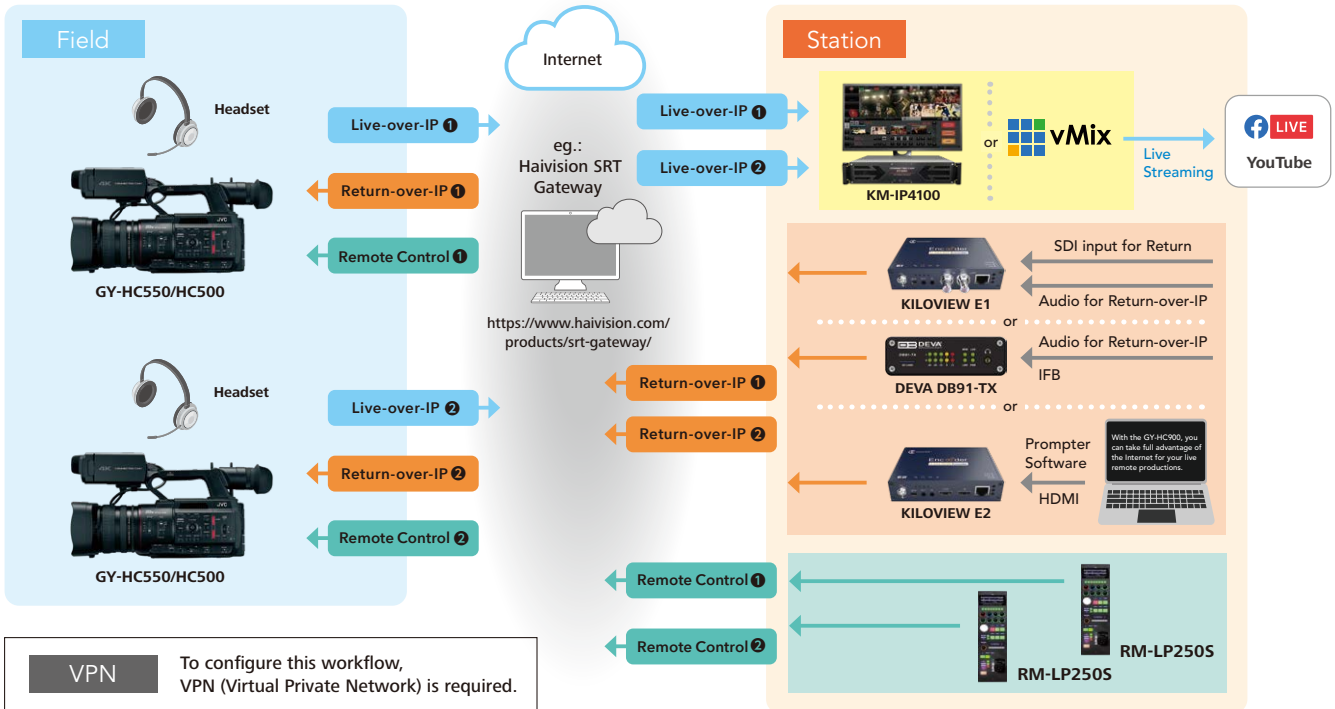


Remote Zoom Ease

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

SRT Remote Production over the Internet (REMI)

You can take full advantage of the Internet for your live remote productions. Just bring your camera operators on location—no massive external devices requiring teams of people to operate are necessary. Connect via LAN, Wi-Fi or 4G/5G LTE* to transport broadcast quality video to a remote studio—even receive return video and IFB—all over the Internet. *Availability differs by model.



VPN To configure this workflow, VPN (Virtual Private Network) is required.

GY-HC550/HC500 Camera System

Item	Model	Description	Qty	Live-over-IP
1	GY-HC550/HC500	4K Memory Card Camera Recorder	2	
2	QAN0067-003	Microphone	2	
3		Headset	2	
4	Battery and Power System			
5	SDHC/SDXC Memory Card			
6	KA-MC100G	SSD Media Adapter		
7	SSD Media			
8	Internet Connection (Requires also for "Station" side)			

KM-IP4100

Model	Description	Qty	Live-over-IP
KM-IP4100/4000/4000S	LIVE STREAMING PRODUCTION SUITE	1	
Monitor	Monitor for KM-IP4000	1	

vMix (vmix.com)

Model	Description	Qty	Live-over-IP
vMix		1	

Return Video (with Audio) over the Internet

Item	Description	Return-over-IP
KILOVIEW E1	H.264 HD SDI to IP Wired Video Encoder Converter	
Audio	Studio Audio Mixer, etc.	

IFB (Talkback) over the Internet [Protocol: Icecast]

Item	Description	Return-over-IP
DEVA DB91-TX	Compact IP Audio Encoder	
Audio	Studio Audio Mixer, etc.	

Prompter over the Internet

Item	Description	Return-over-IP
KILOVIEW E2	H.264 HDMI to IP Wired Video Encoder	
PC	With Prompter Software installed	

Remote Control

Item	Description	Remote Control
RM-LP250S (Joystick)	IP Remote Control Panel	2

CONNECTED CAM STUDIO

CONNECTED CAM STUDIO KM-IP6000 (6-input) and KM-IP4100 (4-input) are the flagships of a new generation of advanced live production and streaming switchers. Operation via an intuitive and easy-to-use touch-screen user interface makes live production work extremely fast, flexible and fun.



Controlling 3 cameras with a controller and a streaming switchers

Item	Model	Description	Qty
1	RM-LP250M (Encoder)	IP Remote Control Panel	1
2	GY-HC550/HC500	4K Memory Card Camera Recorder	3
	QAN0067-003	Microphone for GY-HC550/HC500	3
3	KM-IP4100/4000/4000S	LIVE STREAMING PRODUCTION SUITE	1
4	Monitor	(for use with KM-IP4100)	1

Item	Model	Description	Qty
5	Monitor	Monitor for PGM out	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.



Product photo shown with optional microphone.

Accessories

 <p>BN-VC2128 Battery 12800mAh, 92Wh Voltage: 7.2V W42 x H72 x D93 mm 455g</p> <p>BN-VC296 Battery 9600mAh, 69Wh Voltage: 7.2V W42 x H72 x D69 mm 342g</p>	 <p>AA-VC20 Battery Charger W131x H40 x D103 mm 150g</p>	 <p>KM-IP6000/IP4100 KM-IP6000S/IP4000S KM-IP4000 (for Americas market) Live Streaming Production Suite Monitor is not included.</p>
 <p>KA-MC100G SSD Media Adapter SSD media is not included.</p>	 <p>SAMSUNG 860 EVO SATA M.2 SSD 2TB (1TB/500GB)</p>  <p>WD Blue™ SATA SSD M.2 2280 2TB (1TB/500GB)</p>	 <p>KA-EN200G H.265/HEVC Streaming Adapter</p>
<p>RM-LP250S RM-LP250M</p>   <p>RM-LP250S : Joystick version, Can control a single camera RM-LP250M : Encoder version, Can control up to 3 cameras</p> <p>RM-LP250 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).</p>	 <p>RM-LP100 Remote Camera Controller</p>	
 <p>BR-DE900 ProHD Decoder</p>	 <p>zRAMP-4 (Zixi zRAMP 4-in/4-out) zRAMP-2 (Zixi zRAMP 2-in/2-out) Streaming Management Server</p>	 <p>QAN0067-003 Microphone for ProHD/4K Camcorder</p>

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	
	Humidity	Operating: 30% to 80%, Storage: 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	
	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 (GY-HC550 only), SRT, 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 Choose either one —as only one extended slot is available	
	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 Codecs 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	29.97p/25p/23.98p	4:2:2 10-bit	LPCM 2ch 48kHz/24bit	50				
				4:2:0 8-bit	LPCM 2ch 48kHz/16bit	106				
	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			
					ProRes 422		293/245/147/122/117Mbps	360/430/710/850/890		
					QuickTime (MPEG-4.AVC/H.264)		1920 x 1080	59.94p/50p	70Mbps (422 XHQ)	105
							1280 x 720	59.94p/50p	50Mbps (422 XHQ)	145
					QuickTime/MXF (MPEG-2 Long GOP) [GY-HC550]		1920 x 1080	59.94p/50p/29.97p/25p/23.98p	50Mbps (XHQ)	147
							1280 x 720	59.94i/50i/29.97p/25p/23.98p	35Mbps (UHQ)	207
	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	35Mbps (HQ)	LPCM 2ch 48kHz/16bit	206			
					25Mbps (SP)		283			
					12Mbps (LP)		580			
	SD	QuickTime (MPEG-4.AVC/H.264)	720 x 480 (U model)	4:2:0 8-bit	8Mbps (HQ)	LPCM 2ch 48kHz/16bit	785			
720 x 576 (E/EC model)			50i				1040			
WEB (Proxy)	QuickTime (MPEG-4.AVC/H.264)	1280 x 720	4:2:0 8-bit	8Mbps (HQ)	μ -law 2ch 16kHz	760				
		720 x 480				59.94i	2160			
		720 x 576				50i	4720			
		960 x 540				29.97p/25p/23.98p				
High-Speed	QuickTime (MPEG-4.AVC/H.264)	1920 x 1080	120fps	59.94p	70Mbps (XHQ422)	LPCM 2ch 48kHz/24bit	(Deffers by setting)			
								100fps	50p	50Mbps (XHQ422)
			120fps	59.94p/29.97p/23.98p	4:2:2 10-bit	50Mbps (XHQ)				
								100fps	50p/25p	
			120fps	59.94p/29.97p/23.98p	4:2:0 8-bit	35Mbps (UHQ)				
								100fps	50p/25p	
			120fps	29.97p/23.98p	4:2:0 8-bit	35Mbps (UHQ)				
								100fps	25p	

Product and company names mentioned here are trademarks or registered trademarks of their respective owners. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC. Zixi and the Zixi logo are trademarks of Zixi LLC. The SD, SDHC and SDXC are trademarks of the SD Card Association. QR Code is a registered trademark of Denso Wave Incorporated.

Simulated pictures. Values for weight and dimensions are approximate. E.O.E. Design and specifications subject to change without notice. Copyright © 2020, JVCKENWOOD Corporation. All Rights Reserved.

DISTRIBUTED BY

For Instruction Manual

JVC Professional Video website



manual3.jvckenwood.com/pro/mobile/global/index.php



USA pro.jvc.com



Europe eu.jvc.com/pro