

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

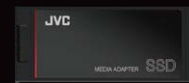
KA-MC100G: SSD Media
Adapter



KA-EN200G



SSD Media (not included)



KA-MC100G

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.

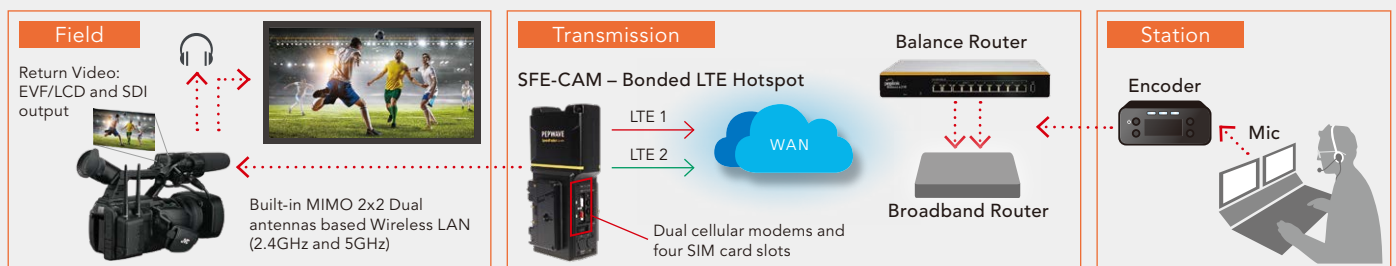
Backup Recording to SSD

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], 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

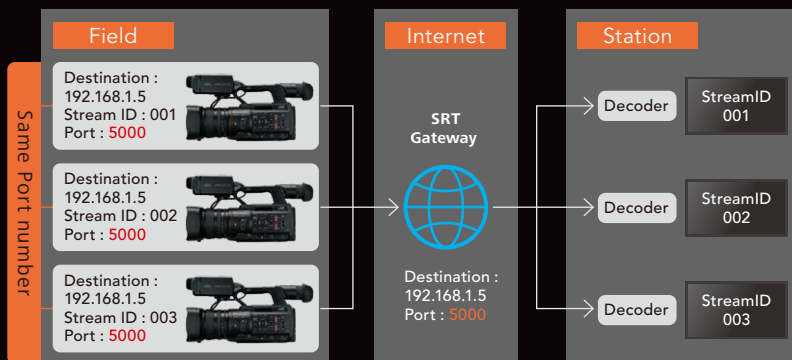
For quality, reliable streaming, the CONNECTED CAM camcorders feature various QoS (Quality of Service) capabilities including Zixi, SRT and SMPTE 2022-1. Forward error correction (FEC), automatic repeat request (ARQ), and adaptive bitrate control are supported to ensure error-free video delivery in packet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

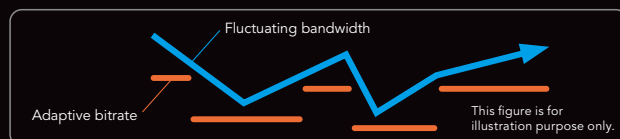
SRT Stream ID for Added Security

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)

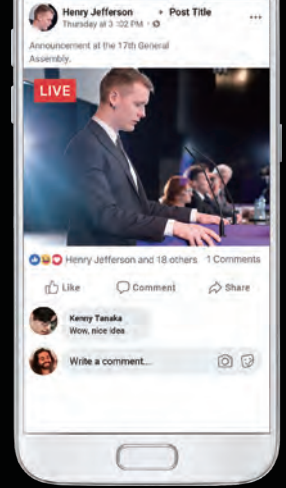
The combination of GY-HC550/H500 and KM-IP6000/IP4100 provides an affordable multi-camera live production solution with Network Time Protocol. Suitable for compact live production and streaming studios to deliver live events such as concerts, sports, ceremonies, and conferences.

■ 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

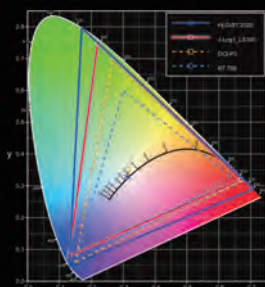
20x Optical/40x Dynamic Zoom Lens with Manual Functions

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.

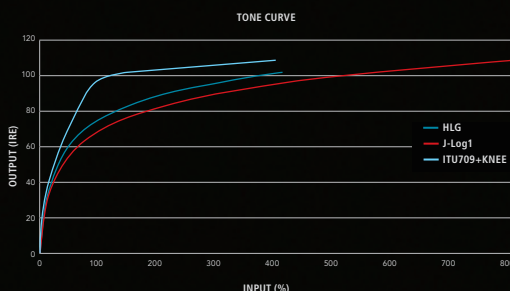


HDR via HLG/J-Log 1

HLG & J-Log 1 Color Gamut



J-Log 1 and Rec709+Knee Gamma



[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.

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.

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.

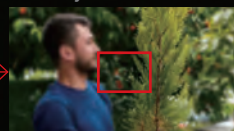
Extremely Practical Auto Focus and Assist Functions

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

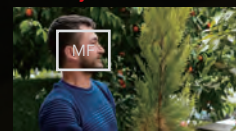


Face Only AF: OFF



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.

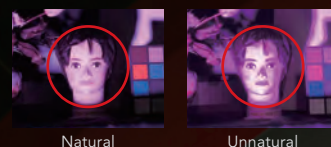


Switchable IR Shooting

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.



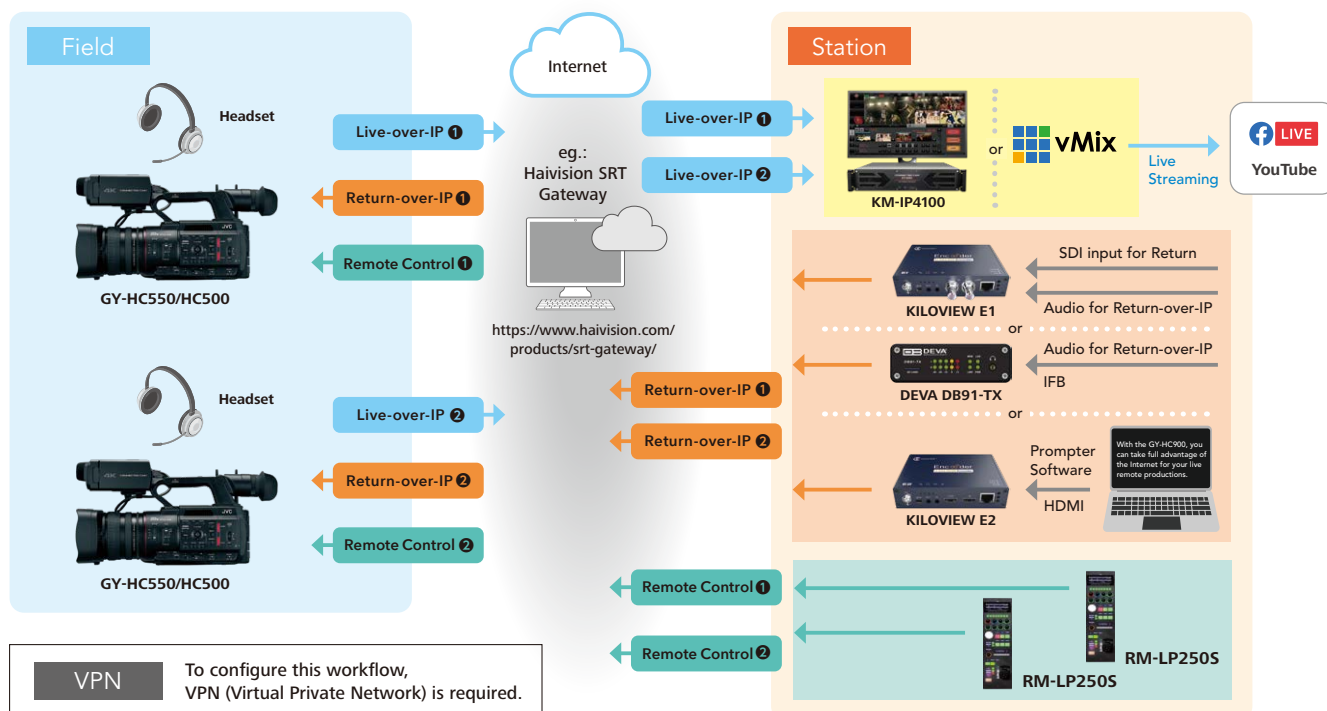
Remote Zoom Ease

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

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.



GY-HC550/H500 Camera System

Item	Model	Description	Qty	Live-over-IP
1	GY-HC550/H500	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

Model	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]

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

Prompter over the Internet

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

Remote Control

Model	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/H500	4K Memory Card Camera Recorder	3
	QAN0067-003	Microphone for GY-HC550/H500	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.



Accessories

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

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]	
LIVE VIDEO STREAMING	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.	
	Protocol	MPEG2-TS/UDP, MPEG2-TS/TCP, MPEG2-TS/RTP, 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	
PROVIDED ACCESSORIES	Wireless LAN [GY-HC550] Built-in (2.4GHz/5GHz) MIMO with dual external antennas		
	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		4:2:2 10-bit	1768/1475/884/737/707Mbps	LPCM 2ch 48kHz/24bit	67/80/134/161/167	1TB SSD		
	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			
	QuickTime (MPEG-4.AVC/H.264)	3840 x 2160	29.97p/25p/23.98p		4:2:2 10-bit	150Mbps	LPCM 2ch 48kHz/24bit	50	64GB SD Card		
4:2:0 8-bit	150Mbps	LPCM 2ch 48kHz/16bit			50						
	70Mbps				106						
HD	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	1TB SSD		
	ProRes 422					293/245/147/122/117Mbps		360/430/710/850/890			
	QuickTime (MPEG-4.AVC/H.264)	1920 x 1080	59.94p/50p		4:2:2 10-bit	50Mbps (422 XHQ)	LPCM 2ch 48kHz/24bit	105	64GB SD card		
								59.94p/59.94i/50p/50i/29.97p/25p/23.98p		145	
		1280 x 720	59.94p/50p		4:2:0 8-bit	50Mbps (XHQ)	LPCM 2ch 48kHz/16bit	147			
								59.94p/59.94i/50p/50i/29.97p/25p/23.98p		207	
		1920 x 1080	59.94i/50i/29.97p/25p		4:2:0 8-bit	35Mbps (UHQ)	LPCM 2ch 48kHz/16bit	206			
								59.94p/50p		283	
	1280 x 720	59.94p/50p		4:2:0 8-bit	35Mbps (HQ)	LPCM 2ch 48kHz/16bit	580				
							59.94i/50i	794			
	QuickTime/MXF (MPEG-2 Long GOP) [GY-HC550]	1440 x 1080	59.94p/50p		4:2:0 8-bit	25Mbps (SP)	AAC 2ch 48kHz/16bit	785			
	1280 x 720	50i						760			
	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	2160			
	1280 x 720	8Mbps (LP)						4720			
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	1040			
		720 x 576 (E/EC model)						50i		760	
	WEB (Proxy)	QuickTime (MPEG-4.AVC/H.264)	1280 x 720	60p/50p		4:2:0 8-bit	6Mbps (LP)	μ-law 2ch 16kHz	2160		
			720 x 480						59.94i	4720	
720 x 576	50i		1.2Mbps (LP)								
960 x 540	29.97p/25p/23.98p										
High-Speed	QuickTime (MPEG-4.AVC/H.264)	1920 x 1080	480 x 270	29.97p/25p/23.98p		4:2:2 10-bit	70Mbps (XHQ422)	LPCM 2ch 48kHz/24bit	(Deffers by setting)		
			120fps							50p	
			100fps				59.94p/29.97p/23.98p	50Mbps (XHQ422)		LPCM 2ch 48kHz/24bit	
			120fps				50p/25p				
			100fps			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		35Mbps (UHQ)		LPCM 2ch 48kHz/16bit	
			100fps			25p					

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