Panasonic

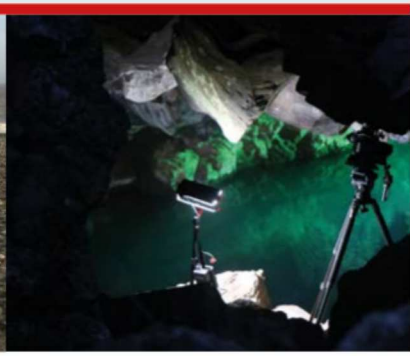
CINEMATIC MOMENTS

AU-EVA

COMPACT CINEMA CAMER

EVA1

COMPACT CINEMA CAMERA



The AU-EVA1 is a new cinema camera positioned between the Lumix GH5 4K mirrorless camera and the VariCam LT 4K cinema camera.

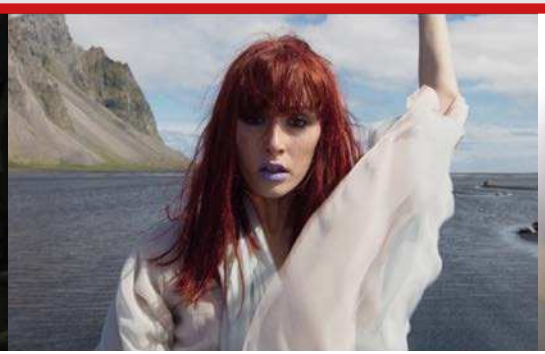
Create cinematic imagery thanks to both the newly-developed 5.7K Super 35 mm sensor and color science inherited from VariCam cinema cameras.

A native EF mount with electronic connectivity has been utilised, and opens up the choice of lenses for EVA1 to a great extent – be it cine, fixed focal, macro or zoom lenses depending on the nature of the shoot.

EVA1 records internally onto SD memory card at up to 4:2:2 10 bit, thus reducing the outlay on media costs.

Compact and lightweight 1.2 kg (2.65 lb) body.

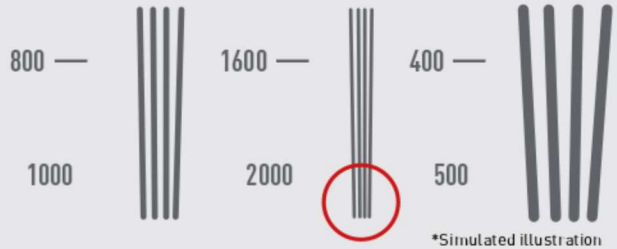





A single 4K sensor has limitations in achieving a 4K image. Because a single sensor utilizes a Bayer pattern color filter array, the camera must take the limited color and resolution information and extrapolate a full 4K RGB image. This results in a loss of resolving power as well as color data.

The solution is to utilize a greater native number of photosites on the sensor that will yield more resolution and color information in the finished image. To deliver a full 4K finished image, a 5.7K Bayer pattern sensor is required. This is the new sensor design in the EVA1.

Panasonic's mission is to offer cinematographers innovative technology to capture cinematic images that will engage audiences on multiple viewing platforms. EVA1's newly developed Super 35 sensor offers high resolution and wide dynamic range that is future-proofed for all types of productions.



EVA1 CAN CAPTURE CLEAR 2000 TV LINES WHICH REALIZE REAL 4K RESOLUTION

5.7K RESOLUTION

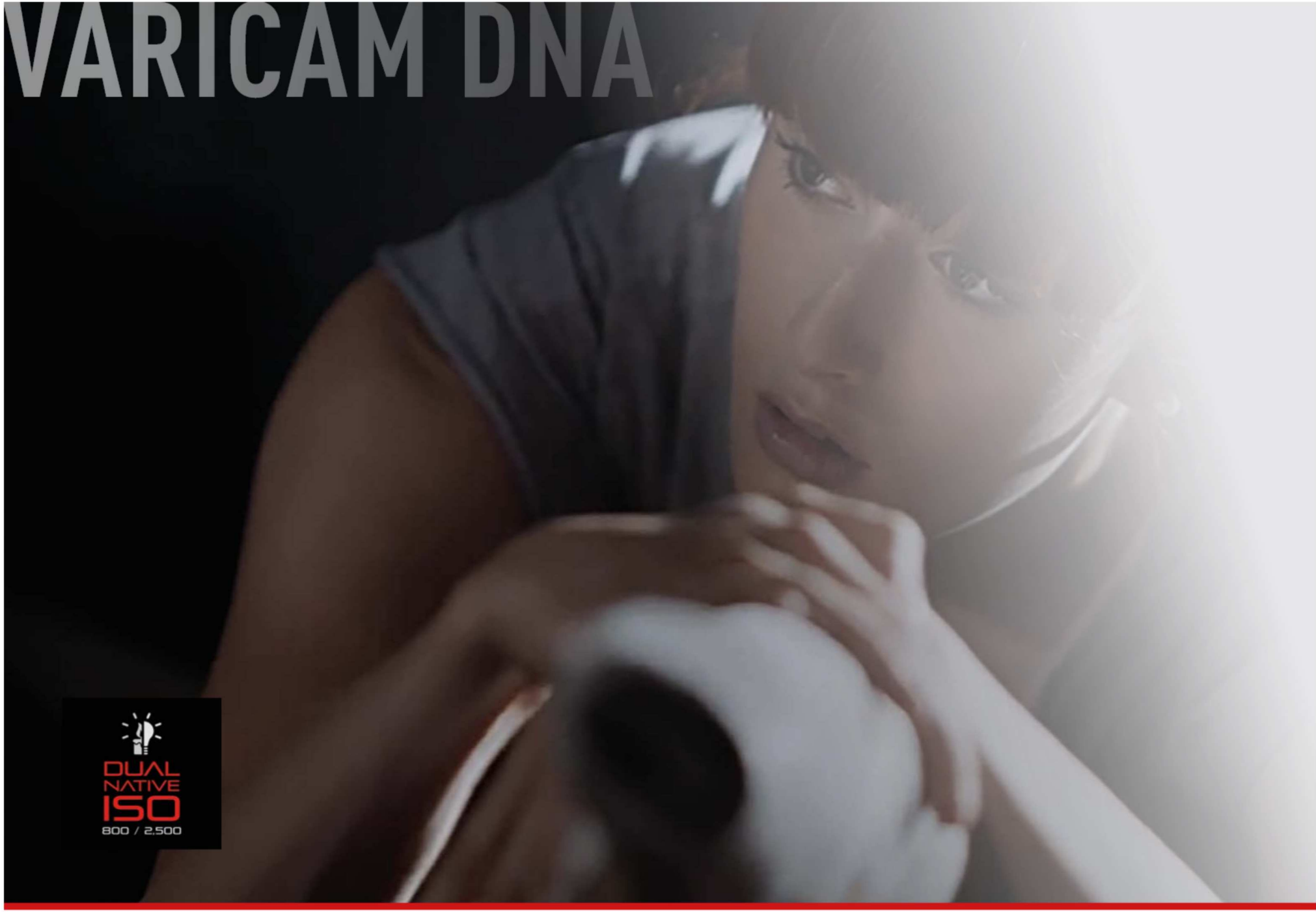
EVA1 contains a Super 35 (24.60 mm x 12.97 mm) sensor that captures 5.7K resolution. With an active resolution of 5720 x 3016, the EVA1 delivers more than 17.25 million photosites, nearly double the 8.8 million for 4K DCI (4096 x 2160). By starting at a higher native resolution, the 5.7K sensor yields a higher resolving image when down-sampled to 4K, UHD, 2K, or even 720p. Additionally, the increased color information results in a finer, more accurate finished image.

14 STOP DYNAMIC RANGE

Dynamic range measures the luminance range that a digital camera can capture. The EVA1 delivers 14 stops of Dynamic Range, enabling fine gradation in exposure from bright to dark image areas.

CINEMATIC IMAGERY

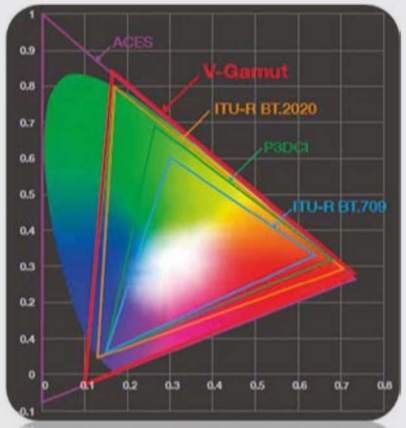
VARICAM DNA



VARICAM LOOK

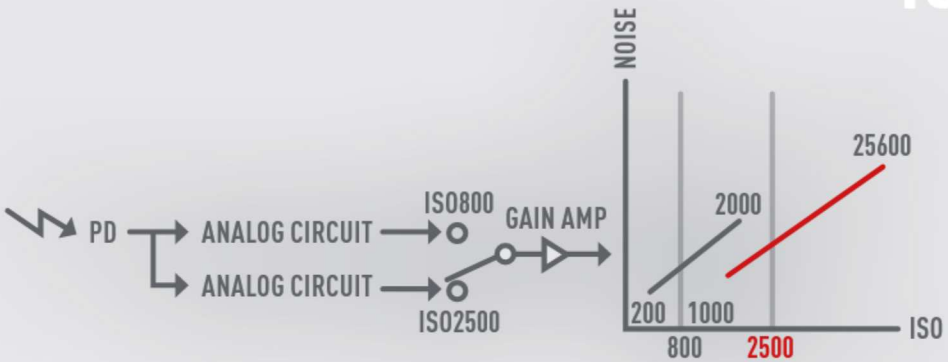
The ability to capture accurate colors and rich skin tones is a must for any filmmaker. EVA1 imports the renowned colorimetry of the VariCam lineup of cinema cameras. The EVA1 contains V-Log/V-Gamut capture to deliver high dynamic range and broad colors. V-Log delivers a very flat image whilst maintaining all of the color information within the image. This means that there is a greater level of play when the images are put through post-production processes.

The Super 35 mm sensor achieves a wide color gamut known as V-Gamut, which is EVA1's optimum color space and achieves a color space that is wider than BT.2020. V-Log has log curve characteristics that are somewhat reminiscent of negative film and V-Gamut delivers a color space even larger than film.



DUAL NATIVE ISO

Another unique feature of EVA1 is the dual-native ISO sensitivity, the technology that was first introduced in the flagship VariCam line-up. It utilizes a process that allows the sensor to be read in a fundamentally different way, extracting more information without degrading the image. This results in a camera that can switch from a standard sensitivity to a high sensitivity with almost no increase in noise or other artifacts. Dual Native ISO gives cinematographers a greater variety of artistic choices as well as the ability to use less light on set, saving both time and money. The EVA1's Dual Native ISOs are 800 and 2,500, which will allow cinematographers to shoot in almost any lighting environment.



LOW-COST MEDIA WORKFLOW

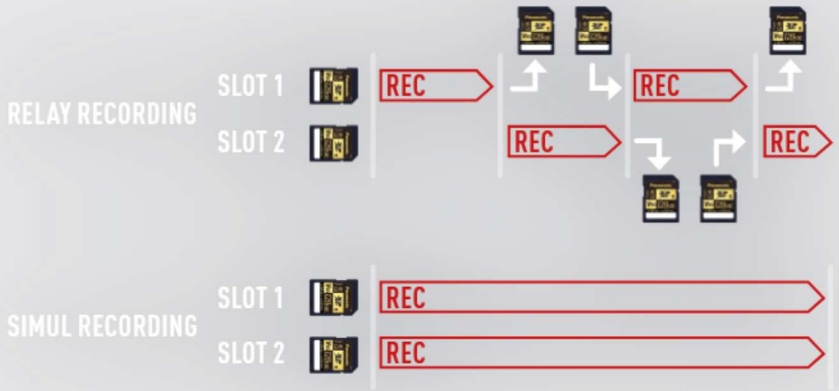
The EVA1 can record in a multitude of formats and compression rates, offering up to 10 bit 4:2:2 even in 4K that can be recorded internally onto SD memory cards, reducing workflow costs.

4:2:2 10 BIT ONTO SD MEMORY CARD

In camera recording, the EVA1 can capture in 4K (4096 x 2160), UHD (3840 x 2160), 2K (2048 x 1080), Full HD (1920 x 1080), and HD (1280 x 720). In a future firmware upgrade, EVA1 will offer ALL Intra compression (400 Mbps) for in camera recording and 5.7K RAW output to third party recorders.

DOUBLE SLOT RECORDING

Ideal for indie filmmakers, the EVA1 records to readily-available, lower-cost SD memory cards. With two SD memory card slots, you can capture footage either with Simul Rec (simultaneous dual record) or Relay Rec (continuous record). Loop Rec and Background Rec will be available with the future firmware update. There's also Pre Rec, One Shot Record, which enables single frame video for stop motion capture, and Interval which are also available in the future upgrade.

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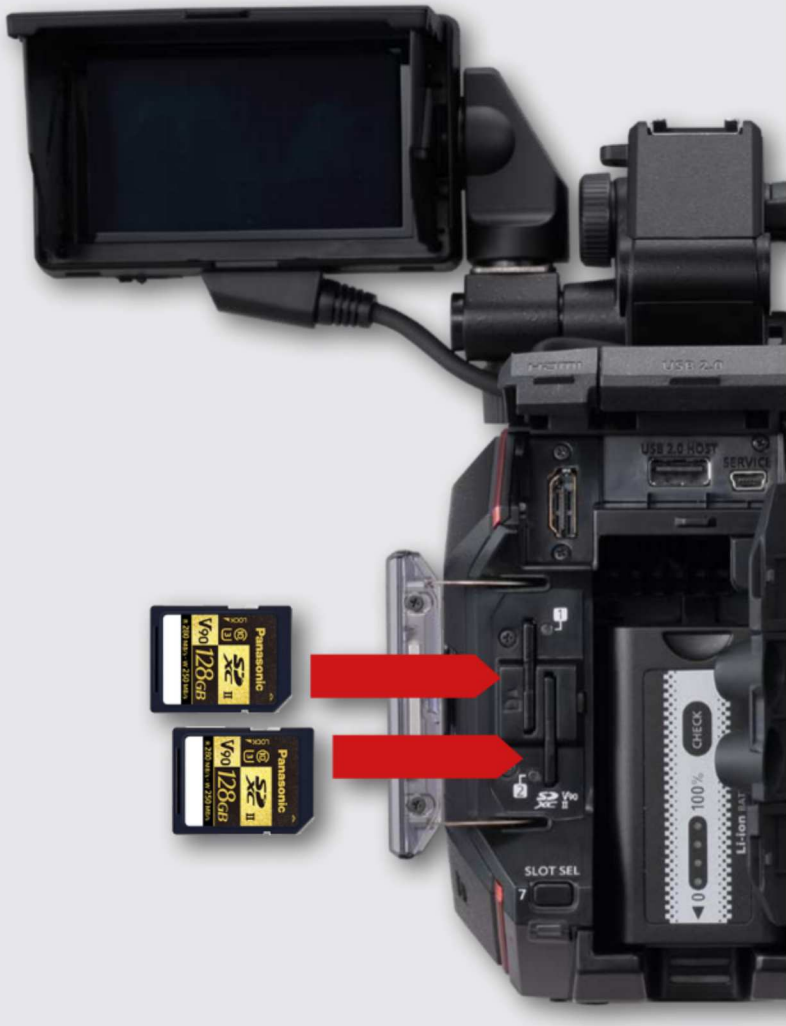
Panasonic
V90 128GB
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RONIN



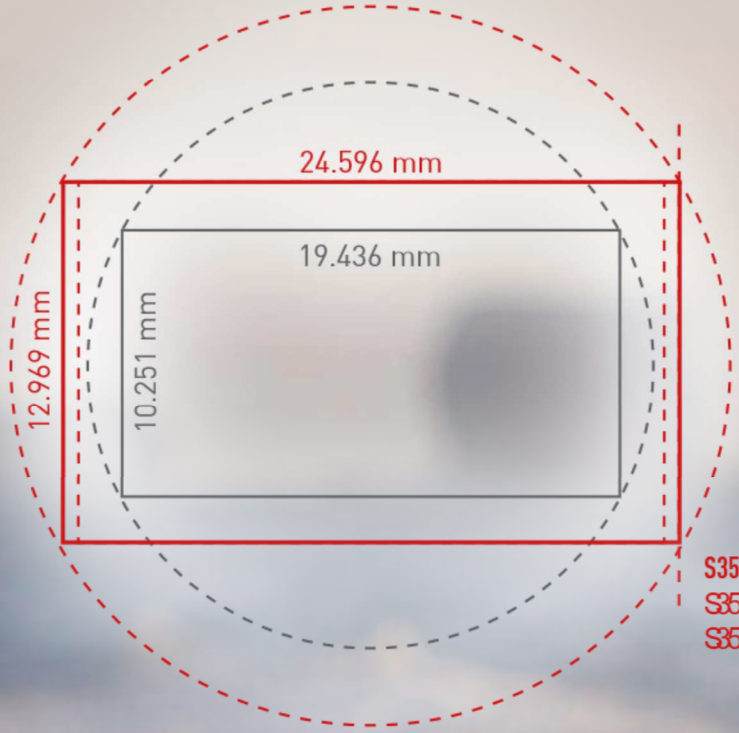

SMALL AND LIGHTWEIGHT

Weighing only 1.2kg (2.65 lb, body-only) with a compact form factor [135 mm (W) x 133 mm (H) x 170 mm (D) | (5-5/16 inches x 5-1/4 inches x 6-11/16 inches) whilst there are a multitude of mounting holes across the camera body for building the camera up. The top-handle can also be removed, whilst the hand-grip can be repositioned or taken off completely to create a compact form factor ideal for rigging the camera into drones, gimbals and jibs.

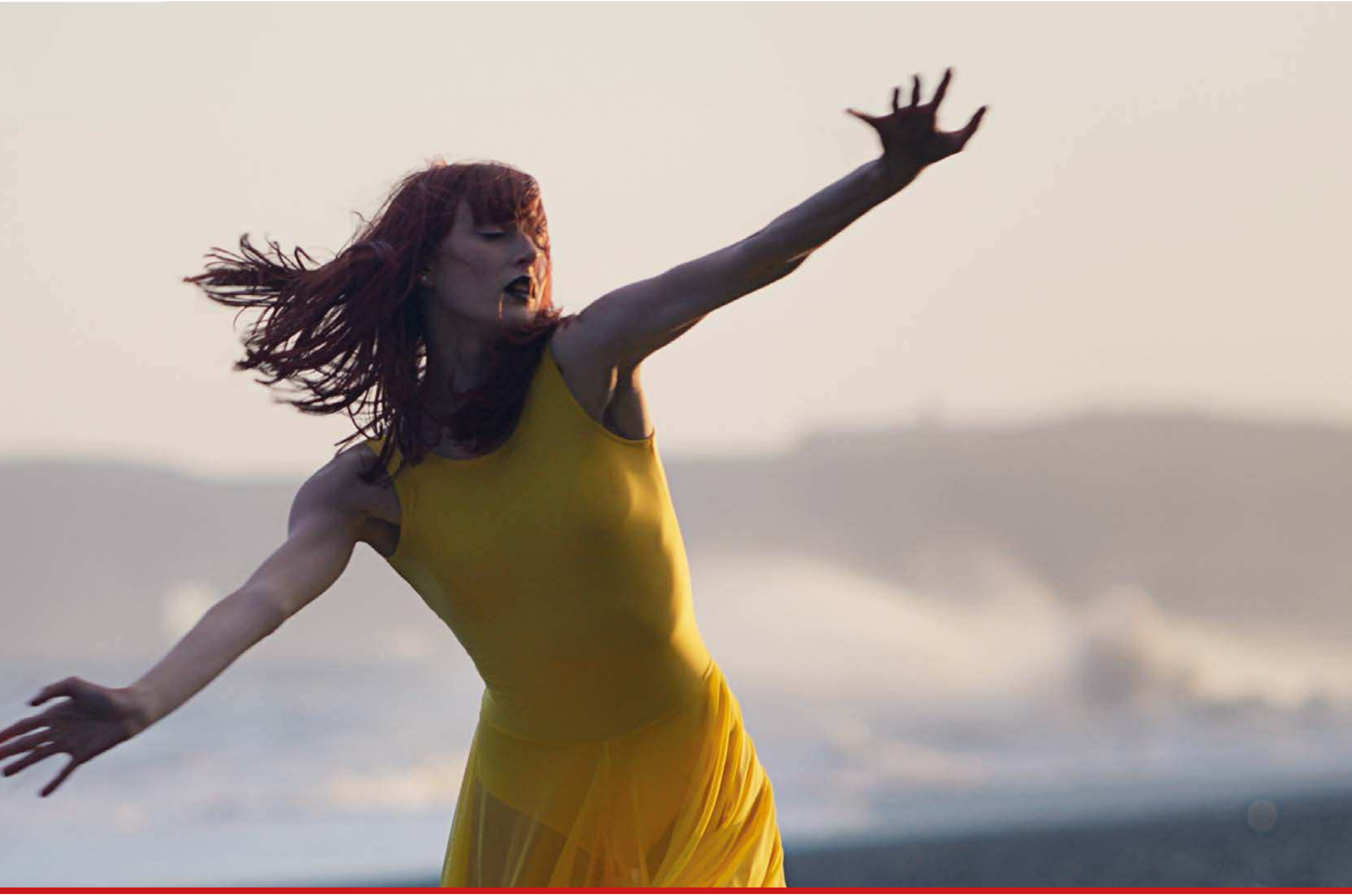
HIGH SPEED SHOOTING

The EVA1 offers high-speed Super 35 mm capture up to 59.94 fps/50 fps for 4K/UHD or up to 120 fps/100 fps for 2K/Full HD. Higher speed capture is possible up to 240 fps/200 fps by cropping the image area (4/3-type).

4/3-type area / 19.436 mm x 10.251 mm
4/3-type CROP&MX2.2K: 1 fps ~ 240 fps (2K/HD)

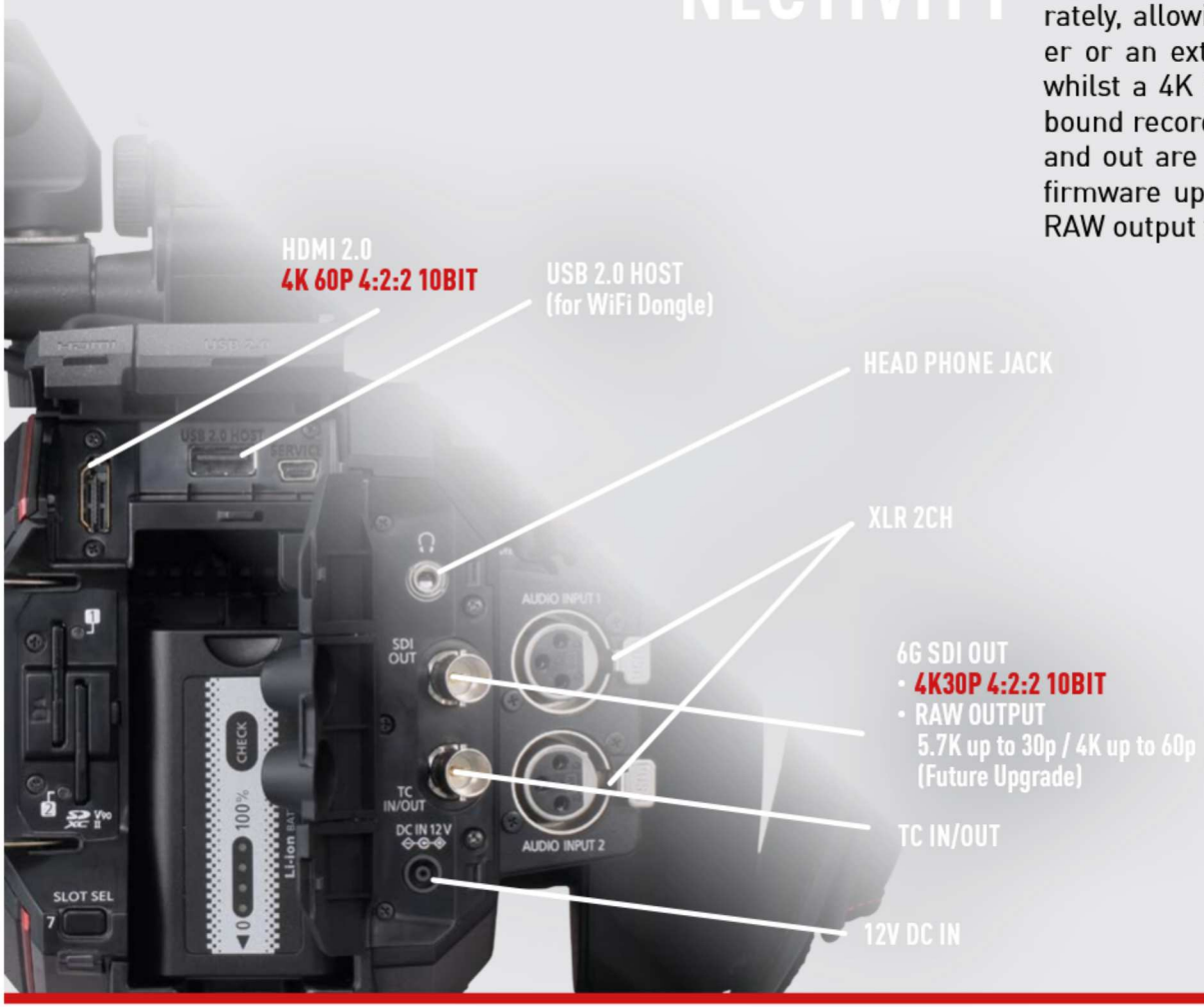


S35 area / 24.596 mm x 12.969 mm
S35 5.7K: 1 fps ~ 60 fps
S35 MX2.8K: 1 fps ~ 120 fps (2K/HD)



PROFESSIONAL CONNECTIVITY

EVA1 offers dual balanced XLR audio inputs with Dolby Audio TM encoding. The HDMI and SDI video outputs are both 4K capable and each can be adjusted separately, allowing a HD feed to a viewfinder or an external monitor for example whilst a 4K feed can be sent to an outbound recorder or monitor. Timecode in and out are also supported. In a future firmware upgrade, EVA1 will offer 5.7K RAW output to 3rd party recorders.



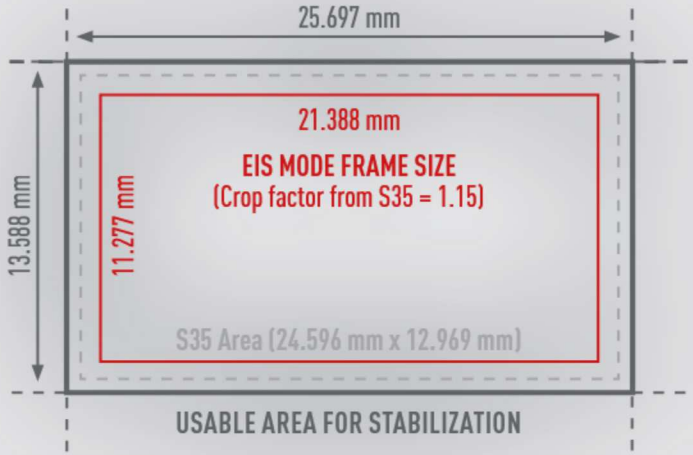
CREATIVE TOOLS

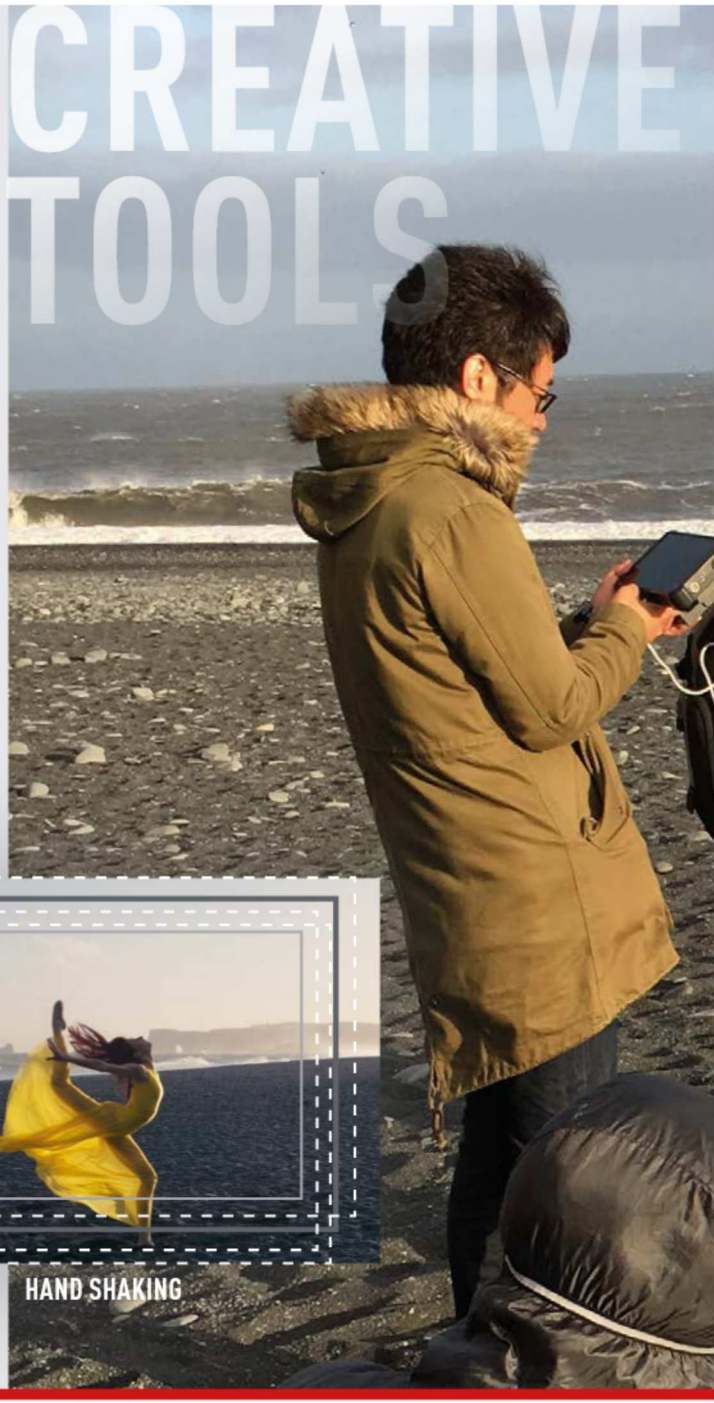
IR CINEMATOGRAPHY

The EVA1 allows the infrared (IR) filter to be removed and replaced with a clear filter for extreme low-light conditions as a simple end-user configuration. Unique photographic effects and night vision imagery are possible with this control over infrared. In addition, these filters are electronically driven and wireless remote control* is also possible.

EIS

Electronic Image Stabilization (EIS) within the camera will counterbalance camera shake and blurring enabling smooth movement for handheld shooting.





REMOTE OPERATION

EVA1 will have a remote-control app for a tablet (iOS, Android) that enables users to control an EVA1 when the camera is on a camera crane, or remote location.*

* The optional AJ-WM50 Wireless Module is required. Other optional wiress module will be updated accordingly on the website <http://pro-av.panasonic.net/en/>.

GENERAL SPECIFICATION

Power:	DC 7.28 V (Battery Operation) DC 12 V (AC adapter operation)
Power Consumption:	19 W (when LCD monitor is used)
Operating Temperature:	0 °C to 40 °C (32°F to 104°F)
Operating Humidity:	10% to 80% (relative humidity)
Storage Temperature:	–20 °C to 60 °C (–4°F to 140°F)
Weight:	Body: Approx. 1.2 kg (2.65 lb) (excluding accessories) Shooting: Approx. 2.05 kg (4.52 lb) (with accessories)
Dimensions:	135 mm (W) x 133 mm (H) x 170 mm (D) (excluding protrusions and accessories) (5-5/16 inches x 5-1/4 inches x 6-11/16 inches)

CAMERA UNIT

Image Sensor:	Super 35 mm, MOS sensor
Number of Pixels:	Total pixels: Approx. 20.49 megapixels, 6340 (H) x 3232 (V) Effective pixels: Approx. 17.25 megapixels, 5720 (H) x 3016 (V)
Sensor Area and Max Frame Rate:	S35: 4K/UHD 60 fps/50 fps 2K/HD 120 fps/100 fps 4/3-type: 2K/HD 240 fps/200 fps
Latitude:	14 stop
Log:	V-Log
Gamma:	eV-Look Gamma (2 types) Video Gamma Hybrid Log Gamma (HLG)
Gamut:	V-Gamut (V-Log) BT.2020 (HLG)
EI Settings:	[ISO] mode: NATIVE ISO: 800, 2500 800 Base: 200 to 2000 2500 Base: 1000 to 25600 [dB] mode: (Normal) –12 dB to 8 dB (High) –8 dB to 20 dB
Shutter Speed:	[deg] mode: 3.0 deg to 357.0 deg (0.5 deg step) 12 presets [sec] mode: 1/24.1 sec to 1/8000 sec (23.98p) 12 presets
Color Temp:	ATW, AWB, 2000 K to 15000 K ±10.0 GMg 12 presets
Lens Mount:	EF mount
Image Stabilization:	Electric Image Stabilization (EIS)
Auto Focus:	One push auto focus
ND Filter:	CLEAR, 0.6ND, 1.2ND, 1.8ND, Electrical driven
IR Cut Filter:	USER assignable IR shooting (filter ON/OFF)

MEMORY CARD RECORDER

Recording Media:	SDHC memory card (4 GB to 32 GB) SDXC memory card (32 GB to 128 GB) UHS-I /UHS-II UHS Speed Class3 is supported, Video Speed Class V90 is supported
Recording Slot:	SD memory card slot x 2
Recording Resolution:	4096 x 2160 (4K), 3840 x 2160 (UHD), 2048 x 1080 (2K), 1920 x 1080 (FHD), 1280 x 720 (HD)
Recording System Frequency:	59.94p, 50p, 29.97p, 25p, 24p, 23.98p 59.94i, 50i (AVCHD only)
2 Slots Functions:	Simul Rec, Relay Rec, Loop Rec*1, Background Rec*1
Other Rec Functions:	Pre Rec, Interval Rec*1, One Shot Rec*1

DIGITAL VIDEO

Quantizing:	MOV: 4:2:2 10 bit/4:2:0 8 bit AVCHD: 4:2:0 8 bit
Video Compression Format:	H.264/MPEG-4 AVC High Profile

DIGITAL AUDIO

Recording Audio Format:	MOV: 48 kHz/24 bit, 2 CH, Linear PCM AVCHD: 48 kHz/16 bit, 2 CH, Dolby Audio™
Headroom:	18 dB/20 dB (menu switchable)

Video Output

SDI OUT:	BNC x 1, SDI REC REMOTE is supported 0.8 V [p-p], 75 Ω, 4K (6G), HD (3G/1.5G) Output format (4:2:2 10 bit): • 4096 x 2160: 29.97p, 25p, 24p, 23.98p • 3840 x 2160: 29.97p, 25p, 24p, 23.98p • 1920 x 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 29.97PsF, 25p, 25PsF, 24p, 24PsF, 23.98p, 23.98PsF • 1280 x 720p: 59.94p, 50p RAW* output format (10 bit): • 5760 x 3072: 29.97p, 25p, 24p, 23.98p • 4096 x 2160: 59.94p, 50p, 29.97p, 25p, 24p, 23.98p
HDMI:	HDMI x 1, TypeA, HDMI REC REMOTE is supported, Viera Link is NOT supported Output format (4:2:2 10 bit): • 4096 x 2160: 59.94p, 50p, 29.97p, 25p, 24p, 23.98p • 3840 x 2160: 59.94p, 50p, 29.97p, 25p, 24p, 23.98p • 1920 x 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 24p, 23.98p • 1280 x 720: 59.94p, 50p • 720 x 480: 59.94p • 720 x 576: 50p Output format (4:2:0 8 bit): • 4096 x 2160: 59.94p, 50p • 3840 x 2160: 59.94p, 50p

AUDIO INPUT/OUTPUT

Internal Mic:	Stereo microphone
INPUT1/2:	XLR (3-pin) x 2 (INPUT1/2), input high impedance LINE/MIC/MIC +48 V (menu switchable) MIC: –40 dBu/–50 dBu/–60 dBu (menu switchable) LINE: +4 dBu/0 dBu (menu switchable)
SDI OUT:	Linear PCM 2 CH
HDMI:	Linear PCM 2 CH
PHONES:	3.5 mm stereo mini jack x 1
Speaker:	20 mm diameter, round x 1

OTHER INPUT/OUTPUT

TC IN/OUT:	BNC x1 for IN/OUT (menu switchable) IN: 1.0 V [p-p] to 4.0 V [p-p], 10 kΩ OUT: 2.0 V [p-p] ±0.5 V [p-p], low impedance
LCD:	40-pin (for connecting LCD monitor)
REMOTE:	2.5 mm Super Mini Jack
USB 2.0 (HOST):	Type-A, 4-pin for Wireless Module (AJ-WM50)
EF Mounting Contact:	8-pin
DC IN 12 V:	DC 12 V EIAJ type 4

LCD MONITOR

Size:	3.5-type LCD monitor (approx. 1,150,000 dots) Touch panel (MENU control, Shooting assist functions)
Switches:	MIRROR (OFF, B/T, ROTATE)

HAND GRIP

Mounting Mechanism:	One touch rotatable/Detachable
Switches:	REC, MENU, MULTI dial, User switch x 2

INCLUDED ACCESSORIES

Accessories:	Battery (5900 mAh), Battery charger, AC adapter, AC cable, Shoulder strap, Microphone holder, Microphone holder adapter, LCD monitor (with hood and mounting attachment), Handle, Grip, Grip belt, Mount cap

*1: Functions to be supported by firmware update.

* Specifications are subject to change without notice.

RECORDING FORMAT AND RECORDING TIME

Format	Pixel	Main Codec (bps)	Frequency	Sampling	Bitrate (average)	Recording Time (128 GB)
MOV*	4096 x 2160 (4K)	422ALL-I 400M Update	29.97p, 24p, 25p, 23.98p	4:2:2 10 bit	400 Mbps (VBR)	Approx. 40 min.
		422LongGOP 150M	29.97p, 24p, 25p, 23.98p	4:2:2 10 bit	150 Mbps (VBR)	Approx. 1 hour 50 min.
		420LongGOP 150M	59.94p, 50p	4:2:0 8 bit	150 Mbps (VBR)	Approx. 1 hour 50 min
		420LongGOP 100M	29.97p, 24p, 25p, 23.98p	4:2:0 8 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
	3840 x 2160 (UHD)	422ALL-I 400M Update	29.97p, 25p, 23.98p	4:2:2 10 bit	400 Mbps (VBR)	Approx. 40 min.
		422LongGOP 150M	29.97p, 25p, 23.98p	4:2:2 10 bit	150 Mbps (VBR)	Approx. 1 hour 50 min.
		420LongGOP 150M	59.94p, 50p	4:2:0 8 bit	150 Mbps (VBR)	Approx. 1 hour 50 min.
		420LongGOP 100M	29.97p, 25p, 23.98p	4:2:0 8 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
	2048 x 1080 (2K)	422ALL-I 200M Update	59.94p, 50p	4:2:2 10 bit	200 Mbps (VBR)	Approx. 1 hour 20 min.
		422ALL-I 100M Update	29.97p, 24p, 25p, 23.98p	4:2:2 10 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
		422LongGOP 100M	59.94p, 50p	4:2:2 10 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
		422LongGOP 50M	29.97p, 24p, 25p, 23.98p	4:2:2 10 bit	50 Mbps (VBR)	Approx. 5 hour 20 min.
		420LongGOP 100M	59.94p, 50p	4:2:0 8 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
		420LongGOP 50M	29.97p, 24p, 25p, 23.98p	4:2:0 8 bit	50 Mbps (VBR)	Approx. 5 hour 20 min.
	1920 x 1080 (FHD)	422ALL-I 200M Update	59.94p, 50p	4:2:2 10 bit	200 Mbps (VBR)	Approx. 1 hour 20 min.
		422ALL-I 100M Update	29.97p, 24p, 25p, 23.98p	4:2:2 10 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
		422LongGOP 100M	59.94p, 50p	4:2:2 10 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
		422LongGOP 50M	29.97p, 25p, 23.98p	4:2:2 10 bit	50 Mbps (VBR)	Approx. 5 hour 20 min.
		420LongGOP 100M	59.94p, 50p	4:2:0 8 bit	100 Mbps (VBR)	Approx. 2 hour 40 min.
		420LongGOP 50M	29.97p, 25p, 23.98p	4:2:0 8 bit	50 Mbps (VBR)	Approx. 5 hour 20 min.
AVCHD	1920 x 1080 (FHD)	PS	59.94p, 50p	4:2:0 8 bit	25 Mbps (VBR)	Approx. 11 hours
		PH	23.98p, 59.94i, 50i	4:2:0 8 bit	21 Mbps (VBR)	Approx. 12 hour 30 min.
		HA	59.94i, 50i	4:2:0 8 bit	17 Mbps (VBR)	Approx. 17 hours
	1280 x 720 (HD)	PM	59.94p, 50p	4:2:0 8 bit	8 Mbps (VBR)	Approx. 35 hours

Update = Functions to be supported by firmware update. * SDXC memory card is required for MOV recording.

AVAILABLE MEMORY CARD

Format	Memory Card Type	Bitrate/ Recording Function	Speed Class
MOV	SDXC	400 Mbps Update	Video Speed Class V60 or faster
		2K/FHD VFR Mode* ALL-I Codec Update	
		200 Mbps Update	Video Speed Class V30 UHS Speed Class 3 or faster
		150 Mbps	
		100 Mbps	
		2K/FHD VFR Mode* LongG Codec	
		50 Mbps	Video Speed Class V10 UHS Speed Class 1 Speed Class 10 or fast
AVCHD	SDHC/ SDXC	All	Speed Class 4 or faste

Update = Functions to be supported by firmware update. *VFR: Variable Frame R

AVAILABLE BATTERY PACK

Battery	Voltage/Capacity	Charge time*1	Continuous shooting time
AG-VBR59 (Bundled)	7.28 V 5900 mAh/43 Wh	Approx. 3 hour 20 min.	Approx. 2 hours 50 mi
AG-VBR89G	7.28 V 8850m Ah/64 Wh	Approx. 4 hours	Approx. 4 hours 15 mi
AG-VBR118G	7.28 V 11800 mAh/86 Wh	Approx. 4 hour 40 min.	Approx. 5 hours 40 mi
VW-VBD58	7.2 V 5800 mAh/42 Wh	Approx. 5 hour 20 min.	Approx. 2 hours 40 mi

* 1:When using bundled battery charger.
* 2: "Continuous shooting time" is when you use this machine in the following con [Menu setting is factory preset, Have LCD monitor and grip attached, No cable is connected to outputs]. Under other conditions, continuous shootable time becor shorter.
* Specifications are subject to change without notice.

TECHNICAL SPECIFICATION

As of November, 2

Panasonic Corporation
Connected Solutions Company
2-15 Matsuba-cho, Kadoma, Osaka 571-8503 Japan
http://pro-av.panasonic.net/

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