



PHOTOS. VIDEOS.
Explore New Frontiers.
CHANGING PHOTOGRAPHY **G**



*1 The firmware update is recommended for more comfortable HD video recording. *2 AFS compatibility can be added with a firmware update. *3 The DC-GH5 is not compatible with the H-FT012. *4 The DMW-ZL1 is compatible with the following Micro Four Thirds lenses (As of January 2017), H-F007014 / H-HSA12035 / H-ES12060 / H-FS12060 / H-FS014042 / H-FS014045 / H-FS14140 / H-HSA35100 / H-FS45150 / H-FSA45200 / H-FSA100300. *5 The AC Adaptor DMW-AC10 requires the DC coupler DMW-DCC8 / DCC11 / DCC12 / DCC15. The DC coupler DMW-DCC8 / DCC11 / DCC12 / DCC15 requires the AC Adaptor DMW-AC10. • Some functions of the GH5 cannot be used when mounting the Four Thirds lenses with the Mount Adaptor DMW-MA1, the LEICA M or R lenses with the Mount Adaptor DMW-MA2M or DMW-MA3R. • Leica is a registered trademark of Leica Microsystems IR GmbH. • When a lens that does not support the Contrast AF function is mounted, operation will automatically switch to manual focus. • Confirm the operation information of compatible lenses at Customer Support. • For detailed information about the lenses made by SIGMA, OLYMPUS, LEICA, COSINA, KENKO TOKINA, KOWA and TAMRON, please see each company's website. • Batteries made by other companies which have been certified by Panasonic may be used with these units, but we offer no guarantee as to the quality, performance or safety of such batteries. • Exercise care when purchasing batteries. Many fake or imitation batteries have been found among those sold at unusually low prices and those which customers cannot check for themselves before purchasing. • Please confirm the latest information about batteries on the following website. • The SDXC/SDHC Memory Card can be used only if their logos are indicated on the equipment or in the operation manual. It cannot be used with equipment that supports only the SD Memory Card.

PHOTOS. VIDEOS.

Explore New Frontiers.

Upgraded Digital Live MOS Sensor delivers the ultimate in LUMIX image quality.

Ultra high-speed DFD AF freezes the frame with stunning clarity and

5-stop*¹, 5-axis Dual I.S.2 stabilizes the world you see.

World's first 4K 60p/50p*² video recording, 4:2:2*³ 10-bit faithful color reproduction

and practical features support a professional workflow.

6K PHOTO*⁴ lets you confidently capture moments otherwise left to chance.

Explore new dimensions of photography and videography with

the LUMIX GH5 Mirrorless System Camera.



Actual Size

LUMIX GH5

*¹ Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=50-140mm (35mm film camera equivalent f=100-280mm), when H-FS14140 is used, *² As a Digital Single Lens Mirrorless camera as of 4 January, 2017. *³ As an interchangeable lens system camera as of 4 January, 2017. *⁴ 6K PHOTO is a high speed burst shooting function that cuts a still image out of a 4:3 or 3:2 video footage with approx. 18-megapixel (approx. 6000 x 3000 effective pixel count) that the 6K image manages.



Highest-photographic Performance from LUMIX's Flagship Camera

Photojournalist

Daniel Berehulak

A Tonlé Sap Journal

The Tonlé Sap Lake area in Cambodia is one of the world's most varied and productive ecosystems. An abundance of activity, history, amazing color and welcoming people made for a great environment to test the camera's capabilities. Fishermen battle with rapids upstream in Laos while downstream in the Tonlé Sap, they pull their fishing nets out of the lake, on which their houses are also built, providing them with nourishment and the means to trade. The flood plains fed by the Mekong, sustain agricultural needs with the cultivation of rice and lotus flowers to drive their commerce. The LUMIX GH5, an excellent tool for photojournalism and my reliable companion, provided flexibility and freedom to capture the vibrancy and life, with professional-level lenses in a lightweight, compact, and non-intimidating form. The Tonlé Sap was a great location to explore with this new camera.



BIOGRAPHY

Daniel Berehulak is an award-winning independent photojournalist based in Mexico City. He has visited more than 60 countries covering history-shaping events. In 2015 he was awarded the Pulitzer Prize for feature photography for his coverage of the Ebola outbreak in West Africa for The New York Times.



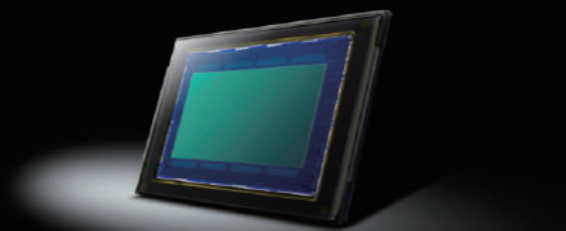


Technologies Behind Superb Image Delivery



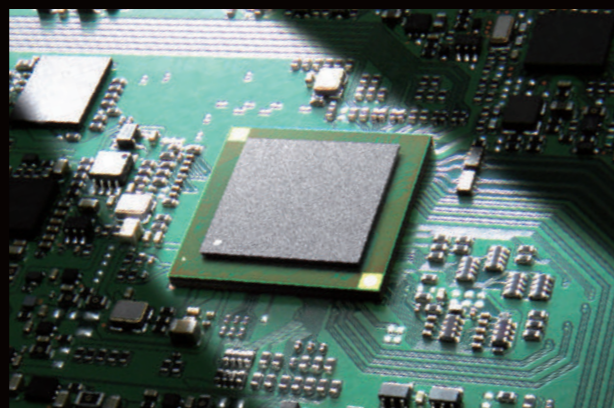
20MP MOS Sensor w/o Low-Pass Filter

The LUMIX GH5 includes a newly developed 20.3-megapixel Digital Live MOS Sensor increased from 16.05 megapixels and 1.66 faster in readout speed over previous models. It also removes the low-pass filter to capture significantly greater detail. This is an approx 5% improvement in limiting resolution that gives crisp, clear, and impressive images with high-resolution, true-to-life detail and minimum noise. Combined with the new Venus Engine, the LUMIX GH5 achieves an unprecedentedly high image quality – the highest of all LUMIX G digital cameras to date.



New Venus Engine for Natural Texture Expression

The image processor Venus Engine of the LUMIX GH5 has been improved still further with diffraction correction functionality. Multipixel Luminance Generation and Intelligent Detail Processing ensure that every single pixel is analyzed and optimized, resulting in natural images with precise detail reproduction. Three-dimensional Color Control also allows improved color expression. Furthermore, high precision noise reduction gives a more natural stereoscopic image. This Venus Engine delivers sharp, high-quality images whatever the focal length being used. All these improvements, in combination with the 20.3-megapixel Digital Live MOS Sensor, render truly clear images with minimum noise even in low-light and max. ISO 25600.



Multipixel Luminance Generation

In order to render clear and sharp images with high contrast reproduction and natural textures, the reference area for generating and extracting the luminance signal from the RGB has been greatly expanded. It uses an approx. 9 times larger area of pixel information than in conventional processing.

Intelligent Detail Processing

The characteristic of every single pixel within the subject is analyzed to detect if it is from a flat area, a detail or the edge. Optimum emphasis or optimum suppression is controlled accordingly.



Three-dimensional Color Control

The new capability of Three-dimensional Color Control delivers a richer color expression by optimally controlling brightness. The bright and dark shadow parts are corrected separately. You can now faithfully reproduce the nuance of smooth, subtle gradations across, for example, an evening subject.

High-performance Color Moiré Suppression

The undesirable false color moiré effect sometimes generated when photographing a subject with repetitive patterns, e.g. fabrics or fences, is suppressed thanks to improvements in Venus Engine processing. By removing color moiré, a far more natural texture expression is achieved.



High-precision Multi-Process NR

Multi-process noise reduction has been upgraded for higher precision and suppression. Noise identification now has four times higher resolution for preserving details delivering a natural stereoscopic effect, even for images shot at high ISO settings.

Suppressed Rolling Shutter Distortion

'Rolling shutter' distortion, which can happen while panning when recording video or using an electronic shutter, is now suppressed through high speed reading of the sensor to give more natural results.

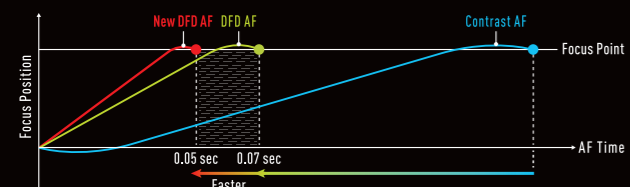
Ultra-fast AF Technology Revolutionized



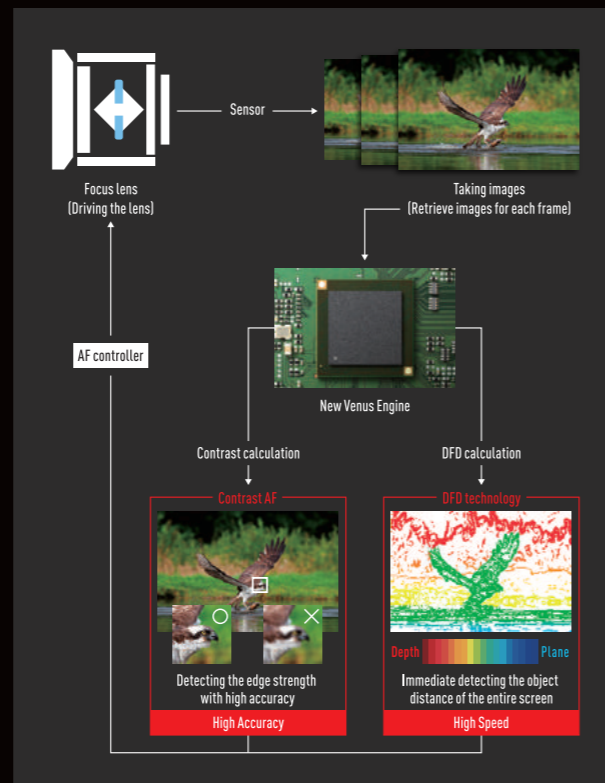
Advanced DFD AF / Fast, Accurate Tracking Performance

The LUMIX GH5 achieves innovative motion tracking AF more precise than ever before for capturing unpredictable fast-moving subjects as stills or video. The moving-object tracking algorithms are redesigned to take advantage of the evolved space recognition (constantly monitoring distance to subject for best focus), motion vector prediction, and combined Contrast AF*1 with DFD (Depth From Defocus) technologies which, at 0.05 seconds*2, achieve the industry's fastest auto focus. By analyzing every frame at higher speed and more precisely, motion detection error is minimal and the AF drive is capable of 480fps (max.), every frame processed with less delay for improved fine-block resolution and depth. There is also better performance across vertical, horizontal and depth so that, all in all, you simply concentrate on framing your sporting or wildlife subjects, etc., instead of worrying about out-of-focus results.

*1 Contrast AF with DFD Technology works only with Panasonic Micro Four Thirds lenses.
*2 (approximately), in AFS, at wide-end with H-ES12060 (CIPA)



DFD AF System



225-area Multi AF

The LUMIX GH5 features highly flexible auto focus control. The number of focus areas has been increased from 49 to 225 to allow even more precise focusing. In addition, you can freely select the AF-area group using the Custom Multi mode.

Customize AF

With Customize AF settings it is possible to adjust AF directionality to match movement within the scene and keep the subject in frame. For extra confidence, four preset patterns are installed for frequently used situations so that you can switch instantly to the AF settings most suited to the predicted direction, speed, and framing of different kinds of moving subject. The presets can be finely customized to suit your shooting intentions and style. You can individually adjust the 3 key aspects of tracking a subject in focus, namely, 'AF Sensitivity', 'AF Area Switching Sensitivity', and 'Moving Object Prediction'. Freely adjust each level as you like.

Set 1		Set 2	
AF Sensitivity	±0	AF Sensitivity	+1
AF Area Switching Sensitivity	±0	AF Area Switching Sensitivity	-1
Moving object prediction	+1	Moving object prediction	+2
Versatile and basic setting		For subjects that go in one direction and move at the constant speed.	
DISP. Reset Set		DISP. Reset Set	

Basic setting with high versatility (e.g., Runners)

For subjects moving towards a fixed direction at high speed (e.g., Trains)

Joy Stick Control

All focusing operations are controlled intuitively using the thumb-position joystick, and you can adjust to the required focus without releasing the shutter button. This allows you to fully concentrate on the subject – another first for the LUMIX G cameras.



12fps (AFS), 9fps (AFC) Burst

You can achieve high-speed burst shooting with the mechanical shutter at 12 fps (AFS) and shoot at 9 fps (AFC) in full resolution to track fast moving subjects or capture moments not visible to the naked eye. This is achieved by the astonishingly high-speed image processing of the new Venus Engine, effortlessly handling the 480 fps AF drive at twice the speed of previous models.

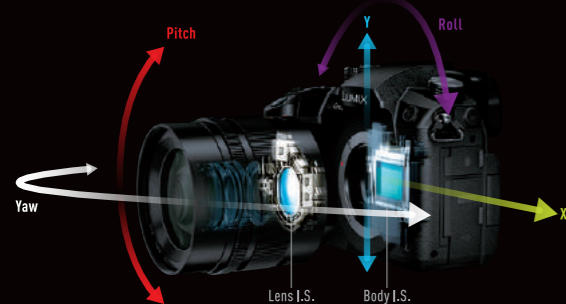
Advanced Pro-use Features



5-axis Dual I.S.2

The LUMIX GH5 features the new 5-axis Dual I.S.2*1 (image stabilizer) for more powerful and effective camera-shake suppression. Through the perfect combination of body image stabilizer and optical image stabilizer, conventionally uncontrollable larger movements are corrected. The LUMIX GH5 integrates a high-precision gyrosensor that controls the distribution of O.I.S / B.I.S. compensation by analyzing the focal length and shooting situation, making it possible to achieve up to 5-stop slower shutter speeds*2. Intelligently balanced, this optimized shake correction is highly effective for not only wide-angle but also telephoto shooting, and even for 4K video recording.

*1 5-Axis Dual I.S.2 can be used with the H-FS12060 lens, H-FS14140 lens, and H-RS100400 lens (requires updated firmware) as of February 2017. The newly updated H-ES12060, H-HSA12035, H-HSA35100, H-FSA45200 and H-FSA100300 are all compatible with 5-Axis Dual I.S.2.
*2 Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=50-140mm (35mm film camera equivalent f=100-280mm), when H-FS14140 is used.]



Durable Mg Body – Splash / Dust / Freezeproof

The LUMIX GH5 is well-suited to active outdoor shooting. The frame is constructed of lightweight, durable magnesium alloy. All joints, dials and buttons are sealed to make it both splash and dustproof. It is also specially designed to tolerate freezing temperatures down to -10°C (14°F).



Newly Developed Shutter Unit

The durable shutter unit can withstand approx. 200,000 releases. A floating construction for the shutter frame greatly reduces shock to the camera body, to 1/6th of the shock in previous models.

0.76x 3,680k-dot OLED LVF

The LUMIX GH5 boasts a Live View Finder (LVF) with an astounding high magnification ratio of approx. 1.52x / 0.76x (35mm camera equiv.). This uses a high-precision, high-speed and high-resolution 3,860K-dot OLED (Organic Light-Emitting Diode) display with 100% field of view ratio. Thanks to this high-response OLED, the LVF achieves excellent visibility with an almost imperceptible time lag and a high 10,000:1 contrast. High visibility with comfort is also enjoyed by users wearing glasses due to an eye point distance of approx. 21 mm.



Power Save LVF Shooting Mode

The camera also employs an 'Auto-OFF' power-saving function by which the camera automatically enters sleep mode after detecting that your eye has been away from the camera for 3, 5 or 10 seconds. Later, when the shutter button is half-pressed shooting mode is instantly restored. Battery life can be increased by about 2.5 times.

3.2" Free-angle Touch Monitor

The 3.2-inch free-angle rear monitor in 3:2 aspect with 1,620K-dot high resolution achieves an almost 100% field of view and uses a static-type touch control system. The monitor adopts White pixels in addition to RGB (Red, Green and Blue) pixels to deliver much improved visibility, even under direct sunlight. It also tilts approx.270-degrees up and down for easier high or low angle shooting.



Silent Mode

Silent mode mutes operating sounds and forces the flash and AF assist lamp off. This is convenient for subjects and places requiring minimal disturbance, such as those easily affected by sound or movement – animals in the wild, etc.

1/250 sec (Flash Sync)

An external flash can be synchronized with a max. 1/250 second shutter speed.

Mechanical Shutter Max. 1/8000 sec

You can choose the shutter type, mechanical or electronic, and the speed according to the shooting situation. The mechanical shutter unit offers the highest shutter speed at max. 1/8000 sec not only capturing spur-of-the-moment, fast moving subjects but also for using with a high-speed lens with a fully open aperture even outdoors for impressive defocusing. You can use the electronic shutter to shoot silently at speeds up to 1/16000 sec.

Electronic First-curtain Shutter

The electronic first-curtain shutter can be used at speeds up to max. 1/2000 sec with minimal shutter shock. This is particularly advantageous in noise-sensitive situations such as shooting wildlife or classical music concerts. The shutter can also be used with an external flash.

L. Monochrome

A notable addition to the Photo Style options is the 'L. Monochrome' mode. This lets you shoot dramatic black and white images with the kind of rich gradation and deep intensity only usually seen in a classic Film Noir movie.

Battery Grip

The newly introduced DMW-BGGH5 battery grip is specially designed to be compatible with the LUMIX GH5 camera. Loaded with extra battery power, it doubles the camera's shooting time. Key operation controls have been built into it including the shutter button and function buttons so that switching between portrait and landscape handling is totally stress free. The AF control joystick, a new introduction to the camera body, is also on the battery grip. So, for field shooting you can instantly change focus preferences without moving your eye from the viewfinder. The rugged ergonomic design – also splash, dust and freeze proof – has taken both horizontal and vertical operation into account for every shooting situation.



Professional Performance with 4K Video Production



Filmmaker Luke Neumann

Beyond The Grid

“Beyond The Grid” is our thoughts behind the value in reconnecting with nature in the modern world. The Lumix GH5 opened up so many creative possibilities with the Dual Image Stabilization and 10-bit 4:2:2 colorspace. We were able to move freely, sometimes forgoing a tripod, and capture shots with little to no movement. The extra color information allowed us to push our grade in post production and tell the story the way we felt it should be told. Working in an 8-bit color space can be limiting if you are trying to do a creative grade, and the difference between 8-bit color and 10-bit color is like night and day. Unplugging for a while can be rejuvenating and bring a sense of unity, not only with our planet, but with each other. The GH5 and its qualities were perfect for capturing the adventure.

BIOGRAPHY

Neumann Films is a production company located in the Pacific Northwest. With over 110,000 subscribers, their YouTube channel is known for producing high quality visual content. Their broad range showcases a passion for both narrative and travel/documentary work.



Documentary Filmmaker Griffin Hammond

Hand-cut

Inspired by beautiful ice blocks used by New York City bartenders, I wanted to understand how crystal clear cocktail ice cubes are created. Shooting in 4K, the Panasonic GH5 perfectly captures the gorgeous close-up details of carved ice. But this story also features chisels and chainsaws—ice flakes spraying through the air. To capture all of this fine detail with minimal motion blur, I need a higher framerate. 60p/50p recording captures twice as much information, reducing judder in my pans and jib shots. And with double the shutter speed, each frame is clearer. Whether played back at full speed or in slow motion, 4K60p lets me immerse my audience in much more visual detail. The GH5 is the perfect camera for this film.

BIOGRAPHY

Griffin Hammond is a documentary filmmaker in New York City, covering politics for Bloomberg Television. He filmed his award-winning documentary Sriracha on the Panasonic GH3, and captured the drama of the U.S. presidential election on his Panasonic GH4.





Technologies Supporting Professional Performance



High Quality 4K/60p & 4K/50p Recording



In the DSLM class of interchangeable lens cameras, the LUMIX GH5 has achieved an all-round evolution as well as a world first* with 4K/60p and 4K/50p video recording. The smooth, ultra high-definition results are also recorded with no cropping which allows you to keep using the same focal length from your stills shoot for high quality video shooting. There is also no limit on recording duration.

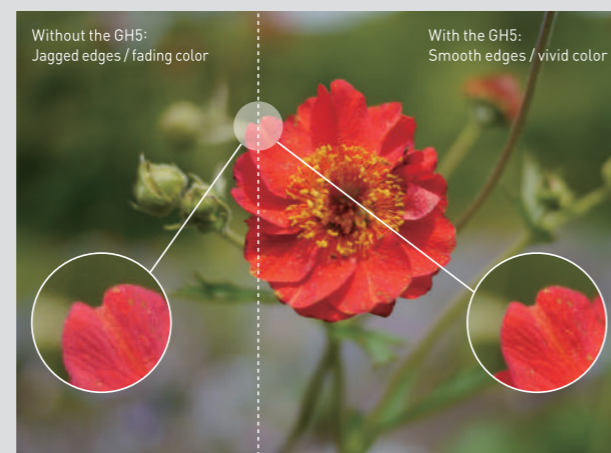
* The first Digital Single Lens Mirrorless camera, based on the Micro Four Thirds standard, as of 4 January, 2017.



4K/30p 4:2:2 10-bit Recording*

The LUMIX GH5 is capable of even more faithful color reproduction, with internal recording of video in 4:2:2 10-bit. With the 20.3-megapixel Digital Live MOS Sensor and Venus Engine handling digital signals at ultra-high speed, image quality per frame is dramatically improved. The color around edges is less jaggy, as well as being smoother, with rich color reproduction and grading. For non-linear editing and for post-production color grading, color control is also much improved.

* A first for an interchangeable lens system camera, as of 4 January, 2017.



HDMI Output (4K60p 4:2:2 10-bit / Type A / Cable Lock Holder included)

The LUMIX GH5 includes a host of practical features to make the professional workflow process easier. When recording outside the camera, video can be output in 4:2:2 10-bit by HDMI. Even when recording to the main body, video can be simultaneously output in 4:2:2 10-bit for virtually any recording mode*1. The body is fitted with a highly versatile Type-A HDMI terminal*2 which, thanks to a cable lock holder, is far less prone to accidental disconnecting.

*1 Simultaneous recording and outputting of 4K60p/50p is in 4:2:0 8-bit. Users can choose 4:2:2 10-bit for output only.

*2 For 4K / 60p and 4K / 50p video output, a "4K compatible" HDMI 2.0 cable displaying the HDMI logo should be used.

System Frequency

For professional videographers working globally and requiring system flexibility, the frequency can also be selected between 59.94Hz (30p/60i), 50.00Hz (25p/50i), or 24.00Hz (CINEMA).

* In 24p playback. Effect value varies depending on the recording format and frequency.

System Frequency	Monitor Display	Recording Frame Rate
59.94Hz (NTSC)	60p / 60i	59.94fps
	30p / 60i	29.97fps
	24p	23.98fps
50.00Hz (PAL)	50p / 50i	50.00fps
	25p / 50i	25.00fps
24.00Hz (CINEMA)	24p	24.00fps

Cinelike Gamma

Gamma presets are available in Creative Video mode. CINELIKE D and CINELIKE V let you shoot with the kind of rich cinematic image expression you see on movie screens.

V-LogL

The LUMIX GH5 features V-LogL video recording* which offers exceptional flexibility and a wider dynamic range for color grading during post-production. V-LogL boasts a log characteristic that captures 12 stops of dynamic range. Installing the Upgrade Software Key activates a Look Up Table (LUT) in camera so you can also playback the graded video footage recorded in V-LogL.

* With the purchase of the optional Upgrade Software Key DMW-SFU1.

Like709 Gamma

'LIKE 709' gamma with characteristics compatible with HDTV standards is also featured in the LUMIX GH5. For pro-users shooting video, Knee Control adjustment to suppress overexposure is now possible.

SS/Gain Operation

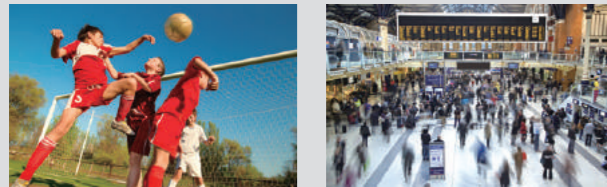
To ensure immediate familiarity with settings such as shutter speed, gain, etc., the LUMIX GH5 uses indicators already well-known to professionals.

Professional Movie-Making Versatility

Variable Frame Rate

You can also shoot at variable frame rates (VFR) to create the effects and expression your video project requires, including slow motion, quick motion and time lapse – all in 4K (60 fps, maximum 2.5x slower)* and FHD (180 fps, maximum 7.5x slower)*. The minimum frame rate for quick motion video is 2 fps and Time Lapse video can also be produced inside the camera.

* In 24p playback. Effect value varies depending on the recording format and frequency.



Slow Motion

Quick Motion

4K Video Recording (4:2:0 8-bit)

	59.94Hz		24.00Hz		50.00Hz	
	29.97p	23.98p	24.00p	24.00p	25.00p	25.00p
Quick	2fps		2fps		2fps	
	15fps		12fps		12fps	
	26fps		20fps		20fps	
	28fps		22fps		23fps	
	30fps		24fps		25fps	
Slow	32fps		26fps		27fps	
	34fps		28fps		30fps	
	45fps		36fps		37fps	
	60fps		48fps		60fps	
	—		60fps		—	

Versatile Format

The LUMIX GH5 allows you to freely select your preferred recording format from the MOV, MP4, AVCHD Progressive and AVCHD options and shoot for an unlimited time, including for both FHD and 4K video.

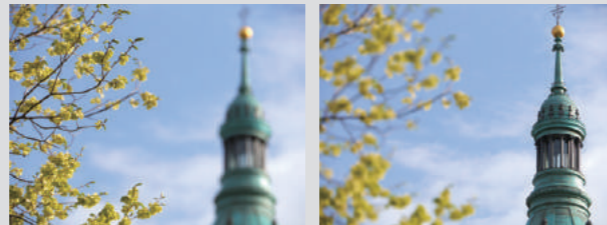
Video Recording Mode (Excerpt)

Format	Size	Frame Rate	Compression	Bit Rate	Sound
4K MP4 / MOV	4096 x 2160	24.00p	ALL-Intra*1	400Mbps*3	LPCM/ High Res**4 (MOV)
		23.98p			
		24.00p	LongGOP (4:2:2 10-bit)	150Mbps	
		23.98p			
		24.00p	LongGOP (4:2:0 8-bit)	100Mbps	
		23.98p			
	3840 x 2160	29.97p	ALL-Intra*1	400Mbps*3	LPCM (MP4)
		25.00p			
		24.00p	LongGOP (4:2:2 10-bit)	150Mbps	
		23.98p			
		59.94p	LongGOP (4:2:2 10-bit)	150Mbps	
		50.00p			
29.97p	LongGOP (4:2:2 10-bit)	150Mbps			
25.00p					
24.00p	LongGOP (4:2:0 8-bit)	100Mbps			
23.98p					
FHD MP4 / MOV	1920 x 1080	59.94p	ALL-Intra*1	200Mbps	
		50.00p			
		29.97p	LongGOP (4:2:2 10-bit)	150Mbps	
		25.00p			
		24.00p	LongGOP (4:2:0 8-bit)	100Mbps	
		23.98p			
	59.94p	LongGOP (4:2:2 10-bit)*2 / (4:2:0 8-bit)	100Mbps		
	50.00p				
	29.97p				
	25.00p				
	24.00p				
	23.98p				

*1 The firmware will be released in second half of 2017. *2 The firmware will be released in April 2017.
*3 Only the V60 and V90 SD cards should be used for 400-Mbps mode 4:2:2 10-bit All-Intra video recording.
*4 High-res audio is selectable only when using the DMW-XLR1 (sold separately).

Focus Transition

There is also a Focus Transition function which, set in advance, automatically moves the focus from subject to subject, and so guides your audience between different subjects within a static scene.



Focus in front

Focus gradually changes depth

Anamorphic Mode

Using special post-production software you can edit and redefine 4:3 aspect video recordings, shot to 4K quality, to full cinemascope size. This mode makes it possible to combine the superb high-resolution of 4K with the beauty and all-immersive experience of cinemascope.

Master Pedestal Level

The pedestal adjusts the black level in 31 steps. Lowering it brings crisper blacks to the image, while raising it creates a more foggy overall effect.

Luminance Level Adjustment

Other helpful workflow features include the Luminance Level options, which can be selected between 64-1023 / 64-940 / 0-1023 (10-bit).

Synchro Scan

The Synchro Scan mode suppresses flickering and stripes on images.

Waveform Monitor Display / Vector Scope

As widely used on professional video shoots to make color and brightness corrections on-site, the LUMIX GH5 displays a Waveform Monitor and Vector Scope on its LCD monitor. Now, while shooting, you can constantly measure brightness and contrast signals (luminance intensity), as well as hue and saturation signals (color information / chrominance 0) so that you secure an accurate video recording from the start – all in camera.

Zebra Pattern

This zebra pattern overlay provides a quick way to identify which parts of a scene may be washed out through overexposure.

Double SD Card Slot

The LUMIX GH5 features the first UHS-II compatible double SD card slot in the LUMIX G series. In 'Relay Recording', recording onto the second card automatically starts when the first card reaches capacity. In 'Backup Recording', the same contents are recorded on both cards simultaneously. Furthermore, with 'Allocation Recording', it is possible to select either cards in Slot 1 or Slot 2 for RAW, JPEG, 6K PHOTO/4K PHOTO, or 4K video data recording.



XLR Mic Terminal

The XLR microphone adaptor terminal allows you to record high-grade stereo sound to the camera directly through a high-spec XLR microphone. High-res recording (at 96kHz/24-bit) is also possible when shooting 4K video (MOV only). Selecting between separate MIC / LINE / condenser microphones is also possible using the input switches on the control panel.



Firmware Update Plan

The LUMIX GH5 is set to take further evolutionary leaps and a number of functional upgrades have been scheduled. In April 2017, the camera will be capable of Full HD 4:2:2 10bit video recording. During the second half of 2017 it will also handle 400-Mbps 4:2:2 10-bit All-Intra video recording in 4K30p/25p/24p and 200-Mbps Full-HD. Additionally, high resolution video recording will be possible in Anamorphic mode, as well as 4K Hybrid Log Gamma in Photo Style mode – which enables popular 4K HDR video recording. In the same timeframe, USB tethering will also be added.

Time Code

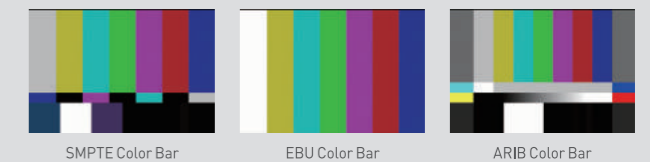
The LUMIX GH5 can embed SMPTE-compliant Time Code – either in Rec Run or Free Run counting – which makes it easy to synchronize multiple videos or sound sources in post production.

Built-in Microphone with NR Structure

For recording sound on video, the LUMIX GH5 incorporates a built-in dedicated microphone that monitors and cancels any noise caused by mechanical movement inside the camera or lens such as image stabilizers or shutter. This results in a reduction of mechanical noise by -10dB to achieve clear, high-quality sound recordings.

Color Bars

Color Bars are handy for adjusting picture quality on an external monitor. Alternatively, a 1 kHz Test Tone can also be output.



Center Marker

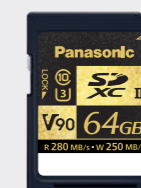
This indicates the very center of the screen – especially convenient while zooming if you want to keep your subject in center frame.



New Product Information

Introducing new video grade V90 SD Cards (RP-SDZA64GAK / RP-SDZA128AK*)

* After the firmware update (second half of 2017), only the V60 and V90 SD cards should be used for 400-Mbps mode 4:2:2 10-bit All-Intra video recording. These are the recommended SD cards for All-Intra 400 Mbps with the LUMIX GH5, which requires V60 cards or higher.



RP-SDZA128AK



RP-SDZA128AK

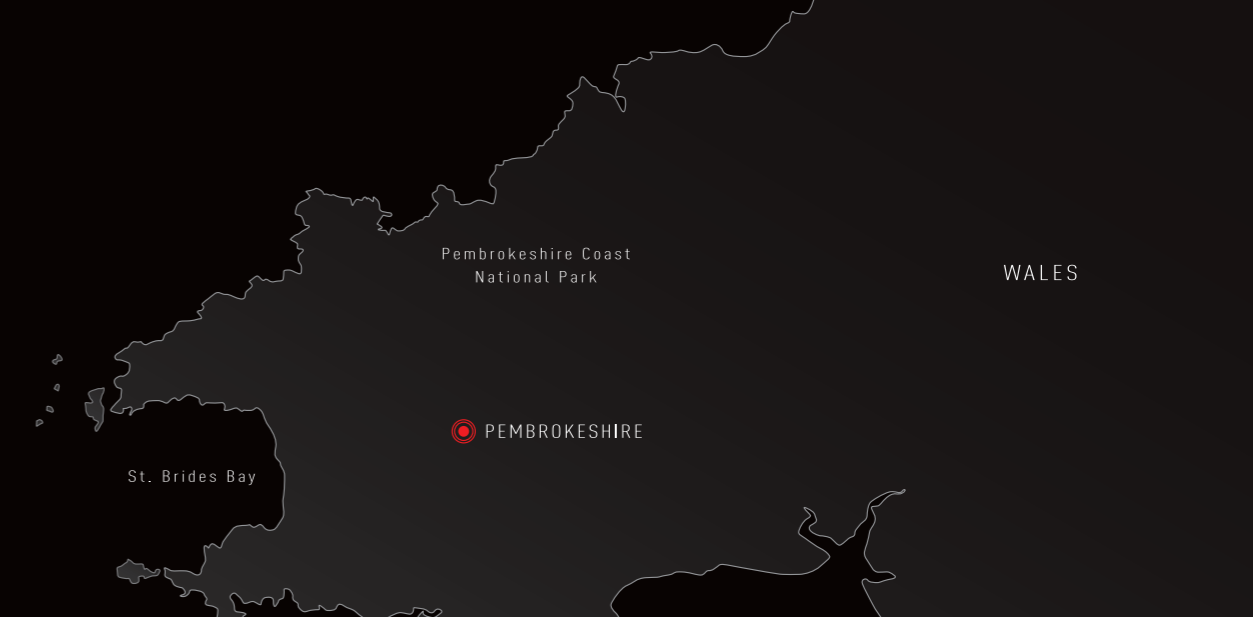
Innovative Photography from LUMIX



Portrait Photographer Ross Grieve

Decisive moments

Pembrokeshire, Wales. A little corner of the globe that has stunning beaches and rolling countryside. With castles scattered around the county, it gives photographers so many options. I chose to shoot with the GH5 in Pembrokeshire because I have so many resources on my doorstep. Sometimes it's nice to get away from the city vibe and breathe in that pure open space. I also really wanted to show off the 6K Photo benefits of the GH5 and being able to shoot in my studio then change to going out on location was a breeze. I was blown away by how much improvement had been made to the low light shooting with 6K Photo. I also wanted to see how the GH5 would perform in different environments. Rain, sand or studio – I wasn't disappointed. One of the new features I have really enjoyed is the joy stick that I used to control my focusing points. I like the way, when I press the joy stick in, it snaps back to the centre of the frame. I like features which make my job easier and the GH5 ticks those boxes.



BIOGRAPHY

Ross Grieve, a New Zealand born and accomplished photographer who has won many awards including UK Pet Photographer and Welsh Master Fashion & Portrait Photographer. He has been mastering his art for over 20 years. Since becoming an Ambassador for Panasonic he has won yet more awards and is leading the way in 4K and 6K photography.



New Photographic Tools with Unlimited Possibilities



6K PHOTO* / 4K PHOTO



The new 6K PHOTO* feature allows you to shoot a 6K burst file shot at 30-fps (in either 4:3 or 3:2 aspect) while the 4K PHOTO has also been upgraded to now enable 60-fps high-speed capture in approx. 8-megapixel equivalent resolution. Not only is this a game-changer in terms of subjects you can cover, each 6K image can be saved as an approx. 18-megapixel equivalent high resolution photo (approx. 6000 x 3000 effective pixel count, or 9 times the pixel count of Full HD) – extraordinary detail you can confidently print out to as large as A1 size. In either 6K PHOTO* or 4K PHOTO you can choose from three different burst modes, depending on the subject you are shooting and the predictability of its movement, etc. These are 6K Burst /4K Burst, 6K Burst (Start/Stop) /4K Burst (Start/Stop) and 6K Pre-burst /4K Pre-burst. With these features it is possible to capture all kinds of fleeting moment and, later, intuitively extract and single out the most perfect frame from the burst file. Beyond fleeting moments, burst shooting lets you capture moments not even visible to the naked eye, thereby opening up a whole new world of possibilities. With such capabilities, the very culture of photography is undergoing a paradigm shift.

* 6K PHOTO* is a high speed burst shooting function that cuts a still image out of a 4:3 or 3:2 video footage with approx.18-megapixel (approx. 6000 x 3000 effective pixel count) that the 6K image manages.

Focus Stacking

The integrated Focus Stacking function enables you to even adjust the depth of field after shooting by combining multiple images captured using the Post Focus function. Moreover, you can do this inside the camera. So you don't need to focus too strictly while shooting as you can achieve the desired level of defocus, or pan-focus images, later by simply selecting the focus area. This is particularly useful when shooting macro shots of insects or other smaller subjects.



Conventional macro shooting



Composed into a single picture

Post Focus



The Post Focus function on the LUMIX GH5 enables you to select the in-focus area even after shooting. This is helpful in situations like macro shooting where strict focusing is required or for changing emphasis by shifting the subject focus. This function is possible thanks to the combination of high-speed, high-precision DFD (Depth From Defocus), auto focus technology and 6K PHOTO / 4K PHOTO technology.



Exposure / WB / Focus / Aperture Brackets

In the LUMIX GH5, a Focus Bracket and Aperture Bracket are new additions to the conventional Exposure Bracket and WB Bracket allowing you to choose the best shot after shooting. In Focus Bracket, a maximum of 999 images can be shot with different focus points. Furthermore, the Aperture Bracket offers you multiple shots with different depths of field.

Bluetooth & Wi-Fi®



The LUMIX GH5 supports Bluetooth 4.2 (Bluetooth Low Energy), so that your smartphone or tablet Bluetooth connection ensures only minimal battery consumption. Once paired it is always connected so you can launch your camera anytime from your device without touching it. The Wi-Fi® connectivity of the LUMIX GH5 enables a more flexible shooting experience with easy operation, including instant image-sharing. By connecting it to a smartphone or tablet installed with "Panasonic Image App for iOS / Android" software, you can remotely control the camera to shoot, view or share images. In addition to the conventional 2.4GHz IEEE802.11b/g/n wireless standards, the LUMIX GH5 also supports the more powerful 5GHz* IEEE802.11ac standard. With 5GHz your wireless transfer of photo and video data is now even more secure and the connectivity more stable.

* Please note that 5GHz Wi-Fi is not yet available in some countries.
 • The Wi-Fi CERTIFIED Logo is a certification mark of the Wi-Fi Alliance. • The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Panasonic Corporation is under license. Other trademarks and trade names are those of their respective owners.

Parts & Controls



Grip Design

The grip has been designed to fit your hand both naturally and comfortably to ensure a secure and stable shooting experience.

6K PHOTO Switch

The 6K PHOTO switch is included on the drive mode dial for easy and intuitive access as well as fast and efficient operation.

Front Dial, Rear Dial

These dials allow smooth and immediate adjustment of the aperture or shutter speed you want, etc. Complemented by the comfortable and secure camera grip, you can operate the dials intuitively without your attention being distracted from the subject and without taking your eye away from the viewfinder.

- | | | | |
|--|-----------------------------------|--------------------------------|---|
| 01 Self-timer indicator / AF Assist Lamp | 16 Focus distance reference mark | 32 Mode dial lock button | 48 [Q.MENU] button/[Fn2] button |
| 02 Flash synchro socket (Flash synchro socket cap) | 17 Shutter button | 33 Mode dial | 49 [Auto Focus Mode] button / [Fn3] button |
| 03 Shoulder strap eyelet | 18 Front dial | 34 Stereo microphone | 50 Cursor buttons/ Function button/[Fn17]/ [Fn18]/[Fn19]/[Fn20] |
| 04 Lens release button | 19 (White Balance) button | 35 Drive mode dial | 51 [MENU/SET] button |
| 05 Lens lock pin | 20 (ISO sensitivity) button | 36 [Playback] button | 52 [Delete/Cancel] button/ [Fn4] button |
| 06 Mount | 21 (Exposure Compensation) button | 37 [LVF] button / [Fn5] button | |
| 07 Sensor | 22 Motion picture button | 38 Eyecup | |
| 08 Lens fitting mark | 23 [Fn1] button | 39 Eye sensor | 53 Battery door |
| 09 Preview button/ Function button (Fn6) | 24 WIRELESS connection lamp | 40 Viewfinder | 54 Release lever |
| 10 Card door | 25 [REMOTE] socket | 41 Speaker | 55 DC coupler cover |
| 11 [MIC] socket | 26 Access lamp (card 1) | 42 Diopter adjustment dial | 56 Cover for the battery grip connector |
| 12 Headphone socket | 27 Card slot 1 | 43 Joystick/Function buttons | 57 Tripod mount |
| 13 Cable holder mount | 28 Card slot 2 | 44 [AF/AE LOCK] button | 58 Touch screen/monitor |
| 14 [HDMI] socket | 29 Access lamp (card 2) | 45 Focus mode lever | |
| 15 USB socket | 30 Status indicator | 46 Rear dial | |
| | 31 Camera ON/OFF switch | 47 [DISP.] button | |

LUMIX Lens Line-up



LEICA DG Lens

LEICA DG LENS



LEICA DG VARIO-ELMARIT 12-60mm / F2.8-4.0 ASPH. / POWER O.I.S. (H-ES12060)



LEICA DG SUMMILUX 12mm / F1.4 ASPH. (H-X012)



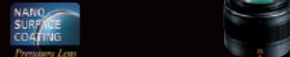
LEICA DG VARIO-ELMAR 100-400mm / F4.0-6.3 ASPH. / POWER O.I.S. (H-RS100400)



LEICA DG SUMMILUX 15mm / F1.7 ASPH. (H-X015)



LEICA DG SUMMILUX 25mm / F1.4 ASPH. (H-X025)



LEICA DG NOCTICRON 42.5mm / F1.2 ASPH. / POWER O.I.S. (H-NS043)



LEICA DG MACRO-ELMARIT 45mm / F2.8 ASPH. / MEGA O.I.S. (H-ES045)



LUMIX G Lens and X Lens



LUMIX G FISHEYE 8mm / F3.5 (H-F008)



LUMIX G VARIO 14-42mm / F3.5-5.6 II ASPH. / MEGA O.I.S. (H-FS1442A)



LUMIX G 14mm / F2.5 II ASPH. (H-H014A)



LUMIX G VARIO 14-42mm / F3.5-5.6 ASPH. / MEGA O.I.S. (H-FS014042)



LUMIX G 20mm / F1.7 II ASPH. (H-H020A)



LUMIX G VARIO 14-45mm / F3.5-5.6 ASPH. / MEGA O.I.S. (H-FS014045)



LUMIX G 25mm / F1.7 ASPH. (H-H025)



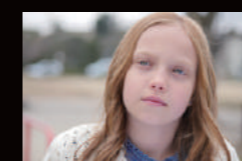
LUMIX G VARIO 14-140mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-FS14140)



LUMIX G MACRO 30mm / F2.8 ASPH. / MEGA O.I.S. (H-HS030)



LUMIX G X VARIO 35-100mm / F2.8 II / POWER O.I.S. (H-HSA35100)



LUMIX G 42.5mm / F1.7 ASPH. / POWER O.I.S. (H-HS043)



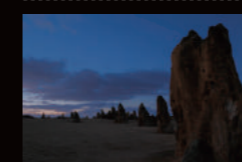
LUMIX G VARIO 35-100mm / F4.0-5.6 ASPH. / MEGA O.I.S. (H-FS35100)



LUMIX G VARIO 7-14mm / F4.0 ASPH. (H-F007014)



LUMIX G VARIO 45-150mm / F4.0-5.6 ASPH. / MEGA O.I.S. (H-FS45150)



LUMIX G VARIO 12-32mm / F3.5-5.6 ASPH. / MEGA O.I.S. (H-FS12032)



LUMIX G X VARIO PZ 45-175mm / F4.0-5.6 ASPH. / POWER O.I.S. (H-PS45175)



LUMIX G X VARIO 12-35mm / F2.8 II ASPH. / POWER O.I.S. (H-HSA12035)



LUMIX G VARIO 45-200mm / F4.0-5.6 II / POWER O.I.S. (H-FSA45200)



LUMIX G VARIO 12-60mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-FS12060)



LUMIX G VARIO 100-300mm / F4.0-5.6 II / POWER O.I.S. (H-FSA100300)



LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-PS14042)



• Four Thirds™ and Micro Four Thirds™, and Four Thirds and Micro Four Thirds Logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.

• Leica is a registered trademark of Leica Microsystems IR GmbH.

Specifications

TYPE	Type	Digital Single Lens Mirrorless camera
	Recording media	SD Memory Card, SDHC Memory Card, SDXC Memory Card (Compatible with UHS-I / UHS-II UHS Speed Class 3 standard SDHC / SDXC Memory Cards)
	Image sensor size	17.3 x 13.0 mm [14:3 aspect ratio]
	Lens mount	Micro Four Thirds mount
IMAGE SENSOR	Type	Live MOS Sensor
	Total pixels	21.77 Megapixels
	Camera effective pixels	20.30 Megapixels
	Color filter	Primary color filter
	Dust reduction system	Supersonic wave filter
IMAGE STABILIZATION SYSTEM	Image sensor shift type (5-axis / 5-stop)*, Dual I.S. [Dual I.S. 2 compatible]	
	* Based on the CIPA standard [Yaw/Pitch direction: focusing distance from 50mm (50mm camera equivalent f=120mm), when H-FS12060 is used.	
WIRELESS	Wi-Fi	IEEE 802.11a/b/g/n/ac * 5GHz Wi-Fi is not available in some countries.
	Bluetooth	Bluetooth® v4.2 [Bluetooth Low Energy (BLE)]
	QR Code Connection	Yes
	Password-less connection	Yes (ON / OFF selectable)
VIEWFINDER	Type	OLED Live View Finder [3,680k dots]
	Field of view	Approx. 100%
	Magnification	Approx. 1.52x / 0.76x (35mm camera equivalent) with 50 mm lens at infinity, -1.0, m ⁻¹
	Eye point	Approx. 21 mm from eyepiece lens
	Dioptric adjustment	-4.0 - +3.0 (dpt)
	Eye sensor	Yes
	Eye sensor adjustment	High / Low
FOCUS	Contrast AF system	Yes
	DFD technology	Yes
	Post Focus	Yes
	Focus Stacking	Yes
	Focus mode	AFS [Single] / AFF [Flexible] / AFC [Continuous] / MF
	AF mode	Face/Eye Detection / Tracking / 225-Area / Custom Multi / 1-Area / Pinpoint [Full area touch is available] [Scalable AF frame size by Joystick] and flexible AF position (by front/rear dial)
	AF assist lamp	EV \leq -18 (ISO1100 equivalent)
	AF lock	Yes [AF/AE LOCK button]
	AF custom setting	AF Sensitivity, AF Area Switching Sensitivity, Moving Object Prediction
	Others	One Shot AF, Shutter AF, Half Press Release, Quick AF, Continuous AF (during motion picture recording), Eye Sensor AF, AF-MF, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter
EXPOSURE CONTROL	Light metering system	1/28-zone multi-pattern sensing system
	Light metering mode	Multiple / Center Weighted / Spot
	Metering range	EV0-18 (F/2.0 lens, ISO1000 equivalent)
	Exposure mode	Program AE, Aperture Priority AE, Shutter Priority AE, Manual
	ISO sensitivity (Standard output sensitivity)	Still image: Auto / Intelligent ISO / 100 (Extended) / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600 (Changeable to 1/3 EV step) Creative Control Mode: Auto / 100 (Extended) / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 (Changeable to 1/3 EV step)
	Exposure compensation	1/3 EV step +5EV (-3EV for motion picture)
	AE lock	Yes [AF/AE LOCK button]
WHITE BALANCE	White balance	AWB / AWBc / Daylight / Cloudy / Shade / incandescent / Flash / White Set 1, 2, 3, 4 / Color temperature setting 1, 2, 3, 4
	White balance adjustment	Blue/Amber bias, Magenta/Green bias
	Color temperature setting	2300K - 10000K
SHUTTER	Type	Focal-plane shutter
	Shutter speed	Still Image: Bulb [Max. 30 minutes], 1/8,000 - 60 Electronic first curtain shutter: Bulb [Max. 30 minutes], 1/2,000 - 60 Electronic shutter: 1/16,000 - 1 Motion picture: 59.94Hz: 1/16,000 - 1/30, 50.00Hz: 1/16,000 - 1/25, 23.98Hz: 1/16,000 - 1/24 [When using Synchro Scan]
	Shutter life	Approx. 200,000 images
	Self timer	10sec, 3 images / 2sec / 10sec
	Remote control	Remote control with Bulb function by DMW-RS1 [sold separately]
BRACKET	AE bracket	3, 5, 7 images in 1/3, 2/3 or 1 EV step, max. +3 EV, single/burst
	Aperture Bracket	3, 5 or all positions in 1 EV step
	Focus Bracket	1 to 999 images, focus steps can be set in 5 levels
	White balance bracket	3 exposures in blue/amber axis or in magenta/green axis, color temperature setting
BURST SHOOTING	Burst speed	[Mechanical shutter] AFS/MF: H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View) AFF/AFC: H: 9 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View) [Electronic shutter] AFS/MF: H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View) AFF/AFC: H: 9 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)
	Number of recordable images	More than 60 images (when there are RAW files with the particular speed) More than 600 images (when there are no RAW files (depending on memory card size, battery power, picture size, and compression))
4K PHOTO* / 4K PHOTO	Burst speed	[4K PHOTO] 30 frames/sec [4K PHOTO] 60 frames/sec, 30 frames/sec
	Exif information	Yes [Each JPEG image cropped out of the 4K burst file complies with EXIF.]
	Marking function	Yes (in 4K/4K Burst [S] mode)
	Loop Rec function	Yes (in 4K/4K Burst [S] mode)
FLASH	Flash type	TTL External Flash [sold separately]
	Flash mode	Auto*, Auto-/Red-eye Reduction*, Forced On, Forced On/Red-eye Reduction, Slow Sync., Stow Sync./Red-eye Reduction, Forced Off *For iA, iA+ only.
	Synchronization speed	Less than 1/250 second
	Flash output adjustment	1/3EV step ±3EV
	Flash synchronization	1st, Curtain Sync, 2nd Curtain Sync.
	Synchronization for flash dimming and exposure compensation	Yes
	Wireless control	Yes [When using DMW-FL200L / FL360L / FL580L (sold separately)], Wireless Channel: 1ch/2ch/3ch/4ch
	Flash sync socket	Yes
REAR MONITOR	Type	TFT LCD monitor with static touch control
	Monitor size	Free-angle 3.2-inch [8.0cm] / 3:2 aspect / Wide viewing angle
	Pixels	Approx. 1,620k dots
	Field of view	Approx. 100%
	Monitor adjustment	Brightness, Contrast, Saturation, Red-Green, Blue-Yellow
LIVE VIEW	Digital zoom	2x, 4x
	Extra Tele Conversion	Still Image: Max. 2x 4K PHOTO: 1.4x [4:3], 1.5x [3:2], 1.4x [16:9, 1:1] Motion picture: 2.7x [FHD], 1.4x [4K]
	Other functions	Level Gauge, Real-time Histogram, Guide Lines [3 patterns], Center Marker, Highlight display [Still image / motion picture], Zebra pattern [Still image / motion picture]
DIRECTION DETECTION FUNCTION	Yes	
FUNCTION BUTTON	Fn1-20	Wi-Fi / Q.MENU / LVF/Monitor Switch / LVF/Monitor Disp. Style / AF-ON / AF-ON / Preview / One Push AE / Touch AE / Level Gauge / Focus Area Set / Zoom Control / 1 Shot RAW+JPG / 1 Shot Spot Metering / Operation Lock / Dial Operation Switch / Photo Style / Filter Select / Aspect Ratio / Picture Size / Quality / AFS/AFF / Metering Mode / Burst Rate / 6K/4K PHOTO / Self Timer / Bracket / Highlight Shadow / i, Dynamic / i, Resolution / Post Focus / HDR / Shutter Type / Flash Mode / Flash Adjust. / Wireless Flash Setup / Ex. Tel Conv. / Digital Zoom / Stabilizer / ON/OFF of each item in White Balance / ON/OFF of each item in Photo Style / AF Mode/MF / Rec/Playback Switch / Off / 4K Live Cropping / Motion Pic. Rec Format / Motion Pic. Rec Quality / Variable Frame Rate / Picture Mode in Rec. / Synchro Scan / Time Code Display / Mic. Directivity Adjust / Color Bars / WFM/Vector Scope / Focus Transition / LUT Monitor Display* / LUT HDMI Display* / Silent Mode / Peaking / Histogram / Guide Line / Zebra Pattern / Monochrome Live View / Rec Area / Video-Priority Display / Step Zoom / Zoom Speed / Restore to Default *Upgrade Software Key DMW-SFU1 [sold separately] is required.

PHOTO STYLE	Standard / Vivid / Natural / Monochrome / L. Monochrome / Scenery / Portrait / Custom 1, 2, 3, 4 / Cinelike D / Cinelike V / Like709* / V-LogL/** *When Creative Video Mode is selected. **Upgrade Software Key DMW-SFU1 [sold separately] is required.
CREATIVE CONTROL	Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochrome / Rough Monochrome* / Silky Monochrome* / Impressive Art / High Dynamic / Cross Process / Toy Effect / Toy Pop / Bleach Bypass / Miniature Effect** / Soft Focus* / Fantasy / Star Filter* / One Point Color / Sunshine** *For photos only. **Not available in 4:2:2 10-bit video or 4K video recording.
RECORDING SYSTEM	Recording Still image 6K PHOTO* / 4K PHOTO Motion picture JPEG [DCF, Exif 2.31], RAW 6K PHOTO: MP4 (H.265/HEVC), Audio format: AAC [2ch] 4K PHOTO: MP4, H.264/MPEG-4 AVC, Audio format: AAC [2ch] MOV: H.264/MPEG-4 AVC (Audio format: LPCM [2ch 48kHz/16-bit, 48kHz/24-bit*, 96kHz/24-bit**]) *When attaching DMW-XLR1 (sold separately), MP4: H.264/MPEG-4 AVC AVCHD Progressive, AVCHD (Audio format: Dolby Audio 2ch) System frequency 59.94Hz, 50.00Hz, 24.00Hz Aspect ratio 4:3, 3:2, 16:9, 1:1 Image quality RAW+Standard, Fine, Standard Color space sRGB, AdobeRGB File size Still [4:3] 5184x3888[S] / 3712x2784[M] / 2624x1968[S] / 4992x3744[6K PHOTO] / 3328x2496[4K PHOTO] [Pixels] image [3:2] 5184x3456[L] / 3712x2480[M] / 2624x1752[S] / 5184x3456[6K PHOTO] / 3504x2336[4K PHOTO] [1:1] 5184x2928[L] / 3840x2160[M] / 1920x1080[S] / 3840x2160[4K PHOTO] Motion picture MOV** / 59.94Hz High-res audio is selectable only when using the DMW-XLR1 [sold separately], 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (LPCM, High-Res Audio) *The firmware will be released in second half of 2017, 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) / 100Mbps (4:2:2 10-bit LongGOP) (LPCM, High-Res Audio) [Full HD] 1920x1080: