

LUMIX GH4 Professional 4K Mirrorless Interchangeable Lens Camera

DMC-GH4K

TYPE

- Type Digital Single Lens Mirrorless camera
- Recording media SD Memory Card, SDHC Memory Card, SDXC Memory Card (Compatible with UHS-I UHS Speed Class 3 standard SDHC / SDXC Memory Cards)
- Image sensor size 17.3 x 13.0 mm (in 4:3 aspect ratio)
- Lens mount Micro Four Thirds mount

IMAGE SENSOR

- Type Live MOS Sensor
- Total pixels 17.20 megapixels
- Camera effective pixels 16.05 megapixels
- Color filter Primary color filter
- Dust reduction system Supersonic wave filter

RECORDING SYSTEM

- Recording file format
 - Still Image JPEG (DCF, Exif 2.3), RAW, MPO (When attaching 3D lens in Micro Four Thirds system standard)
 - Motion picture MOV (Audio format LPCM), MP4 (Audio format LPCM / AAC 2ch), AVCHD (Audio format: Dolby Digital 2ch)
 - System frequency 59.94Hz, 50.00Hz, 24.00Hz
 - Aspect ratio 4:3, 3:2, 16:9, 1:1
 - Image quality RAW, RAW+Fine, RAW+Standard, Fine, Standard / MPO+Fine / MPO+Standard (with 3D lens in Micro Four Thirds system standard)
 - Color Spaces, RGB, AdobeRGB
 - File size (Pixels)
 - Still Image [4:3] 4608x3456(L) / 3264x2448(M) / 2336x1752(S) / 1824x1368 (with 3D lens in Micro Four Thirds system standard) / [3:2] 4608x3072(L) / 3264x2176(M) / 2336x1560(S) / 1824x1216 (with 3D lens in Micro Four Thirds system standard) / [16:9] 4608x2592(L) / 3840x2160(M) / 1920x1080(S) / 1824x1024 (with 3D lens in Micro Four Thirds system standard) / [1:1] 3456x3456(L) / 2448x2448(M) / 1744x1744(S) / 1712x1712 (with 3D lens in Micro Four Thirds system standard)
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- Motion picture (MOV*:59.94Hz)[4K] 3840x2160:29.97p, 100Mbps (IPB) (LPCM) / [4K] 3840x2160:23.98p, 100Mbps (IPB) (LPCM) / [Full HD] 1920x1080:59.94p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:29.97p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:23.98p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
- Motion picture (MOV*:50.00Hz)[4K] 3840x2160:25.00p, 100Mbps (IPB) (LPCM) / [Full HD] 1920x1080:50.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:25.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
- Motion picture (MOV*:24.00Hz)[C4K] 4096x2160:24.00p, 100Mbps (IPB) (LPCM) / [4K] 3840x2160:24.00p, 100Mbps (IPB) (LPCM) / [Full HD] 1920x1080:24.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
- Motion picture (MP4*:59.94Hz)[4K] 3840x2160:29.97p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC) / [4K] 3840x2160:23.98p, 100Mbps (IPB) (LPCM) / [4K] 23.98p, 100Mbps (IPB) (AAC)**** / [Full HD] 1920x1080:59.94p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:29.97p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:23.98p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:59.94p, 28Mbps (IPB) (AAC) / [Full HD] 1920x1080:29.97p, 20Mbps (IPB) (AAC) / [HD] 1280x720:29.97p, 10Mbps (IPB) (AAC) / [VGA] 640x480:29.97p, 4Mbps (IPB) (AAC)
- Motion picture (MP4*:50.00Hz)[4K] 3840x2160:25.00p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC) / [Full HD] 1920x1080:50.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:25.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM) / [Full HD] 1920x1080:50.00p, 28Mbps (IPB) (AAC) / [Full HD] 1920x1080:25.00p, 20Mbps (IPB) (AAC) / [HD] 1280x720:25.00p, 10Mbps (IPB) (AAC) / [VGA] 640x480:25.00p, 4Mbps (IPB) (AAC)
- Motion picture (MP4*:24.00Hz)[C4K] 4096x2160:24.00p, 100Mbps (IPB) (LPCM) / [4K] 3840x2160:24.00p, 100Mbps (IPB) (LPCM) / [Full HD] 1920x1080:24.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
- Motion picture (AVCHD Progressive*:59.94Hz)[Full HD] 1920x1080:59.94p, 28Mbps (IPB) (Dolby)
- Motion picture (AVCHD Progressive*:50.00Hz)[Full HD] 1920x1080:50.00p, 28Mbps (IPB) (Dolby)
- Motion picture (AVCHD*:59.94Hz)[Full HD] 1920x1080:59.94i, 24Mbps (IPB) (Dolby) (Sensor output is 29.97fps) / [Full HD] 1920x1080:59.94i, 17Mbps (IPB) (Dolby) (Sensor output is 59.94fps) / [Full HD] 1920x1080:23.98p, 24Mbps (IPB) (Dolby)
- Motion picture (AVCHD*:50.00Hz)[Full HD] 1920x1080:50.00i, 24Mbps (IPB) (Dolby) (Sensor output is 25.00fps) / [Full HD] 1920x1080:50.00i, 17Mbps (IPB) (Dolby) (Sensor output is 50.00fps)
- Continuous recordable time (Motion picture)AVCHD: Approx. 220 min with H-HS12035 / AVCHD: Approx. 220 min with H-FS14140
- Actual recordable time (Motion picture)AVCHD: Approx. 110 min with H-HS12035 / AVCHD: Approx. 110 min with H-FS14140

WiFi FUNCTION

- WiFi 802.11b/g/n, 2412 MHz - 2462 MHz (11 ch), Wi-Fi / WPA / WPA2, Infrastructure mode, WPS, Wi-Fi Direct
- NFCISO/IEC 18092, NFC-F (Passive Mode)
- QR Code Connection Yes

VIEWFINDER

- Type LED Live View Finder (2,359K dots)
- Field of view Approx. 100%
- Magnification Approx. 1.34x / 0.67x (35mm camera equivalent) with 50 mm lens at infinity; -1.0 m-1
- Eye point Approx. 21 mm from eyepiece lens
- Diopter adjustment -4.0 - +4.0 (dpt)
- Eye sensor Yes
- Eye sensor adjustment High / Low

FOCUS

- Type Contrast AF system
- DFD technology Yes
- Focus mode AFS (Single) / AFF (Flexible) / AFC (Continuous) / MF
- AF mode Face/Eye Detection / Tracking / 49-Area / Custom Multi / 1-Area / Pinpoint / (Full area touch is available)
- AF detective range EV -4 - 18 (ISO100 equivalent)
- AF assist lamp Yes
- AF lock Yes (AF/AE LOCK button)
- 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 1,728-zone multi-pattern sensing system
- Light metering mode Multiple / Center Weighted / Spot
- Metering range EV 0-18 (F2.0 lens, ISO100 equivalent)
- Exposure mode Program AE, Aperture Priority AE, Shutter Priority AE, Manual
- ISO sensitivity (Standard Output Sensitivity) Auto / Intelligent ISO / 100 (Extended) / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600 (Changeable to 1/3 EV step) / (Up to ISO6400 in motion picture recording) (ISO Auto in M mode)
- Exposure compensation 1/3 EV step ±5EV (±3EV for motion picture)
- AE lock Yes (AF/AE LOCK button)
- AE bracket 3, 5, 7 frames in 1/3, 2/3 or 1 EV Step, Max. ±3 EV, single/burst

WHITE BALANCE

- White balance Auto / Daylight / Cloudy / Shade / incandescent / Flash / White Set 1, 2, 3, 4 / Color temperature setting
- White balance adjustment Blue/Amber bias, Magenta/Green bias
- Color temperature setting 2500-10000K in 100K
- White balance bracket 3 exposures in blue/amber axis or in magenta/green axis

SHUTTER

- Type Focal-plane shutter
- Shutter speed Still image: Bulb (Max. 60 minutes), 1/8,000 - 60 / 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-RSL1 (Optional)

BURST SHOOTING

- Burst speed Mechanical shutter: H: 12 frames/sec (with AFS), 7 frames/sec (with AFC), M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View) / Electronic shutter: SH: 40 frames/sec, H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Number of recordable images Approx. 40 images (when there are RAW files with the particular speed) / Approx. 100 images (when there are no RAW files) / Approx. 120 images (when using electronic shutter) / (depending on memory card size, battery power, picture size, and compression)

4K Photo Mode****

- Exit information Yes
- Selectable aspect ratio Yes (4:3 / 3:2 / 16:9 / 1:1 are selectable)
- Exposure mode Program AE / Aperture-Priority / Shutter-Priority / Manual Exposure
- Marking function Yes
- Loop Rec function Yes

FLASH

- Built in flash type TTL Built-in-Flash, GN12 equivalent (ISO100 · m) / GN17 equivalent (ISO200 · m), Built-in Pop-up (Reference) / Lighting angle: 24mm (35mm camera equivalent)
- Flash Mode Auto*, Auto/Red-eye Reduction*, Forced On, Forced On/Red-eye Reduction, Slow Sync., Slow 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
- Flash sync socket Yes

MONITOR

- Type LED monitor with static touch control
- Monitor size Free-angle 3.0-inch / 3:2 aspect / Wide viewing angle
- **<glossary>Pixels</glossary>**Approx. 1036K dots
- Filed of view Approx. 100%
- Monitor adjustment Brightness (7 levels), Contrast and Saturation (7 levels), Red-Green (11 levels), Blue-Yellow (11 levels)

LIVE VIEW

- Digital zoom 2x, 4x
- Extra Tele Conversion Still image: Max. 2x (Aspect ratio sets at 4:3. Not effective with L size recording. Magnification ratio depends on the recording pixels and aspect ratio.) / Motion picture: 2.4x (FHD), 3.6x (HD), 4.8x (VGA)
- 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

- Direction Detection Function Yes

FUNCTION BUTTON

- Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9, Fn10 Wi-Fi / Q.MENU / Preview / One Push AE / Touch AE / Level Gauge / Focus Area Set / Zoom Control / 1 Shot RAW+JPG / 1 Shot Spot Metering / Cursor Button Lock / Photo Style / Aspect Ratio / Picture Size / Quality / AFS/AFF / Metering Mode / Burst Rate / Auto Bracket / Self Timer / Highlight Shadow / I. Dynamic / I. Resolution / HDR / Electronic Shutter / Flash Mode / Flash Adjust. / Ex. Tele Conv. / Digital Zoom / Stabilizer / Motion Pic. Set / Variable Frame Rate / Picture Mode / Synchro Scan / Time Code Display / Mic. Directivity Adjust / Color Bars / Silent Mode / Peaking / Histogram / Guide Line / Zebra Pattern / Rec Area / Video-Priority Display / Step Zoom / Zoom Speed / AF Mode/MF / Restore to Default

PHOTO STYLE

- Still image and motion picture Standard / Vivid / Natural / Monochrome / Scenery / Portrait / Custom / Cinelike D* / Cinelike V* *When Creative Video Mode is selected.

CREATIVE CONTROL

- Still image 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
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- Motion picture Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochrome / Impressive Art / High Dynamic / Cross Process / Toy Effect / Toy Pop / Bleach Bypass / Miniature Effect / Fantasy / One Point Color

CREATIVE VIDEO MODE

- Exposure Mode Program AE/ Aperture-Priority / Sutter-Priority / Manual Exposure
- Variable frame rate
- 59.94Hz MOV/FHD/100Mbps/29.97p, MP4(LPCM)/FHD/100Mbps/29.97p: / 2fps, 15fps, 26fps, 28fps, 30fps, 32fps, 34fps, 45fps, 60fps, 75fps, 90fps, 96fps / MOV/FHD/100Mbps/23.98p, MP4(LPCM)/FHD/100Mbps/23.98p: / 2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps, 72fps, 84fps, 96fps / AVCHD/FHD/24Mbps/29.97p:2fps, 15fps, 26fps, 28fps, 30fps, 32fps, 34fps, 45fps, 60fps / AVCHD/FHD/24Mbps/23.98p:2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps
- 50.00Hz MOV/FHD/100Mbps/25.00p, MP4(LPCM)/FHD/100Mbps/25.00p:2fps, 12fps, 21fps, 23fps, 25fps, 27fps, 30fps, 37fps, 50fps, 62fps, 75fps, 96fps / AVCHD/FHD/24Mbps/25.00p:2fps, 12fps, 21fps, 23fps, 25fps, 27fps, 30fps, 37fps, 50fps
- 24.00Hz MOV/FHD/100Mbps/24.00p, MP4(LPCM)/FHD/100Mbps/24.00p: / 2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps, 72fps, 84fps, 96fps

MOTION PICTURE FUNCTION

- Master pedestal level 31 steps
- Luminance level 0-255 / 16-235 / 16-255
- Synchro scan Yes
- Time code Count Up: Rec Run/Free Run selectable, Time Code Mode: Drop frame/Non-drop frame selectable (When system frequency [59.94Hz] is selected.)
- SS/Gain operation Shutter Duration/ISO / Angle/ISO / Shutter Duration/dB
- Color bars / 1kHz test tone Yes (SMPTE / EBU / ARIB) / Yes
- Cinelike gamma Cinelike D / Cinelike V

PLAYBACK

- Playback mode Normal playback, 30-thumbnail display, 12-thumbnail display, Calendar display, Zoomed playback (Max. 16x), Slideshow (All / Picture Only / Video Only / 3D / Category Selection / Favorite, duration & effect is selectable), Playback Mode (Normal / Picture / Video / 3D Play / Category / Favorite), Location Logging, RAW Processing, Clear Retouch, Title Edit, Text Stamp, Video Divide, Time Lapse Video, Stop Motion Video, Resize, Cropping, Rotate, Rotation Display, Favorite, DPOF Print Set, Protect, Face Recognition Edit, Picture Sort, Delete Confirmation

IMAGE PROTECTION / ERASE

- Protection Single / Multi or Cancel
- Erase Single / Multi / All / Except Favorite

PRINT

- Direct Print Pict Bridge compatible

INTERFACE

- USBUSB 2.0 High Speed Multi
- HDMI (**)
- Monitor-through 4:2:2 8-bit / 4:2:2 10-bit (When 4:2:2 10-bit mode is selected, it is not possible to record motion picture or still picture on the SD memory card in the camera unit.) / Auto / C4K / 4K / 1080p / Information display ON/OFF (selectable) / Automatic down-conversion (4K --> 1080p only)
- Playback microHDMI TypeD / VIERA Link, Audio: Stereo / 59.94Hz: Auto / 4K / 1080p / 1080i / 720p / 480p / 50.00Hz: Auto / 4K / 1080p / 1080i / 720p / 576p
- Audio video output Monaural Type
- Remote input ϕ 2.5mm for remote
- External microphone input ϕ 3.5mm for external microphone
- Headphone output ϕ 3.5mm for headphone
- <glossary>Microphone</glossary>Stereo, Wind-cut: OFF / Low / Standard / High / AUTO
- <glossary>Speaker</glossary>Monaural

LANGUAGE

- OSD language English, Spanish

GENERAL

- POWER
- <terms>Battery</terms>Li-ion Battery Pack (7.2V, 1860mAh) (Included) / Battery Charger
- Battery life (CIPA standard) Approx. 530 images with H-HS12035 / Approx. 530 images with H-FS14140
- DIMENSIONS / WEIGHT
- Dimensions (W x H x D) 132.9 x 93.4 x 83.9mm / 5.23 x 3.68 x 3.30 in (excluding protrusions)
- Weight: Approx. 560g / 19.75 oz. (SD card, Battery, Body) / Approx. 480g / 16.93 oz. (Body only) / Approx. 865g / 30.51 oz. (SD card, Battery, H-HS12035 lens included) / Approx. 825g / 29.10 oz. (SD card, Battery, H-FS14140 lens included)
- OPERATING ENVIRONMENT
- Operating temperature 0°C to 40°C (32°F to 104°F)
- Operating humidity 10% to 80%
- STANDARD ACCESSORIES
- <footnote>Software</footnote>PHOTO fun STUDIO 9.5 PE (Windows XP / Vista / 7 / 8) / SILKYPIX® Developer Studio 4.1 SE (Windows XP / Vista / 7 / 8, Mac OS X v10.5 / v10.6 / v10.7 / v10.8) / Lo!Lo Scope (trial version) (Windows XP / Vista / 7 / 8)

- Standard accessories: Battery Charger (AC Cable included), Battery Pack, Body Cap, Hot Shoe Cover, USB Connection Cable, Shoulder Strap, DVD / Lens Cap*, Lens Hood*, Lens Rear Cap*
*Included with DMC-GH4A kit and DMC-GH4H kit.
- OPTIONAL ACCESSORIES
- External flash (optional)DMW-FL580L (optional), Wireless Channel: 1ch/2ch/3ch/4ch
- Interface unit (optional)DMW-YAGH (optional)**
- AC adaptor (optional)DMW-AC10 (optional)
- External microphone (optional)DMW-MS2 (optional), Stereo/Lens Auto/Shotgun/Super Shotgun/Manual selectable)
- Battery grip (optional)DMW-BGGH3 (optional)

Further Specifications

- NOTE* About motion picture recording. / • Motion picture can be recorded up to 29 min 59 sec depending on the recording format and the camera's sales area. / • Use a card with SD Speed Class with "UHS-I Speed Class 3 (U3)" when recording motion pictures in [4K/100Mbps] [C4K/100Mbps] [FHD/100Mbps] or [FHD/200Mbps]. / • Use a card with SD Speed Class with "UHS-I Speed Class 1 (U1)" or higher when recording motion pictures in [FHD/50Mbps]. / • Use a card with SD Speed Class with "Class 4" or higher when recording motion pictures in [FHD/28Mbps]. / (SD speed class is the speed standard regarding continuous writing.) / ** For [4K] or [C4K] video output, use an HDMI cable that has the HDMI logo on it, and that is described as"4K compatible". / *** The DMW-YAGH is not available in some countries or regions. / **** Firmware must be updated to the latest version 2.0.
- Source: <https://panasonic.com/cameras-and-camcorders/cameras/lumix-interchangeable-lens-ilc-cameras/DMC-GH4KBODY.html#pnsb2c-pdp-specifications>