

FOR IMMEDIATE RELEASE

Ricoh announces the PENTAX K-1 Mark II full-frame digital SLR camera

Flagship model in the PENTAX K series camera line updated to deliver even higher image quality and enhanced performance in challenging shooting conditions

WEST CALDWELL, NJ, February 21, 2018 Ricoh Imaging Americas Corporation today announced the PENTAX K-1 Mark II 35mm full-frame digital SLR (DSLR) camera. Developed as the successor to the PENTAX K-1 full-frame DSLR camera launched in April 2016, the compact, rugged and weather-resistant PENTAX K-1 Mark II now becomes the flagship camera in the acclaimed PENTAX K-series lineup. The camera incorporates new technologies that allow it to deliver outstanding image quality and improved operability in a broader range of shooting conditions.

The PENTAX K-1 Mark II uses the same full-frame Anti-aliasing (AA)-filterless CMOS sensor with 36.4 effective megapixels as its predecessor model. However, Ricoh has added a new accelerator unit to the PENTAX K-1 Mark II that—along with the camera's PRIME IV image processor—enables it to produce high-resolution images with minimal noise in even in the most challenging low-light conditions, up to ISO 819200. This makes the new camera ideal for low-light photography where higher shutter speeds are required.

The camera also incorporates Pixel Shift Resolution System II. This new, PENTAX-developed technology uses the same in-camera shake-reduction (SR) mechanism and sensor-shift capabilities as the original Pixel Shift Resolution System found in the PENTAX K-1, which captures four images of the same scene, and then synthesizes them into a single, super-high-resolution composite image. With the Pixel Shift Resolution System II, the camera also obtains RGB color data, resulting in images with significantly finer details and truer colors than those produced by typical full-frame sensors.

A new feature in the Pixel Shift Resolution System II is Dynamic Pixel Shift Resolution mode. This mode allows photographers to produce crisp, ultra-high pixel shift resolution images without the need of a tripod, extending the camera's use to a wider variety of subjects and scenes.

The PENTAX K-1 Mark II also comes equipped with many unique features and functions designed to facilitate creativity and ensure operational comfort that have become the hallmark of PENTAX cameras. These include a sturdy magnesium-alloy body with dustproof, weather-resistant construction; an optical viewfinder with a nearly 100-percent field of view for real-time subject confirmation; Astro Tracer, which simplifies the tracing and photographing of celestial bodies by coupling GPS data with the camera's sophisticated SR II mechanism; and a flexible tilt-type LCD monitor to accommodate various shooting angles.

| Pricing and Availability |

The PENTAX K-1 Mark II camera body will be available in April 2018 for a suggested list price of \$1,999.95. The camera body plus HD PENTAX-D FA 28-105mm F3.5-5.6 ED DC WR zoom lens will also be available for a suggested list price of \$2,399.95. Both can be purchased at www.us.ricoh-imaging.com as well as at Ricoh Imaging-authorized retail outlets throughout North America.

| Main Features |

1. Newly incorporated accelerator unit delivers high-quality images and excellent super-high-sensitivity imaging performance

The PENTAX K-1 Mark II features a 35mm-format full-frame CMOS image sensor with an AA (anti-aliasing) filter-free design to produce high-resolution images with approximately 36.4 effective megapixels. It also features a new accelerator unit, which optimizes the image data obtained by the full-frame image sensor before delivering it to the high-performance PRIME IV imaging engine. As a result, the camera is capable of producing high-quality images with minimal noise, while retaining excellent resolution at all sensitivity levels, from normal to super-high sensitivities. PENTAX has also updated all image-processing parameters to ensure colors are true to life, with special emphasis on deep blues and lively greens. PENTAX has also dramatically improved the camera's noise-reduction performance at a high-sensitivity range — up to ISO 819200 — to expand creative possibilities in super low-light shooting.

2. Pixel Shift Resolution System II produces super-resolution images and enables handheld shooting

Building upon the original PENTAX-developed Pixel Shift Resolution System — the super-resolution technology that uses the camera's in-body shake-reduction mechanism to capture four images of the same scene by shifting the image sensor by a single pixel for each image, and then synthesizes them into a single composite image — is the Pixel Shift Resolution System II,* making its debut in the PENTAX K-1 II. This new system obtains RGB color data for each pixel, resulting in super-high-resolution images with finer details and more realistic colors than those produced by cameras with ordinary full-frame sensors. The Motion Correction functions provides ON/OFF switching, which detects moving elements of the continuously captured images to minimize the effect of subject movement during the image synthesizing process.***The new Dynamic Pixel Shift Resolution mode,** which can be used during handheld shooting, works together with the camera's shake-reduction mechanism, by synthesizing the composite images while detecting the slight fluctuations of the subject's position during the capture process.

This technology comes from the reverse thinking of pixel shift technology to utilize the minute camera shake itself to product the composite images. Therefore, by detecting the camera shake in three dimensions, the continuously captured four images are analyzed based on the detected camera shake information and combined into a single file to produce one super high resolution image.

** When using this system, the user is advised to stabilize the camera firmly on a tripod. Even if a moving subject is captured in the camera's image field, the image may not be reproduced clearly, partially or in total.*

*** The captured images may not be properly synthesized with certain subjects or under certain conditions. By capturing images in the RAW or RAW+ format, the user can process the images unsuitable for the synthesizing process as normal RAW-format images within the camera body. The images may not be properly synthesized in a composite image*

**** The movement may not be sufficiently corrected when the object is moving in a certain direction and/or pattern. This function does not guarantee that the movement is properly corrected with all subjects.*

3. High-performance five-axis, five-step SR II system

(1) In-body SR mechanism delivers optimal shake-reduction performance with all compatible lenses

The PENTAX K-1 Mark II comes equipped with the PENTAX-developed SR II (Shake Reduction II) five-axis mechanism, which provides accurate control of the large full-frame image sensor with all compatible PENTAX interchangeable lenses.* In addition to camera shake caused by pitch and yaw, this advanced system also compensates for camera shake caused by horizontal and vertical shift (often generated in macro photography) and camera shake caused by roll, which is difficult for lens-installed shake-reduction mechanisms to handle. It has a compensation range up to five steps (measured in conformity with CIPA standards, using the HD PENTAX-D FA 28-105mm F3.5-5, 6ED DC WR at a 105mm focal length). When taking a panning shot, this system automatically detects the direction of the camera's movement, and efficiently controls the SR unit to produce the best image possible without requiring any mode switching operation.

(2) Innovative AA filter simulator to minimize moiré and inaccurate color rendition

By applying microscopic vibrations to the image sensor unit at the sub-pixel level during image exposure, the camera's anti-aliasing (AA) filter simulator** provides the same level of moiré reduction as an optical AA filter. Unlike an optical filter, which always creates the identical result, this innovative simulator not only lets the user switch the AA filter effect on and off, but also adjust the level of the effect. This means that the ideal effect can be set for a particular scene or subject based on given photographic conditions.

(3) Additional shooting functions enabled by the SR II system

Since the camera's SR unit has a flexible design that tilts the image sensor unit in all directions, additional shooting functions are enabled, including auto level compensation, image-composition fine-adjustment, and Astro Tracer, a feature that works along with the built-in GPS, to produce super-sharp images of the night sky.

** Lenses compatible with this mechanism: K-, K_A-, K_{AF}-, K_{AF2}-, K_{AF3}- and K_{AF4}-mount lenses; screw-mount lenses (with an adapter); and 645- and 67-system lenses (with an adapter). Some functions may not be available with certain lenses.*

*** This function works most effectively with a shutter speed of 1/1000 second or slower. This function may not be combined with some shooting modes, including the Pixel Shift Resolution system.*

4. Flexible, tilting LCD monitor facilitates shooting in the dark

On its back panel, the PENTAX K-1 Mark II features a flexible, tilting LCD monitor, which can be adjusted to the desired angle horizontally, vertically or diagonally with a single adjustment, without deviating from the lens's optical axis. The user can not only tilt it approximately 35 degrees horizontally and approximately 44 degrees vertically, but also pull it out from its base to view the on-screen image from above for waist-level photography. This large, 3.2-inch LCD monitor has approximately 1,037,000 dots and a 3:2 aspect ratio, and provides a protective tempered-glass front panel for added durability. In addition to its wide-view design, it also features a unique air-gapless construction, in which the air space between LCD layers is eliminated to effectively reduce the reflection and dispersion of light for improved visibility during outdoor shooting. Its outdoor monitor function, which allows instant adjustment of the monitor's

brightness to the desired level, has also been improved to provide greater visibility in dark locations. Its red-lit monitor display function facilitates monitor viewing when the photographer's eyes have become accustomed to a dark location during nighttime photography.

5. SAFOX 12 with 33 sensor points and full-frame-proportioned AF frame
Using a SAFOX 12 AF sensor module with 33 AF sensors (25 cross-type sensors positioned in the middle), the PENTAX K-1 Mark II optimizes the autofocus process, and assures high-speed autofocus operation in the AF.S (AF Single) mode. The center sensor and two sensors located just above and below it are designed to detect the light flux of an F2.8 lens, making it easy to obtain pinpoint focus on a subject when using a large-aperture lens. Its AF Tracking algorithm has also been revised to improve tracking accuracy of fast-moving subjects in the AF.C (AF Continuous) mode.
6. PENTAX Real-Time Scene-Analysis System, developed using artificial intelligence technology
By combining an approximately 86,000-pixel RGB metering sensor with the high-performance PRIME IV imaging engine, the PENTAX K-1 Mark II's advanced PENTAX Real-Time Scene Analysis System performs real-time analysis of the brightness distribution over the image field and the subject's colors and movement. Based on this data, it then measures the subject's lighting conditions with great accuracy and optimizes the exposure. By adopting a breakthrough artificial intelligence technology, deep learning, to its algorithm,* it assesses each individual scene more accurately, and optimizes the exposure settings for a given scene or composition.

** Effective when the AUTO exposure mode is set to Scene Analyze Auto and the Custom Image mode is set to Auto Select.*

7. Easy-to-focus optical viewfinder with nearly 100-percent field of view
Optimized for a 35mm full-frame digital SLR design, the camera's optical viewfinder provides a nearly 100-percent field of view and an approximately 0.7-times magnification. Using a combination of a condenser lens and aspherical lens, it provides a wide field of view and a clear, undistorted image of the subject. It comes with a Natural Bright Matte III focusing screen, acclaimed for ease of focusing during manual-focus operation, and true-to-life rendition of defocused areas in the viewfinder image. In addition, its transparent viewfinder display makes it possible to superimpose a wide range of photographic data over the viewfinder image.
8. High-speed continuous shooting
The PENTAX K-1 Mark II allows continuous recording of as many as 17 images in the RAW format (or a maximum of 70 images in the JPEG Best format) in a single sequence, at a top speed of approximately 4.4 images per second. This is made possible by the combination of advanced mechanisms including a damper mechanism that effectively minimizes mirror shock; high-speed, high-precision control of the shutter and mirror units; and a high-speed data transmission system incorporated in the PRIME IV imaging engine. In the APS-C Crop mode, the drive speed can be boosted to as high as approximately 6.4 images per second, and as many as 50 images in a single sequence in the RAW format (or 100 images in the JPEG Best format) to assure quick response to fast-moving subjects.
9. Supportive shooting functions to improve picture-taking efficiency and operational comfort
Operation-assist light function, which sets LED lights at four different spots around the camera body — above the lens mount, behind the LCD monitor, at the memory card slot, and at the cable switch terminal — to facilitate lens and memory card changes, attachment and removal of the cable switch, and control button operation at night and in poorly lit settings.
Key lock function, which prevents erroneous operation of the four-way controller and other exposure-related control buttons.

Smart Function, which allows the user to swiftly choose and set desired functions using just the function dial and the set dial on the camera's upper panel, without referring to the menu screen on the LCD monitor.

Control panel customize function, which allows the user to change a listing and/or position of the on-screen menu.

10. Compact, rugged body with dustproof, weather-resistant construction

The camera's bottom panel and front and back frames are all made of sturdy yet lightweight magnesium alloy. Although the camera features a dependable, durable shutter unit that can withstand 300,000 shutter releases (measured under actual shooting conditions) for professional use, its body has been downsized to the minimum possible, thanks to the incorporation of a unique floating mirror structure. With the inclusion of 87 sealing parts in the body, the camera also boasts a dustproof, weather-resistant and cold-resistant construction, assuring solid operation at temperatures as low as -10°C. All these features make the PENTAX K-1 Mark II a dependable, all-purpose performer, even under demanding shooting conditions.

11. Full HD movie recording with an array of creative tools

The PENTAX K-1 Mark II captures Full HD movie clips (1920 x 1080 pixels; 60i/30p frame rate) in the H.264 recording format, and comes equipped with a stereo mic terminal for external microphone connection, and a headphone terminal. The user can also adjust the audio recording level manually, monitor sound pressure levels during microphone recording, and cut down wind noise using a new wind-noise reduction mode. In addition to a host of distinctive visual effects for movie recording,* the camera also provides the interval movie mode, which captures a series of 4K-resolution (3840 x 2160 pixels) movie clips at a fixed interval.

** When special image processing is required, the frame rate may vary depending on the selected special-effect mode.*

12. Built-in GPS module

The PENTAX K-1 Mark II provides a variety of advanced GPS functions, including the recording of location, latitude, longitude, altitude and UTC (Universal Time Coordinated) and direction at the time of shooting. The user can easily access images containing GPS data using a computer, to browse them, check on shooting locations and position data on the screen, or save them.

The camera also provides a set of other unique tools, including: Electronic Compass, which displays the camera's direction on its LCD monitor; GPS log, which keeps track of the photographer's movement; and Astro Tracer, which simplifies the tracing and photographing of celestial bodies by coupling GPS data with the camera's SR mechanism.

13. Other features

- High-grade DR11 (Dust Removal II) mechanism for effective elimination of dust on the image sensor using ultrasonic vibration
- Crop mode with a choice of image area from AUTO, FF (Full Frame), APS-C and 1:1
- Wireless LAN connection to support the operation with smartphones and table computers, the transfer of captured images, and remote shooting operations
- HDR (High Dynamic Range) shooting mode with RAW-format data filing, usable in handheld shooting
- The PENTAX-invented hyper operating system for quick, accurate response to the photographer's creative intentions
- Dual SD card slots for memory card flexibility (compatible with SDXC UHS-1 speed class in SDR104 bus speed mode)

- Compensation of various parameters: lens distortion, lateral chromatic aberration, diffraction, and brightness level at image-field edges. Fringe effect compensation is also available in RAW-format processing.
- Bulb Timer function to improve operability in bulb shooting
- Compatibility with PENTAX Image Transmitter 2 tethering software (software update required from RICOH IMAGING official website)
- Digital Camera Utility 5 software (latest version) included

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◆ *Designs and specifications are subjects to change without notice.*

| About Ricoh Imaging Americas Corporation|

Ricoh Imaging Americas Corporation is a subsidiary of Ricoh Company Ltd., a global technology company specializing in office imaging equipment, production print solutions, document management systems and IT services. Headquartered in Tokyo, Ricoh Group operates in about 200 countries and regions.

The company now known as Ricoh Imaging Americas Corporation was originally founded in 1919, under the name Asahi Optical Joint Stock Co. and launched its first SLR camera in the 1950s under the PENTAX name. Today, Ricoh Imaging Americas Corporation continues to produce the heritage-rich, award-winning line of PENTAX DSLR cameras, lenses and sport optics equipment as well as Ricoh's offering of stylish and compact digital cameras, known for their wide-ranging, rich set of features.

For further information, please visit www.ricohimaging.com

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PENTAX K-1 Mark II Specifications

Model Description

Type	TTL autofocus, auto-exposure SLR digital-still camera
Lens Mount	PENTAX K _{AF2} bayonet mount (AF coupler, lens information contacts, K-mount with power contacts)
Compatible Lens	K _{AF4} , K _{AF3} , K _{AF2} (power zoom compatible), K _{AF} , K _A mount lens

Image capture unit

Image Sensor	Primary color filter, CMOS. Size: 35.9 x 24.0 (mm)
Effective Pixels	Approx. 36.40 megapixels
Total Pixels	Approx. 36.77 megapixels
Dust Removal	Image sensor cleaning using ultrasonic vibrations "DR II"
Sensitivity (Standard output)	ISO AUTO/100 to 819200 (EV steps can be set to 1EV, 1/2EV or 1/3EV)
Image Stabilizer	Sensor-shift shake reduction (SR II: Shake Reduction)(5-axis)
AA Filter Simulator	Moiré reduction using SR unit. OFF/Type1/Type2/ Bracketing(2 images)/ Bracketing (3 images)

File formats

File format	RAW (PEF/DNG), JPEG (Exif 2.3), DCF2.0 compliant
Recorded Pixels	[35mm Full Frame] JPEG: L(36M:7360x4912), M(22M:5760x3840), S(12M:4224x2816), XS(2M:1920x1280) RAW: (36M:7360x4912) [APS-C size] JPEG: L(15M:4800x3200), M(12M:4224x2816), S(8M:3456x2304), XS(2M:1920x1280) RAW: (15M:4800x3200)
Quality Level	RAW (14bit): PEF, DNG JPEG: ★★★ (Best), ★★ (Better), ★ (Good), RAW + JPEG simultaneous capturing available
Color Space	sRGB, AdobeRGB
Storage Medium	SD, SDHC and SDXC Memory Card (Conforms to UHS-I standards)
Dual SD slot	Sequential Use, Save to Both, Separate RAW/JPEG, Image copy between slots possible
Storage Folder	Folder Name: Date (100_1018,101_1019...) or User assigned folder name (Default "PENTX")
Recording File	File Name: "IMGP****" or User assigned file name File name numbering: Sequential, Reset

Viewfinder

Type	Pentaprism Finder
Coverage (FOV)	Approx. 100%
Magnification	Approx. 0.70x (50mmF1.4 at infinity)
Eye-Relief Length	Approx. 20.6mm (from the view window), Approx. 21.7mm (from the center of lens)
Diopter adjustment	Approx. -3.5m to + 1.2m ⁻¹

Focusing Screen	Fixed Natural-Bright-Matte III focusing screen
Viewfinder Overlay	AF Points, Grid Display, Electronic Level, AF Frame, Spot Metering Frame, Crop

Live view

Type	TTL method using image sensor
Focusing Mechanism	Contrast detection (Face detection, Tracking, Multiple AF points, Select, Spot) Focus Peaking: ON/OFF
Display	Field of View approx. 100%, Magnified view (up to 16x), Grid Display (4x4 Grid, Golden Section, Scale display, Square 1, Square 2, Grid Color: Black/White), Histogram, Bright area warning, Composition Adjustment

LCD monitor

Type	Wide viewing angle TFT color LCD, Air-gapless glass. Flexible-tilt.
Size	3.2 inch (aspect ratio 3:2)
Dots	Approx. 1037K dots
Adjustment	Brightness, Saturation and Colors adjustable
Outdoor View Setting	Adjustable ± 2 step
Night Vision LCD Display	ON/OFF

White Balance

Type	Method using a combination of the image sensor and the light source detection sensor
White Balance	AUTO WB, Multi Auto WB, Daylight, Shade, Cloudy, Fluorescent Light (D:Daylight Color, N:Daylight White, W:Cool White, L:Warm White), Tungsten Light, CTE, Manual WB (up to 3 settings), Color Temperature Configuration (up to 3 settings), Copying the white balance setting of a captured image
Fine Adjustment	Adjustable ± 7 steps on A-B axis or G-M axis

Autofocus System

Type	TTL: Phase-matching autofocus
Focus Sensor	SAFOX 12, 33 point (25 cross type focus points in the center)
Brightness Range	EV-3 to 18 (ISO 100 / at normal temperature)
AF mode	Single AF (AF.S), Continuous AF (AF.C)
AF Point Selection	Spot, Select, Expanded Area (S, M, L), Zone select, Auto (33 AF points)
AF Assist Light	Dedicated LED AF assist light

Metering

Type	TTL open aperture metering using 86K pixel RGB sensor, Multi-segment, Center-weighted and Spot metering
Metering Range	EV-3 to 20 (ISO100 at 50mm F1.4)
Exposure Mode	Scene Analyze Auto, Program, Sensitivity Priority, Shutter Priority, Aperture Priority, Shutter & Aperture Priority, Manual, Bulb, Flash X-sync Speed, USER1, USER2, USER3, USER4, USER5
EV Compensation	± 5 EV (1/2EV steps or 1/3EV steps can be selected)
AE Lock	Button type (timer type: two times the meter operating time set in Custom Setting); Continuous as long as the shutter button is halfway pressed

Shutter

Type	Electronically controlled vertical-run focal plane shutter * Electronic shutter when using Pixel Shift Resolution
Shutter Speed	Auto:1/8000 to 30 sec., Manual:1/8000 to 30 sec. (1/3EV steps or 1/2EV steps), Bulb (Timed exposure setting possible from 10 sec. to 20min.)
LV Electronic Shutter	ON/OFF

Drive modes

Mode Selection	<p>Still Image: Single Frame, Continuous (H, M, L), Self-timer (12s, 2s, Continuous), Remote Control (0s., 3s., Continuous), Bracketing (2, 3 or 5 frames), Mirror-up (Possible to use with Remote Control), Multi-Exposure (Possible to use with Continuous, Self-timer or Remote Control), Interval Shooting, Interval Composite, Interval Movie Record, Star Stream</p> <p>Movie: Remote Control * Bracketing, Interval Shooting, Interval Composite, Interval Movie Record and Star Stream are possible to use with Self-timer/Remote Control.</p>
Continuous Shooting	<p>[35mm Full-Frame] Max. approx. 4.4 fps, JPEG (L: ★★★ at Continuous H): up to approx. 70 frames, RAW: up to approx. 17 frames Max. approx. 3.0 fps, JPEG L: ★★★ at Continuous M): up to approx. 100 frames, RAW: up to approx. 20 frames Max. approx. 0.7 fps, JPEG (L: ★★★ at Continuous L): up to approx. 100 frames, RAW: up to approx. 100 frames</p> <p>[APS-C size] Max. approx. 6.4 fps, JPEG (L: ★★★ at Continuous H): up to approx. 100 frames, RAW: up to approx. 50 frames Max. approx. 3.0 fps, JPEG L: ★★★ at Continuous M): up to approx. 100 frames, RAW: up to approx. 70 frames Max. approx. 1.0 fps, JPEG (L: ★★★ at Continuous L): up to approx. 100 frames, RAW: up to approx. 100 frames</p> <p>*ISO100</p>
Multi-Exposure	Composite Mode(Additive/Average/Bright) Number of Shots(2 to 2000 images)
Interval Shooting	<p>[Interval Shooting] Interval: 2s. to 24h./ Standby Interval: Min. · 1s. to 24h., Number of shots: 2 to 2000 images, Start Interval: Now/Self-timer/Remote Control/Set Time</p> <p>[Interval Composite] Interval: 2s. to 24h./ Standby Interval: Min. · 1s. to 24h., Number of shots: 2 to 2000 images, Start Interval: Now/Self-timer/Remote Control/Set Time, Composite Mode: Additive/Average/Bright, Save Process: On/Off</p> <p>[Interval Movie] Recorded Pixels: 4K/FullHD/HD, File Format: Motion JPEG (AVI), Interval:2s. to 24h./ Standby Interval: Min · 1s. to 24h., Number of shots: 8 to 2000 images (8 to 500 images at 4K), Start Interval:Now/Self-timer/Remote Control/Set Time</p> <p>[Star Stream] Recorded Pixels: 4K/FullHD/HD, File Format: Motion JPEG (AVI), Interval: Min · 1s. to 24h., Number of shots: 8 to 2000 images (8 to 500 images at</p>

	4K), Start Interval: Now/Self-timer/Remote Control/Set Time, Fade-out: Off/Low/Medium/High
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External Flash

Flash Modes	Auto Flash Discharge, Auto Flash + Red-eye Reduction, Flash On, Flash On + Red-eye Reduction, Slow-speed Sync, Slow-speed Sync + Red-eye, P-TTL, Contrast-control-sync, High-speed sync, Wireless sync * Contrast-control-sync and High-speed sync requires 2 or more dedicated external flash
Sync Speed	1/200sec.
Flash Exposure Compensation	-2.0~+1.0EV

Capture Settings

Custom Image	Auto Select, Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Flat, Bleach Bypass, Reversal Film, Monochrome, Cross Processing
Cross Process	Random, Preset 1-3, Favorite 1-3
Digital Filter	Extract Color, Replace Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Unicolor Bold, Bold Monochrome
Clarity	Adjustable ± 4
Skin Tone	Type1/Type2
HDR	Auto, HDR1, HDR2, HDR3, Advanced HDR, Exposure bracket value adjustable, Automatic composition correction function
Pixel Shift Resolution	Available, Motion Correction ON/OFF , Image Stabilization On
Lens Correction	Distortion Correction, Peripheral Illumin. Correction, Lateral Chromatic Aberration Correction, Diffraction Correction
D-RANGE Compensation	Highlight Correction, Shadow Correction
Noise Reduction	Slow Shutter Speed NR, High-ISO NR
GPS	GPS Logging (Logging Interval, Logging Duration, Memory Card Options), GPS Time Sync
Electronic Compass	Available
Astrotracer	Possible
Horizon Correction	SR On: correction up to 1 degrees, SR Off: correction up to 2 degrees
Composition Adjustment	Adjustment range of ± 1.5 mm up, down, left or right (1mm when rotated); Rotating range of 1 degree
Electronic Level	Displayed in viewfinder (Horizontal and vertical); Displayed on LCD monitor (Horizontal and vertical)

Movie

File Format	MPEG-4 AVC/H.264 (MOV)
Recorded Pixels	Full HD(1920x1080, 60i/50i/30p/25p/24p) HD (1280x720, 60p/50p)
Sound	Built-in stereo microphone, external microphone (Stereo recording compatible) Recording Sound Level adjustable, Wind Noise Reduction
Recording Time	Up to 25 minutes or 4GB ; automatically stops recording if the internal temperature of the camera becomes high.
Custom Images	Auto Select, Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Flat, Bleach Bypass, Reversal Film, Monochrome, Cross Processing
Cross Processing	Random, Preset 1-3, Favorite 1-3.
Digital Filter	Extract Color, Replace Color, Toy Camera, Retro, High Contrast, Shading, Invert

Color, Uicolor Bold, Bold Monochrome

Playback

Playback View	Single frame, Multi-image display (6,12, 20, 35, 80 segmentation), Display magnification (up to 16, 100% display and quick magnification available), Grid display (4x4 Grid, Golden Section, Scale display, Square 1, Square 2, Grid Color: Black/White), Rotating, Histogram (Y histogram, RGB histogram), Bright area warning, Auto Image Rotation, Detailed information, Copyright Information (Photographer, Copyright holder), GPS information (latitude, longitude, altitude, Coordinated Universal Time) , Orientation, Folder Display, Calendar Filmstrip Display, Slide Show,
Delete	Delete single image, delete all, select & delete, delete folder, delete instant review image
Digital Filter	Base Parameter Adj, Extract Color, Replace Color, Toy Camera, Retro, High Contrast, Shading, Invert Color, Uicolor Bold, Bold Monochrome, Tone Expansion, Sketch, Water Color, Pastel, Posterization, Miniature, Soft, Starburst, Fish-eye, Slim, Monochrome
RAW Development	RAW file select: Select Single Image, Select Multiple Images, Select a folder RAW Development Parameter: White Balance, Custom Image, Sensitivity, Clarity, Skin Tone, Digital filter, HDR, Pixel Shift Resolution, Shadow Correction, High-ISO NR, Distortion Correction, Peripheral Illumin. Corr., Lateral Chromatic Aberration Correction, Diffraction Correction, Color Fringe Correction, File Format (JPEG/TIFF), Aspect Ratio, JPEG Recorded Pixels, JPEG Quality, Color Space
Edit	Image Rotation, Color Moiré Correction, Resize, Cropping (Aspect ratio and Slant adjustment available), Movie Edit (Divide or delete selected frames), Capturing a JPEG still picture from a movie, Saving RAW data in buffer memory, Image Copy

Customization

USER Mode	Up to 5 settings can be saved
Custom Functions	26 items
Mode Memory	17 items
Button Customization	Fx1 Button, Fx2 Button (One Push File Format, Outdoor View Setting, Flash Mode, Pixel Shift Resolution, Shake Reduction, Horizon Correction, Electronic Level) AF Button (AF1/ AF2/ Cancel AF) Preview Dial (Optical Preview/Digital Preview) Various settings for the action of the e-dials in each exposure mode can also be saved.
AF Customization	AF.S: Focus-priority/ Release-priority 1st Frame Action in AF.C: Release-priority/Auto/Focus-priority Action in AF.C Continuous: Focus-priority, Auto, FPS-priority Hold AF Status: OFF, Low, Medium, High AF in Interval Shooting: Locks focus at 1st exposure, Adjusts focus for each shot AF with Remote Control: Off/On
Operation Control Lock	Type1: E-Dial, EV Compensation, ISO, Green Button, AE Lock Type2: 4-way controller, AF point change button, Change AF Point, OK Button, Menu Button
Text Size	Standard, Large
World Time	World Time settings for 75 cities (28 time zones)
Language	English, French, Germany, Spanish, Portuguese, Italian, Dutch, Danish,

	Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian, Korean, Traditional Chinese, Simplified Chinese, Japanese
AF Fine Adjustment	±10 step, Uniform adjustment, Individual adjustment (up to 20 can be saved)
Illumination Settings	LCD Panel (High/Low/Off), Backside Controls (High/Low/Off), Lens Mount (On/Off), Card Slot/Connector (On/Off)
Indicator Lamps	Wi-Fi (High/Low/Off), GPS (High/Low/Off), Self-timer (On/Off), Remote Control (On/Off)
Copyright Information	Names of "Photographer" and "Copyright Holder" are embedded to the image file. Revision history can be checked using the provided software.

GPS/Electronic Compass

Satellites	GPS, QZSS, SBAS(WAAS/EGNOS/GAGAN/MSAS)
Reception Frequency	L1 1575.42MHz
Recorded Information	Latitude, Longitude, Altitude, Time (UTC), Direction
Geodesics	World Geodetic System (WGS84)
GPS Logging	KML format, Logging Interval: 5/10/15/30sec. /1min., Logging Duration: 1-24hr. (Up to 9hours at Logging Interval 5sec. Up to 18hrs. at Logging Interval 10sec.)
Electronic Compass	Azimuth calculation using triaxial geomagnetic sensor and triaxial acceleration sensor, True north standard

Power supply

Battery Type	Rechargeable Lithium-ion Battery D-LI90
AC Adapter	AC Adapter Kit K-AC167 (Optional)
Battery Life	Number of recordable images: Approx.: 670 images Playback time: Approx. 340 minutes * With a fully-recharged Rechargeable Lithium-ion Battery. Tested in compliance with CIPA standard. Actual results may vary depending on the shooting condition.

Interfaces

Connection Port	USB2.0 (micro B), External power supply terminal, External cable switch terminal, X-sync socket, HDMI output terminal (Type D) , Stereo microphone input terminal, Headphone terminal
USB Connection	MSC/PTP

Wireless LAN

Standards	IEEE 802.11b/g/n
Frequency (Center Frequency)	2412MHz~2462MHz (1ch~11ch)
Security	Authentication: WPA2, Encryption: AES

Dimensions and Weight

Dimensions	Approx. 136.5mm (W) x110mm (H) x 85.5mm (D) (excluding protrusions)
Weight	Approx. 1010g (Including dedicated battery and SD Memory Card), Approx. 925g (body only)

Operating Environment

Temperature	-10°C ~ 40°C (14°F ~ 104°F)
Humidity	85% or less (no condensation)

Accessories

Included	Strap O-ST162, ME Viewfinder Cap, Rechargeable Lithium-ion Battery D-LI90, Battery Charger D-BC90, AC plug cord, Software (CD-ROM) S-SW162 <Mounted to the camera> Eyecup FT, Hot shoe cover FK, Sync socket 2p cap, Body mount cap KII, Battery Grip terminal cover
Software	Digital Camera Utility 5

Storage capacity

<Still>

Crop : 35mm full-frame	RAW	JPEG											
Recorded Pixels	7360x4912	L: 36M 7360x4912			M: 22M 5760x3840			S: 12M 4224x2816			XS: 2M 1920x1280		
Quality Level	PEF	★★★	★★	★	★★★	★★	★	★★★	★★	★	★★★	★★	★
8GB	101	351	676	1164	572	1096	1874	1054	2013	3364	4723	8469	12927

shots

Crop : APS-C size	RAW	JPEG											
Recorded Pixels	4800x3200	L: 15M 4800x3200			M: 12M 4224x2816			S: 8M 3456x2304			XS: 2M 1920x1280		
Quality Level	PEF	★★★	★★	★	★★★	★★	★	★★★	★★	★	★★★	★★	★
8GB	215	821	1564	2689	1054	2013	3364	1564	2959	4912	4723	8469	12927

shots

Crop : 1:1	RAW	JPEG											
Recorded Pixels	4912x4912	L: 24M 4912x4912			M: 14M 3744x3744			S: 6M 2592x2592			XS: 2M 1440x1440		
Quality Level	PEF	★★★	★★	★	★★★	★★	★	★★★	★★	★	★★★	★★	★
8GB	101	525	1006	1717	899	1717	2889	1846	3459	5712	5582	9824	15351

shots

<Movie>

Recorded Pixels	Full HD 1920x1080						HD 1280x720	
	60i	50i	30p	25p	24p	60p	50p	
8GB	00:32'15"	00:38'21"	00:32'15"	00:38'21"	00:39'51"	00:32'15"	00:38'21"	

hh:mm:ss

The maximum file size is 4GB for movie.
The maximum length is 25 minutes for movie.

System Requirements

<Windows>

OS	Windows 10(FCU/CU) (32bit/64bit)/Windows 8.1 (32bit/64bit)/ Windows 8 (32bit/64bit)/ Windows 7 (32bit/64bit)
CPU	Intel Core 2 Duo or higher
RAM	4GB or more
Free Disk Space	Program installation and start-up: 100 MB or more of available space Image file saving: Approximately 15 MB per file (JPEG) / approximately 50MB (RAW)
Monitor	1280 x 1024 dots, 24 bit full-color or more

<Macintosh>

OS	macOS v10.13 High Sierra / macOS v10.12 Sierra / OS X v10.11 El Capitan / OS X v10.10 Yosemite
CPU	Intel Core 2 Duo or higher
RAM	4GB or more

Free Disk Space	Program installation and start-up: 100 MB or more of available space Image file saving: Approximately 15 MB per file (JPEG) / approximately 50MB (RAW)
Monitor	1280 x 1024 pixels, 24 bit full-color or more