# Full Olympus E-M1X camera specifications

**Format**
Format: Micro Four Thirds compliant interchangeable lens camera
capturing screen size: 17.4 mm × 13.0 mm
lens mount: Micro Four Thirds
recording medium: SD / SDHC / SDXC (※ UHS-I / II compatible)
**Image sensor**
format: 4 / 3-inch Live MOS sensor
number of pixels: camera effective pixel number about 20,370,000 pixels, the total number of pixels about 21,770,000 pixels
aspect ratio 1.33 (4: 3)
dustproof corresponding: Supersonic wave filter (SSWF: ultrasonic anti-dust filter)
**Sstill Image recording format**
Recorded image format: RAW (12 bit lossless compression), JPEG, RAW + JPEG
Recorded image size: [RAW] 5184 x 3888 [JPEG] 5184 x 3888 to 1024 x 768
Double slot recording function: standard, automatic switching, sorting, same writing. In case both the card slot writable, still image recording destination, video recording destination, playback destination specifiable
**Image stabilization**
Format: Body-in image stabilization (image sensor-shift 5-axis image stabilization). Angular Shake Compensation (Yaw / Pitch), Shake Shake Compensation (Up / Down, Left / Right), Rotary Shake Compensation (Roll)
5 Axis Sync Shake Reduction: Yes. Lens image stabilization mechanism mounted in M.ZUIKODIGITAL lens used during
image stabilization effect: 7.0 stage Lens: M.ZUIKO DIGITAL ED12-40mm F2.8 PRO focal length f = 40 mm (35 mm film equivalent f = 80 mm)
7.5 stage Lens: M.ZUIKO DIGITAL ED12-100mm F4.0 IS PRO focal length f = 100 mm (35 mm film equivalent f = 200 mm), half-press image stabilization Off, frame rate fast
**Finder**
Format: eye-level type liquid crystal viewfinder, about 2.36 million dots
field of view / magnification: 100% / about 1.48 times to about 1.65 times (50mm lens · ∞ · -1m-1)
eye point / diopter adjustment range: from about the last lens surface 21 mm (at -1 m-1 ) / Approx. -4 ~ + 2 m – 1
OVF simulation: EVF for exposure mode P / A / S / M / B shooting possible. Art Filter, WB, exposure compensation, such as a non-reflecting
live view: about 100% field of view, exposure compensation reflects, white balance reflects, gradation auto reflect, face detection reflect (up to 8 people), a ruled line display, enlarged display (3 times
Information display: Normal, histogram, highlight & shadow, level, OFF
LV boost: LV boost 1, LV boost 2 (corresponding to dark environment). LV boost can be set for each shooting mode. Display speed priority for LV boost 2, selectable image quality priority. Exposure simulation mode in OFF
monitor format 3.0 inch biaxial movable LCD. About 1.04 million dots (3: 2), an electrostatic capacitance type touch panel
**Focus**
AF method: High Speed Imager AF (imager phase difference AF / imager contrast AF in combination). Operated with phase difference AF when Four Thirds lens (optional mount adapter is required)
AF detection Luminance range: EV -3.5 to 20 (equivalent to ISO 100, with F 2.8 lens)
Distance measurement point / distance measurement point mode: 121 points (cross type phase difference AF), 121 points (contrast AF) / all targets, single target (standard, small), group target (5 points, 9 points, 25 points) custom four kinds of targets (number, mobile number of steps configurable)
focus mode: Single AF (S-AF) / continuous AF (C-AF) / manual focus (MF) / tracking AF (C-AF + TR) / preset MF
AF operation characteristics: Subject followability (5 steps), AF scan mode (3 types), C – AF center priority, C – AF center start

AF limiter: Yes. Turn on / off with the Fn button operation. Up to three distances can be registered.Distance display is approximate
AF target pad: Yes. Enabled by double-tap / disabled-friendly
super spot AF: Yes. Contrast AF at the center of the screen during zoom display. Micro Four Thirds lens when mounted only possible
face priority AF / pupil priority AF: Yes / Yes. Pupil priority AF is OFF, a short distance of the pupil priority right pupil priority, the left four from selected pupil priority

**Exposure control**

Metering (TTL image sensor metering): 324 divided digital ESP metering, center-weighted averaging metering, spot Metering, spot metering highlights / shadows. AF target interlocking spot metering friendly
metering range: EV-2 ~ 20 (F2.8 lens, ISO100 equivalent)
exposure mode, shooting mode: P: Program AE (Program shift allowed), A: aperture priority AE, S: Shutter priority AE , M: Manual, B: Valve (Valve, Time, Composite), C1 to C4
Automatic from ISO LOW (64 equivalent) to 6400 (initial setting), standard sensitivity, upper limit sensitivity can be changed from 200 to 6400 available Manual ISO: LOW (about 64 equivalent, equivalent to 100) 200 ~ 25600 (1 / 3or1EV step selectable)
exposure correction range: ± 5 EV (1 / 3,1 / 2,1EV step selected), a live view reflected, videos, HDR until ± 3EV
flickerless shooting: Yes

**Shutter**

format : electronically controlled focal-plane shutter, electronic front curtain shutter, electronic shutter
shutter speed: electronically controlled focal-plane shutter: 1 / 8,000 to 60 seconds, bulb, time, live composite
electronic front curtain shutter: 1/320 to 60 seconds, the electronic shutter 1 / 32,000 to 60 seconds
flicker scan: video 1 / 30.0 to 1 / 250.0, still images 1 / 50.0 to 1/7634

**Drives**

continuous shooting speed: continuous H: set to about 15 frames / sec (10 to 15 frames / sec Continuous L: About 10 frames / sec (1 Low setting continuous shooting L: approx. 8.5 frames / sec (can be set to 1 to 8 M / sec), silent continuous shooting H: about 60 frames / sec (15, 20, 30, 60 Pro / Capture Continuous H: Approximately 60 frames / sec (15, 20, 1, 10, 15, 18 frames per second) Pro capture continuous shooting L: About 18 frames / sec (can be set to 10, 15, 18 frames / sec), Maximum number of frames to shoot: Continuous shot H · At 15 fps [RAW]: Approx. 103 frames, [JPEG: LF]: About 132 frames, Continuous shot L at 10 fps [RAW]: About 287 frames, [JPEG: LF] Approximately 49 frames, [JPEG: LF]: about 49 frames, silent continuous shooting L at 18 fps [RAW]: about 74 frames, JPEG: LF: About 89 frames,

**Flash**

dimming method: TTL dimming, manual, auto, super FP (FPTTL auto, FP manual). Auto, Super FP function of the external flash
flash sync speed: 1/250 seconds or less. It is 1/125 to 1/8000 seconds at Super FP. When using the electronic shutter, it is 1/50 sec (~ ISO 6400), 1/20 sec (ISO 8000 ~), 1/20 sec when ISO bracket.External
flash: FL – 50R, FL – 36R, FL – 20, FL – FL – 300R, FL – 300R, FL – 600R, FL – 900R, FL – 900R, FL – 700WR

**Wireless flash control**

compatible External flash: FL – 50R, FL – 36R, 700WR
control system: command communication by flash lighting (Olympus wireless RC flash system)
Commander flash: FL-LM3, FL-600R, FL-900R, STF-8, FL-700WR

**White balance**

White balance mode: Auto, preset ), One touch WB (4 items allowed), CWB (color temperature specified)

**Picture mode**

Mode: i-Finish, Vivid, Natural , Flat, Portrait, monotone, custom, e portrait, water, color creator, Art Filter

**Art Filter**

Art Filter (Variation / Art Effect): Pop Art (I, II / a, b (- / c, e), day dream (I, II / a, b, c, d, f), light tone (- / d, f), rough monochrome The cross process (I, II / b, c, d, d), the toy photo (I, II, III / d), the diorama (I, II / d) d, e, f, g, h), dramatic tones (I / b, c, d, e, f), gentle sepia (- / a, b, c, d, f) A, b, c, d), water color (I, II / a, b, c, d), vintage (I, II, III / a, b, c, d, e, f, i), part (/, A, b, c, d, e, f, i), neonostalgia (- / a,
a soft focus effect, b pinhole effect, c white edge effect, d frame effect, e starlight effect, f blurring effect

(up and down, right and left), g ( c, d, e, f, i) Color effect (no color, yellow, orange, red, green), h toning effect (none, sepia, blue, purple, green),
i shade effect (up and down, left and right)
coloring (for part color): color selection color)
HDR photography: HDR (automatic synthesis) HDR1 (photographic), HDR2 (painterly). ISO 200, shutter speed setting is limited to 4 seconds maximum. Exposure compensation enabled
Live digital shift: shooting digital shift shooting available. Live view confirmation possible. ± 20 step correction in V direction, H direction possible, simultaneous in V direction, H direction possible Live ND ND
Live: Yes. S, Usable in M mode, the flash is not permitted, ISO up to 800, (at the time of ND2 setting) shutter speed maximum speed is 1/30, will be slower and ND set the number of stages is increased

**Tripod hi-res shots**

resolution: 50M pixels equivalent, [JPEG (50 M)] 8160 × 6120, [JPEG (25 M)] 5760 × 4320, [RAW] 10368 × 7776 shooting mode P, A, and S , M correspondence. RAW + JPEG, JPEG selectable.Camera RAW editing Allowed
to edit on a PC “Olympus Workspace” is the PC environment to work need
shutter system / Shutter speed: electronic shutter / 1 / 8000-60 seconds

**Hand-held hi-res shots**

resolution: 50M pixels equivalent, 25M pixel equivalent ( [JPEG (50 M)] 8160 × 6120, [JPEG (25 M)] 5760 × 4320, [RAW] 8160 × 6120 Shooting mode P, A, S, M correspondence. RAW + JPEG, JPEG selectable. Flash prohibited, RAW editable in camera. The editing of the PC “Olympus Workspace” PC environment in which operation is necessary
shutter system / Shutter speed: electronic shutter / 1 / 8000-60 seconds

**Low vibration shooting**

shutter system / Shutter speed: electronic shutter / 1 / 32,000 to 60 seconds
Exposure Delay: 0,1 / 8,1 / 4,1 / 2,1,2,4,8,15,30 seconds

**Silent shooting**

shutter system / Shutter speed: electronic shutter / 1 / 32,000 to 60 seconds
exposure delay: 0 , 1 / 8,1 / 4,1 / 2,1,2,4,8,15,30 seconds
manner mode: Yes. Electronic sound, AF illuminator, individually disable / enable flash, in the initial setting is prohibited

**Live valve / live time shooting**

display update time: 0.5 seconds to 60 seconds

**Live composite photography**

display update time / synthetic type: 0.5 seconds to 60 seconds / lighten compositing

**Videos**

video recording system: MOV (MPEG-4AVC / H.264 )
recording pixels / frame rate / compression method: [MOV] 4096 × 2160 (C4K) / 24p / IPB ( about 237Mbps)
3840 × 2160 (4K (FHD) / 60p, 50p / IPB (FHD ) / 30p, 25p, 24p / IPB (about 102Mbps)
1920×1080 (FHD) / 30p, 25p, 24p / ALL- IPP (SF, F, N) 60 p: 59.94 fps, 50 p: 50.00 fps, 30 p: 29.97 fps (
SF, F, N)
1280 x 720 (HD) / 60 p, 50 p, 30 p, 25 p,
24 p / ALL- , 25 p: 25.00 fps, 24 p: 23.98 fps 24.00 fps at C 4 K,
HDALL-I (AI: ALL-Intra / about 102 Mbps), FHDIPB (SF: SuperFine / about 52 Mbps, F: Fine / about 30 Mbps, N: Normal / about 18 Mbps
) , HDIPB (SF: SuperFine / about 26Mbps, F: Fine / about 14Mbps, N: Normal / about 10Mbps)
recording time limit: about 29 minutes
Art filter video: Yes. All art filter Allowed
movie Telecom: about three times the
time-lapse video (interval Video): 3840 × 2160 (4K) / 5Fps
1920 × 1080 (FHD) / 5Fps, 10Fps, 15Fps
1280 × 720 (HD) / 5Fps, 10Fps, 15Fps, 30 fps
High Speed Shooting: 120 fps (1920 × 1080 / MOV)
Shooting Movie Shake Reduction: M-IS 1 (Multimotion IS with Image Sensor Shift and Electronic Shake Reduction), M-IS 2 ),
HDMI Monitoring Through: Monitor mode (mode for outputting video and information to external monitor)

Recording mode ( mode for outputting video only for recording on external device)
Movie exclusive Picture mode: Flat, OM – Log 400 View Assist Yes

**Audio recording**

audio recording method: Wave format compliant (stereo linear PCM / 16bit, sampling frequency 48kHz) high-quality recording Allowed (stereo linear PCM / 24bit, sampling Frequency 96 kHz)
Microphone / Speaker: Built-in stereo microphone (also wearing is possible external stereo microphone) / Built-in mono speaker
microphone function: wind noise reduction (depending on the normal and sound quality), recording level adjustment, microphone input limiter, voice dubbing Allowed to a still image (up to 30 seconds)
IC recorder link: Slate tone generation function / Movie shooting and recording synchronization function. Compatible models: Linear PCM Recorder LS-100

**Wi-Fi function**

position information adding function: Yes (obtained from the GPS function with smart phones) Built-in GPS information is priority
wireless flash: remote live view, remote rec view, wireless touch AF shutter, timer shutter (countdown with sound / continuous shooting / short movie shooting s), remote power OFF, wireless shutter release mode, movie recording (image quality is limited)
image sharing function: smart phone the image to be transferred bookable can be transferred to the image: JPEG, MOV Allowed
easy Connection function: Easy connection with QR code Easy connection by Bluetooth (Image viewing, transfer)

**Camera control function Camera control function**

from PC: USB connection: Can be operated with both PC and camera
Wi-Fi connection: Shot via access point Transfer image to PC. 2.4 GHz / 5 GHz
GPS / field sensor system: GPS (GLONASS, QZSS), orientation sensor, pressure sensor, temperature sensor, acceleration sensor Exif recording, INFO display ready, sensor log acquisition available, image tracking data display available on smartphone (OI. Track is required), automatic time correction allowed by the GPS
menu language selection: Japanese, English, including 34 language

**Customize**

My Menu: 35 items (7 items x 5 pages)
Mode Dial Custom Set: 4 types (Can be registered in C1 to C4 of the mode dial)
Menu Custom Set: Yes (Menu items C1 to C4 registered in P, A, S , M, B). However there items that can not be reflected such as the shooting mode
multi selector customize: yes

**Input and output**

USB / remote control terminal: USB Type-C / φ2.5 mini jack (optional remote cable RM-CB2 available)
HDMI terminal: HDMI micro connector (Type-D )
flash terminal: hot shoe, PC terminal
wireless LAN: built (IEEE 802.11 A / B / G / N / Ac)
Bluetooth: built-in (Bluetooth Ver.4.2 BLE)
external microphone input terminal: φ3.5 stereo mini-jack (plug-ins power ON / OFF s)
headphone jack: φ3.5 stereo mini-jack
PC interface: SuperSpeed (USB3.0)
DC terminal: AC adapter AC-5 Allowed to connect

**The power supply**

use battery: two lithium-ion rechargeable battery BLH-1. 1 can operate even when the loaded
battery information: the remaining capacity (10-stage indicator,%, minutes), the number of times of photographing, Performance check
AC adapter optional AC adapter AC-5
USB powered: from devices USB PD standard Power supply enabled, Camera PD compliant standard Rev 3.0 Ver 1.0a
Charging in main unit: AC adapter AC – 5 and the connected USB device to charge the battery inside the main body. Charging accepted on camera power OFF, it behaves differently by the power supply performance of the USB device
power saving: Yes. Set time (1/3/5 min) sleep by the elapsed
photographable number of frames: about 870 sheets (BLH-1 two use, flash unfastened, CIPA test standard)
of about 2580 sheets (low power imaging mode, our test method)

moving continuous recording length: continuous recording length about 2 hours 50 minutes (JEITA standard), continuous recording length about 5 hours and 50 minutes

**Magnitude / weight**

size: width 44.4 mm × height 146.8Mm × depth 75.4Mm (excluding CIPA compliant projections)
weight (weight): about 997 g (. CIPA compliant battery 2, without including two memory cards eyecup), 849G (body only)

**Operating environment**

operating temperature: Operating
humidity: 30 to 90% (in operation), 10 to 90% (in storage): -10 to + 40 ° C (in operation), -20 to + 60 ° C

**Horizontal position and vertical position realized high holding ability In**

response to the demand of professional users who place importance on holding properties and operability at the time of shooting, we adopted a vertical position grip integrated structure. Both the horizontal position and the vertical position adopt a grip that is deep in the finger scales to improve the holding ability and realize ergonomic property that is less fatigue even in long-time shooting.

**High-speed continuous shooting at 20 frames / full pixel, 60 frames / second in RAW recording High-speed continuous shooting of**

up to about 60 frames / second enables you to capture the moment that can not be grasped with the naked eye with high definition. Besides, high-speed continuous shooting of 60 frames / second, high-speed continuous shooting of up to about 18 frames / second following AF / AE are shooting with silence, and performances that do not want to emit shutter sounds, and it is quite useful in the scene, such as do not want to interfere with the centralized sports

**Emphasis on the operation of the viewfinder shooting**

arrangement and shape of the buttons and levers, it renewed the height, realize the operation of being able to concentrate on more viewfinder shooting Did. Furthermore, a multi selector which can quickly move the focus area while looking through the viewfinder is arranged in each of the vertical position and the horizontal position. In addition to providing a new “C-LOCK” lever, you can lock not only the vertical position control but also the selected operating section.

**High magnification, high speed viewfinder**

viewfinder has newly designed its optical system and realizes the industry’s top class finder magnification of 0.83 (* 35 mm format conversion). Moreover, it is clearly displayed to the four corners without distortion by the four-piece composition using an aspherical lens or glass with a high refractive index. Like the “OM – D E – M1 Mark II”, it achieves a high – speed frame rate of 120 fps (progressive method), a display time lag of only 0.005 seconds, and captures moving subjects without stress.

**Further evolved robustness and reliability**

“OM – D E – M1X” has been developed to allow shooting even in harsh environments where professional photographers will meet, conducting an internal drip – proof test that is stricter than IPX 1 I will. You can shoot without the influence of the weather by realizing dustproof, drip-proof, low temperature resistance (-10 ° C) even when the cable is connected to the remote cable, microphone and headphone jack. Moreover, by adopting a new coating for SSWF (super sonic wave filter via Photo Rumors) which vibrates more than 30,000 times / second to remove dirt and dust, the possibility of dust and dust reflection in the photograph is reduced to 1/10 compared to the conventional It is. A heat dissipation structure that suppresses function limitation due to temperature rise at high load such as movie shooting and continuous shooting in the scorching sun and 400,000 times shutter life realize robustness and high reliability for professional photographers with peace of mind It is.

**The cartridge type**

loading system which can insert two lithium ion batteries “BLH – 1” adopted from the **cartridge type battery loading system** “OM – D E – M1 Mark II” is carried. Approximately 870 shots are possible (* CIPA test standard, about 2,580 in Olympus measurement in low power consumption shooting mode), battery exchange is easy even with a single leg or tripod attached. In addition, it is compatible with the USB PD (Power Delivery) standard, enabling power supply from USBPD standard power supply of maximum 100 W. It is also possible to charge the two “BLH-1” loaded in the body at the fastest about 2 hours.

**The multi selector**

“OM – D E – M1X” which can quickly move the AF area has AF multi selector which can move the AF area quickly while looking through the viewfinder in each of the vertical and horizontal positions.Movement of AF area during continuous shooting and movie shooting is also smooth.

**121 points with high degree of freedom in composition Comprehensive 121 point all-cross image plane phase difference AF sensor established with the all-cross image plane phase difference AF sensor**

“OM – D E – M1 Mark II” continues to be adopted, accurate with various composition Focusing with high degree of freedom can be performed. As a feature of Olympus’s image plane phase difference AF, you can quickly follow the speed change of irregularly moving subjects and subjects by using AF information not only from live view images but also from captured images. The AF low brightness limit realizes -6.0 EV (equivalent to ISO 100) when F1.2 lens is installed, and focuses on dark scenes and low contrast subjects with high precision.

**Various AF settings are possible**

Vertical / Horizontal Position **You can set the** AF target mode and AF area position for each shooting, and C – AF + M, which can instantly switch the MF by turning the focus ring during C – AF, Various AF settings according to the professional photographer’s needs are possible. The AF target mode also supports a new 25 point group target, and also has a custom AF target mode that allows AF area to be placed freely.

**“Pro capture mode” for RAW shooting, no blackout, “Pro Capture mode”**

which can record up to 35 frames from the time of shutter release can be recorded backwards, there is no blackout (image loss) at shooting, 20M high Recording with pixels, and also shooting in RAW mode are supported. Ever since its incorporation in “OM – D E – M1 Mark II”, it is also highly valuable from professional photographers and it is effective when photographing subjects with unpredictable movements as “works”.

**Two high-speed image processing engine “TruePic VIII” installed**

Reduced startup time and sleep recovery time, both SD card slots realize high speed response such as high-speed UHS-II support. In addition to contributing to speedup of cameras, we realized state-of-the-art shooting functions such as “handheld high res shot”, “live ND”, “intelligent subject recognition AF”.

**Landscape photographer realized long-awaited “hand held high**

reso shot” In addition to “tripod high res shot” capable of shooting ultrahigh resolution images of up to 80 M, “new handheld high res shot” specially requested from landscape photographers is newly installed did. High resolution images can be captured on hand, making it especially useful for high-definition photography in places where there are many mountain landscapes and tripods that can not be used.

**“Live ND”**

which can express expression using slow shutter effect “Live ND” which can express expression using slow shutter effect like using ND filter was installed. It is a new technology that can obtain slow shutter effect by combining multiple exposed images. In addition, you can check the slow shutter effect with the viewfinder before shooting by live view, and you can improve the shooting efficiency.The effect can be selected from 5 stages of ND 2 (equivalent to 1 shutter speed), ND 4 (2 steps), ND 8 (3 steps), ND 16 (4 steps), ND 32 (5 steps).

**Can capture 4K and 4K cinema**

powerfully Strong 5-axis camera shake correction + electronic camera shake compensation **enables** high-quality 4K, cinema 4K movie handheld shooting. The camera shake compensation intensity can be selected from 3 levels according to the attitude and movement of the photographer.

**Effective for scenes where light conditions are easy to change “OM – Log 400” shooting**

It is compatible with “OM – Log 400” shooting, which allows you to shoot without darkening from highlighting to dark areas and highlighting, and performing color grading by allowing you to express images with high degrees of freedom.

**Supported high-speed movie (120 fps) It corresponds**

to 120 fps high-speed movie with FullHD. Impressive image representation by slow motion effect becomes possible when playing.

**“Intelligent Subject Recognition AF”**

utilizing Deep Learning Technology A newly developed algorithm was developed using deep learning technology which is a kind of AI. It detects subjects in three genres of motor sports, aircraft and railroad, focuses on the best point, and tracks. For example, in the case of motor sports, since the subject is automatically detected by focusing on the driver’s helmet, it is possible to focus on the composition as well as improve the autofocus accuracy.

**Realizing the world’s best anti-shake performance in combination with “M. ZUIKO DIGITAL ED 12-100 mm F4.0 IS PRO”**

By installing a newly developed gyro sensor, up to approximately 7.0 steps of body alone, “M. With ZUIKODIGITAL ED 12-100 mm F 4.0 IS PRO “, we realized” 5-axis synchro anti-shake correction “which is the world’s maximum about 7.5 steps. You can also take hand-held shots with an unprecedented low-speed shutter, which is useful for nighttime, indoor shooting and other photography.

**Field sensor system installed. Addition of position information to image by built-in GPS**
Field sensors such as GPS sensor, thermometer, atmospheric pressure sensor, and compass are built in the camera. More detailed shooting information can be added to the image data by the camera detecting and recording the temperature, altitude, orientation, including position information of latitude and longitude.
**“Flickerless Shooting” & “Flicker Scan” The**
camera detects the blinking cycle of artificial light represented by a fluorescent light, controls the shutter to cut off according to the peak of brightness, uneven exposure between continuous shooting frames, and color unevenness The “flickering less shooting” which suppresses is carried. Moreover, it also supports “flicker scan” which can set the shutter speed more precisely in order to suppress the striped phenomenon which occurred when using silent mode (electronic shutter) and movie shooting.
**Wireless shooting Olympus Capture “Olympus Capture”**
camera control software **that supports image transfer supports** newly transferred images via Wi-Fi.Youcan wirelessly transfer images to your PC without connecting a USB cable during studio shooting. The frequency used is 2.4 GHz band and the 5 GHz band (which is specification which does not use some standards depending on the country of sale) which can perform high speed communication is usable. For details, please refer to “Olympus Capture” website.