Olympus E-M10 Mark II Specifications

Product Type

Product Type	Micro Four Thirds interchangeable lens system camera
Memory	SD Memory Card (SDHC, SDXC, UHS-I/II compatible, Eye-Fi Card compatible*) • Not compatible with Endless Memory
Sensor Size	17.3 mm (H) x 13.0 mm (V)
Lens Mount	Micro Four Thirds Mount

Image sensor

Product Type	4/3 Live MOS Sensor
Number of Pixels / Aspect Ratio	Number of effective pixels : Approx. 16.1 million pixels Total number of pixels : Approx. 17.2 million pixels Aspect ratio : 1.33 (4:3)
Dust Reduction	Supersonic Wave Filter (Image Sensor Dust Reduction System)

Recording (Still)

Recording Format	DCF, DPOF compatible / Exif, Print Image Matching III, MPO compatible

File Format	RAW (12-bit lossless compression), JPEG, RAW+JPEG, MPO(3D still)
Recording image size	[RAW] 4608 x 3456 pixels [JPEG] 4608 x 3456 pixels - 640 x 480 pixels

Image Stabilisation System

Type	Built-in 5-axis* sensor-shift image stabilisation for movie and still photos • Compensates for yaw/pitch/roll/vertical shift/horizontal shift
Modes	S-IS AUTO, S-IS1, S-IS2, S-IS3, OFF
Live View Image Stabilisation	Activation by half-press or enlarging view.
Focal Length Setting	Adjustable
Lens IS Priority	Selectable
Stabilisation Performance	4.0 EV steps* • Based on CIPA measurement conditions. When using M.Zuiko Digital ED 14-42mm F3.5-6.3 EZ (focal length =42mm (35mm equivalent with 84mm))
Available Manual Focal Length Setting	Input focal length : 8, 9, 10, 12, 15,16, 17.5,18, 24, 25, 28, 30, 35, 40, 42.5, 48, 50, 55, 65, 70, 75, 80, 85, 90, 100, 105, 120, 135, 150, 180, 200, 210, 250, 300, 350, 400, 500, 600, 800, 1000

Finder

Finder Type	Eye-level OLED viewfinder, Approx. 2.36M-dot
Field of View / Viewfinder Magnification	Approx. 100% / Approx. $1.08x_{[1]}$ - $1.23x_{[2]}$ ($-1m_{-1}$, 50mm lens, Infinity) 1: at Finder Style 1, 2 (aspect 4:3) 2: at Finder Style 3 (aspect 4:3)
Eye point / Diopter adjustment range	Approx. 19.2mm ($-1m_{-1}$, Distance from rear lens surface) / -4 ~ $+2m_{-1}$
Preview	Live View preview with depth of field preview lock
Display Grid	Off, normal grid, golden grid, scale, diagonal, movie grid
Level Gauge	2-axis (horizontal / vertical) level gauge
Finder Style	3 styles
Brightness / Colour Temperature Control	Adaptive brightness technology, ±2 level manual control /±3 level manual control
Expansion of Live View Dynamic Range	S-OVF (simulated optical viewfinder)* • Available in the EVF when in P, A, S and M modes. Art filter, WB and exposure are not reflected in EVF.
Eyecup	Interchangeable with separately available EP-16 eyecup

Live View

Live View	Approx. 100% field of view,

	exposure compensation preview, WB adjustment preview, gradation preview, face detection preview (up to 8 faces), grid line, magnification display (x3/x5/x7/x10/x14), Display modes: Standard, Histogram, Highlight & Shadow, Level Gauge, Off (Image Only)
Preview	Preview with depth of field preview lock

Monitor

Monitor Type	3.0-inch tilting monitor* • Approx.1040k dots (3:2), electrostatic capacitance touch panel
Touch Control	Shutter release, magnification, AF area selection, AF area size adjustment, frame forward/backward, magnified playback, Live Guide, Super Control Panel, Art Filter selection, scene mode selection, Wi-Fi connection,
Tilting Capability	Upward tilting angle : up to 80 degrees Downward tilting angle : up to 50 degrees
Brightness / Colour Temperature Control	±7 levels / ±7 levels
Colour Tone Select	Vivid / Natural

Focusing

AF System	High-speed Imager AF
Focus Mode	Single AF (S-AF) / Continuous AF (C-AF) / Manual Focus (MF) / S-AF + MF / AF tracking (C-AF + TR)

	• When a Four Thirds lens is attached, S-AF (Single Target) can only be used. Focus operates as MF during movie recording.
Full-time AF	Available
Magnified Frame AF	Selectable from over 800 AF points Selectable magnification: x3, x5, x7, x10(Default), x14 Super Spot AF* • Available only when a Micro Four Thirds lens is attached
Face Detection AF / Eye Detection AF	Available Eye Detection AF Mode : Off / Nearer-eye Priority / Right-eye Priority / Left-eye Priority
Focusing Point / Focusing Point Selection Mode	81-area multiple AF/ All target, Group target area (9-area), Single target(normal), Single target (small)
AF Targeting Pad	Available • Activate/deactivate with double tap on rear monitor
AF Illuminator	Available
Manual Focus Assist	Focus ring rotation activates Live View image magnification or focus peaking when in S-AF+MF or MF mode
Peaking Function	Activate with Fn button or focus ring Change peaking settings using the Info button Colour selection: white, black, red, yellow

	Intensity selection: high, normal, low Back light effect: on, off

Exposure Control(Still)

Metering System (TTL Image Sensor Metering)	Digital ESP metering (324-area multi pattern metering), Centre-weighted average metering, Spot metering, Spot metering with highlight control, Spot metering with shadow control
Metering Range	EV -2 - 20 (using 17mm f/2.8, ISO 100)
Exposure Mode	i Auto, P: Program AE (Program shift can be performed), A: Aperture priority AE, S: Shutter priority AE, M: Manual, Bulb, Time, Scene select AE, Art Filter, Underwater wide / macro* , My Set • Selectable from menu as a function on Fn button • My set can be set to mode dial function
Scene Select AE	Portrait, e-Portrait, Landscape, Landscape + Portrait, Sport, Hand-held Starlight[1], Night scene, Night + Portrait, Children, High Key, Low Key, DIS mode, Macro, Nature Macro, Candle, Sunset, Documents, Panorama, Fireworks, Beach & Snow, Fisheye Conv., Wide Conv., Macro Conv.,Panning, 3D[2], 1 8 images automatically shot and combined into a single image composite 2 For 3D lens(H-FT012 by Panasonic) only, still photo only
ISO Sensitivity	Auto ISO : Low (approx. 100) - 25600 (Customizable, Defalut: Low - 1600) Manual ISO : Low (approx.100), 200 - 25600, 1/3 or 1 EV steps selectable
Exposure Compensation	Still photo ±5 EV, movie ±3 EV, with selectable EV adjustment steps (1/3, 1/2, 1) • HDR Shooting, monitor and EVF displays only up to ±3 EV.

AE Lock	Locks with a half-press of the shutter button (Can be set to Fn button as well)

Shutter

Shutter Type	Focal-plane shutter / 1/4000 - 60 sec., with selectable EV adjustment steps (1/3, 1/2, 1) Bulb/Time: Selectable exposure time (1/2/4/8/15/20/25/30 min.), with 8-min. default setting

Flash

Flash Intensity Control Method	TTL Auto, Auto*, Manual, Super FP* (FP-TTL AUTO, FP-MANUAL) • Available on the external flash
Built-in Flash	TTL Flash, GN=5.8 (ISO100/m) / GN= 8.2 (ISO200/m)
Flash Mode	Flash Auto, Redeye, Fill-in, Flash Off, Red-eye Slow sync.(1st curtain), Slow sync.(1st curtain), Slow sync.(2nd curtain), Manual(1/1(FULL)~1/64)
Synchronisation Speed	1/250 sec. FL-LM3: 1/250 sec, FL-50R: 1/180sec., Others:1/200sec., Super FP:1/125-1/4000sec., RC mode:1/160sec.
Flash Intensity Control	Up to ±3 EV in 0.3, 0.5, 1 EV steps selectable
Compatible External Flash	FL-50R, FL-36R, FL-20, FL-14, FL-300R, FL-600R

Wireless flash control

Drive

Compatible	FL-50R, FL-36R, FL-300R, FL600R
Control Method	Triggered and controlled by the built-in flash (Olympus Wireless RC Flash system compatible)
External Flash Type	TTL Auto, Auto, Manual, FP-TTL-AUTO, FP-MANUAL
Channel	4 channels
Groups	4 groups: 3 external flash + 1 commander flash*) / Built-in flash
Sequential Shooting Maximum Speed	[Sequential Shooting H Mode] : Approx 8.5 fps • IS Off • Focus and exposure are fixed at the values for the first shot [Sequential shooting L Mode] : Approx 4.0 fps • When using the M.Zuiko Digital ED 14-42mm f/3.5-5.6 EZ
Max. recordable pictures on sequential shooting *	[Raw] Max. ∞ frames (in 4.0 seq. shooting L) Max. 22 frames (in 8.5 seq. shooting H) [JPEG] Max. ∞ frames (in 4.0 seq. shooting L) Max. 36 frames (in 8.5 seq. shooting H) • When using the M.Zuiko Digital ED 12-40mm f/2.8 Pro • With Toshiba SDHC UHS-II R260 / W240 Exceria™ Pro
Self-timer	Operation time: 12 sec., 2 sec., Custom (Wait time: 1-30sec., Shot interval: 0.5 / 1 / 2 / 3sec., Number of shots: 1-10, Every time AF: On / Off)

Bracketing

Exposure Bracketing	2, 3 or 5 frames in 0.3 / 0.7 / 1.0EV steps selectable, 7 frames in 0.3 / 0.7EV steps selectable • AE-bkt can be programmed to the Fn-button
ISO Bracketing	3 frames in 0.3 / 0.7 / 1.0EV steps selectable
White Balance Bracketing	3 frames in 2, 4, 6 steps selectable in each A-B / G-M axis.

Flash Bracketing	3 frames in 0.3 / 0.7 / 1.0 EV step selectable
Art Filter Bracketing	i-Enhance, Vivid, Natural, Muted, Portrait, Monotone, Custom, Art Filters selectable
Focus Bracketing	Available (3 to 999 shots, Focus steps adjustable from 1 to 10) • Compatible with Micro Four Thirds lenses

HDR Function

HDR (Auto Composite)	HDR1, HDR2 (Painting-like) • ISO sensitivity is fixed at 200, and maximum shutter speed setting is 1 sec. • Exposure compensation can be performed.
Bracketing for HDR Postprocess	3 or 5 frames in 2.0 / 3.0 EV steps selectable, 7 frames in 2.0EV steps selectable. • This function does not execute HDR processing in PC • HDR function can be assigned to the Fn-button

Art Filter

Mode (Variation / Effect)	Pop Art (I, II / a. b. c. d. e. f) Soft Focus (- / c.e) Pale & Light Colour (I, II / a. b. c. d. f) Light Tone (- / d. f) Grainy Film (I, II / b. c. d. g. h) Pin Hole (I, II, III / d) Diorama (I, II / d) Cross Process (I, II / b. c. d. f) Gentle Sepia (- / a. b. c. d. f) Dramatic Tone (I / b. c. d. e. f) (II / b. c. d. e. f. g. h) Key Line (I, II / a. b. c. d. e) Watercolour (I, II / a. b. c. d) Vintage (I, II, III / a. b. c. d. e. f. i) Partial Colour (I, II, III / a. b. c. d. e. f)

Art Effects	a. Soft Focus Effect b. Pin-Hole Effect c. White Edge Effect d. Frame Effect e. Star Light Effect f. Blur Effect (Top & bottom, Left & Right) g. B&W Effect (None, Yellow, Orange, Red, Green) h. Pict. Tone (None, Sepia, Blue, Purple, Green) i. Shade Effect (Top & bottom, Left & Right)
Colour Ring (for partial colour)	18 colour selectable

Photo Story

Type (Variation / Flame / Number of divided parts)	Standard (I,II,III,IV / a, b, c, d / A, B, C, D) Speed (- / - / A, E, F) Zoom In / Out (I,II/ a, c / A, G) Layout (I, II, III, IV / - / -) Fun Frame (I, II, III / - / -)
Frame Effect	a. White Frame b. White Frame & White Edge Effect c. Black Frame d. White Frame & Pin Hole Effect
Aspect & Window Pattern	A. 4:3, 2 frames B. 4:3, 3 frames C. 1:1, 2 frames D. 1:1, 3 frames E. 1:1, 4 frames F. 16:9, 5 frames G. 16:9, 2 frames
Hold Function	Available

Movie

Recording	MOV (MPEG-4AVC / H.264) , AVI (Motion JPEG)

Recording (Sound)

Recording Format	[MOV] 1920 x 1080(FHD) / 30p, 25p, 24p / ALL-I (A-I), IPB (SF, F, N) 1920 x 1080(FHD) / 60p, 50p / IPB (SF, F, N) 1280 x 720(HD) / 60p, 50p, 30p, 25p, 24p / ALL-I (A-I), IPB (SF, F, N) Wave Format (Stereo Linear PCM / 16-bit, Sampling Frequency 48 kHz) • 60p: 59.94 fps, 50p: 50.00 fps, 30p: 29.97 fps, 25p: 25.00 fps, 24p: 23.98 fps
Mode / frame rate / compression method Microphone / Speaker	• FHD ALL-I (A-I: approx. 77Mbps) • FHD IPB(SF: approx. 52Mbps, F: approx. 30Mbps, N: approx. 18Mbps) Built-in Stereo Microphone / Built-in Mono Speaker [AVI] 1280 x 720(HD) / 30p 640 x 480(SD) / 30p
Microphone Function	Wind Noise Reduction*, Recording Volume, Microphone Volume Limiter Audio Dubbing Possible for Still Pictures (up to 30 sec.) • Frame rates may drop when particular Art Filters and Movie Effect are used • Class-10 or higher SD card is recommended for shooting movies. • May affect audio quality. • UHS-II or UHS-I U3 card is recommended for ALL-I shooting.

White Balance

Maximum recording time White Balance Mode	[MOV] Approx. 29min [AVI] HD : Approx. 7min* / SD : Approx. 14min* Auto WB, 7 Preset WBs, 4 Capture WBs, Custom WB (Kelvin setting) • Excluding when particular Art Filters are used.
White balance compensation Art Filter Movie	±7 steps in each A-B / G-M axis Available* • Except for Custom WB • Frame rate: 30 fps or lower.

Colour Mode

Movie Effect	One-shot Echo / Multi-echo / Art Fade / Old Film
Colour matrix One-push Movie Digital Teleconveter	sRGB, Adobe RGB ×4 (Can be activated only in Movie Mode with Movie Effect on)

Picture Mode

Mode Time Lapse	AVI Motion JPEG i-Enhance, Vivid, Natural, Muted, Portrait, Monotone, Custom, e-Portrait, Underwater, Art Filters 3840 x 2160(4K) / 5 fps 1920 x 1080(FHD) / 5 fps, 10 fps, 15 fps 1280 × 720(HD) / 5 fps, 10 fps, 15 fps, 30 fps

Gradation	Auto, Normal, High Key, Low Key [except Art Filters]

Keystone Compensation

Keystone Compensation	Available (Can be confirmed on Live View)

Anti-shock Mode

Shutter Type / Shutter Speed	Electronic First Curtain Shutter / 1/320* - 60 sec. • For speeds over 1/320 sec., mechanical shutter will automatically be selected.
Shutter Start Delay	0, 1/8, 1/4, 1/2, 1, 2, 4, 8, 15. 30 sec.

Silent Mode

Shutter Type / Shutter Speed	Electronic Shutter / 1/16000 - 60 sec.
Shutter Start Delay	0, 1/8, 1/4, 1/2, 1, 2, 4, 8, 15. 30 sec.

Live Bulb / Live Time

Update Interval Time	0.5 sec. - 60 sec.

Live Composite

Update	0.5 sec. - 60 sec. / Lighten Mode (Bright Area Prioritisation)

Interval Mode

Interval Mode	Interval Time 1 sec. - 24 Hours, maximum 999 frames. Automatic Time-lapse movie processing aviailable.

Multi Exposure

Number of Picture / Function	2 frames / Auto gain, Exposing on Recorded picture(RAW)

Multi Aspect

Aspect Ratio	4:3 (Default) / 3:2 / 16:9 / 1:1 / 3:4

Level Gauge

Detection	2-axis

One Push Tele-converter

Magnification	x2

Wi-Fi

GPS info. Function	Via smartphone GPS data

Wireless Shooting	Live View, Rec View, Wireless Touch AF shutter, Self Timer (w / Countdown guidance, Sequential shooting, movie recording capability), Wireless Release, Movie Recording, Power Off iAuto / ART / P / A / S / M (Live Bulb, Live Time and Live Composite) and drive mode can be selected. • Aperture, Shutter Speed, Exposure, ISO Sensitivity, White balance can be adjusted. • When in private connection
Image Share	File Type: JPEG*, MOV Connect to up to four devices simultaneously. Marking function for image share. • Excluding MPO file
Easy Connection	QR code setting.

Playback

Playback Mode	Single-frame, Information Display, Index Display (4 / 9 / 25 / 100 frames), Clips, Calendar, Enlargement (2x - 14x), Movie (With sound, FF / REW / Pause), Picture Rotation (Auto), Slideshow (With sound including BGM, Slide Show Effects, Replaceable BGM), Light Box Display
Information display	Histogram (independent luminance / RGB available), Highlight/Shadow point warning, AF frame, Photographic information, OFF

Menu

Languages	34 languages selectable : English, French, German, Spanish, Italian, Japanese, Korean, Traditional Chinese, Simplified Chinese, Russian, Czech, Dutch, Danish, Polish, Portuguese, Swedish, Norwegian, Finnish, Croatian, Slovenian, Hungarian, Greek, Slovakian, Turkish, Latvian, Estonian, Lithuanian, Ukrainian, Serbian, Bulgarian, Rumanian, Indonesian, Malay, Thai

Image Editing

Editing Function	Raw Data Edit, Gradation Auto, Monochrome, Sepia, Red-eye Fix, Saturation, Resize (1280x960, 640x480, 320x240), Trimming, Aspect, e-Portrait, Image Overlay, Postrecording
Raw Data Edit	Raw data edit based on settings of the camera (Including e-Portrait, Colour Creator, Art Filter, Art-bkt). 2 Programmable Settings, Preview Capability.

Print

Print Function	Print Reservation (DPOF), Direct Print (PictBridge compatible)

Input / Output

USB / AV / Remote Control Connector	Dedicated Multi-connector [USB: USB 2.0 Hi-speed, Video: NTSC / PAL selectable, Optional Remote Cable RM-UC1 compatible.]
HDMI Connector	Micro HDMI (Type-D)
Flash Attachment	Hot Shoe / Sync. terminal
Wireless LAN	Built-in (IEEE 8.02.1 b / g / n)
PC Interface	USB 2.0 Hi-speed
TV Interface	HDMI Out (HD / Stereo), Video Out (SD / Mono)

Power Requirements

Battery	BLS-50 Li-ion Battery (Included)
Sleep mode	Available (1 / 3 / 5 min. off)
Number of Recordable Pictures	Approx. 320 shots (using BLS-50 and TOSHIBA SD with IS on, based on CIPA standards) Approx. 750 shots (when shot in Quick Sleep Mode, based on CIPA standards)
Battery Life (Movie) [1]	Approx. 80 minutes* (Under standard JEITA testing) Approx. 150 minutes* (When zoom and other operational functions are not used) • When repeatedly recording at the maximum time of 29 minutes

Dimensions / Weight

Dimensions	119.5 mm(W)×83.1 mm(H)×46.7 mm(D) [CIPA guideline compliant, Excluding protrusions]
Weight	Approx. 399 g [CIPA guideline compliant, with BLS-50 battery and Memory card] Approx. 351 g [Body only]

Operating Environment

Temperature	0~ +40℃ (When in operation) / -20 ~ +60℃ (When stored)
Humidity	30 - 90% (When in operation) / 10 - 90% (When stored)

Box contents

Box	Body, USB Cable, Shoulder Strap, Olympus Viewer 3 (CD-ROM),

Contents	Instruction Manual, Warranty card, BLS-50 Li-ion Battery, BCS-50 Li-ion Battery Charger