



Clifton Cameras Product Specification

Olympus OM-D E-M1 Mark II Camera Body with 12-40mm Lens

Body material: Magnesium alloy body

Lens Mount: Micro Four Thirds

Image Sensor

Type: 4/3 " Live MOS sensor

Effective Pixels: 20.4 Megapixels

Filter array: Primary colour filter (RGB)

Aspect ration & area: 4:3 / 17.3 x13.0mm

Full resolution: 21.8 Megapixels

Engine

Type: TruePic VIII

Filter: Dust reduction filter, Supersonic Wave Filter

Viewfinder

Type: Electronic Viewfinder

Pixel number: 2.360K dots

Diopter adjustment: Yes; -4.0 -+ 2.0 diopters / built-in type

Field of view: Approx, 100%

Magnification: Max, 1.48x with a 50mm lens set to infinity at -1 dioptre (depending on selected viewfinder style)

Eye point: 21mm at -1 dioptre from eyepiece lens

Style: 3 styles selectable

Displayed information:

- Aperture value
- Shutter speed
- AF frame (superimpose)
- AF confirmation mark
- AF lock
- Auto bracket
- Battery check
- Exposure compensation indicator
- Exposure compensation value indicator
- Exposure level indicator
- Exposure mode



- Flash
- FP Flash
- IS Activating mode
- Metering mode
- Number of storable sequential pictures
- White balance
- Highlight & shadow
- Liver Pre-view function
- Histogram

Brightness adjustment: Adaptive Brightness Technology / manual settings: +/- 7 levels

Correction of colour temperature: +/- 7 levels

S-OVF: Expands the Liver View dynamic range

*Available in the EVF when in P, A, S and M Modes. Art filter, WB and exposure are not reflected in EVF

Live View

Displayed information:

- Aperture
- Shutter speed
- Auto bracket
- AE lock
- Focus mode
- Shooting mode
- Battery check
- IS activating mode
- Face / Eye detection mode
- Record mode
- ISO
- Sequential shooting mode
- White Balance
- Metering mode
- Exposure compensation value
- AF frame display
- AF confirmation mark
- Shooting information
- Spot metering area
- Super FP
- Flash Status
- Touch Panel Condition
- Focal Length
- Flash mode
- Histogram
- Level Gauge
- Highlight & shadow
- Focus Peaking
- Number of storable pictures
- Custom
- Face detection
- Flash intensity
- Wi-Fi

Field of view: Approx. 100%

Magnification levels: 3/5/7/10/14x

Dynamic range expansion: When in HDR1 or HDR2



Display modes

- Comparison
- Grid (4 Types)
- Grid
- Histogram
- Level Gauge
- Magnified View
- Standard information
- Off

Image stabiliser: Type: Sensor-Shift

Modes: Five-dimensional, vertical or horizontal activation, automatic

Effective Compensation Range: Up to 5.5 EV Steps ((CIPA))

Focusing System

Method: TTL phase difference detection system, contrast detection system

Focus areas:

- 121 points* / All target, Group target (9-areas or 5-areas), Single target
- 800 points / Manual selection in Magnified View Mode

*All cross-type

AF Lock: Yes; Locked by first position of shutter release button in single AF mode, AE/ AF lock button (customized)

Modes:

- Manual focus
- Preset MF*
- Single AF
- Continuous AF
- Single AF + MF
- AF Tracking

*Distance setting values are rough estimates and only AF lenses can be used.

AF Illuminator: Yes

Full-time AF: Yes

Manual focus: Yes; With an enlarged focusing area or focus peaking

Face Detection extension:

- Eye Detect AF: Off
- Left side priority
- Near side priority
- Right side priority

Predictive AF: Yes

AF tracking: Yes; Available in continuous AF mode



Focus Peaking

Colour selection: White, black, red, yellow

Intensity: High/ Normal/ Low

Back light effect: On/Off

Focus Bracketing Mode

Number of images: 3 – 999 shots

Step size: 10 levels

- Compatible with: All Micro Four Thirds AF lenses

Exposure System:

Modes

- Programme automatic
- Aperture priority
- Shutter priority
- Manual
- Bulb
- Time
- Movie
- HDR
- My Mode
- Custom shooting
- Custom 1
- Custom 2

Exposure Compensation: +/- 5 EV (1, ½, 1/3 steps)

Note: Monitor and EVF displays only up to ± 3 EV

Exposure bracketing:

- 2/3/5 frames (+/- 1/3, 2/3, 1 EV steps)
- 7 frames (+/- 1/3, ½, 2/3 EV steps)

ISO Bracketing:

- 3 frames (1/3, ½, 1 EV steps)

AE lock: Yes

My Mode: 4 settings storable

Enhancement Function: Digital Shift (horizontal and vertical compensation can be performed simultaneously)

Shadow Adjustment Technology



HDR Bracketing:

- 3 /5 frames (+/-2/ 3 EV steps)
- 7 frames (+/-2 EV steps)

Multi-Exposure

Max number of frames:

- 2 frames (shooting)
- 3 frames (editing)

Auto gain control: Yes

Frame assistance: Liv View

Light Metering

Method: TTL open aperture light metering

zones: 324 zones Multi-pattern Sensing System

Detection range: -2 -20 EV (17mm f2.8, ISO 100)

Modes:

- ESP light metering
- Spot metering
- Center-weighted metering
- Highlight
- Shadow

Art Filter

Modes

- Pop Art
- Soft Focus
- Pale & Light Colour
- Light Tone
- Grainy Film
- Pin Hole
- Diorama
- Cross Process
- Dramatic Tone
- Gentle Sepia
- Key Line
- Water Colour
- Vintage
- Partial Colour *

Variation/ Effect: Available

Art Filter bracketing: Art Filters selectable



Sensitivity

Auto: (customizable, default ISO LOW-6400)

Manual: ISO LOW – “5600 in 1/3 or 1 EV ISO steps

Shutter

Shutter type: Computerised focal-plane shutter

Self timer: 2s/ 12s/ Custom

Durability: 200000 shots

Shutter Speeds:

Shutter speed range: 1/800- 60s (in 1/3, ½, 1 EV steps)

Bulb mode: Up to 30 minutes (selectable longest time in the menu, default: 8 minutes)

High res shot

Shutter type: Electronic shutter

Shutter speed: 1/8000-8s

Start delay: 0, 1/8, ¼, ½, 1, 2, 4, 8, 15, 30s

Resolution:

- JPEG: 8160x6120 / 5760x4320 RAW: 10368x7776
- Equivalent to 50M/ 25M pixel sensor (8 shots combined into a single JPEG using sensor shift)

Available in P/ A/ S/ M mode: Anti-shock mode

Shutter type: Electronic first curtain shutter

Shutter Speed: 1/320* - 60s

Start delay: 0, 1/8, ¼, ½, 4, 8, 15, 30s

*For speeds over 1/320 sec. The mechanical shutter will automatically be selected

Silent mode

Shutter Type: Electronic Shutter

Shutter Speed: 1/32000 – 60s

Start delay: 0, 1/8, ¼, ½, 1, 2, 4, 8, 15, 30s



White Balance

AUTO WB system: Advanced detection system with Live M-OS sensor

Manual White Balance (One-Touch): Yes

White balance bracketing: 3 frames +/- -2, 4, 6 mired steps

One-touch white balance: 4 custom settings can be registered

Custom WB: 1 setting can be registered at Kelvin temperature (2000K -14000K)

Preset Values

- Tungsten
- Fluorescent 1
- Sunlight
- Flash
- Overcast
- Shade
- Underwater

Auto Flash Adjustment: Off/ Auto WB/ Flash

Keep warm colour: On/Off

Sequence Shooting:

- Speed (H) Approx. 15fps
- Speed (L) 10fps
- Silent mode
- Speed (H) Approx. 60fps
- Speed (L) Approx. 18fps
- Pro Capture mode
- Speed (H) Approx 60fps
- Speed (L) Approx. 18fps
- Pre-shutter Frames
- 0-14 frames (recorded by half release prior to full release)

Frame count limiter: 1-99 frames/ Off (unlimited frames) (incl, pre-shutter frames)

Conditions: Memory card: TOSHIBA SDHC UHS-II R95 W90 Exceria

- When using the M.Zuiko Digital ED 12-40mm f2.8 Pro
- Maximum sequential shooting speed may be affected by several factors including lens used, brightness, aperture, shutter speed, and ISO setting
- When ISO is 8000 or above, 30 fps becomes the maximum sequential shooting speed. The actual shooting speed may become slower than the set shooting speed by a few frames per second. When using ISO Bracketing, performance will be affected at IOS 2000 or above.

Image Processing

Colour space: sRGB/ Adobe RGB

Sharpness + Contrast: 5 levels



Contrast: 5 levels

Saturation: 5 levels

Black & White filter: Yellow, Orange, Red, Green

Black & White toning: Sepia, Blue, Purple or Green in Black & White mode

Picture mode

Gradation: 4 levels (auto, high-key, normal, low key)

Engine: TruePic VIII

Art Filter bracketing: Available

Tele converter effect: 2x

Internal Flash

Modes:

- AUTO
- Manual
- Manual (Full, 1/4, 1/16, 1/64)
- Red-eye reduction
- Slow synchronisation with red-eye reduction
- Slow Synchronization
- Slow synchronisation 2nd curtain
- Fill-in
- Off
- TTL-Auto
- FP Manual
- FP TTL Auto

Type: Detachable flash with bounce capability (bundled)

Flash compensation: +/- 3 EV / 1/3, 1/2, 1 EV steps

Guide number: 12.9 (ISO 200)

X-sync speed: 1/250s / 1/8000s (Super FP Mode)

Type: TTL Auto, Auto, Manual, FP TTL AUTO, FP Manual

Modes

- Auto
- Red-eye reduction
- Slow synchronization
- 2nd curtain and slow synchronization
- Fill in for exclusive flash
- Manual

Intensity: +/- EV (1/3, 1/2, 1 EV steps)

Note: Some functions are only available if they are supported by the external flash.



Wireless Flash Control

Number of channels: 4 channels

Compatible external flash: FL-38R, FL-50R, FL-300R, FL-600R, FL-900R, STF-8

Control method: Triggered and controlled by bundled flash

Group setting: 4 groups

Available when used together with cameras compatible with the Olympus wireless RC flash system.

Monitor

Monitor type: Vari-angle LCD -Touch Panel

Monitor Size: 7.6cm/ 3.0" (3:2)

Resolution: 1037K dots

Brightness adjustment: +/- 7 levels

Colour balance: +/- 7 levels Vivid (default)/ Natural

Touch Control functions

- AF area enlargement
- AF area selection
- Art Filter
- Enlargement
- Enlargement playback
- Frame forward backward
- Live Guide
- Scene Modes
- Shooting mode
- Shutter release
- Super Control Panel
- Wi-Fi connection

Level Gauge

Detection: 2-axis

Display: Rear display and viewfinder

Super Control Panel

Displayed information

- Batter indicator
- Record mode
- Shutter speed
- Aperture Value
- Exposure Compensation indicator
- ISO
- AE bracketing
- AF frame
- Focus mode
- AEL notification
- Face detection
- Number of storable frames
- Metering mode
- Exposure mode
- Exposure level view
- Flash compensation value
- Colour Space
- Gradation
- Colour saturation compensation value
- Sharpness compensation value
- Contrast compensation value
- White balance
- White balance compensation value
- Noise reduction Flash mode
- Drive Mode
- Internal temperature warning
- Histogram

Recording Formats

RAW: 12 bit

RAW & JPEG: Yes; parallel recording

JPEG: Yes

Aspect ratio: 4:3/ 3:2/ 16:9/ 6:6/ 3:4

MPO (3D): Yes

Image Size

RAW:

- 5184x3888 compressed
- 5184x3888 Fine (compression ¼)

Still Image Recording

EXIF: 2.3

DCF: Yes

RAW: Yes



Dual SD Card settings: Standard, Auto Switch, Dual Independent, Dual Same. When two cards are inserted, card to be saved on to or to be viewed can be designated

Movie recording system

Recording format: MOV(MPEG-4 AVC/ H.264), AVI (Motion Jpeg)

Time code:

- Rec run/ Free run
- Drop frame/Non-drop frame

Image stabilisation Mode:

- Yes; Sensor-Shift
- M-IS1 (image sensor shift and electronic image stabilizer with multi-motion IS)
- M-IS2 (Image sensor shift with multi-motion IS)

4K Movie quality:

- 4096x2160 (C4K)/ 24p/ IPB (approx.. 237 Mbps)
- 3840x2160 (4K)/ 30p, 25p, 24p / IPB (approx.. 102 Mbps)

HD Movie quality:

- Full HD 1920x1080 (15:9)/ 20p, 25p, 24p / ALL-I (A-I), IPB (SF, F, N) (MOV)
- HD 1280x 720 (16:9)/ 60p, 50p, 30p, 25p 24p / ALL-I (A-I), IPB (SF, F, N) (MOV)
- ALL-I: - 202Mbps
- FullHD IPB (Sf:-52Mbps, F:-30Mbps)
- HD IPB (SF:-26Mbps, F:-14 Mbps, N:10Mbps)
- HD 1280x 720 (16:9)/ 30p (MOV)

Movie quality: 640x 480/ 30p (AVI Motion JPEG)

Maximum Recording Time:

- 29min (MOV)
- 14 min (SD)/ 7 min (HD) (AVI Motion JPEG) (Frame rate may drop when using certain art filter)

Max, file size:

- 4GB (AVCHD)
- 2GB (Motion JPEG)

Exposure Modes

- Aperture priority
- Art Filter
- Manual
- Programme Automatic
- Shutter Priority

Call 10 or higher SD card is recommended for movie shooting

UHS-II or UHS-I U3 Card is recommended for ALL-I shooting

Movie Specialties

Time lapse: 4K, 1080p, 720p (AVI Motion JPEG)



Fast motion: Yes

Slow motion: Yes

Movie Clips: 1, 2, 4, 8s

(Extension to 16s by pressing record button before clip ends.)

Movie effects:

- Multi shot echo
- One shot echo
- Art fade
- One push tele-converter
- Old Film

Art Filter:

- Cross Process
 - Diorama
 - Dramatic Tone
 - Gentle Sepia
 - Grainy Film
 - Key Line
 - Light Tone
 - Pale & Light Colour
 - Pin Hole
 - Pop Art
 - Soft Focus
 - Vintage
 - Partical Colour*
- *18 colours selectable
Frame rate is limited to 30fpd or lower

HDMI Live View: Yes (GUI* is shown on connected device only and peaking is not available)

*GUI can be hidden for recording on external drive under following condition. Movie type: YCbCr 4:2:2/ Frame rate: as set/
Sound: no

Sound Recording System

Internal microphone: Stereo

Recording format: Stereo PCM/16bit, 48KHz, Wave Format Base

Image Footage: 30s

Speaker: Yes

Microphone Functions :

- Wind Noise Reduction
- Recording Volume
- Volume Limiter
- Audio Dubbing



Linking Olympus PCM Recorders

Functions: Slate Tone/ Synchronised Audio Rec-Movie Rec

Compatible with: LS-100

View Images

Mode:

- Index
- Calendar
- Zoom
- Slide show
- Movie
- Single

Light box: Yes

Histogram in playback mode: Yes

Shooting information: Off/On

Highlight/Shadow point warning: Yes

Erase/ Protect/ Copy Function

Erase Modes

- Single
- All
- Selected

Image Protect mode: Single frame, Selected frames, All Frames, Release protect (Single/ All selected)

Image Editing

Editing functions:

- RAW data edit
- Red eye reduction
- Sepia
- Black & White
- Resize
- Correction of saturation
- Correction of brightness
- Correction of colour balance
- Shadow Adjustment
- Trimming
- E-Portrait
- Aspect ratio

Menu

Menu languages in camera:

English, French, German, Spanish, Italian, Russian, Czech, Dutch, Danish, Polish, Portuguese, Swedish, Norwegian, Finnish, Croatian, Slovenian, Hungarian, Greek, Slovak, Turkish, Latvian, Estonian, Lithuanian, Ukrainian, Serbian [Art Filter](#):



Customisation Options

Fn Button: Yes

My Mode: 4 settings storable (can be set to mode dial.)

Factory reset: Full/ Basic

Programmable button: Yes

Interface

Media:

SD Memory Card (SDHC, SDXC, UHS-I, UHS-II compatible) Class 10 or higher SD card is recommended for movie shooting. UHS-II or UHS-I U3 card is recommended for 4K, C4K, ALL-I shooting.

Slot 1: UHS-I, II compatible

Slot 2: UHS-I compatible

HDMI: Yes; Micro connector (Type D) *

USB 2.0 High Speed: Yes

USB 3: Type C

Wireless Connectivity: Wi-Fi

*" HDMI", the HDMI logo and "High-Definition Multimedia Interface" are trademarks or registered trademarks of HDMI Licensing LLC

Tethered control: Yes

Microphone jack: 3.5mm mini-jack

Earphone jack: 3.5mm mini-jack

Wi-Fi Functions

Easy Connection: QR code setting

Wireless Shooting :

- Live view
- Power off
- Rec View
- Self timer
- Touch AF & shutter
- P/ A/ S/ M exposure modes
- Bulb mode
- Zoom
- Movie recording
- Live Composite
- Short movie



Power Supply

Battery: BLH – 1 Lithium-Ion Battery

Sleep mode: 1, 3, 5, 10 min, and off selectable

DC- input: AC-5

Environment

Temperature: -10° - 40°C Operating temperature/ -20° - 60°C storage temperature

Humidity: 30-90% operation humidity / 10-90% storage humidity