

Clifton Cameras Product Specification

Canon EOS Ra Camera Full Spec

Specifications in detail

Image Sensor

Type

36 x 24 mm CMOS

Effective Pixels

Approx. 30.3 megapixels

Total Pixels

Approx. 31.7 megapixels

Aspect Ratio

3:2

Low-Pass Filter

Built-in/Fixed

Sensor Cleaning

EOS integrated cleaning system

Colour Filter Type

Primary Colour with increased H α light Transmission rate

Image Processor

Type

DIGIC 8

Lens

Lens Mount

RF (EF and EF-S lenses can be attached using EF to EOS R Adapter, EF to EOS R Adapter with Control Ring, EF to EOS R Drop in Filter Adapter; EF-M lenses not compatible)

Focal Length

Equivalent to 1.0x the focal length of the lens with RF and EF lenses 1.6x with EF-S

Focusing

Type

Phase-difference detection system with image sensor (Dual Pixel CMOS AF)

AF System / Points

With Area 88% horizontal and 100% vertical ¹

AF working range

EV -6 – 18 (at 23°C & ISO100)

AF Modes

One Shot

Servo AF

AF Point Selection

Automatic selection: Face/eye + tracking. 143 Available AF areas when automatically selected

Manual selection: 1-point AF (AF frame size can be changed) 5655 AF positions available

Manual selection: AF point Expansion 4 points (up, down, left, right)

Manual selection: AF point Expansion surrounding

Manual selection: Zone AF (all AF points divided into 9 focusing zones)

Manual selection: Large Zone AF (Vertical)

Manual selection: Large Zone AF (Horizontal)

AF Lock

Locked when shutter button is pressed halfway or AF ON is pressed in One Shot AF mode. Using customised button set to AF stop in AI servo

AF Assist Beam

Emitted by built in LED or optional dedicated Speedlite (flash)

Manual Focus

Selected on lens

Exposure Control

Metering modes

Real-time with image sensor, 384-zone metering.

(1) Evaluative metering (linked to All AF points)

(2) Partial metering (approx. 6.1% of viewfinder at centre)

(3) Spot metering: Centre spot metering (approx. 2.7% viewfinder at centre)

AF point-linked spot metering not provided

(4) Centre weighted average metering

Metering Brightness Range

EV -3 – 20 (at 23°C, ISO100, with evaluative metering)

AE Lock

Auto: AE lock takes effect when focus is achieved

Manual: By AE lock button in P, Av, Fv, Tv and M modes

Exposure Compensation

+/-3 EV in 1/3 or 1/2 stop increments (can be combined with AEB).

AEB

+/-3 EV in 1/3 or 1/2 stop increments

Anti-flicker shooting

Yes. Flicker detected at a frequency of 100 Hz or 120 Hz. Maximum continuous shooting speed may decrease

ISO Sensitivity

Auto 100-40000 (in 1/3-stop or whole stop increments)

ISO can be expanded to L:50, H1: 51200, H2: 102400,²

Shutter

Type

Electronically-controlled focal-plane shutter

Speed

30-1/8000 sec (1/2 or 1/3 stop increments), Bulb (Total shutter speed range. Available range varies by shooting mode)

Shutter Release

Soft touch electromagnetic release

White Balance

Type

Auto white balance with the imaging sensor

Settings

AWB (Ambience priority/White priority), Daylight, Shade, Cloudy, Tungsten light, White Fluorescent light, Flash, Custom, Colour Temperature Setting

White balance compensation:

1. Blue/Amber +/-9
2. Magenta/Green +/-9

Custom White Balance

Yes, 1 setting can be registered

WB Bracketing

+/-3 levels in single level increments

3, 2, 5 or 7 bracketed images per shutter release

Selectable Blue/Amber bias or Magenta/Green bias

Viewfinder

Type

0.5-inch OLED colour EVF

Dot count

3.69 Million dots (1280x960)

Coverage (Vertical/Horizontal)

Approx. 100%

Magnification

Approx. 0.76x ³

Eyepoint

Approx. 23mm (from eyepiece lens centre)

Dioptre Correction

-4 to +2 m⁻¹ (dioptré)

Viewfinder Information

AF point information, Exposure level indicator, Number of remaining multiple exposures, Exposure compensation, HDR shooting, Highlight tone priority, Multiple-exposure shooting, ISO speed, Dual Pixel RAW shooting, Possible shots, Multi Shot Noise Reduction, Number of self-timer shooting, Digital Lens Optimizer, Maximum burst, AF method, Battery level, AF operation, Exposure simulation, Drive mode, AEB, Metering mode, FEB, Anti-flicker shooting, Still photo cropping, Shooting mode, Aspect ratio, Scene icons Auto Lighting Optimizer, AE lock Picture Style, Flash-ready, White balance, Flash off White balance correction, FE lock, Image Quality, High-speed sync, Bluetooth function, Shutter speed, Wi-Fi function, Multi-function lock warning, Histogram, Aperture Electronic level, Lens information

Depth of field preview

Yes, via customised button

Eyepiece shutter

N/A

LCD Monitor

Type

8.01cm (3.15") Clear View LCD II, approx. 2.1million dots



Coverage

Approx. 100%

Viewing Angle (horizontally/vertically)

Approx. 170° vertically and horizontally

Coating

Anti-reflection and Anti-smudge. Reinforced glass incorporated

Brightness Adjustment

Manual: Adjustable to one of seven levels

Colour Tone Adjustment: 4 settings

Touch-screen operations

Capacitive method with menu functions, Quick Control settings, playback operations, and magnified display. AF point selection in still and Movies, touch shutter is possible in still photo shooting.

Display Options

(1) Basic Camera settings

(2) Advance Camera settings

(3) Camera settings plus histogram and dual level display

(4) No info

(5) Quick Control Screen

Flash

Models

E-TTL II Auto Flash, Metered Manual

X-sync

1/200sec

Flash Exposure Compensation

+/- 3EV in 1/3 increments with EX series Speedlite flashes

Flash Exposure Bracketing

Yes, with compatible External Flash

Flash Exposure Lock

Yes

Second Curtain Synchronisation

Yes via Speedlite

HotShoe / PC terminal

Yes/No

External Flash Compatibility

E-TTL II with EX series Speedlite, wireless multi-flash support

External Flash Control

via camera menu screen

Shooting

Modes

Stills; Scene Intelligent Auto, Flexible priority AE, Program AE, Shutter priority AE, Aperture priority AE, Manual, Bulb and Custom (x3)

Movie: Scene Intelligent Auto, Program AE, Shutter priority AE, Aperture priority AE, Manual, Bulb and Custom (x3)



Picture Styles

Auto, Standard, Portrait, Landscape, Fine Detail, Neutral, Faithful, Monochrome, User Defined (x3)

Colour Space

sRGB and Adobe RGB

Image Processing

Highlight Tone Priority

Auto Lighting Optimizer (4 settings)

Long exposure noise reduction

High ISO speed noise reduction (4 settings) (still and video)

Lens optical correction:

- Peripheral illumination correction, Chromatic aberration correction Distortion correction (during/after still photo shooting, during video only)

- Diffraction correction, Digital Lens Optimizer (during/after still photo shooting)

Resize to M, S1, S2 [4](#)

Cropping: JPEG images can be cropped (Aspect ratios 3:2, 4:3, 16:9, 1:1)

- 45 cropping sizes selectable, from 11% to 95% (diagonal)

- Switch between vertical and horizontal cropping orientation

- Image straightening

- Cropping frame can be moved using touch screen operation

RAW image processing [5](#)

Multiple exposure

HDR

Drive modes

Single, Continuous High, Continuous Low, Silent Single, Self timer (2s+remote, 10s+remote)

Continuous Shooting

Max. Approx. 8fps. speed maintained for 100 JPEG or 47 RAW images [6](#) [7](#) [8](#)

Max. 5fps with AF Tracking

Interval timer

Via Remote Controller Adapter RA-E3

Live View Mode

Type

Electronic viewfinder with image sensor

Coverage

Approx. 100% (horizontally and vertically)

Frame Rate

59.97 fps (smooth) / 29.97 fps (power saving)

Focusing

Manual Focus (Magnify the image 5x, 10x or 30x at any point on screen)

Autofocus: Dual Pixel CMOS AF (Face Detection and Tracking AF, 1point AF, Expand AF Area Zone AF, and Touch shutter)

Metering

Real-time evaluative metering with image sensor (384-zone)

Partial metering (approx. 6.1% of the centre of the screen)

Spot metering (approx. 2.7% of the centre of the screen)

Centre-weighted average metering

Active metering timer can be changed



Display Options

3 levels available Basic shooting information, Advanced shooting information and Advanced shooting information with Histogram

File Type - Stills

Still Image Type

JPEG: 2 compression options

RAW: RAW, C-RAW and Dual Pixel RAW (14-bit, Canon original RAW 3rd edition)

Complies with Exif 2.31 and Design rule for Camera File system 2.0

Complies with Digital Print Order Format [DPOF] Version 1.1

RAW+JPEG simultaneous recording

Yes, any combination of RAW + JPEG possible, including Dual Pixel RAW +JPEG

Image Size

JPEG:

3:2 ratio (L, RAW, C-RAW) 6720x4480, (M1) 4464x2976, (S1) 3360x2240, (S2) 1696x1280

1.6x (crop) (L) 4176x2784, (S2) 2400x1600

4:3 ratio (L) 5952x4480, (M1) 3968x2976, (S1) 2976x2240, (S2) 2112x1600

16:9 ratio (L) 6720x3776, (M1) 4464x2512, (S1) 3360x1888, (S2) 2400x1344

1:1 ratio (L) 4480x4480, (M1) 2976x2976, (S1) 2240x2240, (S2) 1600x1600

Folders

New folders can be manually created and selected

File Numbering

(1) Consecutive numbering

(2) Auto reset

(3) Manual reset

EOS Movie

Movie Type

MOV Video: 4K (16:9) 3840 x 2160, Full HD, HD

MPEG4 AVC/H.264 variable (average) bit rate, Audio: Linear PCM

Movie Size

4K (16:9) 3840 x 2160 (29.97, 25, 24, 23.98 fps) intra or inter frame

Full HD (16:9) 1920 x 1080 (59.94, 50, 29.97, 25, 23.98 fps) intra or inter frame

Full HD (16:9) 1920 x 1080 HDR (29.97, 25 fps) inter frame

Full HD (16:9) 1920 x 1080 (29.97, 25) light inter frame

HD (16:9) 1280 x 720 (119.9, 100 fps) intra frame

Colour Sampling (Internal recording)

4K - YCbCr4:2:2 (8-bit)

Full HD/HD - YCbCr4:2:0 (8-bit)

Canon Log

Yes Log 1

Movie Length

4K and Full HD - Max duration 29min 59sec. (excluding High Frame Rate movies). No 4GB file limit with exFAT CF card.

High Frame Rate Movie

MOV Video: HD - 1280 x 720 at 100fps or 119.9fps

Recorded as 1/4-speed slow motion movie

Single scene maximum recording up to 7min 29sec.



4K Frame Grab

8.3-megapixel JPEG still image frame grab from 4K movie possible

Bitrate / Mbps

MOV:

4K (29.97p/25.00p/24.00p/23.98p): ALL-I Approx. 480 Mbps

4K (29.97p/25.00p/24.00p/23.98p): IPB Approx. 120 Mbps

Full HD (59.94p/50.00p)/ALL-I: Approx. 180 Mbps

Full HD (59.94p/50.00p)/IPB Approx. 60 Mbps

Full HD (29.97p/25.00p/24.00p/23.98p)/ALL-I: Approx. 90 Mbps

Full HD (29.97p/25.00p/24.00p/23.98p)/IPB: Approx. 30 Mbps

HD (119.9p/100.0p)/ALL-I: Approx. 160 Mbps

MP4:

Full HD (29.97p/25.00p)/IPB (Light): Approx. 12 Mbps

Microphone

Built-in stereo microphones (48 Khz, 16-bit x 2 channels)

HDMI Display

External Monitor only, External Monitor only without information display or Simultaneous on camera and external monitor

HDMI Output

4K (UHD) recording only, uncompressed YCbCr 4:2:2, 8-bit or 10-bit, sound output via HDMI is also possible

Focusing

Dual Pixel CMOS AF with Face Detection and Tracking AF, Movie Servo AF

Manual Focus

ISO

4K - Auto: 100-12800, H: 25600, H: 32000, H1: 51200, H2: 102400,

Full HD/HD - Auto: 100-25600, H: 32000, H1: 51200, H2:102400

Other Features

Custom Functions

22 Custom Functions

Metadata Tag

User copyright information (can be set in camera)

Image rating (0-5 stars)

IPTC data (registered with EOS Utility)

Image transfer with caption (Caption registered with EOS Utility)

LCD Panel / Illumination

Yes/Yes

Water/Dust resistance

Yes

Voice Memo

No

Intelligent Orientation Sensor

Yes

Playback zoom

1.5x - 10x in 15 steps



Display Formats

- (1) Single image
- (2) Single image with information (2 levels)
 - Basic - Shooting information (shutter speed, aperture, ISO and Image quality)
 - Detailed - Shooting information (shutter speed, aperture, ISO, metering Image, quality and file size), Lens information, Brightness and RGB histogram, White balance, Picture Style, Color space and noise reduction, Lens optical correction, GPS information, IPTC information
- (3) 4 image index
- (4) 9 image index
- (5) 36 image index
- (6) 100 image index
- (7) Jump Display (1, 10 or 100 images, Date, Folder, Movies, Stills, Protected images, Rating)
- (8) Movie edit
- (9) RAW processing
- (10) Rating

Slide Show

Image selection: All images, by Date, by Folder, Movies, Stills, Protected images or Rating
Playback time: 1/2/3/5/10 or 20 seconds
Repeat: On/Off

Histogram

Brightness: Yes
RGB: Yes

Highlight Alert

Yes

Image Erase

Single image, select range, Selected images, Folder, Card

Image Erase Protection

Erase protection of Single image, Folder or Card all found images (only during image search)

Self Timer

2 or 10 sec.

Menu Categories

- (1) Shooting menu
- (2) AF Menu
- (3) Playback menu
- (4) Setup menu
- (5) Custom Functions menu
- (6) My Menu

Menu Languages

29 Languages
English, German, French, Dutch, Danish, Portuguese, Finnish, Italian, Norwegian, Swedish, Spanish, Greek, Russian, Polish, Czech, Hungarian, Vietnamese, Hindi, Romanian, Ukrainian, Turkish, Arabic, Thai, Simplified Chinese, Traditional Chinese, Korean, Malay, Indonesia and Japanese

Firmware Update

Update possible by the user (Camera, Lens, WFT, External Speedlite, BLE remote control, Lens adapter)

Interface

Computer

SuperSpeed USB 3.1 USB C connector



Wi-Fi

Wireless LAN (IEEE802.11b/g/n) (2.4 GHz only), with Bluetooth support ⁹ Features supported - EOS Utility, Smartphone, Upload to Web, Wireless printing

Other

HDMI mini out (Type C, HDMI-CEC compatible), External Microphone In/Line In (Stereo mini jack), Headphone socket (Stereo mini jack), E3-type terminal (remote control terminal)

Direct Print

PictBridge

Yes (Via Wireless LAN only)

Storage

Type

1x SD/SDHC/SDXC and UHS-II

Supported Operating System

PC & Macintosh

Windows 8.1 and Windows 10 (tablet mode not supported)
OS X v10.11, 10.12, 10.13 and 10.14

Software

Image Processing

Digital Photo Professional 4.10 or later (RAW Image Processing)

Other

EOS Utility 3.10 or later (incl. Remote Capture), Picture Style Editor, Map Utility, EOS Lens Registration Tool, EOS Web Service Registration Tool, Canon Camera connect app (iOS/Android)

Power Source

Batteries

Rechargeable Li-ion Battery LP-E6N (supplied)/LP-E6

Battery life

Approx. 370 shots (at 23°C) ¹⁰

Approx. 350 (at 0°C)

Battery Indicator

6 levels + percentage

Power saving

Power turns off after 30 seconds, 1, 3, 5, 10 or 30mins

Power Supply & Battery Chargers

Battery charger LC-E6E (supplied), AC Adapter AC-E6N and DC Coupler DR-E6, AC Adapter Kit ACK-E6N/ACK-E6, Car Battery Charger CBC-E6, PD-E1 USB power adapter

Accessories

Wireless File Transmitter

Wireless File Transmitter WFT-E7B

Lenses

All RF lenses (EF & EF-S via Lens adapters)



Lens adapters

EF TO EOS R ADAPTER, EF TO EOS R ADAPTER WITH CONTROL RING, EF TO EOS R Drop in filter ADAPTER

Flash

Canon Speedlite (EL-100, 90EX, 220EX, 270EX, 270EX II, 320EX, 380EX, 420EX, 430EX, 430EX II, 430EX III 470EX-AI, 550EX, 580EX, 580EX II, 600EX, 600EX-RT, 600EX-II-RT, Macro-Ring-Lite MR-14EX, Macro Ring Lite MR-14EX II, Macro Twin Lite MT-24EX, Macro Twin Lite MT-26EX Speedlite Transmitter ST-E2, Speedlite Transmitter ST-E3-RT)

Remote Controller / Switch

Remote control with E3 type socket and Speedlite 600EX-II-RT

Other

BG-E22 battery grip, GP-E2 GPS receiver

Dimensions, Weight & Body Materials

Body Materials

Magnesium Alloy body and polycarbonate with glass fibre parts

Operating Environment

0 – 40 °C, 85% or less humidity

Dimensions (WxHxD)

135.8 x 98.3 x 84.4mm

Weight (body only)

Approx. 580 g (660 g with card and battery)