# Canon

# EOS R100

Advanced User Guide

**E**

# Specifications

## Type

**Type:** Digital single-lens non-reflex AF/AE camera
**Lens mount:** Canon RF mount
**Compatible lenses:** Canon RF lens group (including RF-S lenses)
 * Canon EF or EF-S lenses (excluding EF-M lenses) also compatible, using mount adapter EF-EOS R
**Lens focal length:** Approx. 1.6 times the focal length indicated on the lens

## Image sensor

**Type:** APS-C CMOS sensor

| Effective pixels[1][2] | Max. approx. 24.1 megapixels |
| --- | --- |
| Total pixels[1] | Approx. 25.8 megapixels |
| Screen size | Approx. 22.3×14.9 mm |
| Dual Pixel CMOS AF | Supported |

 * 1: Rounded to the nearest 100,000.
 * 2: Using RF or EF lenses.
    The effective pixel count may be lower with certain lenses and image processing.

## Recording system

**Image recording format:** Compliant with Design rule for Camera File system 2.0 and Exif 2.31[1]
 * 1: Supports time offset information

### Image type and extension

| Image type | | Extension |
| --- | --- | --- |
| Still photos | JPEG | .JPG |
| | RAW | .CR3 |
| | C-RAW | |
| Movies | ALL-I[1], IPB (Standard) | .MP4 |

 * 1: Time-lapse movies only
 * Still photos: HEIF not supported
 * Movies: IPB (Light) not supported

# Recording media

### Recording media
SD/SDHC/SDXC memory cards

| UHS-I | Supported |
|---|---|
| UHS Speed Class | Supported |
| SD Speed Class | Supported |

**Card slot:** Equipped with a single slot
* Supports UHS-I

# Still photo recording

### Still photo pixel count

| Image quality | | Recorded pixels | | | |
|---|---|---|---|---|---|
| | | Aspect ratio | | | |
| | | 3:2 | 4:3 | 16:9 | 1:1 |
| JPEG | L | 24.0 megapixels (6000×4000) | Approx. 21.3 megapixels[1] (5328×4000) | Approx. 20.2 megapixels[1] (6000×3368) | 16.0 megapixels (4000×4000) |
| | M | Approx. 10.6 megapixels (3984×2656) | Approx. 9.5 megapixels (3552×2664) | Approx. 8.9 megapixels[1] (3984×2240) | Approx. 7.1 megapixels (2656×2656) |
| | S1 | Approx. 5.9 megapixels (2976×1984) | Approx. 5.3 megapixels (2656×1992) | Approx. 5.0 megapixels[1] (2976×1680) | Approx. 3.9 megapixels (1984×1984) |
| | S2 | Approx. 3.8 megapixels (2400×1600) | Approx. 3.4 megapixels[1] (2112×1600) | Approx. 3.2 megapixels[1] (2400×1344) | Approx. 2.6 megapixels (1600×1600) |
| RAW | $\boxed{\text{RAW}}$ / $\boxed{\text{C RAW}}$ | 24.0 megapixels (6000×4000) | | | |

* Values for recorded pixels are rounded off to the nearest 100,000th.
* RAW/C-RAW images are generated at 3:2 and tagged to indicate the specified aspect ratio.
* JPEG images are generated at the specified aspect ratio.
* These aspect ratios (M/S1/S2) and pixel counts also apply to resizing.
* 1: Aspect ratios are slightly different for these image sizes.

## File size/number of shots available

| Image quality | | File size [Approx. MB] | Available shots [Approx.][*1] |
|---|---|---|---|
| JPEG | ▲L | 8.4 | 3600 |
| | ▲L | 4.5 | 6610 |
| | ▲M | 4.6 | 6480 |
| | ▲M | 2.6 | 11400 |
| | ▲S1 | 3.1 | 9690 |
| | ▲S1 | 1.8 | 16010 |
| | S2 | 1.8 | 16340 |
| RAW | RAW | 27.2 | 1120 |
| | CRAW | 15.8 | 1930 |
| RAW+JPEG | RAW + ▲L | 27.2 + 8.4 | 850 |
| | CRAW + ▲L | 15.8 + 8.4 | 1250 |

* 1: Number of shots using a 32 GB card that conforms to Canon testing standards.
* File sizes are determined based on Canon testing standards.
* File size varies by shooting conditions (such as aspect ratio, subject, ISO speed, Picture Style, and Custom Functions).

**Maximum burst (approx. shots)**

Number of shots available when set to [⚏ᵢ], without slower continuous shooting speed

| Image quality | | Electronic 1st-curtain (approx. 6.5 shots/sec.)*1 |
|---|---|---|
| | | Standard card*2 |
| JPEG | ◢**L** | 100 |
| | ◢**M** | 97 |
| | ◢**S1** | 97 |
| | **S2** | 97 |
| RAW | **RAW** | 6 |
| | C**RAW** | 17 |
| RAW+JPEG | **RAW** + ◢**L** | 6 |
| | C**RAW** + ◢**L** | 13 |

* 1: For details on shooting conditions, see "<u>Drive mode and continuous shooting speed</u>".
* 2: Number of shots using a UHS-I compliant 32 GB card that conforms to Canon testing standards.
* Maximum burst as measured under conditions conforming to Canon testing standards (continuous shooting in One-Shot AF mode, ISO 100, and Standard Picture Style).
* Maximum burst varies depending on shooting conditions (including aspect ratio, subject, memory card brand, ISO speed, Picture Style, and Custom Function, etc.).
* Setting Auto Lighting Optimizer to [High] reduces maximum burst.

# Movie recording

**Movie recording format:** MP4

**Estimated recording time and movie bit rate/file size**

| Movie recording size | | | | Total recording time (approx.) | | | Movie bit rate (approx. Mbps) | File size (approx. MB/min.) |
|---|---|---|---|---|---|---|---|---|
| Movie recording | Frame rate (fps) | | Compression method | 32 GB | 128 GB | 512 GB | | |
| | NTSC | PAL | | | | | | |
| 4K UHD | 23.98 | 25.00 | IPB (Standard) | 35 min. | 2 hr. 21 min. | 9 hr. 27 min. | 120 | 861 |
| Full HD | 59.94 | 50.00 | IPB (Standard) | 1 hr. 10 min. | 4 hr. 43 min. | 18 hr. 52 min. | 60 | 432 |
| | 29.97 23.98 | 25.00 | IPB (Standard) | 2 hr. 20 min. | 9 hr. 23 min. | 37 hr. 35 min. | 30 | 217 |
| HD | 59.94 | 50.00 | IPB (Standard) | 2 hr. 42 min. | 10 hr. 49 min. | 43 hr. 19 min. | 26 | 188 |
| High Frame Rate movies | 119.88 | 100.00 | IPB (Standard) | 1 hr. 22 min. | 5 hr. 28 min. | 21 hr. 52 min. | 52 | 372 |
| 4K time-lapse movies | 29.97 | 25.00 | ALL-I | 14 min. | 56 min. | 3 hr. 47 min. | 300 | 2146 |
| Full HD time-lapse movies | 29.97 | 25.00 | ALL-I | 47 min. | 3 hr. 9 min. | 12 hr. 38 min. | 90 | 644 |
| Miniature effect movie | 29.97 23.98 | 25.00 | IPB (Standard) | 2 hr. 20 min. | 9 hr. 23 min. | 37 hr. 35 min. | 30 | 217 |

* Bit rate only applies to video output, not audio or metadata.
* Movie recording stops when the maximum recording time per movie is reached.
* Sound is not recorded for approx. the last two frames when the compression method for movie recording quality is IPB (Standard). Moreover, the video and sound may be slightly out of sync when movies are played back in Windows.

## Card performance requirements (movie recording) [write/read speed]

| Movie recording size | | | | SD card |
|---|---|---|---|---|
| Movie recording | Frame rate (fps) | | Compression method | |
| | NTSC | PAL | | |
| 4K UHD | 23.98 | 25.00 | IPB (Standard) | UHS Speed Class 3 or higher |
| Full HD | 59.94 | 50.00 | IPB (Standard) | SD Speed Class 10 or higher |
| | 29.97 23.98 | 25.00 | IPB (Standard) | SD Speed Class 6 or higher |
| HD | 59.94 | 50.00 | IPB (Standard) | SD Speed Class 4 or higher |
| High Frame Rate movies | 119.88 | 100.00 | IPB (Standard) | SD Speed Class 10 or higher |
| 4K time-lapse movies | 29.97 | 25.00 | ALL-I | Read speed of 40 MB/s or higher |
| Full HD Time-lapse movies | 29.97 | 25.00 | ALL-I | Read speed of 20 MB/s or higher |
| Miniature effect movie | 29.97 23.98 | 25.00 | IPB (Standard) | SD Speed Class 6 or higher |

\* When set to [🎬 **Digital IS**: **Disable**].

**Built-in microphone:** Monaural microphone
**External microphone (External microphone IN terminal):** Φ3.5 mm diameter stereo mini jack

## Autofocus

**Focusing method**
Still photo shooting, Full HD or HD movie recording: Dual Pixel CMOS AF

4K movie recording: Contrast AF
 * With Contrast AF as used when recording 4K movies, focusing may take longer than when recording Full HD or HD movies, and focusing with certain lenses may be difficult.

**Focusing brightness range**
Still photo shooting: EV –4.0 to 20
(With an f/1.2 lens,* center AF point, One-Shot AF at room temperature, and ISO 100)
 * Except RF lenses with a Defocus Smoothing (DS) coating

Movie recording: EV –2.0 to 20
(With an f/1.2 lens,* center AF point, One-Shot AF at room temperature, and ISO 100)
 * Except RF lenses with a Defocus Smoothing (DS) coating
 * During Full HD (29.97/25.00 fps) recording

**Focusing operation**

|  | Still photo shooting | Movie recording |
|---|---|---|
| AF operation | • One-Shot AF*1<br>• Servo AF*1 | • One-Shot AF<br>• Movie Servo AF |
| Manual focus (MF) | Supported | Supported |

 * 1: Available in Creative Zone modes. Automatically set in Basic Zone modes to suit the shooting mode.
 * In < $\boxed{A}^+$ > mode, the camera automatically switches from One-Shot AF to Servo AF in response to subject movement.

**Focus mode:** AF / MF
 * Applies when an RF or RF-S lens without a focus mode switch is used.
 * When lenses with a focus mode switch are used, the setting on the lens takes precedence.

**Lens compatibility based on focusing area:** Refer to the Canon website

## Number of AF area available for automatic selection

| Focusing area | | Horizontal: Approx. 88%, Vertical: Approx. 100% |
|---|---|---|
| Number of AF zones | Still photos | Max. 143 zones (13×11) |
| | Movies | Max. 117 zones (13×9) |

\* May vary depending on settings.

## Selectable positions for AF point

| Focusing area | | Horizontal: Approx. 88%, Vertical: Approx. 100% |
|---|---|---|
| Numbers of positions | Still photos | Max. 3975 positions (75×53) |
| | Movies | Max. 3375 positions (75×45) |

\* When set to [1-point AF] and selected using the cross keys.
\* Values for the selectable positions for AF points do not represent AF performance.

## Viewfinder

**Type:** OLED color electronic viewfinder
**Screen size:** Approx. 1.0 cm (0.39 inch)
**Dot count:** Approx. 2,360,000 dots
**Magnification / Angle of view:** Approx. 0.95×/28.0° (3:2 aspect ratio, with 50mm lens at infinity, $-1 \text{ m}^{-1}$)
**Coverage:** Approx. 100% (at JPEG Large image quality, a 3:2 aspect ratio, and approx. 22 mm eyepoint)
**Eyepoint:** Approx. 22 mm (at $-1 \text{ m}^{-1}$ from eyepiece lens end)
**Dioptric adjustment:** Approx. $-3.0$ to $+1.0 \text{ m}^{-1}$ (dpt)

## Screen

**Type:** TFT color, liquid-crystal monitor
**Screen size:** Approx. 7.5 cm (3.0 inch) (screen aspect ratio of 3:2)
**Dot count:** Approx. 1,040,000 dots
**Angle of view:** Approx. 150° vertically and horizontally
**Coverage:** Approx. 100% vertically and horizontally (at L image size and an aspect ratio of 3:2)
**Screen brightness:** Manually adjustable in a range of 1–7

## HDMI output

**HDMI video / audio output:** HDMI micro OUT terminal (Type D)
 * HDMI CEC not supported
**HDMI resolution:** Auto / 1080p

# Exposure control

## Metering functions under various shooting conditions

| Item | | Still photo shooting | Movie recording |
|---|---|---|---|
| Metering method | | 384-zone (24×16) metering using image sensor output signals | |
| Metering mode | Evaluative metering | Yes | Set automatically when faces are detected with [⌣+Tracking] |
| | Partial metering | Yes<br>* Approx. 5.8% in the center of the screen | |
| | Spot metering*1 | Yes<br>* Approx. 2.9% in the center of the screen | |
| | Center-weighted average metering | Yes | Set automatically when faces are not detected with [1-point AF], [Zone AF], or [⌣+Tracking] |
| Metering brightness range (at room temperature, ISO 100) | | EV –2 to 20 | EV 0 to 20 |

* 1: Multi-spot metering not available (not supported).

## ISO speed (recommended exposure index) in still photo shooting

### Manual ISO speed setting for still photos

| | ISO speed |
|---|---|
| Normal ISO speed | ISO 100–12800 (in 1/3- or 1-stop increments) |
| Expanded ISO speed | H (equivalent to ISO 25600) |

* When set to [Highlight tone priority], the available manual setting range is ISO 200–12800.

### Manual ISO speed setting range for still photos: Not supported

### ISO Auto maximum limit setting for still photos

| Max. for ISO Auto | ISO 400 / 800 / 1600 / 3200 / 6400 / 12800 |
|---|---|

### ISO Auto setting range for still photos: Not supported

## ISO Auto details for still photos

| Shooting mode | | No flash | Using flash*5 |
|---|---|---|---|
| Creative Zone | P / Tv / Av / M (other than bulb) | ISO 100*1*2–12800*2 | ISO 100*1*2–1600*2 |
| | M (bulb) | ISO 400*3 | ISO 400*3 |
| Basic Zone | A⁺ / ▣ | ISO 100–6400 | ISO 100–3200*4 |
| | SCN | Varies by shooting mode | |
| | ◉ | Varies by shooting mode | |

* 1: ISO 200 when set to [**Highlight tone priority**: **Enable**/**Enhanced**].
* 2: Varies depending on the [**Max for Auto**] settings.
* 3: If outside the setting range, changed to the value closest to ISO 400.
* 4: When using the built-in flash. ISO 1600 when using an external flash unit.
* 5: Can be used with lenses that do and do not support variable control of maximum ISO Auto limit for E-TTL.

## Variable control of maximum ISO Auto limit for E-TTL: Supported

**ISO speed (recommended exposure index) in movie recording**

**Manual ISO speed setting for movies**

| | Full HD / HD | 4K |
|---|---|---|
| Normal ISO speed | ISO 100 to 12800[1] (in 1/3-stop increments) | ISO 100 to 6400[2] (in 1/3-stop increments) |
| Expanded ISO speed | H (equivalent to ISO 25600)[1] | |

* 1: When set to [**Highlight tone priority**], the setting range is ISO 200–12800.
* 2: When set to [**Highlight tone priority**], the setting range is ISO 200–6400.

**Automatic ISO speed setting for movies (with ISO Auto)**

| | Full HD / HD | 4K |
|---|---|---|
| Normal ISO speed | ISO 100 to 12800[1] (in 1/3-stop increments) | ISO 100 to 6400[2] (in 1/3-stop increments) |
| Expanded ISO speed | H (equivalent to ISO 25600)[1] | |

* Maximum ISO speed when set automatically corresponds to the [**Max for Auto**] setting.
* 1: When set to [**Highlight tone priority**], the setting range is ISO 200–12800.
* 2: When set to [**Highlight tone priority**], the setting range is ISO 200–6400.

**Manual ISO speed setting range limit for movies:** Not supported

**Maximum ISO Auto setting for movies**

| | |
|---|---|
| Max. for ISO Auto | ISO 6400 / 12800 / H (equivalent to ISO 25600) |

**Maximum ISO Auto setting for time-lapse movies:** Not supported

## Shutter

### Still photo shooting

**Type:**
Electronically controlled focal-plane shutter
 * Electronic 1st / mechanical 2nd curtain
 * Except in Silent shutter mode
Rolling shutter, using the image sensor
 * Electronic shutter
 * In Silent shutter mode

### Shutter mode

| Shutter mode | Flash photography |
|---|---|
| Electronic 1st-curtain | Possible |
| Electronic shutter | Disabled |

### Shutter speed / X-sync speed
Creative Zone: 1/4000–30 sec.,*[1] Bulb*[2]
Basic Zone: 1/4000–1 sec.*[3]
Maximum flash sync speed: 1/250 sec.
 * 1: In 1/3-stop increments
 * 2: In manual shooting mode only
 * 3: Varies by mode.

### Movie recording

**Type:** Rolling shutter, using the image sensor

**Shutter speed:**
Movie auto exposure: 1/4000–1/25*[1] sec.
Movie manual exposure: 1/4000–1/8 sec.
 * 1: Varies by frame rate.

# Drive

## Drive mode and continuous shooting speed

(Max. approx.)

| Drive mode | AF operation | Electronic 1st-curtain | Electronic shutter |
|---|---|---|---|
| Single shooting | One-Shot AF / Servo AF | Yes | Yes |
| Continuous shooting | One-Shot AF | 6.5 shots/sec. | Not supported |
| | Servo AF | 3.5 shots/sec. | Not supported |
| Self-timer: 10 sec./remote control | | Yes | Yes |
| Self-timer: 2 sec./remote control | | Yes | Yes |
| Self-timer: Continuous shooting | | Yes | Not supported |

## Built-in flash

**Type:** Retractable flash
**Retraction method:** Manual
**Guide no.:** Guide no. of approx. 6 (ISO 100/m) / 19.7 (ISO 100/feet)
**Flash exposure compensation:** ±2 stops (in 1/3-stop increments)
**Effective flash range (example)**

(Approx.)

| ISO speed | Lens: RF-S18-45mm F4.5-6.3 IS STM | | | |
| | Wide-angle end f/4.5 | | Telephoto end f/6.3 | |
| | m | ft. | m | ft. |
|---|---|---|---|---|
| 100 | 0.3–1.2 | 1.0–3.9 | 0.4–0.9 | 1.3–3.0 |
| 1600 | 1.2–4.9 | 3.9–16.1 | 0.9–3.5 | 3.0–11.5 |
| 12800 | 3.5–13.8 | 11.5–45.3 | 2.5–9.9 | 8.2–32.5 |

 * Rounded to the first decimal place.
 * Suitable exposure may not be obtained when shooting distant subjects at high ISO speeds, because preflash metering limits may be exceeded.

## External flash

**Accessory shoe contacts:** 5-pin contact
**Flash exposure compensation:** ±2 stops (in 1/3-stop increments)
 * When set from the camera menu

## Playback

| Item | Still photos | Movies |
|---|---|---|
| AF point display | Yes | |
| Magnified view | 1.5×–10× (15 levels) | |
| Set image search conditions | Search conditions<br>Rating / Date / Folder / Protection / Type of file (1) / Type of file (2) | |
| Rating | OFF / ★ to ★★★★★<br>Select images / Select range / All images in folder / All images on card / All found images | |
| Protect images | Select images / Select range / All images in folder / Unprotect all images in folder / All images on card / Unprotect all images on card / All found images / Unprotect all found images | |

## Frame grab from 4K movies

Individual frames of 4K movies recorded with the camera can be saved as approx. 8.3-megapixel (3840×2160) still photos (JPEG).
 * In-camera resizing or cropping is not supported for extracted still photos, and these images cannot be edited with Creative filters or Creative Assist.

## Print order (DPOF)

Compliant with DPOF Version 1.1

## External interface

**Digital terminal**
**Terminal type:** USB Type-C
**Transmission:** Equivalent to Hi-Speed USB (USB 2.0)
**Applications:** For PC communication
 * Cannot be connected to a printer
 * Not for communication with smartphones
 * Charging and powering the camera via USB are not supported

**HDMI output terminal:** HDMI micro OUT terminal (Type D)
**External microphone IN terminal:** 3.5 mm diameter stereo mini jack
**Remote control terminal:** Terminal compatible with Remote Switch RS-60E3

## Power source

### Battery

| | |
|---|---|
| Compatible battery pack | LP-E17 |
| Quantity used | 1 |

**Battery check:** Automatic battery check with 4-level display when the power switch is set to ON.

**Battery information:** Not supported

**USB battery charging and camera power supply:** Not supported

### AC power source

| | |
|---|---|
| AC adapter | AC-E6N |
| DC coupler | DR-E18 |

### Number of shots available

| Type of shooting | Temperature | Available shots (approx.) | | |
|---|---|---|---|---|
| | | Using 50% flash | | AE shooting[2] |
| | | Power saving[1] | Smooth[2] | Power saving |
| Viewfinder shooting | +23°C / 73°F | 320 | 320 | 340 |
| On-screen shooting | | 400 | 320 | 430 |

 * 1: Based on CIPA standards.
 * 2: According to Canon measurement conditions, which are based on CIPA standards.
 * Using a new, fully charged LP-E17
 * The number of shots available may vary greatly depending on the shooting environment.

## Available operating time

| Conditions of use | | | Temperature | Available operating time |
|---|---|---|---|---|
| Time available for bulb exposure | | | 23°C / 73°F | Approx. 3 hr. 20 min. |
| Time available for Live View shooting<br>* Using the screen | | | 23°C / 73°F | Approx. 3 hr. 00 min. |
| Time available for movie recording<br>* Movie Servo AF: Disable | 4K | • IPB (Standard)<br>• 23.98 fps / 25.00 fps | 23°C / 73°F | Approx. 1 hr. 50 min. |
| | | | 0°C / 32°F | Approx. 1 hr. 50 min. |
| | Full HD | • IPB (Standard)<br>• 29.97 fps / 25.00 fps | 23°C / 73°F | Approx. 2 hr. 40 min. |
| | | | 0°C / 32°F | Approx. 2 hr. 30 min. |
| Time available for continuous playback (normal playback) | 4K | • IPB (Standard)<br>• 23.98 fps / 25.00 fps | 23°C / 73°F | Approx. 3 hr. 10 min. |

* With a new, fully charged LP-E17

## Dimensions and weight

### Dimensions

| (W) × (H) × (D) | Approx. 116.3 × 85.5 × 68.8 mm / Approx. 4.58 × 3.37 × 2.71 in. |
|---|---|

\* Based on CIPA guidelines.

### Weight

| | Weight |
|---|---|
| Body<br>(including battery and card)*¹ | Approx. 356 g / Approx. 12.56 oz. |
| Body only | Approx. 309 g / Approx. 10.90 oz. |

\* Not including body cap.
\* 1: Based on CIPA guidelines.

## Operating environment

**Operating temperature:** 0–40°C / 32–104°F
**Operating humidity:** 85% or less

## Wi-Fi (wireless LAN)

### Supported standards (equivalent to IEEE 802.11b/g/n standards)

| Wi-Fi standards | Transmission method | Maximum link speed |
|---|---|---|
| IEEE 802.11b | DSSS modulation | 11 Mbps |
| IEEE 802.11g | OFDM modulation | 54 Mbps |
| IEEE 802.11n | | 72.2 Mbps |

\* Not compatible with MIMO (Multiple-input and multiple-output).

### Transmission frequency (Center frequency)

| Frequency | 2412 to 2462 MHz |
|---|---|
| Channels | 1 to 11 ch |

### Authentication and data encryption methods

| Connection method | Authentication | Encryption |
|---|---|---|
| | | Encryption method |
| Camera access point | WPA2-PSK | AES |
| | Open | Disable |
| Infrastructure | Open | WEP |
| | | Disable |
| | Shared key | WEP |
| | WPA-PSK | TKIP AES |
| | WPA2-PSK | |

## Bluetooth

**Standards compliance:** Bluetooth Specification Version 4.2 compliant (Bluetooth Low Energy technology)
**Transmission method:** GFSK modulation

- All data above is based on Canon testing standards and CIPA (Camera & Imaging Products Association) testing standards and guidelines.
- Dimensions and weight listed above are based on CIPA Guidelines (except weight for camera body only).
- Product specifications and appearance are subject to change without notice.
- If a problem occurs with a non-Canon lens attached to the camera, contact the respective lens manufacturer.