Canon

PowerShot V10

Type	
Type	Video camera
Image Processor	DIGIC X

Image Sensor	
Type	1-inch high-sensitivity CMOS sensor (back-illuminated)
Effective Pixels	During Movie recording (Full HD, 16:9) - Approx. 13.1 megapixels During Still photo shooting - Approx. 15.2 megapixels
Total Pixels	Approx. 20.9 megapixels
Color Filter System	RGB primary color filters

Lens	
Focal Length	During Movie recording (Full HD, 16:9) - 6.6 mm (Approx. 19 mm equivalent, 35mm format equivalent) During Still photo shooting - 6.6 mm (Approx. 18 mm equivalent, 35mm format equivalent)
Angle of view	During Movie recording (Full HD, 16:9) - 97.5° During Still photo shooting - 100.2°
F-number (max. aperture)	f/2.8
Aperture	f/2.8–f/8
Lens configuration	8 elements in 7 groups
Aspherical lenses	3 lenses, 6 surfaces
Optical zoom	None
Optical IS	None
ND filter	Included (equivalent to 3 stops)
Protective glass	Included (no lens barrier)
Focusing range	0.05 m / 0.16 ft. to infinity

Recording System			
Recording Format	Compliant to Design rule for Camera File system 2.0 and Exif 2.31* *Supports time offset information		
Image Format	**Image Type**		Extension
	Still Photos	**JPEG**	.JPG
	Movies	**IPB (Standard) / IPB (Light)**	.MP4

File Numbering	1. File numbering methods
	    a. Continuous
	        i. The numbering of captured images continues even after you replace the card.
	    b. Auto reset
	        i. When cards are replaced, the numbering is reset to start from 0001. If the new card already contains images, the numbering will continue from the last recorded image in the card.
	2. Manual reset
	    a. Resets the file number to 0001, and creates a new folder automatically.
	        * When manually resetting the file number, folders can also be renamed.

Recording Media	(One) microSD card slot
	  • Compatible with UHS-I
	  • microSD, microSDHC, and microoSDXC memory cards

Still Photo Recording

File Size / Number of Shots Available		Image Quality	File Size [Approx. MB]	Available Shots [Approx.][*1]
	JPEG	L	9.6	2880
		M	4.8	5270
		S1	2.8	7940
		S2	1.9	15630

*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 and number of shots available vary by shooting conditions (such as aspect ratio, subject, ISO speed, and Custom Functions).

Movie Recording

Movie Recodring Format	Container format	MP4
	Bit depth	8 bits
	Compression	H.264 / MPEG-4 AVC
	Video signal recording range	Full range (0-255)
	Color sampling method	YCbCr 4:2:0
	Standards compliance	Rec. ITU-R BT.709
	Color gamut	Rec.709
	Audio	AAC

Movie Recording Size Overview

Movie Recording Size	Resolution	Aspect Ratio	Frame Rate (fps)		Video Compression	Audio Compression
			NTSC	PAL		
4K UHD	3840 x 2160	16:9	29.97 23.98	25.00	IPB (Standard) IPB (Light)	AAC
Full HD	1920 x 1080	16:9	59.94 29.97	50.00 25.00		
			23.98	25.00	IPB (Standard)	

Estimated Recording Time, Movie Bit Rate, and File Size

Movie Recording Size			Total Recording Time (approx.)			Video Bit Rate (Approx. Mbps)	File Size (Approx. MB/ min.)
Movie Record-ing	Frame Rate	Compression method	32 GB	128 GB	512 GB		
4K UHD	29.97 fps 25.00 fps 23.98 fps	IPB (Standard)	35 min.	2 hr. 21 min.	9 hr. 27 min.	120	860
		IPB (Light)	1 hr. 10 min.	4 hr. 43 min.	18 hr. 52 min.	60	431
Full HD	59.94 fps 50.00 fps	IPB (Standard)	1 hr. 10 min.	4 hr. 43 min.	18 hr. 52 min.	60	431
		IPB (Light)	2 hr. 1 min.	8 hr. 4 min.	32 hr. 15 min.	35	252
	29.97 fps 25.00 fps	IPB (Standard)	2 hr. 20 min.	9 hr. 23 min.	37 hr. 35 min.	30	216
		IPB (Light)	5 hr. 47 min.	23 hr. 11 min.	92 hr. 47 min.	12	88
	23.98 fps	IPB (Standard)	2 hr. 20 min.	9 hr. 23 min.	37 hr. 35 min.	30	216

* Bit rate only applies to video output, not audio or metadata.
* Movie recording stops when the maximum recording time per movie is reached.
* No audio is recorded for approx. the last two frames with the compression method for movie recording quality setto IPB (Standard) or IPB (Light). Moreover, the video and sound may be slightly out of sync when movies are played back in Windows.

	Movie Recording Size			SD Card
Card Performance Requirements	4K UHD	29.97 fps 25.00 fps 23.98 fps	IPB (Standard)	UHS Speed Class 3 or higher
			IPB (Light)	SD Speed Class 10 or higher
	Full HD	59.94 fps 50.00 fps	IPB (Standard)	SD Speed Class 10 or higher
			IPB (Light)	SD Speed Class 6 or higher
		29.97 fps 25.00 fps 23.98 fps	IPB (Standard)	SD Speed Class 6 or higher
			IPB (Light)	SD Speed Class 4 or higher

Movie Color Filters	14 filters available
Smooth Skin Movie	Can record movies with a smooth skin effect

Built-in Microphone	Microphone	Stereo microphones 48 kHz
	Sampling frequency	16 bits
	Bits	2 ch
	Channels	Full range (0-255)

| Audio Noise Reduction | 3-mic noise cancellation |

| External Microphone | Terminal | 3.5 mm diameter stereo mini-jack |
| | Plug-in power | Supported*1 |

*1: Plug-in power specifications vary by manufacturer. Stereo Microphone DM-E100 is recommended if plug-in power will be used.

| Digital Zoom | Off / 1.5× / 2.0× / 3.0×
* Cannot be combined with image stabilization or auto level. |

| Digital IS | Movie digial IS Supported
* Cannot be combined with digital zoom or auto level. |

Movie Self-timer	Off	Movie recording begins immediately
	10 sec.	Movie recording begins in 10 sec.
	2 sec.	Movie recording begins in 2 sec.

| Remote Control Recording | Supported |

| Maximum Recording Time per Recording | Normal movie and during movie recording other than below | Maximum: Approx. 1 hr. |
| | Smooth skin movie [4K movie recording] | Maximum: Approx. 5 min. |

White Balance

| Settings | (1) Auto (Ambience priority / White priority)
(2) Daylight
(3) Shade
(4) Cloudy*1
(5) Tungsten light
(6) White fluorescent light
(7) Color temperature

*1: Effective also in twilight and sunset. |

| White Balance Shift | Blue/amber bias: ±9 levels
Magenta/green bias: ±9 levels
* Adjustable in [Color tone] in compatible modes. |

Autofocus

| Focus Method | Contrast detection |

	Still photo shooting	Movie recording
AF operation	One-Shot AF	Movie Servo AF
AF method	Face Tracking AF	Face Tracking AF Specified Frame AF
AF lock	Not Supported	Tap to start/stop AF*1
Manual focus (MF)	Not Supported	

Focusing Operation

*1 Activated by the right cross key during output to a single screen over HDMI.
* AF lock icon is displayed only in the detailed information screen.

Focusing Area	Still photo shooting (with face detection) - Approx. 100% vertical and horizontal coverage Movie recording (with face detection) - Approx. 100% vertical and horizontal coverage Number of AF areas for One-Shot AF (still photos) - Max. 31 areas (7×5; corners not available)
Tap-based Subject Selection	Subjects to track are specified by tapping * People only

LCD Screen

Type	TFT color, liquid-crystal monitor
Screen Size	2.0-inch (screen aspect ratio of 3:2) 1.97 in./5.0cm diagonal (1.61 in./4.1cm width, 1.10 in./2.8cm height)
Dot Count	Approx. 460,000 dots
Angle of View	Approx. 160° vertically and horizontally
Coverage	Movies - Approx. 100% vertically and horizontally (at an aspect ratio of 16:9) Still Photos - Approx. 100% vertically and horizontally (at L image size and an aspect ratio of 3:2)
Brightness Control	Manually adjustable in a range of 1–5
Touch-screen Operation	Capacitive sensing Support for: Tap-based subject selection; Touch Shutter (Disable / Enable); Menu selection; Quick Control Menu
Tilt	Approx. 180° upward

Shooting Information Display

Grid display	Disable / 3x3
Recording emphasis	On / Off
Aspect marker	Off / 1:1 / 4:5 / 5:4 / 9:16 / 4:3 / 13:9 / 14:9 / 1.375:1 / 1.66:1 / 1.75:1 / 1.85:1 / 1.90:1 / 2.35:1 / 2.39:1

Interface Languages	31 (English, German, French, Dutch, Danish, Portuguese, Finnish, Italian, Ukraine, Norwegian, Swedish, Spanish, Greek, Russian, Polish, Czech, Hungarian, Vietnamese, Hindi, Romanian, Turkish, Arabic, Thai, Simplified Chinese, Traditional Chinese, Korean, Malay, Indonesian, Persian, Hebrew, and Japanese)

Exposure Control

Metering Mode	Evaluative metering 384-zone (24×16) metering using the image sensor
ISO Speed in Still Photo Shooting	Manual ISO speed setting for still photos not configurable ISO Auto range for still photos - Auto (ISO 125–12800) (in 1/3-stop increments)

ISO Speed in Movie Recording	Manual or Automatic ISO Speed Settings		
			ISO Speed
	Normal ISO Speed	Full HD	ISO 125–6400 (in 1/3-stop increments)
		4K	ISO 125–3200 (in 1/3-stop increments)
	* Expanded ISO speed not available.		

Shutter

Type	Rolling shutter, using the image sensor
Still Photo Shooting Shutter Speeds	1/2000–1/8 sec. * Up to 1.0 sec. depending on the scene.
Movie Recording Shutter Speeds	1/4000–1/25 sec. * Varies by movie recording mode and frame rate. Manual exposure movies: 1/4000–1/8 sec.

Image Stabilization (IS mode)

Movie Digital IS	Movie digital IS or movie auto level is available during movie recording. Cannot be combined with digital zoom. Using Movie digital IS results in cropped movies. {table} * Cannot be combined with auto level. * Cannot be use in Smooth skin mode.

Digital IS setting	Image area
Off	Approx. 100%
On	Approx. 90%
Enhanced	Approx. 70%

Auto Level	Keeps the movie level as it is recorded, by rotating the image and extracting a portion. {table} * Cannot be combined with Movie digital IS. * Cannot be used in Smooth skin movie

Auto Level	Image area
Enable	Approx. 90%

Playback

Item	Still Photo	Movie
Display conditions	JPEG images	MP4 movies*1
Image review	Review duration: Off / 2 sec. / 4 sec. / 8 sec. / Hold	
Single-image display	Yes	Yes
View from last seen	Yes	Yes
Shooting information display	No information display / Basic information display / Detailed shooting information display	
Index display	4 / 9 / 36-image index	
Highlight alert	Can be checked in Detailed information screen	
Histogram	Brightness	
Movie play count		Rec time
Image magnification	By enlarging/reducing (pinching in/out)	
Rotate image	Rotate stills (manually: 90° → 270° → 0°) Auto rotate	Change movie rotation information
Rating	OFF / 1 to 5 Stars Select images / Select range / All images in folder / All images on card	
Protect images	Select images / Select range / All images in folder / Unprotect all images on card / Unprotect all images on card	
Erase images	Select and erase images / Select range / All images in folder / All images on card	

(Display Format)

*1: Movie files recorded with other cameras may not be played back, even if they have the same file extensions as used by this camera.

Quick Control Function

Function	The Quick Control screen can be accessed by pressing the <Q/SET> button during movie recording. * In still photo shooting, [Image quality] settings are displayed.

Customization

Custom Functions	None
Customize Buttons	<Comm/Multi-Access> button operation in movie recording mode is customizable with the following functions. • Wi-Fi/Bluetooth connection • Autofocus method • Movie recording size • Recording level • Digital zoom • White balance selection • Color tone • Color filter • Digital IS setting • Aspect marker • Maximize screen brightness (temp) • Choose USB connection app
Shortcut function	A customized setting screen can be opened by pressing and holding the <Comm/ Multi-Access> button.

Wi-Fi®

Supporting Standards	Equivalent to IEEE 802.11b/g/n Standards
Transmission Method	DS-SS modulation (IEEE 802.11b) OFDM modulation (IEEE 802.11g/n)
Transition Frequency (Central Frequency)	**2.4 GHz band** Frequency: 2412 to 2462 MHz Channels: 1 to 11 channels

Security	Connection Method	Authentication	Encryption	
			Encryption	Key Format and Length
	Camera Access Point	WPA2 / WPA3-Personal	AES	• ASCII 8 characters
		Open	Disable	
	Infrastructure	Open	WEP	• Hexadecimal 10 digits • Hexadecimal 26 digits • ASCII 5 characters • ASCII 13 characters
			Disable	
		Shared key	WEP	Same as WEP above
		WPA / WPA2 / WPA3-Personal	TKIP AES	1–127 characters

Send Images to a Web Service	image.canon: Enables uploading of still photos (JPEG) and movies (MP4) to image.canon servers. From image.canon, images can be sent to specific social media and 3rd-party cloud image services.

Bluetooth®

Standards Compliance	Bluetooth Specification Version 4.2 compliant (Bluetooth Low Energy technology)
Transmission Method	GFSK modulation
Bluetooth Pairing	Smartphone — up to 10 devices; BR-E1 remote controller — 1 unit

Video Calls / Streaming

Video Calls	Available * The camera is accessible to software on a computer once connected via USB.
Supported Protocols and Data Formats	Video • USB Video Class (UVC) supported • Video compression format: Motion JPEG • Movie recording size: Full HD at 30 fps only • Camera control from applications: Not supported Audio • USB Audio Class (UAC) supported • Linear PCM (48 kHz, 16 bits) • Built-in or external microphone (External microphone IN terminal)
Streaming Services	Streaming video captured by the camera is possible by selecting a streaming service icon on the camera to obtain a destination URL. * Linkage with compatible streaming services and other settings are configured by connecting the camera to Camera Connect. * Streamed videos are not saved on the camera.

Compatible Services	• YouTubeLive
	• FacebookLive
	  * Details on each service are provided on the service website.
	  * As of February 2023.

External Interface

USB Terminal	USB Type-C Equivalent to Hi-Speed USB (USB 2.0)
HDMI Out Terminal	HDMI micro OUT terminal (Type D) * Resolution switches automatically * HDMI CEC not supported * Images not displayed unless [For NTSC] or [For PAL] is set correctly for the TV video system
Microphone terminal	3.5mm diameter stereo mini jack
Headphone terminal	Not provided

Power Source

Battery	Built-in rechargeable lithium-ion battery * Not user-replaceable.
Rated voltage/capacity	<table><tr><th>Rated voltage</th><th>Capacity</th></tr><tr><td>3.6V</td><td>1250 mAh</td></tr></table>
Recharge cycles	Approx. 500 recharging and usage cycles
USB charging time	Approx. 1 hr. 50 min. 　* To fully recharge a completely depleted battery based on CIPA testing standards using PD-E1 (at room temperature)
Start-up Time	Approx. 1.1 sec.

Dimensions and Weight

Dimensions (W x H x D)	Approx. 2.50 × 3.54 × 1.35 in. / 63.4 × 90.0 × 34.3 mm

Weight		Exterior color	Weight	
	Body (including card)	Black / Silver	Approx. 7.44 oz.	Approx. 211 g
	Body only	Black / Silver	Approx. 7.41 oz	Approx. 210 g

Operating Environment

Working Temperature Range	0–40°C / 32–104°F
Working Humidity Range	10%–90%