PUB. DIE-0561-000A



# EOS R50

## Digital Cinema Camera

Advanced User Guide (PHOTO edition)

#### Туре

Lens mount: Canon RF mount Compatible lenses: Canon RF lens group \* Using mount adapter EF-EOS R: Canon EF or EF-S lenses (excluding EF-M lenses) Lens focal length: Same as the focal length indicated on the lens \* Using EF-S lenses: Approx. 1.6 times the indicated focal length

#### Image sensor

#### Type: CMOS sensor

Screen size	Approx. 36.0×24.0 mm	
Effective pixels*1*2	Max. approx. 45.0 megapixels	
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 to Design rule for Camera File system 2.0 and Exif 2.31\*

\* Supports time difference information

#### Image type and extension

Imag	e type	Extension
	JPEG	JPG
	HEIF	HIF
Still photos	RAW	
	Dual Pixel RAW	CR3
	C-RAW	

#### Still photo recording

#### Still photo pixel count

Image quality		Recorded pixels				
		Aspect ratio				
			1.6x (crop)*1	1:1	4:3	16:9
	L	Approx. 44.8 megapixels (8192×5464)	Approx. 17.3 megapixels (5088×3392)	Approx. 29.8 megapixels (5456×5456)	Approx. 39.8 megapixels (7280×5464)	Approx. 37.7 megapixels (8192×4608)
JPEG	М	Approx. 22.5 megapixels (5808×3872)		Approx. 15.0 megapixels (3872×3872)	Approx. 19.9 megapixels (5152×3872)	Approx. 19.0 megapixels (5808×3264)
HEIF	51	Approx. 11.6 megapixels (4176×2784)		Approx. 7.8 megapixels (2784×2784)	Approx. 10.3 megapixels (3712×2784)	Approx. 9.8 megapixels (4176×2344)
	S2	Approx. 3.8 megapixels (2400×1600)	Approx. 3.8 megapixels (2400×1600)	Approx. 2.6 megapixels (1600×1600)	Approx. 3.4 megapixels (2112×1600)	Approx. 3.2 megapixels (2400×1344)
RAW	RAW / CRAW	Approx. 44.8 megapixels (8192×5464)	Approx. 17.3 megapixels (5088×3392)	Арр	rox. 44.8 megap (8192×5464)	ixels

\* Values for recorded pixels are rounded off to the nearest 100,000th.

\* RAW images are generated at 3:2, with information added about the specified aspect ratio, and JPEG images are generated at the specified aspect ratio.

\* 1: Angle of view of approx. 1.6 times the focal length.

## Still photo file size / Number of possible shots / Maximum burst for continuous shooting

		File size	File size Possible		Maximum burst [Approx.]*5		
	Image quality	[Approx. MB]		SD card*1	SD card*1 [Hi-speed]	CFexpress card <sup>*2</sup>	
	<b>A</b> L	13.5	2240	190	350	350	
	al L	6.8	4450	260		350	
	∎M	7.8	3860	320		350	
JPEG <sup>*4</sup>	M	4.1	7330	290		350	
	<b>S</b> 1	4.7	6420	330		350	
	∎S1	2.6	11360	330		350	
	S2	1.8	16790	340		350	
	<b>A</b> L	13.4	2240	190	280	280	
	al.	10.0	2970	210		330	
	۸	8.3	3580	310		310	
HEIF"3	M	6.3	4730	350		360	
	<b>S</b> 1	5.1	5710	340		360	
	<b>S</b> 1	4.0	7330	360		350	
	S2	1.8	14480	340		360	
RAW*4	RAW	45.4	670	66	87	180	
IN W	CRAW	21.9	1440	130	260	260	
RAW+JPEG*4	RAW +	45.4+13.5	520	64	79	160	
RAW+JPEG*	CRAW +	21.9+13.5	870	100	130	240	
RAW+HEIF*3	RAW +	45.4+13.4	480	61	74	90	
RAW+HEIF °	CRAW +	21.9+13.4	780	110	140	140	

\*1: The number of possible shots and maximum burst (SD card) apply to a UHS-I compliant 32 GB SD card based on Canon testing standards. The number of possible shots and maximum burst (SD card [Hi-speed]) apply to a UHS-II compliant 32 GB SD card based on Canon testing standards.

\*2: The number of shots available and maximum burst (CFexpress card) apply to a 325 GB CFexpress card conforming to Canon testing standards.

\* 3: Available when [HDR PQ] for HDR shooting is set to [Enable].

\* 4: When [HDR PQ] for HDR shooting is set to [Disable].

\* 5: With mechanical shutter or electronic 1st-curtain shutter, shot at approx. 12 fps.

\* File size, number of possible shots, and maximum burst vary depending on shooting conditions (including

1.6x crop/aspect ratio, subject, memory card brand, ISO speed, Picture Style, and Custom Function).

#### Built-in and external microphones

Built-in microphone: Monaural microphone External microphone: 3.5 mm diameter stereo mini jack

#### Recording media

#### Recording media:

CFexpress card SD card \* Compatible with UHS-II

#### Viewfinder

Type: OLED color electronic viewfinder Screen size: 0.5 inch Dot count: Approx. 5,760,000 dots Magnification / angle of view: Approx. 0.76× / Approx. 35.5° (with 50 mm lens at infinity, – 1 m<sup>-1</sup>) Coverage: Approx. 100% (at L image quality, an aspect ratio of 3:2, and approx. 23 mm eyepoint) Eyepoint: Approx. 23 mm (at –1 m<sup>-1</sup> from eyepiece lens end) Dioptric adjustment: Approx. –4.0 to +2.0 m<sup>-1</sup> (dpt)

#### Screen

Type: TFT color, liquid-crystal monitor Screen size: 3.2 inch (Screen aspect ratio of 3:2) Dot count: Approx. 2,100,000 dots Angle of view: Approx. 170° vertically and horizontally Coverage: Approx. 100% vertically and horizontally (at L image quality and an aspect ratio of 3:2) Brightness adjustment: Possible (7 levels) Color tone adjustment: Warm tone / Standard / Cool tone 1 / Cool tone 2 Touch-screen: Capacitive sensing

#### LCD panel

Type: Reflective memory LCD Display format: Dot-matrix display Dot count: 128×128 dots

#### HDMI output

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

#### Autofocus

#### Focusing method: Dual Pixel CMOS AF

#### Focusing operation

	Still photo shooting
AF operation	One-Shot AF Servo AF (Al Focus AF) * Set automatically in A+ mode
Manual focus	Supported

#### Lens compatibility based on AF area: Refer to the Canon website

#### Number of AF zones available for automatic selection

AF area		Horizontal: Approx. 100%, Vertical: Approx. 100%
Number of AF zone	Still photos	Max. 1053 zones (39×27)

\* May vary depending on settings.

#### Selectable positions for AF point

AF area		Horizontal: Approx. 90%, Vertical: Approx. 100%
Number of positions	Still photos	Max. 5940 positions (90×66)

\* When selected using the Multi-controller.

#### Focusing brightness range (in still photo shooting): EV -6 to 20 (With an f/1.2 lens\*,

center AF point, One-Shot AF, at 23°C / 73°F, ISO 100)

\* Except RF lenses with a Defocus Smoothing (DS) coating

#### Exposure control

#### Metering functions under various shooting conditions

Ite	em	Still photo shooting
Metering sensor		384 zone (24×16) metering using image sensor output signals
	Evaluative metering	Yes
Metering mode	Partial metering	Yes: (Approx. 6.1%) of the screen
wetening mode	Spot metering	Yes: (Approx. 3.1%) of the screen
Center-weighted average		Yes
Metering brightnes 23°C / 73°F, ISO		EV -3 to 20

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

Manually set ISO speed in still photo shooting

Normal ISO speed	ISO 100–51200 (in 1/3-stop, 1-stop increments)
Expanded ISO speed (equivalent)	L (50) H (102400)

\* For [ : Highlight tone priority], the available ISO speed range is ISO 200 to 51200.

\* Expanded ISO cannot be set for HDR mode or during HDR PQ shooting.

#### ISO speed range settings in still photo shooting

ISO speed range	ISO speed	
Minimum	L (50)–51200 (in 1-stop increments)	
Maximum	ISO 100-H (102400) (in 1-stop increments)	

\* Expanded ISO speeds are noted as being "equivalent" to these speeds.

#### ISO Auto range settings in still photo shooting

Auto range ISO speed	
Minimum	ISO 100-25600 (in 1-stop increments)
Maximum	ISO 200–51200 (in 1-stop increments)

#### ISO Auto details in still photo shooting

Shooting mode	No flash	Using flash
ه <sup>†</sup>	ISO 100-12800	ISO 100-6400"3
Р		
Tv	- ISO 100 <sup>°1′2</sup> –51200 <sup>°2</sup>	ISO 100°1'2-6400'2'3
Av		
м		
В	ISO 400*4	ISO 400*4

\* 1: ISO 200 when [ : Highlight tone priority] is set to [Enable] or [Enhanced].

\*2: Varies depending on [Maximum] and [Minimum] of [Auto range].

\* 3: ISO 1600 when using a lens that is not compatible with "Variable control of maximum ISO Auto limit for E-TTL".

\*4: If outside the setting range, changed to the value most close to ISO 400.

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

### Shutter

Still photo shooting Type: Electronically controlled focal-plane shutter Shutter mode

Mechanical shutter
Electronic 1st curtain
Electronic shutter

#### Shutter speed

When [Mechanical] or [Elec. 1st- curtain] is set	1/8000-30 sec., Bulb
When [Electronic] is set	1/8000-0.5 sec.

#### X-sync speed

Mechanical shutter	1/200 sec.
Elec. 1st-curtain	1/250 sec.

#### External flash

#### Sync contacts: Multi-function shoe: X-sync contact

\* Max. flash sync speed: 1/250 sec. with elec. 1st-curtain, 1/200 sec. with mechanical shutter.

#### Drive

#### Drive mode and continuous shooting speed

Drive modes	Mechanical shutter	Electronic 1st curtain	Electronic shutter	
Single shooting	Yes	Yes	Yes	
High-speed continuous shooting+	Max. approx. 12 shots/sec.		Max. approx. 20 shots/	
High-speed continuous shooting	Max. approx. 6.0 shots/ sec.	Max. approx. 8.0 shots/ sec.	sec. * Lenses other than EF-S	
Low-speed continuous shooting	Max. approx. 3.0 shots/sec.		lenses	
Self-timer:10 sec / remote control	Yes			
Self-timer:2 sec / remote control	Yes			

#### Playback

Item	Still photo	
Magnify zoom display	1.5x-10x (15 levels)	
AF point display	Yes	
Grid display	Off / 3×3 / 6×4 / 3×3+diag	
Rating	OFF / t to t to to the state of	
Image search	Search conditions Rating / Date / Folder / Protect / Type of file	
Protect	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	
In-camera RAW image processing	Supported	
Resizing	Supported	
Cropping	Supported	

#### Print order (DPOF): Compliant with DPOF Version 1.1

#### **Customization (C.Fn)**

Custom Function: 22 Custom Functions are settable

#### External interface

#### Digital terminal

Terminal type: USB Type-C<sup>™</sup> Transmission: SuperSpeed Plus USB (USB 3.1 Gen 2) equivalent Applications: For computer communication For in-camera charging / powering the camera with USB Power Adapter PD-E1 **HDMI output terminal**: HDMI micro OUT terminal (Type D) **External microphone input terminal**: Compatible with the 3.5 mm diameter stereo mini plug **Headphone terminal**: Compatible with the 3.5 mm diameter stereo mini plug **Remote control terminal**: N3 type terminal

#### Power source

#### Battery

Compatible battery packs	LP-E6NH/LP-E6N/LP-E6
Quantity used	1

#### USB battery charging and camera power: Using USB Power Adapter PD-E1

#### AC power source

AC adapter	CA-946
DC coupler	DR-E6C

#### Possible shots

Configuration Shooting method	Shooting method	Battery	Tomporaturo	Battery life (Approx. number of shots)	
	Dattery	Temperature	Smooth	Power saving	
	Screen		23°C / 73°F	320	490
	Scieen		0°C / 32°F	310	470
Camera body only	Viewfinder	LP-E6NH	23°C / 73°F	220	320
	viewiinder		0°C / 32°F	200	310
	Eco mode (Screen)		23°C / 73°F	550	700
	Screen	Two LP-E6NH batteries	23°C / 73°F	_	970
Battery grip BG-R10 used	One LP-E6NH battery	23°C / 73°F	-	480	
Viewf	Viewfinder	Two LP-E6NH batteries	23°C / 73°F	-	640
Wireless File Transmitter		One LP-E6NH battery <sup>*1</sup>	23°C / 73°F	_	480
WFT-R10 used	Viewfinder	One LP-E6NH battery <sup>*1</sup>	23°C / 73°F	_	310

\* With fully charged batteries

\* 1: Used as a battery for the camera

#### Battery information

Remaining capacity	In 1% increments 5-level indicator
Number of shots	Supported
Recharge performance	3 levels
Battery registrations	Supported (up to 6)
Battery information	Serial number, remaining capacity when removed, date

#### Dimensions and weight

#### Dimensions

(W)×(H)×(D)	Approx. 142×101×111 mm
(W)×(H)×(D)	Approx. 5.6×4.0×4.4 in.

\* Excluding protrusions.

#### Weight

Body (including battery and memory card)	Approx. 770 g	Approx. 1.7 lb.
Body only	Approx. 680 g	Approx. 1.5 lb.

\* Weighed without body cap.

\* With a CFexpress card and an SD card.

#### **Operating environment**

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

#### Wi-Fi (Wireless LAN) communication

#### Compliance standards

Wi-Fi compliance standards	Transmission method	Maximum link speed
IEEE802.11b	DS-SS modulation	11 Mbps
IEEE802.11g	OFDM modulation	54 Mbps
IEEE802.11n		72.2 Mbps
IEEE802.11a		54 Mbps
IEEE802.11ac		86.7/200/433.3 Mbps

#### Transmission frequency (Center frequency)

#### 2.4 GHz band

Frequency	2412 to 2462 MHz
Channels	1 to 11 ch

#### 5 GHz band

Frequency	5180 to 5825 MHz
Channels	36 to 165 ch

\* Specifications vary by country/region.

#### Authentication and data encryption methods

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

#### Bluetooth

Compliance standards: Bluetooth Specification Version 5.0 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.