EOS-1D X Mark III

Advanced User Guide

These operating instructions assume you are using EOS-1D X Mark III firmware version 1.2.0 or later.

E

CT2-D061-D

Specifications

Type

Type	Digital single-lens reflex AF/AE camera
Recording media	CFexpress memory card * Type B compatible: 2 card slots
Image sensor size	Approx. 35.9×23.9 mm
Compatible lenses	Canon EF lens product groups * Excluding EF-S and EF-M lenses (Effective angle of view is approx. equivalent to the indicated focal length.)
Lens mount	Canon EF mount

Image sensor

Type	CMOS sensor
Effective pixels	Approx. 20.1 megapixels * Rounded to the nearest 100,000.
Aspect ratio	3:2
Dust deletion	Auto/Manual, Appending Dust Delete Data

Recording system

<table>
<tr><td>Recording format</td><td>DCF 2.0</td></tr>
<tr><td>Image type</td><td>JPEG (8-bit), HEIF (10-bit), RAW (14-bit Canon original)
RAW+JPEG simultaneous recording possible
RAW+HEIF simultaneous recording possible
* 12 bit A/D conversion processing is applied for RAW images shot with the electronic shutter.</td></tr>
<tr><td>Pixels recorded</td><td>
<table>
<tr><th colspan="2">Image Quality</th><th>Pixel Count</th></tr>
<tr><td rowspan="4">JPEG</td><td>L</td><td>Approx. 20.0 megapixels (5472×3648)</td></tr>
<tr><td>M1</td><td>Approx. 12.7 megapixels (4368×2912)</td></tr>
<tr><td>M2</td><td>Approx. 8.9 megapixels (3648×2432)</td></tr>
<tr><td>S</td><td>Approx. 5.0 megapixels (2736×1824)</td></tr>
<tr><td>HEIF</td><td>L</td><td>Approx. 20.0 megapixels (5472×3648)</td></tr>
<tr><td>RAW</td><td>RAW/C-RAW</td><td>Approx. 20.0 megapixels (5472×3648)</td></tr>
</table>
* Rounded to the nearest 100,000.
</td></tr>
<tr><td>Recording features</td><td>Still photo/movie separate, Still photo recording options, Movie recording options, Still photo record/play, Movie record/play</td></tr>
<tr><td>Folder creation and selection</td><td>Available</td></tr>
<tr><td>File naming</td><td>Preset code, User Defined 1, User Defined 2</td></tr>
<tr><td>File numbering</td><td>Continuous, Auto reset, Manual reset</td></tr>
</table>

Image processing during shooting

Picture Style	Auto, Standard, Portrait, Landscape, Fine Detail, Neutral, Faithful, Monochrome, User Defined 1–3
White balance	Auto (Ambience priority), Auto (White priority), Preset (Daylight, Shade, Cloudy, Tungsten light, White fluorescent light, Flash), Custom (5 settings), Color temperature setting (approx. 2500–10000 K) White balance correction and bracketing available * Flash color temperature information transmission possible
White balance correction	Blue/amber correction: ±9 levels Magenta/green correction: ±9 levels
White balance bracketing	±3 stops, in 1 stop increments
Automatic image brightness correction	Auto Lighting Optimizer
Noise reduction	Applicable to high ISO speed shots and long exposures
Highlight tone priority	Available
Lens aberration correction	Peripheral illumination correction, Distortion correction, Digital Lens Optimizer, Chromatic aberration correction, Diffraction correction

Viewfinder

Type	Eye-level pentaprism
Field of view (coverage)	Vertical/Horizontal approx. 100% (with eyepoint approx. 20 mm)
Magnification	Approx. 0.76× (−1 m^{-1} with 50 mm lens at infinity)
Eyepoint	Approx. 20 mm (from eyepiece lens end at –1 m^{-1})
Dioptric adjustment range	Approx. –3.0 to +1.0 m^{-1} (dpt)
Eyepiece shutter	Built-in
Focusing screen	Fixed
Mirror	Quick-return type
Depth-of-field preview	Available

Autofocus (viewfinder shooting)

Focus method	TTL secondary image-registration, phase-difference detection with the dedicated AF sensor
AF points	191 points max. (cross-type AF points: 155 points max.) * Number of available AF points, Dual cross-type AF points, and Cross-type AF points vary depending on the lens used. * Dual cross-type focusing at f/2.8 with center AF point
Focusing brightness range	EV –4 to 21 (with the center AF point supporting f/2.8, One-Shot AF, room temperature, ISO 100)
Focus operation	One-Shot AF, AI Servo AF, manual focusing (MF)
AF area selection mode	Spot AF (manual selection), 1-point AF (manual selection), AF point expansion (manual selection, vertical/horizontal), AF point expansion (manual selection: surround), Zone AF (manual selection of zone), Large zone AF (manual selection of zone), Auto selection AF
Subject detection AF	EOS iTR AF setting (can recognize color information, faces, and heads) * iTR: Intelligent Tracking and Recognition
AF Configuration Tool	Cases 1–4, Case A
AI Servo AF characteristics	Tracking sensitivity, Acceleration/deceleration tracking
AF fine adjustment	AF Microadjustment (All lenses by the same amount, Adjust by lens)
AF-assist beam	Fired by an external flash unit for EOS cameras

Autofocus (Live View shooting/Movie recording)

Focus method	Dual Pixel CMOS AF
AF method	Face+Tracking, Spot AF, 1-point AF, Expand AF area (vertically/horizontally), Expand AF area: Around, Zone AF, Large Zone AF: Vertical, Large Zone AF: Horizontal
Available AF point positions	Max. 3869 * When selected with the Multi-controller
Available AF areas when automatically selected	Max. 525
Eye Detection AF	Available
Magnified view	Approx. 5×/10×
AF area	Horizontal: Approx. 90%, Vertical: Approx. 100% Horizontal: Approx. 80%, Vertical: Approx. 80% * Varies depending on the lens used
Manual focus (MF)	MF peaking, Focus guide

[Live View shooting]

AF operation	One-Shot AF, Servo AF
Continuous AF	Available
Focusing brightness range	EV –6 to 18 (f/1.2, center AF point, at room temperature, ISO 100, One-Shot AF)
AF Configuration Tool	Cases 1–4, Case A
Servo AF characteristics	Tracking sensitivity, Acceleration/deceleration tracking

[Movie recording]

Focusing brightness range	EV –4 to 18 (f/1.2, center AF point, at room temperature, ISO 100, One-Shot AF, 29.97 fps)
Movie Servo AF	Available
Movie Servo AF characteristics	Tracking sensitivity, AF speed

Exposure control

Metering mode	Viewfinder shooting: 216-zone (18×12) TTL open-aperture metering with an approx. 400,000-pixel RGB+IR metering sensor Live View shooting/movie recording: 384-zone (24×16) metering with signals from the image sensor
	Viewfinder shooting: Evaluative metering Partial metering (approx. 6.2% of screen) Spot metering (approx. 1.5% of screen) * Options include spot metering linked to AF points and multi-spot metering Center-weighted average metering Live View shooting: Evaluative metering, Partial metering (approx. 5.8% of screen), Spot metering (approx. 2.9% of screen) Movie recording: Center-weighted average metering, Evaluative metering * Set automatically based on shooting conditions
Metering brightness range	Viewfinder shooting: EV 0 to 20 (at room temperature, ISO 100) Live View shooting: EV –3 to 20 (at room temperature, ISO 100) Movie recording: EV –1 to 20 (at room temperature, ISO 100)
Shooting mode	Still photo shooting: Program AE, Shutter-priority AE, Aperture-priority AE, Manual exposure, Bulb exposure, Custom shooting modes (C1/C2/C3) Movie recording: Program AE, Shutter-priority AE, Aperture-priority AE, Manual exposure, Custom shooting modes (C1/C2/C3)
ISO speed (recommended exposure index)	Still photo shooting: ISO Auto (automatically set within ISO 100–102400), manually set within ISO 100–102400 (in 1/3- or 1-stop increments), expandable to L (equivalent to ISO 50), H1 (equivalent to ISO 204800), H2 (equivalent to ISO 409600), or H3 (equivalent to ISO 819200) * ISO 200–102400 with Highlight tone priority set Movie recording: Program AE/Av/Tv: ISO Auto (automatically set within ISO 100–25600), expandable to H1 (equivalent to ISO 204800) M: ISO Auto (automatically set within ISO 100–25600), manually set within ISO 100–25600 (in 1/3- or 1-stop increments), expandable to H1 (equivalent to ISO 204800) * ISO 200–25600 with Highlight tone priority set
ISO speed settings	Still photo shooting: ISO speed range, Auto range, Minimum shutter speed Movie recording: ISO speed range, Max for Auto
Exposure compensation	Manual: ±5 stops in 1/3- or 1/2-stop increments (viewfinder shooting), or ±3 stops in 1/3- or 1/2-stop increments (Live View shooting, movie recording) AEB: ±3 stops in 1/3- or 1/2-stop increments (can be combined with manual exposure compensation)
AE lock	Still photo shooting: Auto: AE lock when focus is achieved can be enabled or disabled for each metering mode with a Custom Function Manual: With AE lock button Movie recording: With AE lock button
Flicker reduction	Available (viewfinder shooting)

Multiple exposures

Shooting method	Function/control priority, Continuous shooting priority
Number of multiple exposures	2 to 9 exposures
Multiple-exposure control	Additive, Average, Bright, Dark

HDR shooting (still photo HDR PQ)

Recording format	HEIF
Bit depth	10-bit
Color sampling	YCbCr 4:2:2
HDR specification	ITU-R BT.2100 (PQ)

Shutter

Type	Electronically controlled, focal-plane shutter
Shutter mode	Viewfinder shooting: Mechanical Live View shooting: Mechanical, Electronic 1st-curtain, Electronic
Shutter speed	Mechanical/Electronic 1st-curtain set: 1/8000 sec. to 30 sec., Bulb Electronic set: 1/8000 sec. to 0.5 sec. Max. shutter speed with flash sync: 1/250 sec. * Setting range differs when recording movies

Drive system

<table>
<tr><td>Drive mode</td><td>Single shooting, High-speed continuous shooting, Medium-speed continuous shooting, Low-speed continuous shooting, Single Soft shooting, Soft continuous shooting, Soft low speed continuous shooting, Self-timer: 10 sec, Self-timer: 2 sec</td></tr>
<tr><td>Continuous shooting speed</td><td>
<table>
<tr><th colspan="2">Drive Mode</th><th>Viewfinder Shooting</th><th>Live View Shooting*2</th></tr>
<tr><td rowspan="2">High-speed continuous shooting*1</td><td>One-Shot AF</td><td rowspan="2">Max. approx. 16 shots/sec. (setting range: 3–16 shots/sec.)</td><td rowspan="2">Max. approx. 20 shots/sec.</td></tr>
<tr><td>AI Servo AF/ Servo AF</td></tr>
<tr><td rowspan="2">Medium-speed continuous shooting</td><td>One-Shot AF</td><td rowspan="2">Approx. 10 shots/sec. (setting range: 2–15 shots/sec.)</td><td rowspan="2">Approx. 10 shots/sec.*3</td></tr>
<tr><td>AI Servo AF/ Servo AF</td></tr>
<tr><td rowspan="2">Low-speed continuous shooting</td><td>One-Shot AF</td><td rowspan="2">Approx. 3.0 shots/sec. (setting range: 1–14 shots/sec.)</td><td rowspan="2">Approx. 3.0 shots/sec.</td></tr>
<tr><td>AI Servo AF/ Servo AF</td></tr>
<tr><td colspan="2">Soft continuous shooting</td><td>Approx. 8.0 shots/sec. (setting range: 2–8 shots/sec.)</td><td>Approx. 10 shots/sec.*3</td></tr>
<tr><td colspan="2">Soft low speed continuous</td><td>Approx. 3.0 shots/sec. (setting range: 1–7 shots/sec.)</td><td>Approx. 3.0 shots/sec.</td></tr>
</table>
* 1: May be lower depending on conditions such as shutter speed, aperture, state of aperture during continuous shooting, use of flash, use of flicker reduction, battery level, temperature, subject conditions, brightness (as when shooting under low light), type of lens, type of power, and if internal memory becomes full (which temporarily disables shooting).
* 2: With the electronic shutter, continuous shooting speed is equivalent to the speed in high-speed continuous shooting.
* 3: With the mechanical shutter, continuous shooting speed is approx. 8.0 shots/sec.
</td></tr>
<tr><td>Maximum burst</td><td>JPEG Large: 1,000 shots or more
HEIF Large: 1,000 shots or more
RAW: 1,000 shots or more
RAW+JPEG Large: 1,000 shots or more
RAW+HEIF Large: approx. 350 shots
* In viewfinder shooting with a 325 GB card conforming to Canon testing standards
* Varies depending on shooting conditions (such as when JPEG/HEIF image quality is set to 8, as well as the subject, memory card brand, ISO speed, Picture Style, and Custom Functions)</td></tr>
</table>

External Speedlite

Compatible Speedlites	EL/EX series Speedlites
Flash metering	E-TTL II autoflash
Flash exposure compensation	±3 stops in 1/3- or 1/2-stop increments
FE lock	Available
PC terminal	Available
Flash control	Flash function settings, Flash Custom Function settings

Movie recording

Normal movies

		Canon Log	
		OFF	ON
Recording format		MP4	
Compression		MPEG-4 H.264/AVC	MPEG-4 H.265/HEVC
Video signal recording range		Full range (0–255)	Full range (128–1016)
Color sampling		YCbCr 4:2:0 (8-bit)	YCbCr 4:2:2 (10-bit)
Color Matrix		Rec.ITU-R BT.709	Rec.ITU-R BT.709/BT.2020
Audio	ALL-I/IPB	AAC/Linear PCM*	
	IPB (Light)	AAC	

* AAC or Linear PCM can be selected in [**C.Fn7-7**: **Audio compression**]

RAW movies

	Canon Log	
	OFF	ON
Recording format	RAW (12-bit)	
Audio	Linear PCM	

Movie recording size	RAW (5472×2886), 4K DCI (4096×2160), 4K DCI cropped (4096×2160), 4K UHD (3840×2160), Full HD (1920×1080)
Frame rate	119.9p/59.94p/29.97p/24.00p/23.98p (with NTSC) 100.0p/50.00p/25.00p/24.00p (with PAL) * 119.9p/100.0p used for High Frame Rate movies
Compression method	ALL-I (For editing), IPB (Standard), IPB (Light)

<table>
<tr><td>Bit rate</td><td><table>
<tr><td>RAW (59.94p/50.00p)</td><td>Approx. 2600 Mbps</td></tr>
<tr><td>RAW (29.97p/25.00p/24.00p/23.98p)</td><td>Approx. 1800 Mbps</td></tr>
<tr><td>4K DCI (59.94p/50.00p)/ALL-I</td><td>Approx. 940 Mbps</td></tr>
<tr><td>4K DCI (59.94p/50.00p)/IPB</td><td>Approx. 230 Mbps</td></tr>
<tr><td>4K DCI (29.97p/25.00p/24.00p/23.98p)/ALL-I</td><td>Approx. 470 Mbps</td></tr>
<tr><td>4K DCI (29.97p/25.00p/24.00p/23.98p)/IPB</td><td>Approx. 120 Mbps</td></tr>
<tr><td>4K DCI cropped (59.94p/50.00p)/ALL-I</td><td>Approx. 940 Mbps</td></tr>
<tr><td>4K DCI cropped (59.94p/50.00p)/IPB</td><td>Approx. 230 Mbps</td></tr>
<tr><td>4K DCI cropped (29.97p/25.00p/24.00p/23.98p)/ALL-I</td><td>Approx. 470 Mbps</td></tr>
<tr><td>4K DCI cropped (29.97p/25.00p/24.00p/23.98p)/IPB</td><td>Approx. 120 Mbps</td></tr>
<tr><td>4K UHD (59.94p/50.00p)/ALL-I</td><td>Approx. 940 Mbps</td></tr>
<tr><td>4K UHD (59.94p/50.00p)/IPB</td><td>Approx. 230 Mbps</td></tr>
<tr><td>4K UHD (29.97p/25.00p)/ALL-I</td><td>Approx. 470 Mbps</td></tr>
<tr><td>4K UHD (29.97p/25.00p)/IPB</td><td>Approx. 120 Mbps</td></tr>
<tr><td>Full HD (119.9p/100.0p)/ALL-I</td><td>Approx. 360 Mbps</td></tr>
<tr><td>Full HD (59.94p/50.00p)/ALL-I</td><td>Approx. 180 Mbps</td></tr>
<tr><td>Full HD (59.94p/50.00p)/IPB</td><td>Approx. 60 Mbps</td></tr>
<tr><td>Full HD (29.97p/25.00p)/ALL-I</td><td>Approx. 90 Mbps</td></tr>
<tr><td>Full HD (29.97p/25.00p)/IPB</td><td>Approx. 30 Mbps</td></tr>
<tr><td>Full HD (29.97p/25.00p)/IPB (Light)</td><td>Approx. 12 Mbps</td></tr>
</table></td></tr>
<tr><td>Time code</td><td>Can be added</td></tr>
<tr><td>Drop frame</td><td>119.9p/59.94p/29.97p supported</td></tr>
<tr><td>Sound recording</td><td>Built-in monaural microphone; external stereo microphone terminal included, and line input supported
Sound-recording level adjustable, wind filter provided, attenuator provided</td></tr>
<tr><td>Headphone</td><td>Headphone terminal provided, volume adjustable</td></tr>
<tr><td>Movie Digital IS</td><td>Available</td></tr>
<tr><td>Canon Log</td><td>Available as a shooting option</td></tr>
<tr><td>Still photo shooting</td><td>Not available during movie recording</td></tr>
<tr><td>HDMI output</td><td>Image output without information display available
* 4K output supported; Auto/1080p selectable</td></tr>
</table>

Screen

Type	TFT color, liquid-crystal monitor
Screen size and dots	Approx. 8.01 cm (3.15 in.) (3:2) with approx. 2.1 million dots
Brightness adjustment	Manual (7 levels)
Color tone adjustment	Warm tone, Standard, Cool tone 1, Cool tone 2
Interface languages	29
Touch-screen panel	Capacitive sensing
System status display	Available for reference

Playback

Image display format	Without shooting information, with basic information, with detailed shooting information, index display (4/9/36/100 images)
Highlight alert	Overexposed highlights blink
AF point display	Available (except under certain shooting conditions)
Grid display	3 types
Magnified view	Approx. 1.5×–10×, initial magnification and position settable
Image search	Search conditions settable (by rating, date, folder, protected, type of file)
Image browsing	1 image, 10 images, Specified number, Date, Folder, Movies, Stills, Protect, Rating
Image rotation	Available
Image protection	Available
Rating	Available
Voice memo	Recording and playback
Movie playback	Available
Start/end movie scene editing	Available
4K movie frame grab	Extraction of specified movie frames and saving as JPEG images
Slide show	All images or images matching the search conditions are played back automatically.
Image copying	Available
Converting HEIF to JPEG	Available
In-camera RAW image processing	Brightness adjustment, White balance, Picture Style, Clarity, Auto Lighting Optimizer, High ISO speed noise reduction, Image quality, Color space, Lens aberration correction (Peripheral illumination correction, Distortion correction, Digital Lens Optimizer, Chromatic aberration correction, Diffraction correction)
Resizing	Available
Cropping	Available
Print order	DPOF Version 1.1 compatible

Communication Functions

[Wi-Fi]

Standards compliance	IEEE 802.11b/g/n
Transmission method	DS-SS modulation (IEEE 802.11b), OFDM modulation (IEEE 802.11g/n)
Transmission frequency (central frequency)	Frequency: 2412 to 2462 MHz Channels: 1–11
Connection method	Camera access point mode, infrastructure* * Wi-Fi Protected Setup supported
Security	Authentication method: Open system, Shared key, or WPA/WPA2-PSK Encryption: WEP, TKIP, AES
Compatible devices	Smartphone, computer, FTP server

[Wired LAN]

Type	Ethernet
Standards compliance	IEEE 802.3u (10BASE-T/100BASE-TX/1000BASE-T)
Compatible devices	Access point, computer, EOS-1D X Mark III* * When syncing time between cameras

[Bluetooth]

Standards compliance	Bluetooth Specification Version 4.2 compliant (Bluetooth low energy technology)
Transmission method	GFSK modulation
Compatible devices	Smartphone

GPS features

Compatible satellites	GPS satellites (USA), GLONASS satellites (Russia), Quasi-Zenith Satellite System Michibiki (Japan)
Image geotagging	Latitude, longitude, elevation, Coordinated Universal Time (UTC), signal acquisition status
Position update interval	1, 5, 10, 15, or 30 sec., or 1, 2, or 5 min.
Position data retention	10 min., 30 min., 1 hr., 3 hr., 6 hr., unlimited
Time adjustment	Camera time can be set from GPS time data
Log data	One file generated daily, NMEA format * Change of time zone creates a separate file * Log data in internal memory can be transferred to cards or imported to a computer as log files
Log data deletion	Available

Customization features

Custom Functions	38 functions
Custom Quick Control	Available
Saving camera settings	Up to 10 settings can be registered on a card
Custom shooting modes	Still photo C1/C2/C3 modes, movie C1/C2/C3 modes
My Menu	Up to 5 screens can be registered
Copyright information	Text entry and appending possible
IPTC information	Can be added

Interfaces

Digital terminal	SuperSpeed Plus USB (USB 3.1 Gen 2) equivalent, USB Type-C Computer communication
HDMI mini OUT terminal	Type C (auto switching of resolution)
External microphone input/line input terminal	3.5 mm diameter stereo mini-jack Directional Stereo Microphone DM-E1, Stereo Microphone DM-E100, or commercially available external microphones can be connected
Headphone terminal	3.5 mm diameter stereo mini-jack
Remote control terminal	For N3-type remote control units
System extension terminal	Wireless File Transmitter WFT-E9 connection
Ethernet terminal	RJ-45 terminal

Power

Battery	Battery Pack LP-E19, quantity: 1 * AC power usable with household power outlet accessories
Battery information	Power source, Battery level, Shutter count, Recharge performance possible
Number of available shots	Viewfinder shooting: Approx. 2850 shots at room temperature (+23°C/73°F), approx. 2360 shots at low temperatures (0°C/32°F) Live View shooting: Approx. 610 shots at room temperature (+23°C/73°F), approx. 530 shots at low temperatures (0°C/32°F) * With a fully charged Battery Pack LP-E19.
Movie recording time available	Total approx. 4 hr. 40 min. at room temperature (+23°C/73°F) Total approx. 4 hr. 10 min. at low temperatures (0°C/32°F) * Using a fully charged Battery Pack LP-E19 with Movie Servo AF disabled to record Full HD 29.97p/25.00p IPB (Standard)

Dimensions and weight

Dimensions (W×H×D)	Approx. 158.0×167.6×82.6 mm/6.22×6.60×3.25 in.
Weight	Approx. 1440 g/50.80 oz. (including battery pack and card)/Approx. 1250 g/ 44.09 oz. (body only)

Operating environment

Working temperature range	0–45°C (32–113°F)
Working humidity	85% or less

- 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.