

Nikon Digital SLR Camera D7100 Specifications

Type of camera	Single-lens reflex digital camera
Lens mount	Nikon F mount (with AF coupling and AF contacts)
Effective angle of view	Nikon DX format; focal length in 35mm [135] format equivalent to approx. 1.5x that of lenses with FX-format angle of view
Effective pixels	24.1 million
Image sensor	23.5 × 15.6 mm CMOS sensor
Total pixels	24.71 million
Dust-reduction system	Image Sensor Cleaning, Image Dust Off reference data (optional Capture NX 2 required)
Image size (pixels)	<ul style="list-style-type: none"> DX (24x16) image area: 6000 × 4000 [L], 4494 × 3000 [M], 2992 × 2000 [S] • 1.3× (18x12) image area: 4800 × 3200 [L], 3600 × 2400 [M], 2400 × 1600 [S] • Photographs with image area of DX (24x16) taken in movie live view: 6000 × 3368 [L], 4496 × 2528 [M], 2992 × 1680 [S] • Photographs with image area of 1.3× (18x12) taken in movie live view: 4800 × 2696 [L], 3600 × 2024 [M], 2400 × 1344 [S]
File format	<ul style="list-style-type: none"> NEF (RAW): 12 or 14 bit, lossless compressed or compressed • JPEG: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8) or basic (approx. 1:16) compression (Size priority); Optimal quality compression available • NEF (RAW)+JPEG: Single photograph recorded in both NEF (RAW) and JPEG formats
Picture Control System	Standard, Neutral, Vivid, Monochrome, Portrait, Landscape; selected Picture Control can be modified; storage for custom Picture Controls
Storage media	SD (Secure Digital) and UHS-I compliant SDHC and SDXC memory cards
Double slot	Slot 2 can be used for overflow or backup storage or for separate storage of copies created using NEF+JPEG; pictures can be copied between cards
File system	DCF (Design Rule for Camera File System) 2.0, DPOF (Digital Print Order Format), Exif (Exchangeable Image File Format for Digital Still Cameras) 2.3, PictBridge
Viewfinder	Eye-level pentaprism single-lens reflex viewfinder
Frame coverage	Approx. 100% horizontal and 100% vertical
Magnification	Approx. 0.94x (50 mm f/1.4 lens at infinity, -1.0 m ¹)
Eye point	19.5 mm (-1.0 m ¹); from center surface of viewfinder eyepiece lens)
Dioptr adjustment	-2 to +1 m ¹
Focusing screen	Type B BriteView Clear Matte Mark II screen with AF area brackets (framing grid can be displayed)
Reflex mirror	Quick return
Depth-of-field preview	Pressing depth-of-field preview button stops lens aperture down to value selected by user (A and M modes) or by camera (other modes)
Lens aperture	Instant return, electronically controlled
Compatible lenses	Compatible with AF NIKKOR lenses, including type G and D lenses (some restrictions apply to PC lenses) and DX lenses, AI-P NIKKOR lenses, and non-CPU AI lenses (A and M modes only); IX-NIKKOR lenses, lenses for the F3AF, and non-AI lenses cannot be used The electronic rangefinder can be used with lenses that have a maximum aperture of f/5.6 or faster (the electronic rangefinder supports the center focus point with lenses that have a maximum aperture of f/8 or faster)
Shutter type	Electronically controlled vertical-travel focal-plane shutter
Shutter speed	1/8000 to 30 s in steps of 1/3 or 1/2 EV, bulb, time, X250
Flash sync speed	X=1/250 s; synchronizes with shutter at 1/320 s or slower (flash range drops at speeds between 1/250 and 1/320 s)
Release modes	S (single frame), C (continuous low speed), Ch (continuous high speed), Q (quiet shutter-release), (self-timer), Mu ¹ (mirror up); interval timer photography supported
Approximate frame advance rate	<ul style="list-style-type: none"> • JPEG and 12-bit NEF (RAW) images recorded with DX (24x16) selected for image area: C: 1 to 6 fps, Ch 6 fps • JPEG and 12-bit NEF (RAW) images recorded with 1.3x (18x12) selected for image area: C: 1 to 6 fps, Ch 7 fps • 14-bit NEF (RAW) images recorded with DX (24x16) selected for image area: C: 1 to 5 fps, Ch 5 fps • 14-bit NEF (RAW) images recorded with 1.3x (18x12) selected for image area: C: 1 to 6 fps, Ch 6 fps
Self-timer	2 s, 5 s, 10 s, 20 s; 1 to 9 exposures at intervals of 0.5, 1, 2 or 3 s
Remote control modes (ML-L3)	Delayed remote, quick-response remote, remote mirror-up
Exposure metering mode	TTL exposure metering using 2016-pixel RGB sensor
Metering method	<ul style="list-style-type: none"> • Matrix: 3D color matrix metering II (type G and D lenses); color matrix metering II (other CPU lenses); color matrix metering available with non-CPU lenses if user provides lens data • Center-weighted: Weight of 75% given to 8-mm circle in center of frame; diameter of circle can be changed to 6, 10, or 13 mm, or weighting can be based on average of entire frame (non-CPU lenses use 8-mm circle) • Spot: Meters 3.5-mm circle (about 2.5% of frame) centered on selected focus point (on center focus point when non-CPU lens is used) • Matrix or center-weighted metering: 0 to 20 EV • Spot metering: 2 to 20 EV
Metering range (ISO 100, 1/1.4 lens, 68°F/20°C)	• Spot metering: 2 to 20 EV
Exposure meter coupling	Combined CPU and AI
Exposure modes	Auto modes (auto; auto (flash off)); programmed auto with flexible program (P); shutter-priority auto (S); aperture-priority auto (A); manual (M); scene modes (portrait; landscape; child; sports; close up; night portrait; night landscape; party/indoor; beach/snow; sunset; dusk/dawn; pet portrait; candlelight; blossom; autumn colors; food; special effects modes (night vision; color sketch; miniature effect; selective color; silhouette; high key; low key); U1 (user settings 1); U2 (user settings 2)
Exposure compensation	Can be adjusted by -5 to +5 EV in increments of 1/3 or 1/2 EV in P , S , A and M modes
Exposure bracketing	2 to 5 frames in steps of 1/3, 1/2, 2/3, 1, 2 or 3 EV
Exposure lock	Luminosity locked at detected value with AE-L/AF-L button
ISO sensitivity (Recommended Exposure Index)	ISO 100 to 6400 in steps of 1/3 or 1/2 EV; can also be set to approx. 0.3, 0.5, 0.7, 1 or 2 EV (ISO 25600 equivalent) above ISO 6400; auto ISO sensitivity control available
Active D-Lighting	Auto, extra high, high, normal, low, off
ADL bracketing	2 frames using selected value for one frame or 3 frames using preset values for all frames
Autofocus	Nikon Advanced Multi-CAM 3500DX autofocus sensor module with TTL phase detection, fine-tuning, 51 focus points (including 15 cross-type sensors; the center point is available at apertures slower than f/5.6 and faster than f/8 or at f/8), and AF-assist illuminator (range approx. 1 ft 8 in. to 9 ft 10 in./0.5 to 3 m)
Detection range	-2 to +19 EV (ISO 100, 68°F/20°C)

Lens servo	<ul style="list-style-type: none"> • Autofocus (AF): Single-servo AF (AF-S); continuous-servo AF (AF-C); auto AF-S/AF-C selection (AF-A); predictive focus tracking activated automatically according to subject status • Manual focus (M): Electronic rangefinder can be used
Focus point	Can be selected from 51 or 11 focus points
AF-area modes	Single-point AF: 9-, 21- or 51-point dynamic-area AF, 3D-tracking, auto-area AF
Focus lock	Focus can be locked by pressing shutter-release button halfway (single-servo AF) or by pressing AE-L/AF-L button
Built-in flash	Auto flash with auto pop-up P S A M H : Manual pop-up with button release
Guide number	Approx. 39/12, 39/12 with manual flash (ft/m, ISO 100, 68°F/20°C)
Flash control	TTL: i-TTL flash control using 2016-pixel RGB sensor is available with built-in flash and SB-910, SB-900, SB-800, SB-700, SB-600 or SB-400; i-TTL balanced fill-flash for digital SLR is used with matrix and center-weighted metering, standard i-TTL flash for digital SLR with spot metering
Flash modes	Auto, auto with red-eye reduction, auto slow sync, auto slow sync with red-eye reduction, fill-flash, red-eye reduction, slow sync, slow sync with red-eye reduction, rear-curtain with slow sync, rear-curtain sync, off; Auto FP High-Speed Sync supported
Flash compensation	-3 to +1 EV in increments of 1/3 or 1/2 EV
Flash bracketing	2 to 5 frames in steps of 1/3, 1/2, 2/3, 1, 2 or 3 EV
Flash-ready indicator	Lights when built-in flash or optional flash unit is fully charged; flashes after flash is fired at full output
Accessory shoe	ISO 518 hot-shoe with sync and data contacts and safety lock
Nikon Creative Lighting System (CLS)	<ul style="list-style-type: none"> • Advanced Wireless Lighting supported with: SB-910, SB-900, SB-800 or SB-700 as a master flash and SB-600 or SB-R200 as remotes or SU-800 as commander; built-in flash can serve as master flash in commander mode • Auto FP High-Speed Sync and modeling illumination supported with all CLS-compatible flash units except SB-400; Flash Color Information Communication and FV lock supported with all CLS-compatible flash units
Sync terminal	AS-15 Sync Terminal Adapter (available separately)
White balance	Auto (2 types), incandescent, fluorescent (7 types), direct sunlight, flash, cloudy, shade, preset manual (up to 6 values can be stored, Spot White Balance measurement available during live view), choose color temperature (2500 K to 10000 K), all with fine-tuning
White balance bracketing	2 to 5 frames in steps of 1, 2 or 3
Live view modes	Live view photography (still images), movie live view (movies)
Live view lens servo	<ul style="list-style-type: none"> • Autofocus (AF): Single-servo AF (AF-S); full-time-servo AF (AF-F) • Manual focus (M)
AF-area modes	Face-priority AF, wide-area AF, normal-area AF, subject-tracking AF
Autofocus	Contrast-detect AF anywhere in frame (camera selects focus point automatically when face-priority AF or subject-tracking AF is selected)
Movie metering	TTL exposure metering using main image sensor
Movie metering method	Matrix
Frame size (pixels) and frame rate	<ul style="list-style-type: none"> • 1920 × 1080; 60i (59.94 fields/s)/50i (50 fields/s)* • 1920 × 1080; 30p (progressive), 25p, 24p • 1280 × 720; 60p, 50p <p><small>Actual frame rates for 60p, 50p, 30p, 25p and 24p are 59.94, 50, 29.97, 25 and 23.976 fps respectively; options support both *high and normal image quality *Available only when 1.3x (18x12) is selected for image area; sensor output is about 60 or 50 fps</small></p>
File format	MOV
Video compression	H.264/MPEG-4 Advanced Video Coding
Audio recording format	Linear PCM
Audio recording device	Built-in or external stereo microphone; sensitivity adjustable
Maximum length	29 min. 59 s
Monitor	3.2-in./8-cm, approx. 1229k-dot (VGA: 640 × 480 × 4 = 1,228,800 dots), TFT monitor with approx. 170° viewing angle, approx. 100% frame coverage and brightness adjustment
Playback	Full-frame and thumbnail (4, 9 or 72 images or calendar) playback with playback zoom, movie playback, photo and/or movie slide shows, histogram display, highlights, photo information, GPS data display and auto image rotation
USB	Hi-Speed USB
HDMI output	HDMI mini connector (Type C)
Accessory terminal	Wireless remote controller: WR-1 and WR-R10 (available separately), Remote cord: MC-DC2 (available separately), GPS unit: GP-1 (available separately)
Audio input	Stereo mini-pin jack (3.5-mm diameter; plug-in power supported)
Audio output	Stereo mini-pin jack (3.5-mm diameter)
Supported languages	Arabic, Bengali, Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Norwegian, Persian, Polish, Portuguese (European and Brazilian), Romanian, Russian, Spanish, Swedish, Tamil, Thai, Turkish, Ukrainian, Vietnamese
Battery	One EN-EL15 Rechargeable Li-ion Battery
Battery pack	Optional MB-D15 Multi-Power Battery Pack with one EN-EL15 Rechargeable Li-ion Battery or six AA-size alkaline, Ni-MH or lithium batteries
AC adapter	EH-5b AC Adapter; requires EP-5B Power Connector (available separately)
Tripod socket	1/4 in. (ISO 1222)
Dimensions (W × H × D)	Approx. 5.3 × 4.2 × 3.0 in./135.5 × 106.5 × 76 mm
Weight	Approx. 1 lb 11.0 oz/765 g with battery and memory card but without body cap; approx. 1 lb 7.8 oz/675 g (camera body only)
Operating environment	Temperature: 32 to 104°F/0 to 40°C; humidity: 85% or less (no condensation)
Supplied accessories (may differ by country or area)	EN-EL15 Rechargeable Li-ion Battery, MH-25 Battery Charger, DK-5 Eyepiece Cap, DK-21 Rubber Eyecup, UC-E6 USB Cable, AN-DC1 BK Camera Strap, BF-1B Body Cap, BS-1 Accessory Shoe Cover, ViewNX 2 CD-ROM

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HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE



At the heart of the *image*™

D7100™



ACT ON YOUR INSTINCTS

Lightweight DX-format agility with a 24-megapixel image sensor unit designed without an optical low-pass filter

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. February 2013
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WARNING

TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT. SOME DOCUMENTATION IS SUPPLIED ON CD-ROM ONLY.



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• Lens: AF-S NIKKOR 500mm f/4G ED VR
• Image quality: RAW (NEF)
• Exposure: [M] mode, 1/500 second, f/11
• White balance: Direct sunlight
• Sensitivity: ISO 100
• Picture Control: Standard
©Koji Nakano



Take advantage of the agility and high-performance features built into the compact and lightweight DX-format body of the D7100. Enjoy the kind of breathtaking, high-resolution images that are only possible when the EXPEED 3 image-processing engine is paired with a powerful CMOS image sensor unit that's designed without an optical low-pass filter. Now you can have all the mobility, resolution and power you need to close in on your target and capture it exquisitely — all yours, via the Nikon DX format. The D7100 is ready to go wherever inspiration calls you. Your hunt for spectacular images starts here.

- Lens: AF-S NIKKOR 70-200mm f/4G ED VR
 - Image quality: RAW (NEF)
 - Exposure: [M] mode, 1/180 second, f/8
 - White balance: Direct sunlight
 - Sensitivity: ISO 100
 - Picture Control: Landscape
- ©Koji Nakano

THE POWER AND AGILITY TO LEAP FORWARD

High-density 51-point AF system that widely covers the frame



With Nikon's newly developed Advanced Multi-CAM 3500DX autofocus sensor module featuring a high density

of 51 focus points (including 15 cross-type sensors), the D7100 can focus sharply on some of the most elusive of subjects. This AF system also achieves a wider AF detection range down to -2 EV* and faster initial detection, just like that of the D4. The center cross-type sensor is compatible with f/8, which means that you can autofocus on distant subjects even with an effective aperture of f/8 when a 2.0x teleconverter is attached to a telephoto NIKKOR lens with a maximum aperture of f/4.

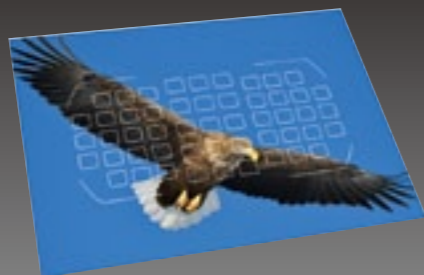
*ISO 100, 68°F/20°C.

The 1.3x crop of DX lets you get closer to distant subjects and achieves fast continuous shooting of up to approx. 7 fps [NEW]

In addition to the regular DX-format size, that enables shooting at an angle of view equivalent to approx. 1.5x*¹ lens focal length, the D7100 also has a 1.3x crop of DX option, which instantly provides an angle of view equivalent to approx. 2.0x*¹ lens focal length, while delivering a sufficient image resolution of approx. 15.4 effective megapixels. In this mode, the 51 focus points cover almost the entire frame, realizing extremely high capturing power. Add to this approx. 7-fps continuous shooting*², and you can see how the D7100 captures fast and erratic subjects with greater efficiency.

*1 When converted to 35mm format.

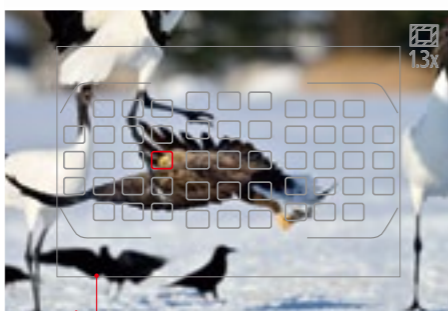
*2 In 1.3x crop of DX mode with JPEG/12-bit NEF (RAW).



51+1.3x

AF POINTS CROP OF DX

CAPTURING POWER TO LOCK ON TO YOUR SUBJECT



1.3x crop of DX
DX format

GET MORE INTIMATE WITH YOUR SUBJECT WITH FULL HD D-MOVIE

Exquisite Full HD video quality

Using an image sensor unit with 24.1 effective megapixels, designed without an optical low-pass filter, and employing the EXPEED 3 image-processing engine, the D7100 records Full HD video with exquisite detail reproduction. Your cinematic potential is expanded further with D-SLR shooting advantages such as the wide range of interchangeable NIKKOR lenses. For the smoothest recordings of fast-moving subjects, use 1280 x 720 at 60p, or try the movie image area based on 1.3x crop of DX with 1920 x 1080 at either 60i or 50i. The D7100 also has a built-in stereo microphone. The file size is compressed in H.264/MPEG-4 AVC format, providing you with a maximum recording time of 29 min. 59 s for a single clip*.

*20 min. with ★ high image quality.

Multi-area mode Full HD D-Movie with movie image area based on 1.3x crop of DX

The D7100 offers you two movie image areas: one based on the DX format and the other on the 1.3x crop of DX. Using the 1.3x crop of DX delivers an angle of view equivalent to approx. 2.0x* lens focal length — an amazing amount of reach to the subject. Also helped by the agility of the compact, lightweight DX-format system, you can boldly get closer to even smaller, more distant subjects.

*When converted to 35mm format.

Glass pentaprism optical viewfinder realizing approx. 100% frame coverage



The optical viewfinder, that features clear viewing with approx. 100% frame coverage and magnification ratio of 0.94x*, supports comfortable and precise composition. The high-intensity, high-contrast, energy-saving organic EL display element, newly employed for the viewfinder information display beneath the image area, also contributes to the excellent visibility. The response of the display in low-temperature conditions has been further improved.

*50mm f/1.4 lens at infinity, -1.0 m¹.

Newly employed, wide-viewing-angle, 3.2-in./8-cm, approx. 1229k-dot, LCD monitor with an RGBW alignment for enhanced visibility [NEW]

Thanks to its new RGBW alignment, the newly employed, large, high-resolution LCD monitor features improved brightness. Combined with the integrated glass-and-panel structure*, it greatly enhances visibility, even under bright conditions.

*Equivalent to that utilized in the D4, D800 series and D600.



Exquisite detail reproduction thanks to 24.1 effective megapixels and an image sensor unit designed without an optical low-pass filter [NEW]

In order to maximize the high resolution realized by its high pixel count, the D7100's image sensor unit does not integrate an optical low-pass filter (OLPF)*. This system successfully brings out NIKKOR lenses' sharp rendering performance to make full use of the 24.1-megapixel resolution achieved with the Nikon DX-format CMOS sensor, delivering stunning reproduction of details with depth.

*An optical low-pass filter sacrifices a slight degree of resolution, while reducing false color and moiré.

High-performance EXPEED 3 image-processing engine

Nikon's exclusive image-processing engine EXPEED 3 handles multiple tasks at ultra-fast speeds while maintaining high precision in order to maximize the potential of 24.1 megapixels in stills and movies. The result: superior color reproduction, rich tonal gradation and high image quality at high ISO.



24.1 WITHOUT OLPF

MEGAPIXELS

EXQUISITE DETAIL REPRODUCTION WITH SUPERIOR CLARITY

ISO sensitivity expandable to ISO 25600 equivalent with superior noise reduction

The D7100 is capable of clear and exquisite image quality across ISO 100 to 6400, which can go up to Hi 2, an ISO 25600 equivalent. The camera's intelligent noise-reduction system delivers smooth, saturated color without sacrificing fine detail, even with low-contrast subjects, in both stills and movies.

Spot White Balance that measures white balance during live view [NEW]

Spot White Balance allows you to easily acquire preset manual data by choosing a specific area of the scene during live view. Pinpoint white balance setting is realized according to your subject or a part of it in the monitor. This eliminates the need to use a gray card or change lenses, even when employing super-telephoto lenses. This comes in handy when shooting in mixed-lighting situations like stadium sports events.

Other features:

Active D-Lighting/HDR (High Dynamic Range)/Picture Control

RELIABILITY BEYOND ITS CLASS CONCENTRATED IN A COMPACT, LIGHTWEIGHT DX-FORMAT SYSTEM

1. Compact and lightweight body, lighter than the D7000, adopts durable magnesium alloy and superior weather and dust sealing

always gives you direct access to frequently used functions.

2. High-speed, highly precise sequential control mechanism

The driving mechanism, that powers aperture and mirror independently, enables continuous shooting of up to approx. 7 fps*^{1,2}, a release time lag of 0.052 s*¹ and smooth, quiet live view photography. Incorporating a mirror balancer has contributed to a more stable viewfinder image during high-speed continuous shooting.

*1 Based on CIPA Guidelines.

*2 In 1.3x crop of DX mode with JPEG/12-bit NEF (RAW).

3. Highly accurate and durable shutter unit that achieves shutter speeds up to 1/8000 s and tested over 150,000 cycles on a fully assembled camera

4. Your shortcut to frequently used settings: the convenient **i** button [NEW]

When viewing playback images or in viewfinder or live view shooting, the new **i** button



5. Built-in flash with a commander function supports Advanced Wireless Lighting

6. Double SD card slots compatible with UHS-I

The D7100's double SD card slots compatible with the SDXC UHS-I standard support smooth handling of the shooting data.

7. MB-D15 Multi-Power Battery Pack (optional) [NEW]

Supports EN-EL15 Rechargeable Li-ion Battery or AA-size alkaline, Ni-MH or lithium batteries.

8. Advanced multifunctional, WR-1 Wireless Remote Controller (optional) [NEW]

The WR-1 (transceiver) is an advanced multifunctional remote controller that allows you to view the status of or change settings*¹ of the D7100. Utilizing radio waves, the communication range between WR-1 units is up to 394 ft/120 m*². Fifteen channels are available. You can not only remotely control a camera with a WR-1

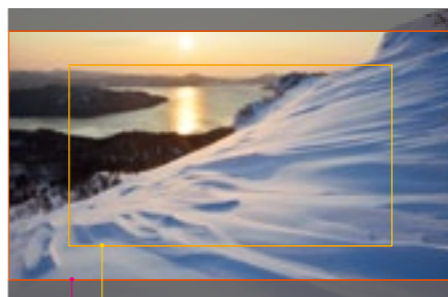
(used as a receiver) attached by operation of another WR-1 (used as a transmitter)*³, but also perform simultaneous or synchronized release of shutters on several cameras using the WR-1*⁴. Furthermore, there is a wide variety of options for remote shooting, which includes dividing remote cameras into groups and controlling each group separately, and Interval Timer Photography. Remote shooting by combining the WR-1 with WR-R10/WR-T10 is also possible*³.

*1 Functions limited.

*2 Approximate range at height of about 4 ft/1.2 m; varies with weather conditions and presence or absence of obstacles.

*3 This requires pairing of the WR-1, WR-R10 and WR-T10 units in use. Maximum number of controllers that can be paired: 20 (WR-1) or 64 (WR-R10).

*4 Only a camera with a ten-pin remote terminal can be employed as a master camera for Synchronized Release.



Movie image area based on 1.3x crop of DX
DX-based movie format

Other features:

Optional ME-1 Stereo Microphone compatibility/External headphone connector/Flicker reduction function/In-camera movie editing functions/Uncompressed HDMI output of movie live view data

