D850

FX

Nikon 100th anniversary

I AM THE DIFFERENCE MAKER

HIGHER RESOLUTION. HIGHER SPEED. GREATER VERSATILITY. PURE POTENTIAL FOR STILLS AND V IDEO.

Witness the next stage in evolution for high-resolution photography.
The D850 doesn't simply surpass the incredible image quality of the D810, with 45.7 effective megapixels and ISO sensitivity versatile and uncompromising performance, including continuous shooting speeds of up to 9 fps with the optional MB-D18 system used in the flagship D5. It's the first Nikon FX-format D-SLR camera to offer full-frame 4K UHD video, while time in over 8K quality even under extremely low light. From landscape to commercial sports, wedding and fashion photography, the D850 lets you create astounding images that meet the strictest professional requirements.

from 64-25600. It pairs these with a new level of Multi-Power Battery Pack* and the 153-point AF -lapse shooters can create high-resolution sequences as well as multimedia shooting,
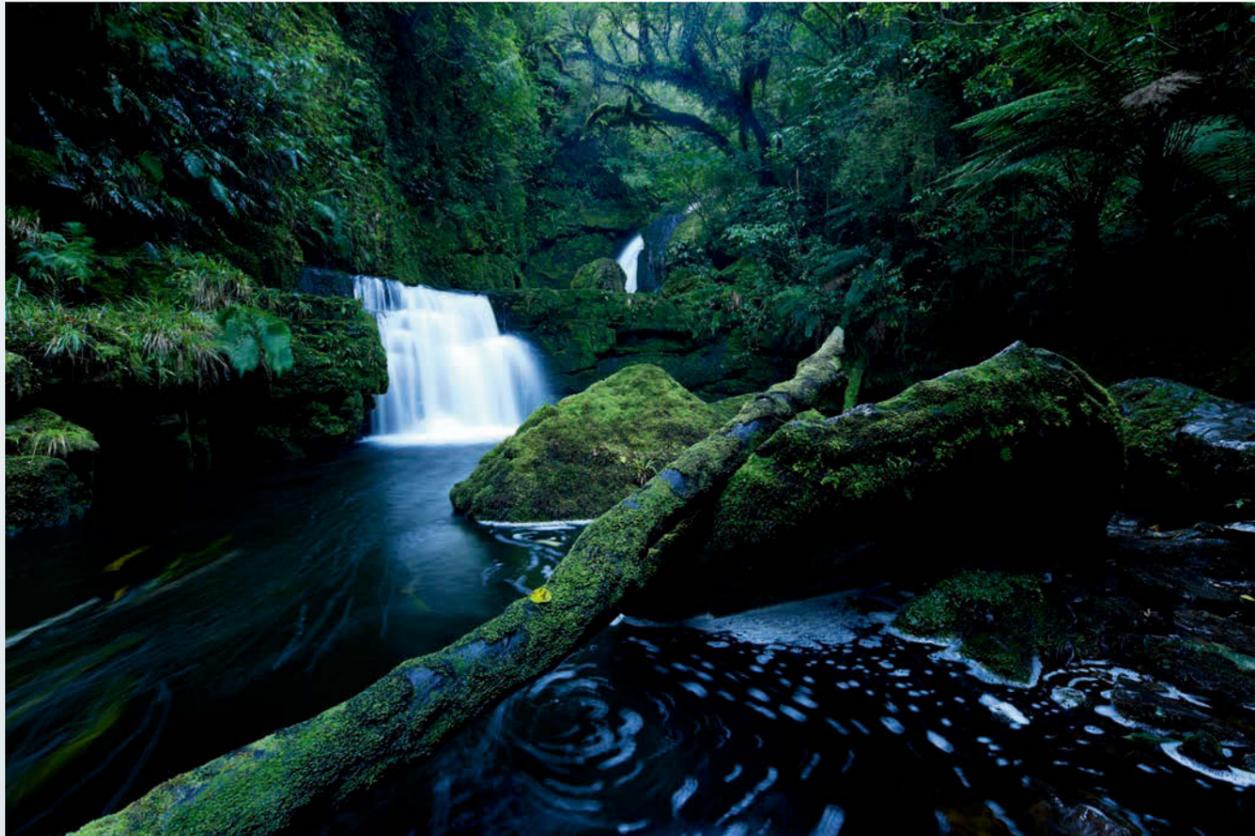
* When using EN-EL18b/EN-EL18a Rechargeable Li-ion Battery. Optional BL-5 Battery Chamber Cover and MH-26a/MH-26 Battery Charger required for use of the EN-EL18b/EN-EL18a.

FX | 4K UHD | 8K TIME-LAPSE

D850

45.7 MEGAPIXELS AND ENHANCED PERFORMAN CE DELIVER IMAGES THAT ASTOUND

• Lens: AF-S NIKKOR 14-24mm f/2.8G ED • Exposure: [A] mode, 3 seconds, f/11 • White balance: Natural light auto • Sensitivity: ISO 64 • Picture Control: Auto   © Luke Austin

Magnificent images with stunning detail — Nikon FX-format, backside illumination sensor delivering 45.7 megapixels with ISO 64-25600

The D850 allows photographers to capture a diverse range of scenes in sumptuously rich detail. It is the first Nikon D-SLR to use a backside illumination sensor, which allows incoming light to reach photodiodes more efficiently. Together with the camera's low-noise performance, this enables it to achieve ISO 25600 despite its high pixel count. What's more, it strikes an optimal balance between sensor sensitivity and the volume of light information accumulated in photodiodes, yielding images with a wide dynamic range even at ISO 64 (expandable to ISO 32 equivalent) — the lowest native ISO setting offered by any camera manufacturer. Copper wiring is used to cut electrical resistance, while the backside illumination structure allows a flexible wiring layout, reducing stray capacity. These measures enable 45-megapixel FX-format images to be captured at continuous shooting speeds of 9 fps*[1]. And because the sensor is designed without an optical low-pass filter, it can bring out the full potential of 45 megapixels when combined with the high resolving power of NIKKOR lenses. The D850 yields pictures that can be enlarged as massive prints at up to A2 size*[2] or used for 8K digital signage displays.

*1 When using the optional MB-D18 Multi-Power Battery Pack with the EN-EL18b/EN-EL18a Rechargeable Li-ion Battery. Optional BL-5 Battery Chamber Cover and MH-26a/MH-26 Battery Charger required for use of the EN-EL18b/EN-EL18a.
*2 When printed at 300 dpi.

Effective noise reduction, fine detail and color reproduction with powerful image processing — EXPEED 5

Beauty is where you find it. The D850 captures it all — thanks to its EXPEED 5 image-processing engine, also incorporated in the flagship D5. EXPEED 5 renders delicate tonality in highly vivid colors, and its superb noise reduction suppresses noise effectively while maintaining detail. Its powerful calculation ability also permits high-speed continuous shooting at approx. 9 fps* with 45 megapixels, as well as full-frame, 4K UHD movie recording.

* When using the MB-D18 Multi-Power Battery Pack with the EN-EL18b/EN-EL18a Rechargeable Li-ion Battery. Optional BL-5 Battery Chamber Cover and MH-26a/MH-26 Battery Charger required for use of the EN-EL18b/EN-EL18a. The D850 shoots at 7 fps with the EN-EL15a/EN-EL15.

More faithful color reproduction under natural light — New natural light auto white balance option

The D850 employs a new "natural light auto" white balance mode, taking advantage of the Advanced Scene Recognition System's improved light source identification function. This option delivers optimal white balance results under natural light — a valuable asset for various scenes. It makes it possible to respond quickly to changes in the weather conditions without switching to the direct sunlight or cloudy options. When shooting scenes such as an autumnal landscape awash with red leaves or spectacular orange sunset, it also enhances the warm colors, helping create even more impressive pictures.

Auto 0

Natural light auto   © Luke Austin

Create your ideal images — Picture Control system

Nikon's Picture Control system helps you craft images that match your creative intentions and purposes. The D850 incorporates the new Auto Picture Control, in addition to the seven existing presets. Each preset allows you to tune settings such as sharpening and clarity, opening up a wider range of options for achieving your ideal image. You can adjust settings and store them as your own custom Picture Controls.

Automatically adjust images to fit the scene — Auto Picture Control

Auto Picture Control produces more desirable images by automatically fine-tuning the tone curve, color, sharpening and clarity of the Standard option, according to each scene's characteristics. As a result, blue skies and verdant greens are rendered more vibrantly for landscape shots. The Advanced Scene Recognition System is now even better at identifying light sources, meaning red colors can be emphasized in sunsets and sunrises.

Auto

Standard

Nail the shot with full detail and no mechanical vibration or shutter release sound — Silent photography at 45 megapixels

The D850's silent photography function*[1] in live view mode utilizes an electronic shutter instead of triggering any mirror or shutter movement, meaning it doesn't cause any mechanical vibration. Photographers can capture every last detail in 45 megapixels — and in complete silence. This mode can be used in approx. 6-fps continuous shooting, but can also shoot approx. 8.6-megapixel pictures in DX image area at approx. 30 fps*[2].

*1 In M and A modes. Aperture drive sound occurs in P and S modes.
*2 Continuous shooting is available for up to approx. 3 s.
Note: Rolling shutter distortion may occur during silent photography. AF/AE fixed with the first frame in continuous shooting.

© Luke Austin

HIGHLY ACCURATE METERING AND EXPOSURE CONTROL THAT MAKE THE MOST OF THE HIGH PIXEL COUNT

• Lens: AF-S NIKKOR 70-200mm f/2.8E FL ED VR • Exposure: [M] mode, 1/400 second, f/6.3 • White balance: Direct sunlight • Sensitivity: ISO 64 • Picture Control: Auto   © Jerry Ghionis

More reliable auto control — 180K-pixel RGB sensor for Advanced Scene Recognition System

The D850 is equipped with the same 180K-pixel RGB sensor as the D5. Its increased pixel count enhances the accuracy of various auto controls by the Advanced Scene Recognition System, such as matrix metering, auto white balance, i-TTL balanced fill-flash, auto-area AF, 3D-tracking and Active D-Lighting. Furthermore, metering is available down to -3 EV* thanks to the sensor's superb low-light sensitivity, which is effective when shooting low-contrast scenes or using a teleconverter. Meanwhile, the flicker detection function reduces flicker effects for more consistent still photo shooting.

* ISO 100, f/1.4 lens, 20°C/68°F, using matrix or center-weighted metering.
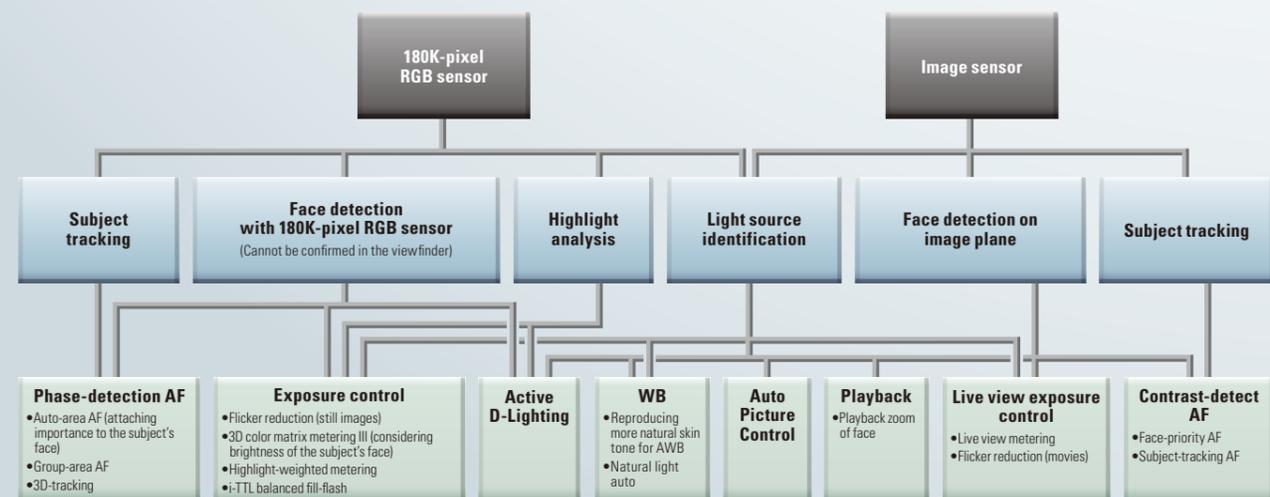
Avoid white clipping and preserve tones in highlights — Highlight-weighted metering

Being able to depict the delicate details of a white dress is critically important in wedding and fashion photography. If you want to retain the subtle tones and nuances of color in the clothes, try highlight-weighted metering. This setting delivers a richer tonality in images by giving priority to the brightest portions of a scene and avoiding white clipping.
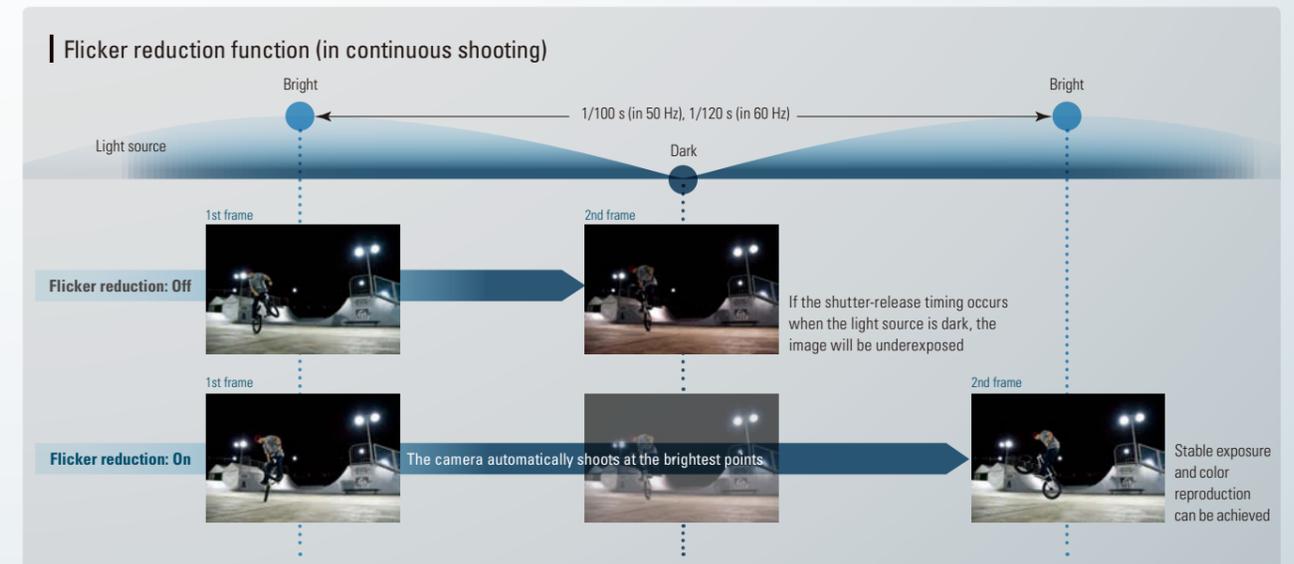
Matrix metering   Highlight-weighted metering   © Jerry Ghionis

Consistent exposures under artificial light sources — Flicker reduction minimizes exposure variances

Artificial light sources such as mercury lighting often produce flickering, causing undesired variations in exposure and color in consecutive shots. The D850's flicker reduction function avoids this problem by detecting the peak brightness level and automatically shifting the release timing slightly to avoid underexposure and color casts. This gives you stable exposures even during continuous shooting*. In movie shooting, using "Auto" flicker reduction makes the camera automatically switch exposure control according to the frequency of light sources, preventing the occurrence of banding in footage.

* Continuous shooting speed may be decreased.

Flicker reduction function (in continuous shooting)

Bright   1/100 s (in 50 Hz), 1/120 s (in 60 Hz)   Bright

Light source   Dark

1st frame   2nd frame

Flicker reduction: Off   If the shutter-release timing occurs when the light source is dark, the image will be underexposed

1st frame   2nd frame

Flicker reduction: On   The camera automatically shoots at the brightest points   Stable exposure and color reproduction can be achieved

(Conceptual images)

180K-pixel RGB sensor

Image sensor

| Subject tracking | Face detection with 180K-pixel RGB sensor (Cannot be confirmed in the viewfinder) | Highlight analysis | Light source identification | Face detection on image plane | Subject tracking |

Phase-detection AF	Exposure control	Active D-Lighting	WB	Auto Picture Control	Playback	Live view exposure control	Contrast-detect AF
• Auto-area AF (attaching importance to the subject's face) • Group-area AF • 3D-tracking	• Flicker reduction (still images) • 3D color matrix metering III (considering brightness of the subject's face) • Highlight-weighted metering • i-TTL balanced fill-flash		• Reproducing more natural skin tone for AWB • Natural light auto		• Playback zoom of face	• Live view metering • Flicker reduction (movies)	• Face-priority AF • Subject-tracking AF

Preserve details in highlights and shadows — Active D-Lighting

Even when shooting high-contrast scenes in backlit situations, Active D-Lighting preserves details in highlight areas as well as shadowy areas, reproducing brightness as you see it. Active D-Lighting is suitable for use with moving subjects, as it does not involve combining two images like the High Dynamic Range (HDR) function does.

Produce amazing dynamic range — HDR

The High Dynamic Range (HDR) function takes two images of different exposures with one shutter release and automatically combines them to produce a single image with a wider dynamic range. This achieves images with rich tonal gradation in shadows and highlights, even for high-contrast shooting scenes. HDR is ideal for stationary subjects such as high-contrast landscapes and still lifes.

Note: Tripod use recommended.

HIGH RESOLUTION MEETS HIGH SPEED AND PRE CISION
ADDING NEW VALUE TO YOUR PHOTOGRAPHY

• Lens: AF-S NIKKOR 24-70mm f/2.8E ED VR • Exposure: [M] mode, 1/2000 second, f/6.3 • White balance: Auto 1 • Sensitivity: ISO 1600 • Picture Control: Standard © Little Shao

Spectacular speed to capture dynamic action in detail — 9-fps/7-fps high-speed continuous shooting

Redefine the power of a dynamic moment with a spectacular match of high resolution and high-speed shooting. The D850 captures massive, sharp 45-megapixel images at 9 fps with the optional MB-D18 Multi-Power Battery Pack (with EN-EL18b/EN-EL18a Rechargeable Li-ion Battery*[1]) attached, or at 7 fps with the body only. The new image sensor achieves fast readout of large amounts of data, which is handled rapidly by the powerful EXPEED 5 image-processing engine. Despite the heavy load, the camera is capable of continuous shooting for up to 51 frames*[2] (body alone) even in 14-bit lossless compressed RAW (up to 170 frames in 12-bit lossless compressed RAW). It lets you explore a whole new realm of high-speed photography combined with high-resolution images.

*1 Optional BL-5 Battery Chamber Cover and MH-26a/MH-26 Battery Charger required for use of the EN-EL18b/EN-EL18a.
*2 When using a 64 GB XQD (Sony QD-G64E) memory card.

Powerful acquisition and tracking of fast, erratic movements — 153-point AF system and AF down to -4 EV

The D850 comes equipped with the same powerful 153-point AF system as the flagship D5. The 153 densely packed focus points (55 selectable) provide over 130% of the D810's frame coverage, while 99 cross sensors with powerful detection are optimally distributed. The AF system makes it possible to achieve pinpoint focus on a small area, but is also designed to immediately acquire fast, often random movements and track them tenaciously. Furthermore, the central point functions at -4 EV* and all other focus points at -3 EV*, thanks to the Multi-CAM 20K autofocus sensor module, allowing for accurate AF in challenging light.

* ISO 100 and 20°C/68°F.

Focus points (153): □ / □ / • / •
Selectable points (55): □ / □
Cross sensors (99): □ / •

Simplified adjustment for more accurate focus — Auto AF fine-tune for viewfinder shooting

Accurate AF is crucial to take full advantage of the D850's high pixel count. To ensure focusing accuracy, the D850's auto AF fine-tune makes subtle adjustments for each type of lens you use. The simplified process involves achieving focus in live view and letting the camera automatically acquire, then store, the AF tuning value.

| Auto AF fine-tune steps

1: Achieve focus at a focus distance you use frequently in live view. Press and hold the AF-mode and movie-record buttons simultaneously until the next dialogue appears.

2: Select "Yes" to save the tuning value.

3: The camera automatically stores the result to "Saved value" list.

Note: AF fine-tune must be turned on in the setup menu to enable the tuning value to be used for shooting.

Achieve precise focus on a very small area — Pinpoint AF

The D850's new pinpoint AF mode is a valuable asset for macro shooting in live view photography. It uses a focus area that's a quarter the size of conventional normal-area AF, enabling you to achieve precise focus on small details — particularly useful when focusing on subjects such as the pistil or stamen of a flower.

□: Normal-area AF   □: Pinpoint AF   © Luke Austin

Accurate manual focus confirmation — Focus peaking display

Many photographers prefer to use manual focus for macro shots, such as when shooting at wide apertures like f/1.4 or f/2.8 with a shallow depth of field. The D850's focus peaking display makes it easier to confirm manual focus during live view, including when zooming. The camera detects the scene's highest-contrast edges — meaning they are in focus — and highlights them in a designated color. You can choose to display highlights in red, white, yellow or blue, according to your subject's own coloration, and adjust between three levels of detection sensitivity.

Bring everything in focus for focus stacking — Focus shift photography

When shooting a scene containing various subjects at different focus distances or creating specimen pictures of insects and flowers, photographers may want to bring everything into sharp focus. The D850 introduces a focus shift photography function, which enables it to shoot sequences of up to 300 frames, while gradually and automatically shifting focus position from the start point to infinity. The shutter release interval can be set from 0-30 s, while the focus step width can be selected from 10 levels. Continuous shooting at approx. 5 fps is also available. Combining the pictures using focus stacking in post-production* gives you an image where every detail is in brilliantly sharp focus.

* Requires third-party editing software.

THE D-SLR CAMERA THAT EXPANDS THE POTENTIAL OF 8K TIME-LAPSE MOVIE PRODUCTION


• Lens: AF-S NIKKOR 14-24mm f/2.8G ED • Exposure: [M] mode, 25 seconds, f/2.8 • White balance: Color temperature (4000 K) • Sensitivity: ISO 6400 • Picture Control: Standard   © Marsel van Oosten

Spectacular 8K time-lapse movie creation — 45-megapixel images delivered by a new Nikon FX-format, backside illumination CMOS sensor

The D850 takes your time-lapse movies into a new realm with its Nikon FX-format CMOS image sensor. Harnessing the vast pixel count of 45 megapixels (8256 × 5504 pixels) with the high resolving power of NIKKOR lenses, the camera's interval timer mode allows you to capture over 8K-size images with exquisite detail for time-lapse movie creation*. The 45 megapixels also allow greater leeway in creating sharper 4K video by down-conversion, or adding pan and zoom effects within the frame in post-production using a computer to inject more dynamism into the finished piece. Thanks to the greater light-gathering efficiency of the backside illumination CMOS sensor structure, together with the advanced image processing of EXPEED 5, the D850 achieves a wider ISO sensitivity range from ISO 64-25600 (expandable to ISO 32 equivalent and to ISO 102400 equivalent). The resulting images feature low noise while maintaining detail even in the high ISO range. With the D850, you can create truly amazing time-lapse movies.

* Requires third-party software.
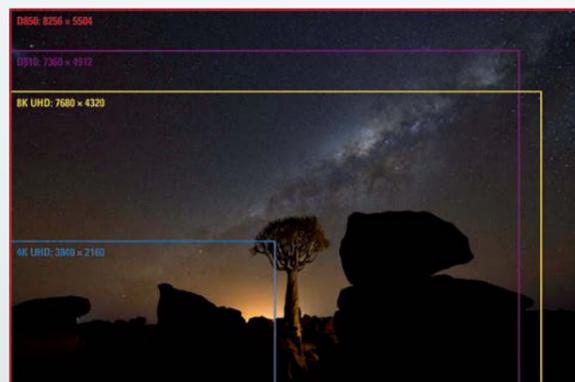
Smoother rendering of rapid motion in time-lapse movies — Minimum interval setting of 0.5 s

When capturing scenes with conspicuous motion, such as fast-moving clouds or fog, even a 1 s interval time may result in a sequence that does not look smooth when turned into a time-lapse movie. The D850 now offers a minimum interval setting of just 0.5 s* for interval timer shooting. This renders movements more smoothly, while giving you greater flexibility in achieving your creative intentions.

* May differ depending on camera settings. Use of an XQD card with 400 MB/s writing speed is recommended.

Shoot time-lapse movie data without release noise, mechanical vibration or mechanical wear — Silent interval timer photography

When shooting time-lapse sequences outdoors for hours at night, you can focus on your shooting without worrying about shutter release noise or mechanical wear. The D850 addresses both of these issues with its silent interval timer photography function* in live view mode, which drives the shutter electronically. The result is a silent shutter release that inflicts no stress on the mechanical drive. It also prevents mechanical vibrations that might cause image blur, meaning you'll maximize the potential of the camera's 45.7 megapixels. The silent interval timer function lets you shoot up to 9,999 frames.

* In P and S modes, aperture drive sound occurs.
Note: Rolling shutter distortion may occur during silent photography.
        For internal image processing, the interval needs to be set more than 2 seconds longer than the shutter speed.

An easy way of shooting time-lapse sequences of starry night skies — Advanced new technology to extend low-light metering range

Capturing overnight star movement is a popular application of time-lapse videos, and the D850 makes it even easier. The exposure smoothing function, Nikon's unique feature, which reduces subtle exposure variance between frames in interval timer shooting, is further improved for the D850. Now it extends exposure metering capability beyond -3 EV*[1] and lets you shoot starry night skies using aperture-priority auto mode when employed with silent interval timer shooting mode*[2]. Photographers can now enjoy shooting star movements from midnight until dawn, when brightness changes significantly, in one continuous interval-timer sequence. This is impossible with manual exposure and opens up new opportunities to delight and impress.


© Marsel van Oosten

*1 ISO 100, f/1.4 lens and 20°C/68°F.
*2 Also available with silent time-lapse and silent focus shift photography.

Create high-resolution 4K UHD time-lapse movies — In-camera time-lapse

If you want to create high-resolution time-lapse movies without the need for post-production editing, the D850's in-camera time-lapse movie function comes in handy. Since it converts full-pixel (over 8K-size) still images into 4K UHD video in camera, you can enjoy relatively high-resolution quality with ease. In-camera time-lapse is also available in Full HD, as well as silent in-camera time-lapse photography.
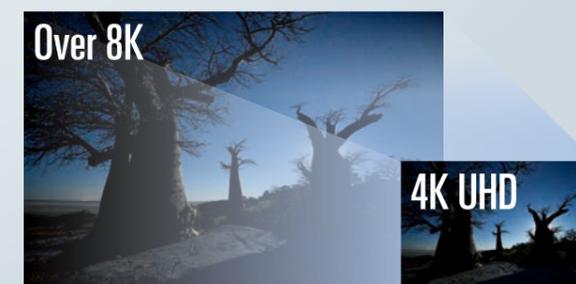
The D850 produces 4K UHD time-lapse movies by downconverting over 8K-size still photos, thus delivering beautiful, high-resolution quality.

A COMPREHENSIVE MULTIMEDIA D-SLR, FEATUR ING FULL-FRAME 4K UHD AND ×4, ×5 SLOW MOTION IN FULL HD


Dynamic wide-angle movies, in high resolution — Nikon's first full-frame, 4K UHD video

4K UHD

The D850 lets you film magnificent 4K UHD/30p videos in full frame. You can capture more dramatic scenes by combining this with wide-angle NIKKOR lenses, which demonstrate high resolving power even around the periphery of the frame. It is also possible to simultaneously record uncompressed, broadcast quality 4:2:2 8-bit 4K UHD files on an external HDMI device. 4K UHD videos are also available in the DX-based movie format — equivalent to super 35mm size — while recording in MP4 format is possible in addition to the conventional MOV option.

Note: The aspect ratio is 16:9.
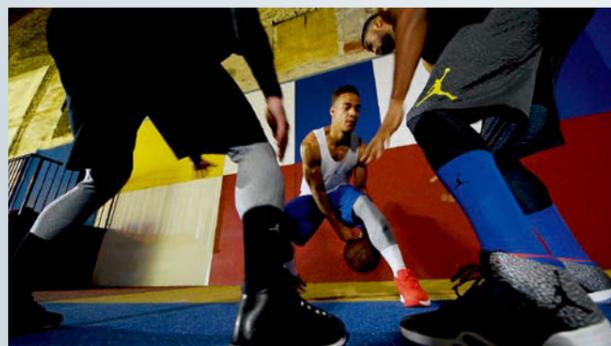
D850

D5

Easily turn moments into drama — ×4 and ×5 slow-motion movie in Full HD

The D850 helps create dramatic Full HD movies with its new in-camera slow-motion video*. It can generate both ×4 slow-motion videos (films at 120/100p and records at 30/25p) and ×5 slow-motion videos (films at 120p and records at 24p) entirely in-camera — great for creating drama out of moments.

* Image quality is fixed at normal and image area is fixed at DX regardless of settings. AF-area modes are limited to normal-area and wide-area AF. No audio recording.

Rich image information for easy post-production editing — Flat Picture Control

If you plan a video creation workflow that includes image enhancement in post-production, shooting in Flat Picture Control gives you the room you need to manipulate the original footage and achieve your preferred look. This option features a near-straight tone curve, which allows you to acquire as much information as possible regarding subject colors, brightness and texture, which previously required complicated procedures. It enables effective color grading using simple adjustments of the tone curve, without requiring technical knowledge of video log. Even if you are new to video, Flat Picture Control will amaze you with its creative potential and ease of use.

Image shot in Flat.

Adjusted image.

Customizable highlight confirmation with even greater ease — Improved highlight display

Highlight display using zebra patterns helps you confirm overblown highlights, and the D850 has improved this function to assist you further. It now lets you adjust the level of brightness, to be indicated between 180-255 depending on your needs. What's more, the zebra patterns come in two varieties, selectable according to the patterns and textures of your subjects.

Highlights

More reliable sound control — Attenuator menu

When filming out of the studio, audio levels can escalate unexpectedly, causing distortion. The D850 incorporates an attenuator menu to avoid such accidental occurrences. When activated, it reduces the microphone sensitivity to the appropriate level — allowing smooth recording with clear sound.

Quickly switch between still-photo and movie shooting — Independent movie-shooting menu

The D850 is designed for multimedia shooters who consider stills and movies equally important. With that in mind, this camera sees Nikon introduce a dedicated movie-shooting menu in addition to the one for still photography. You can register different settings for video without changing those for stills, which makes it easier to switch between the two shooting modes. For example, shooting stills in Auto Picture Control is possible even immediately after filming in Flat. What's more, pressing the i button during movie recording gives you direct access to the movie-shooting settings, providing both convenience and efficiency during your shoot.

COMFORTABLE OPERATION AND SUPERIOR RELIABILITY ENABLE HIGH-RESOLUTION IMAGES WITH EASE

Clearly confirm your entire view — 0.75× optical viewfinder

The D850 provides a wide field of view for easier subject confirmation with a 0.75× magnification* for its optical viewfinder — the highest ever offered by a Nikon FX-format D-SLR. The viewfinder has been redesigned to employ an aspherical lens and a new condenser lens with refined refraction, allowing for a slimmer body while keeping a sufficiently long eye point. Its high-contrast viewfinder information display uses organic EL display elements, making it easier to read even under bright sunlight.
* 50mm f/1.4 lens at infinity, -1.0 m⁻¹.

Greater convenience in the field — Touch-operable, tilting 8-cm/3.2-in. 2359k-dot monitor

The D850's tilting LCD monitor makes it easier to shoot from difficult angles. The monitor opens smoothly even when the camera is mounted on a tripod and has the most extensive touch functionality found in any Nikon D-SLR camera to date. From changing menu settings to shooting to reviewing images, it brings a new level of convenience. And thanks to the monitor's 2359k-dot high-resolution display, you can easily check images and confirm focus in precise detail — which is crucial when working with 45 megapixels — by pinching out to enlarge.

Keep shooting under harsh conditions — Superior weather-/dust-resistant performance and a robust body

Working in environments such as tropical forests or desert, photographers often expose their camera bodies to harsh conditions. Nikon has applied its stringently high standards for weather resistance and durability, renowned in the fields of photography and science alike, to the D850. It has comprehensive weather- and dust-sealing applied to its joints and seams, and its top, rear and bottom covers, as well as the inside body structure, are made of robust magnesium alloy. It's a camera that allows you to work with confidence in a wide range of tough environments. Also, its redesigned grip is deeper and longer, making it easier to hold even over extended periods of time.

Tested for 200,000 cycles — Durable, high-precision shutter

To ensure durability, the D850's shutter has been tested for 200,000 cycles while actually loaded in the camera. It's also designed to minimize the mechanical vibration that causes image blur. The D850 is the first Nikon D-SLR to adopt a shutter counter-balancer in its shutter drive, which travels upward during each shutter release to counteract the vibration caused by the front curtain's downward motion. What's more, the camera's shutter monitor function calculates the duration between front- and rear-curtain movements every time the shutter is released, and automatically corrects any variance.

Ergonomic operation and confidence even in the dark — Button illumination and layout

The superb performance of the D850, such as its low noise at high ISO settings and wide detection range for AF/AE, encourages photographers to venture out in the dark and create amazing images from challenging situations. The camera offers illuminated buttons on the rear left side and release mode dial, making it easier to change settings when shooting in the dark. Moreover, the buttons and dials are arranged in a convenient ergonomic layout to fit photographers' hands. The rear side now features a sub-selector added in the same position as for the D5, to allow easier right-handed operation by photographers who use both models.

Dual memory card slots for fast and secure data storage — Compatible with XQD and UHS-II SD cards

Reliable storage media is crucial to all creative work. The D850 features dual slots for XQD and UHS-II SD cards, enabling rapid reading and writing of the vast data generated from its high-pixel-count image sensor. It also offers a variety of storage options, including the ability to store the same data onto two cards for instant backup and recording RAW and JPEG simultaneously onto separate cards.

Shoot for extended periods without worry — Long battery life

The D850 allows you to concentrate on shooting without having to worry about battery life. The camera can shoot up to approx. 1840 still images*¹ from a single charge of an EN-EL15a Rechargeable Li-ion Battery, thanks to its energy-efficient power circuit and EXPEED 5 image-processing engine. An optional weather- and dust-resistant MB-D18 Multi-Power Battery Pack can also be used as a power source, enabling shooting of up to 5140 images*².
*1 Based on CIPA Standards.
*2 Based on CIPA Standards. With the EN-EL15a Rechargeable Li-ion Battery in the body and the EN-EL18b/EN-EL18a in the MB-D18. Optional BL-5 Battery Chamber Cover and MH-26a/MH-26 Battery Charger required for use of the EN-EL18b/EN-EL18a.
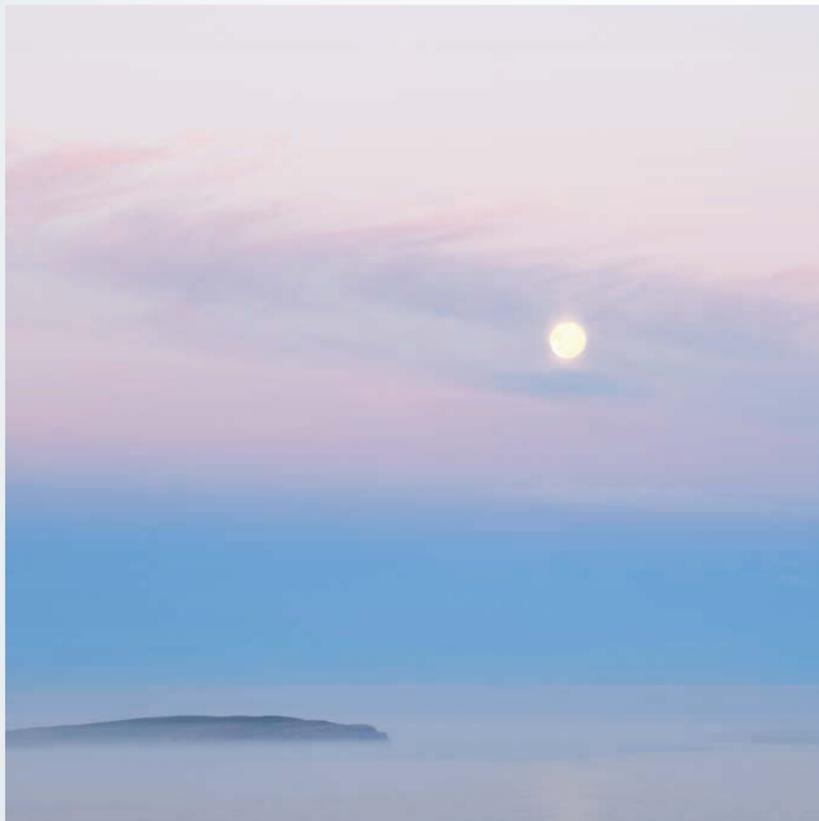
Maximum number of pictures that can be shot per single battery charge (single-frame release mode, CIPA Standards)

D850 **1840** still images*¹

D810 **1200** still images*²

*1 When using an EN-EL15a Rechargeable Li-ion Battery.
*2 When using an EN-EL15 Rechargeable Li-ion Battery.

Show your creativity in a social media-friendly format — New 1:1 image area option

The D850 introduces a new image area option with a 1:1 aspect ratio. While reminiscent of 6 × 6 medium format, it's also ideal for social media, where square images have become increasingly popular. It is also possible to add shading in the viewfinder around the image area you choose, helping you compose more accurately. You can create pictures to impress your followers, as well as experiment with the creative potential of this unique image area.

• Lens: AF-S NIKKOR 80-400mm f/4.5-5.6G ED VR • Exposure: [A] mode, 1/6 second, f/8 • White balance: Natural light auto • Sensitivity: ISO 64 • Picture Control: Auto
© Luke Austin

Huge time savings in post-production — In-camera RAW batch processing

Shooting in RAW gives greater leeway in post-production, letting photographers draw the most from the images they capture. Until now, however, processing RAW has always been extremely time-consuming. The D850 resolves this issue by offering an incredibly convenient, in-camera RAW batch-processing feature, which enables you to quickly apply the same adjustments to selected images. You can save the original RAW files and processed JPEG files on one large-capacity XQD card, or else save the original on XQD and the JPEG on an SD card in the second slot, for easier data management.

1000 pics

14-bit lossless RAW   Approx. 25 min.   JPEG fine★, Large

Note: When data is read from SONY SF-G128 (128 GB) SD card and written to Lexar Professional 2933× (128 GB) XQD card.

Smaller images with full post-production flexibility — RAW size options

There are times when you don't necessarily need to shoot at a full 45 megapixels. However, the variety of scenarios that creative photography involves means you may still want to retain the flexibility of RAW in post-production. That's why the D850 offers three file size options for 12-bit lossless compressed RAW: large (45.4 MP), medium (25.6 MP) and small (11.4 MP). And whichever option you use, in-camera RAW processing is still available.

Push your creativity further with image overlays — Enhanced multiple exposure options

The D850's multiple exposure function is more versatile than ever before, allowing photographers to explore their creativity further. The camera now saves all pictures shot in this mode, so you can use individual images for other purposes as well. It is also now possible to confirm each picture during shooting, as well as the overlay image being created. If your last shot doesn't meet your satisfaction, you can delete, reshoot and replace it easily. Furthermore, the camera lets you select a picture stored as RAW (L) on your memory cards for use as the first image of the overlay. Lighten and darken overlay modes are also now available.

© Little Shao

HIGH-PERFORMANCE ACCESSORIES OPEN UP NEW CREATIVE OPPORTUNITIES

Flexible, easy flash control for elaborate lighting indoors or outdoors — SB-5000 Speedlight with radio-controlled system

Whether you're shooting indoors or outdoors, the SB-5000 Speedlight gives you complete mastery over your lighting. It can communicate via radio from distances up to approx. 30 m/98 ft[1] with minimum interference from obstacles or ambient lighting (radio-controlled Advanced Wireless Lighting[2]). This makes wireless lighting possible even under natural light, letting you render your outdoor subject more impressively — for example, by illuminating from the side. Despite featuring powerful output at a guide number of 34.5/113 (m/ft, ISO 100)[3], the SB-5000 can fire consecutively for longer than conventional models thanks to its built-in cooling system. Advanced Wireless Lighting with optical-controlled units such as the SB-910 is also possible with the D850.

© Little Shao

[1] At approx. height of 1.2 m/3.9 ft; may vary depending on weather, presence of obstacles and radio communication conditions.
[2] Radio-controlled AWL with the D850 and SB-5000 requires WR-R10 Wireless Remote Controller and WR-A10 Wireless Remote Adapter (both optional).
[3] At 35 mm zoom head position, in FX format, standard illumination pattern.

Flexible remote shooting control — WR-1, WR-R10/WR-T10 Wireless Remote Controllers (optional)

Wireless remote controllers bring a new array of options to your photography. The WR-1 and WR-T10 Wireless Remote Controllers can both be configured as a transmitter, and release the shutter of a camera with another WR-1 or WR-R10[1] attached. When using the WR-1 as a transmitter, it's also possible to perform interval timer photography, and use its screen to confirm and change settings[2] of the remote camera. WR-1 units communicate via 2.4 GHz radio frequencies, offering a communication range of up to 120 m/394 ft[3] with 15 channels. The WR-R10/WR-T10 can communicate within a range of up to 20 m/66 ft[3].

WR-R10

WR-T10

WR-A10   WR-1

[1] Attaching a WR-R10 to the D850 requires the optional WR-A10 Wireless Remote Adapter.
[2] Limited functions only.
[3] At approx. height of 1.2 m/3.9 ft; may vary depending on weather, presence of obstacles and radio communication conditions.

Fast wired/wireless LAN transfer — WT-7/A/B/C Wireless Transmitter (optional)

The optional WT-7/A/B/C Wireless Transmitter provides a faster way to securely transfer images to storage. It can transmit images and movies to a computer[1] or FTP server via both wired and wireless LAN. Wired LAN supports 1000BASE-T and offers transmission speeds of up to approx. 1000 Mbps[2], while wireless LAN supports IEEE802.11ac and enables transmission at up to approx. 866.7 Mbps[2], over distances of up to approx. 200 m/656.1 ft[3]. Combined with the optional Camera Control Pro 2 software, it allows the D850 to be controlled wirelessly from a computer[1] — another advantage in studio photography.

[1] Wireless Transmitter Utility (available for download from the Nikon website) must be installed.
[2] Maximum logical data rates according to IEEE standard. Actual rates may differ.
[3] With large antenna at wireless LAN access point. Range may differ according to signal strength and presence or absence of obstacles.

D850 + WT-7/A/B/C

UNPARALLELED R ESOLVING POWER
TO GET THE MOST OUT OF 45 MEGAPIXELS — NIKKOR LENSES

With their exceptionally high resolving power, which makes full use of 45 megapixels, NIKKOR lenses are a perfect partner for the D850, allowing photographers in every field to better capture the essence of their vision, and render every delicate tone or nuance. Thanks to Nikon's superb optical technology, they provide sharp resolution even at the periphery of an image, combined with elaborately designed, beautiful image-blur characteristics. Many lenses feature the anti-reflective Nano Crystal Coat, which effectively reduces ghost and flare. They are also designed to reproduce point light sources as point images as much as possible. NIKKOR lenses are powerful tools for professionals looking to ensure brilliantly sharp images regardless of the subject, environment or lighting conditions.
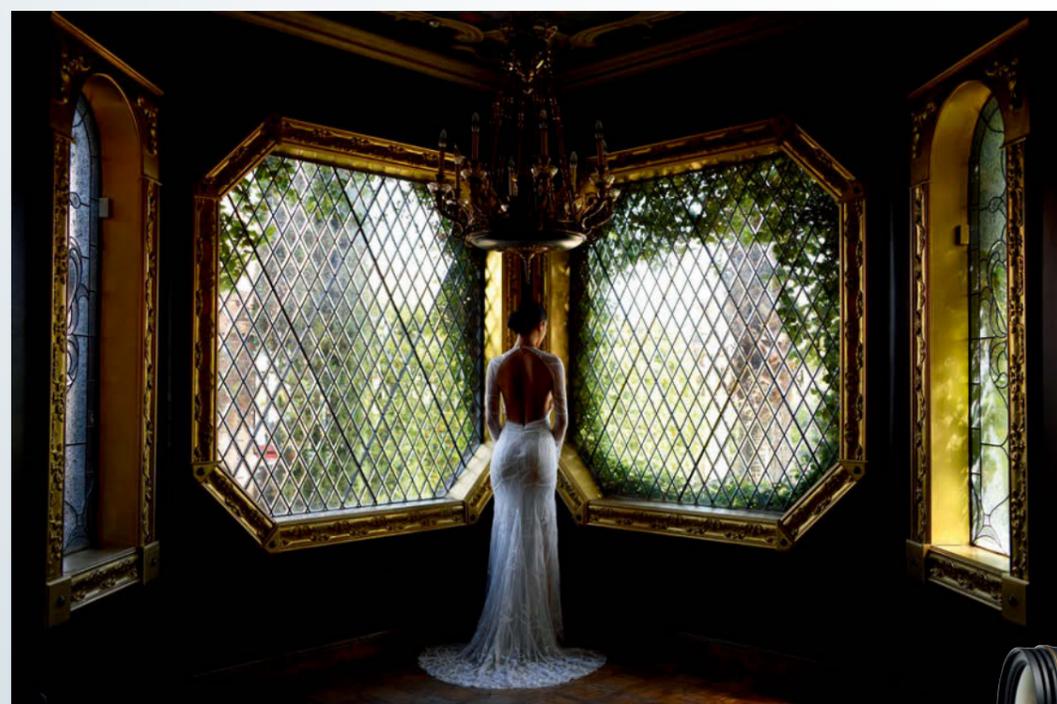
• Lens: AF-S NIKKOR 24-70mm f/2.8E ED VR • Exposure: [M] mode, 1/200 second, f/2.8 • White balance: Direct sunlight • Sensitivity: ISO 160 • Picture Control: Standard
© Jerry Ghionis

AF-S NIKKOR 24-70mm f/2.8E ED VR
An aspherical ED glass element — a first for NIKKOR lenses — works with ED glass, aspherical lens and HRI lens elements as well as Nano Crystal Coat to achieve remarkably high optical performance. Evolved Vibration Reduction (VR) provides an effect equivalent to a shutter speed 4.0 stops*1 faster. Other notable features include an electromagnetic diaphragm mechanism, fluorine coat and highly durable body.

AF-S NIKKOR 14-24mm f/2.8G ED
With a fixed maximum aperture of f/2.8, this award-winning professional lens delivers edge-to-edge sharpness across the frame. Nano Crystal Coat and ED glass ensure outstanding contrast, even in backlit conditions. Tough and reliable, this is essential glass for professional photographers.

AF-S NIKKOR 20mm f/1.8G ED
This 20 mm lens enables photographic expression utilizing the shallow depth of field achieved at the maximum aperture of f/1.8. The latest optical design technology delivers high resolution and superb point-image reproduction while minimizing chromatic aberration. ED glass elements and Nano Crystal Coat ensure superior image quality.

AF-S NIKKOR 24mm f/1.4G ED
The greatest advantage of this versatile wide-angle lens is its amazingly beautiful bokeh at f/1.4 while covering an 84° angle of view. Its optical design now reveals more refined detail with even less aberration. In addition, its Nano Crystal Coat effectively reduces ghost and flare effects in harsh lighting.

AF-S NIKKOR 105mm f/1.4E ED
This fast, medium-telephoto lens embodies NIKKOR's unique design concept of "three-dimensional high fidelity." It provides a large and beautiful bokeh effect with smooth alteration from the focus plane to ensure natural depth of subjects. Superior optical performance achieves high resolution even in the peripheral areas, sharp rendering of distant subjects even at the maximum aperture, and exceptional reproduction of point light sources. Three ED glass elements reduce chromatic aberration, while Nano Crystal Coat effectively minimizes ghost and flare effects. The latest design technology is employed in an original optical system of 105mm f/1.4 with AF, and stable AE with an electromagnetic diaphragm mechanism. Fluorine coat is applied to lens surfaces for easy maintenance.

AF-S NIKKOR 400mm f/2.8E FL ED VR
This new-generation super-telephoto lens delivers outstanding optical performance with minimized chromatic aberration. A weight of approx. 3800 g/8.4 lb*2 is achieved through the employment of fluorites for superior mobility. The VR system provides a powerful effect equivalent to a shutter speed 4.0 stops*1 faster in Normal mode, and Sport mode achieves a stable viewfinder image that's similar to using a monopod, even during handheld shooting. Other notable features include an electromagnetic diaphragm for stable exposure control even during continuous shooting, a highly reliable fluorine coat applied to the lens front, and a tripod mount ring incorporating bearings for smoother operation.

PC NIKKOR 19mm f/4E ED
The 19 mm focal length of this PC lens gives an angle of view that will be familiar to architecture and interior photographers, while bringing dramatic perspectives to landscape shots. Its mechanical structure allows the shift position to be adjusted smoothly and precisely, without the need for locking and unlocking. And thanks to its "PC Rotation" mechanism, the direction of tilt operation can be made parallel or perpendicular to shift, giving you greater control over perspective, focus and depth of field. Three ED glass elements and two aspherical lens elements are employed along with Nano Crystal Coat and a fluorine coat.
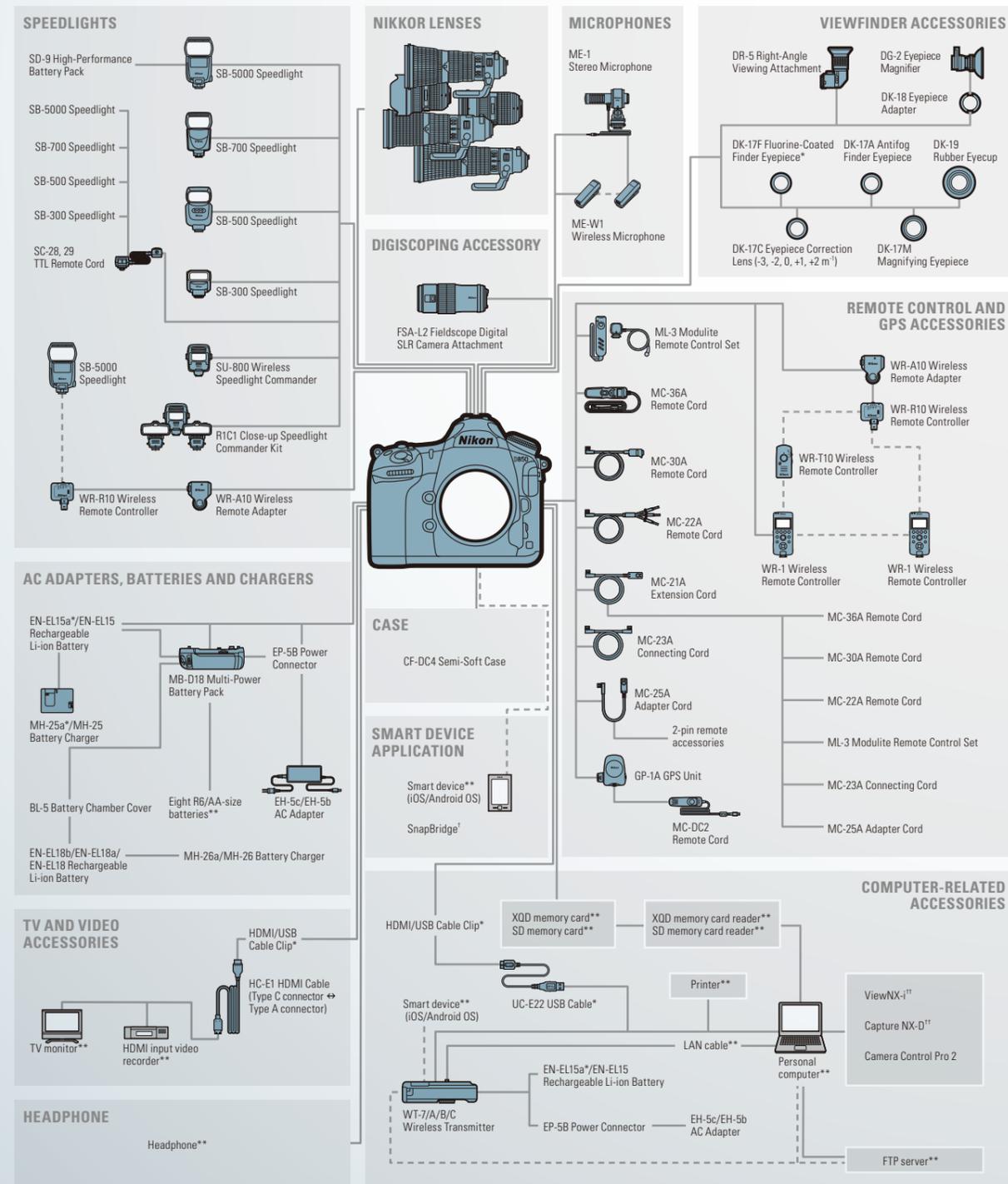
AF-S Fisheye NIKKOR 8-15mm f/3.5-4.5E ED
NIKKOR's first fisheye zoom lens provides two fisheye effects (circular and full-frame) for elaborate image expression. Three ED glass elements effectively reduce lateral chromatic aberration for sharp and high-contrast images. Two aspherical lens elements contribute to improved reproduction of point light images, while Nano Crystal Coat controls ghost and flare effects. A dust- and drip-resistant structure is employed for enhanced reliability, while a fluorine coat ensures easy maintenance.

*1 Based on CIPA Standards. This value is achieved when attached to an FX-format digital SLR camera, with zoom set at the maximum telephoto position.
*2 Based on CIPA Guidelines.

SYSTEM CHART

SPEEDLIGHTS

SD-9 High-Performance Battery Pack

SB-5000 Speedlight

SB-5000 Speedlight

SB-700 Speedlight

SB-700 Speedlight

SB-500 Speedlight

SB-500 Speedlight

SB-300 Speedlight

SC-28, 29 TTL Remote Cord

SB-300 Speedlight

SB-5000 Speedlight

SU-800 Wireless Speedlight Commander

R1C1 Close-up Speedlight Commander Kit

WR-R10 Wireless Remote Controller

WR-A10 Wireless Remote Adapter

NIKKOR LENSES

MICROPHONES

ME-1 Stereo Microphone

ME-W1 Wireless Microphone

DIGISCOPING ACCESSORY

FSA-L2 Fieldscope Digital SLR Camera Attachment

VIEWFINDER ACCESSORIES

DR-5 Right-Angle Viewing Attachment

DG-2 Eyepiece Magnifier

DK-18 Eyepiece Adapter

DK-17F Fluorine-Coated Finder Eyepiece*

DK-17A Antifog Finder Eyepiece

DK-19 Rubber Eyecup

DK-17C Eyepiece Correction Lens (-3, -2, 0, +1, +2 m⁻¹)

DK-17M Magnifying Eyepiece

REMOTE CONTROL AND GPS ACCESSORIES

ML-3 Modulite Remote Control Set

MC-36A Remote Cord

MC-30A Remote Cord

MC-22A Remote Cord

MC-21A Extension Cord

MC-23A Connecting Cord

MC-25A Adapter Cord

2-pin remote accessories

GP-1A GPS Unit

MC-DC2 Remote Cord

WR-A10 Wireless Remote Adapter

WR-R10 Wireless Remote Controller

WR-T10 Wireless Remote Controller

WR-1 Wireless Remote Controller

WR-1 Wireless Remote Controller

MC-36A Remote Cord

MC-30A Remote Cord

MC-22A Remote Cord

ML-3 Modulite Remote Control Set

MC-23A Connecting Cord

MC-25A Adapter Cord

AC ADAPTERS, BATTERIES AND CHARGERS

EN-EL15a*/EN-EL15 Rechargeable Li-ion Battery

MB-D18 Multi-Power Battery Pack

EP-5B Power Connector

MH-25a*/MH-25 Battery Charger

BL-5 Battery Chamber Cover

Eight R6/AA-size batteries**

EH-5c/EH-5b AC Adapter

EN-EL18b/EN-EL18a/ EN-EL18 Rechargeable Li-ion Battery

MH-26a/MH-26 Battery Charger

CASE

CF-DC4 Semi-Soft Case

SMART DEVICE APPLICATION

Smart device** (iOS/Android OS)

SnapBridge†

TV AND VIDEO ACCESSORIES

HDMI/USB Cable Clip*

HC-E1 HDMI Cable (Type C connector ↔ Type A connector)

TV monitor**

HDMI input video recorder**

HEADPHONE

Headphone**

COMPUTER-RELATED ACCESSORIES

HDMI/USB Cable Clip*

XQD memory card** SD memory card**

XQD memory card reader** SD memory card reader**

Printer**

ViewNX-i††

Capture NX-D††

Camera Control Pro 2

Smart device** (iOS/Android OS)

UC-E22 USB Cable*

LAN cable**

Personal computer**

WT-7/A/B/C Wireless Transmitter

EN-EL15a*/EN-EL15 Rechargeable Li-ion Battery

EP-5B Power Connector
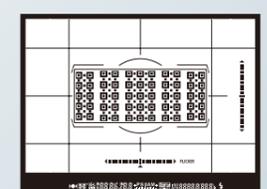
EH-5c/EH-5b AC Adapter

FTP server**

*Supplied accessories **Non-Nikon products † Can be downloaded from the application store of each smart device (free). †† Can be downloaded from Nikon website (free).

NOMENCLATURE

1 Shutter-release button
2 Power switch
3 Self-timer lamp
4 Lens mount
5 Mirror
6 Meter coupling lever
7 Bracketing button
8 Lens mounting mark
9 Flash sync terminal cover
10 Ten-pin remote terminal cover
11 Lens release button
12 AF-mode button
13 Focus-mode selector
14 Fn1 button
15 Pv button
16 Sub-command dial
17 Playback button
18 Delete button/Format button
19 Eyepiece shutter lever
20 Viewfinder
21 Viewfinder eyepiece
22 Speaker
23 Sub-selector
24 AF-ON button

25 Main command dial
26 Multi selector
27 Memory card slot cover
28 Focus selector lock
29 Info button
30 Live view selector
31 Live view button
32 𝑖 button
33 Memory card access lamp
34 Tilting monitor
35 Fn2 button
36 OK button
37 Playback zoom out button/ Thumbnail button/Flash mode button/Flash compensation button
38 Playback zoom in button
39 Protect button/Picture Control button/Help button
40 Menu button
41 Release mode dial lock release
42 Image quality button/Image size button
43 Metering button
44 Stereo microphone
45 Control panel

46 Movie-record button
47 ISO sensitivity button/Format button
48 Exposure compensation button/ Two-button reset button
49 Eyelet for camera strap
50 Diopter adjustment control
51 Focal plane mark
52 Accessory shoe (for optional flash unit)
53 Release mode dial
54 Exposure mode button
55 White balance button
56 Battery-chamber cover latch
57 Battery-chamber cover
58 Power connector cover
59 Tripod socket
60 Contact cover for optional MB-D18 multi-power battery pack
61 Connector covers
62 Headphone connector
63 Connector for external microphone
64 USB connector
65 HDMI connector

Viewfinder display

Top control panel

30

31

Nikon Digital SLR Camera D850 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 FX format
Effective pixels	45.7 million
Image sensor	35.9 × 23.9 mm CMOS sensor
Total pixels	46.89 million
Dust-reduction system	Image sensor cleaning, Image Dust Off reference data (Capture NX-D software required)
Image size (pixels)	• FX (36×24) image area: 8256 × 5504 (L: 45.4 million), 6192 × 4128 (M: 25.6 million), 4128 × 2752 (S: 11.4 million) • 1.2× (30×20) image area: 6880 × 4584 (L: 31.5 million), 5152 × 3432 (M: 17.6 million), 3440 × 2288 (S: 7.8 million) • DX (24×16) image area: 5408 × 3600 (L: 19.4 million), 4048 × 2696 (M: 10.9 million), 2704 × 1800 (S: 4.8 million) • 5 : 4 (30×24) image area: 6880 × 5504 (L: 37.8 million), 5152 × 4120 (M: 21.2 million), 3440 × 2752 (S: 9.4 million) • 1 : 1 (24×24) image area: 5504 × 5504 (L: 30.2 million), 4128 × 4128 (M: 17.0 million), 2752 × 2752 (S: 7.5 million) • FX-format photographs taken during movie recording: 8256 × 4640 (L: 38.3 million), 6192 × 3480 (M: 21.5 million), 4128 × 2320 (S: 9.5 million) • DX-format photographs taken during movie recording: 5408 × 3040 (L: 16.4 million), 4048 × 2272 (M: 9.1 million), 2704 × 1520 (S: 4.1 million)
File format	• NEF (RAW): 12 or 14 bit (lossless compressed, compressed or uncompressed); large, medium and small available (medium and small images are recorded at a bit depth of 12 bits using lossless compression) • TIFF (RGB) • JPEG: JPEG-Baseline compliant with fine (approx. 1 : 4), normal (approx. 1 : 8) or basic (approx. 1 : 16) compression; optimal quality compression available • NEF (RAW)+JPEG: Single photograph recorded in both NEF (RAW) and JPEG formats
Picture Control System	Auto, Standard, Neutral, Vivid, Monochrome, Portrait, Landscape, Flat; selected Picture Control can be modified; storage for custom Picture Controls
Storage media	XQD and SD (Secure Digital) and UHS-II compliant SDHC and SDXC memory cards
Dual card slots	Either card can be used for primary or backup storage or for separate storage of NEF (RAW) and JPEG images; pictures can be copied between cards
File system	DCF 2.0, Exif 2.31, PictBridge
Viewfinder	Eye-level pentaprism single-lens reflex viewfinder
Frame coverage	• FX (36×24): Approx. 100% horizontal and 100% vertical • 1.2× (30×20): Approx. 97% horizontal and 97% vertical • DX (24×16): Approx. 97% horizontal and 97% vertical • 5:4 (30×24): Approx. 97% horizontal and 100% vertical • 1:1 (24×24): Approx. 97% horizontal and 100% vertical
Magnification	Approx. 0.75× (50 mm f/1.4 lens at infinity, -1.0 m^{-1})
Eyepoint	17 mm (-1.0 m^{-1}; from center surface of viewfinder eyepiece lens)
Diopter adjustment	-3 to +1 m^{-1}
Focusing screen	Type B BriteView Clear Matte Mark VIII screen with AF area brackets (framing grid can be displayed)
Reflex mirror	Quick return
Depth-of-field preview	Pressing Pv button stops lens aperture down to value selected by user (A and M modes) or by camera (P and S modes)
Lens aperture	Instant return, electronically controlled
Compatible lenses	Compatible with AF NIKKOR lenses, including type G, E and D lenses (some restrictions apply to PC lenses), and DX lenses [using DX (24×16) image area], AI-P NIKKOR lenses, and non-CPU AI lenses (exposure modes A and M 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 15 focus points with lenses that have a maximum aperture of f/8 or faster, of which 9 points are available for selection)
Shutter type	Electronically controlled vertical-travel focal-plane mechanical shutter; electronic front-curtain shutter available in quiet shutter-release, quiet continuous shutter-release and mirror up release modes
Shutter speed	1/8000 to 30 s in steps of 1/3, 1/2 or 1 EV, bulb, time, X250
Flash sync speed	X=1/250 s; synchronizes with shutter at 1/250 s or slower; auto FP high-speed sync supported
Release modes	S (single frame), CL (continuous low speed), CH (continuous high speed), Q (quiet shutter-release), Qc (quiet continuous shutter-release), ⟳ (self-timer), MUP (mirror up)
Approximate frame advance rate	• With an EN-EL18b battery inserted in an MB-D18 battery pack CL: 1 to 8 fps, CH: 9 fps, Qc: 3 fps • Other power sources CL: 1 to 6 fps, CH: 7 fps, Qc: 3 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
Exposure metering system	TTL exposure metering using RGB sensor with approx. 180K (180,000) pixels
Exposure metering modes	• Matrix: 3D color matrix metering III (type G, E and D lenses); color matrix metering III (other CPU lenses); color matrix metering available with non-CPU lenses if user provides lens data • Center-weighted: Weight of 75% given to 12 mm circle in center of frame; diameter of circle can be changed to 8, 15 or 20 mm, or weighting can be based on average of entire frame (non-CPU and AF-S Fisheye NIKKOR 8-15mm f/3.5-4.5E ED lenses use 12-mm circle) • Spot: Meters 4 mm circle (about 1.5% of frame) centered on selected focus point (on center focus point when non-CPU or AF-S Fisheye NIKKOR 8-15mm f/3.5-4.5E ED lens is used) • Highlight-weighted: Available with type G, E and D lenses
Metering range (ISO 100, f/1.4 lens, 20°C/68°F)	• Matrix or center-weighted metering: -3 to 20 EV • Spot metering: 2 to 20 EV • Highlight-weighted metering: 0 to 20 EV
Exposure meter coupling	Combined CPU and AI
Exposure modes	Programmed auto with flexible program (P); shutter-priority auto (S); aperture-priority auto (A); manual (M)
Exposure compensation	-5 to +5 EV in increments of 1/3, 1/2 or 1 EV
Exposure lock	Luminosity locked at detected value
ISO sensitivity (Recommended Exposure Index)	ISO 64 to 25600 in steps of 1/3, 1/2 or 1 EV; can also be set to approx. 0.3, 0.5, 0.7 or 1 EV (ISO 32 equivalent) below ISO 64 or to approx. 0.3, 0.5, 0.7, 1 or 2 EV (ISO 102400 equivalent) above ISO 25600; auto ISO sensitivity control available
Active D-Lighting	Can be selected from auto, extra high, high, normal, low or off
Autofocus	Multi-CAM 20K autofocus sensor module with TTL phase detection, fine-tuning and 153 focus points (including 99 cross-type sensors and 15 sensors that support f/8), of which 55 (35 cross-type sensors and 9 f/8 sensors) are available for selection
AF detection range	-4 to +20 EV (ISO 100, 20°C/68°F)
Lens servo	• Autofocus (AF): Single-servo AF (AF-S); continuous-servo AF (AF-C); predictive focus tracking automatically activated according to subject status • Manual focus (M): Electronic rangefinder can be used

Focus point	153 focus points, of which 55 or 15 are available for selection
AF-area modes	Single-point AF, 9-, 25-, 72- or 153-point dynamic-area AF, 3D-tracking, group-area AF, auto-area AF
Focus lock	Focus can be locked by pressing shutter-release button halfway (single-servo AF) or by pressing the center of the sub-selector
Flash control	TTL: i-TTL flash control using RGB sensor with approx. 180K (180,000) pixels; i-TTL balanced fill-flash for digital SLR is used with matrix, center-weighted and highlight-weighted metering, standard i-TTL fill-flash for digital SLR with spot metering
Flash modes	Front-curtain sync, slow sync, rear-curtain sync, red-eye reduction, red-eye reduction with slow sync, slow rear-curtain sync, off
Flash compensation	-3 to +1 EV in increments of 1/3, 1/2 or 1 EV
Flash-ready indicator	Lights when 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)	i-TTL flash control, radio-controlled Advanced Wireless Lighting, optical Advanced Wireless Lighting, modeling illumination, FV lock, color information communication, auto FP high-speed sync, AF-assist for multi-area AF, unified flash control
Sync terminal	ISO 519 sync terminal with locking thread
White balance	Auto (3 types), natural light auto, 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
Bracketing types	Exposure, flash, white balance and ADL
Live view modes	📷 (photo live view), 🎥 (movie live view)
Live view lens servo	• Autofocus (AF): Single-servo AF (AF-S); full-time-servo AF (AF-F) • Manual focus (M)
Live view AF-area modes	Face-priority AF, wide-area AF, normal-area AF, pinpoint AF, subject-tracking AF
Live view autofocus	Contrast-detect AF anywhere in frame (camera selects focus point automatically when face-priority AF or subject-tracking AF is selected)
Movie metering system	TTL exposure metering using main image sensor
Movie metering modes	Matrix, center-weighted or highlight-weighted
Frame size (pixels) and frame rate	• 3840 × 2160 (4K UHD); 30p (progressive), 25p, 24p • 1920 × 1080; 60p, 50p, 30p, 25p, 24p • 1280 × 720; 60p, 50p • 1920 × 1080 (slow-mo); 30p ×4, 25p ×4, 24p ×5 Actual frame rates for 60p, 50p, 30p, 25p and 24p are 59.94, 50, 29.97, 25 and 23.976 fps respectively; quality selection available at all sizes except 3840 × 2160 (when quality is fixed at ★) and 1920 × 1080 slow-mo (when quality is fixed at "normal")
File format	MOV, MP4
Video compression	H.264/MPEG-4 Advanced Video Coding
Audio recording format	Linear PCM, AAC
Audio recording device	Built-in stereo or external microphone; sensitivity adjustable
Movie ISO sensitivity (Recommended Exposure Index)	• Exposure modes P, S and A: Auto ISO sensitivity control (ISO 64 to Hi 2) with selectable upper limit • Exposure mode M: Auto ISO sensitivity control (ISO 64 to Hi 2) available with selectable upper limit; manual selection (ISO 64 to 25600 in steps of 1/3, 1/2 or 1 EV) with additional options available equivalent to approx. 0.3, 0.5, 0.7, 1 or 2 EV (ISO 102400 equivalent) above ISO 25600
Movie Active D-Lighting	Can be selected from same as photo settings, extra high, high, normal, low or off
Maximum movie recording length	29 min. 59 s
Other movie options	Index marking, time-lapse movies, electronic vibration reduction
Monitor	8-cm/3.2-in., approx. 2359k-dot (XGA) tilting TFT touch-sensitive LCD with 170° viewing angle, approx.100% frame coverage, and manual monitor brightness control
Playback	Full-frame and thumbnail (4, 9 or 72 images) playback with playback zoom, playback zoom cropping, movie playback, photo and/or movie slide shows, histogram display, highlights, photo information, location data display, picture rating and auto image rotation
USB	SuperSpeed USB (USB 3.0 Micro-B connector); connection to built-in USB port is recommended
HDMI output	Type C HDMI connector
Audio input	Stereo mini-pin jack (3.5-mm diameter; plug-in power supported)
Audio output	Stereo mini-pin jack (3.5-mm diameter)
Ten-pin remote terminal	Can be used to connect optional MC-30A/MC-36A Remote Cord, ML-3 Modulite Remote Control Set, WR-R10 (requires WR-A10 Wireless Remote Adapter) or WR-1 Wireless Remote Controller, GP-1/GP-1A GPS Unit
Wireless	• Standards: IEEE 802.11b, IEEE 802.11g • Operating frequency: 2412 to 2462 MHz (channels 1 to 11) • Maximum output power: 8.5 dBm (EIRP) • Authentication: Open system, WPA2-PSK
Bluetooth	• Communication protocols: Bluetooth Specification Version 4.1 • Operating frequency: 2402 to 2480 MHz (Bluetooth), 2402 to 2480 MHz (Bluetooth Low Energy)
Range (line of sight)	Approx. 10 m/32 ft without interference; range may vary with signal strength and presence or absence of obstacles
Supported languages	Arabic, Bengali, Bulgarian, Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Marathi, Norwegian, Persian, Polish, Portuguese (Portugal and Brazil), Romanian, Russian, Serbian, Spanish, Swedish, Tamil, Telugu, Thai, Turkish, Ukrainian, Vietnamese
Battery	One EN-EL15a/EN-EL15* Rechargeable Li-ion Battery
Battery pack	Optional MB-D18 Multi-Power Battery Pack with one EN-EL18b/EN-EL18a/EN-EL18* Rechargeable Li-ion Battery (available separately), one EN-EL15a/EN-EL15* Rechargeable Li-ion Battery or eight AA alkaline, Ni-MH or lithium batteries; an MH-26a/MH-26 Battery Charger and BL-5 Battery Chamber Cover (both available separately) are required when using EN-EL18b/EN-EL18a/EN-EL18* batteries
AC adapter	EH-5c/EH-5b AC Adapter; requires EP-5B Power Connector (available separately)
Tripod socket	1/4 in. (ISO 1222)
Dimensions (W × H × D)	Approx. 146 × 124 × 78.5 mm/5.8 × 4.9 × 3.1 in.
Weight	Approx. 1005 g/2 lb 3.5 oz with battery and XQD memory card but without body cap; approx. 915 g/2 lb 0.3 oz (camera body only)
Operating environment	Temperature: 0 to 40°C/32 to 104°F; humidity: 85% or less (no condensation)
Supplied accessories (may differ by country or area)	EN-EL15a Rechargeable Li-ion Battery, MH-25a Battery Charger, DK-17F Fluorine-Coated Finder Eyepiece, UC-E22 USB Cable, HDMI/USB Cable Clip, AN-DC18 Strap, BF-1B Body Cap

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. November 2017 © 2017 Nikon Corporation

⚠ WARNING — **TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT. SOME DOCUMENTS CAN BE DOWNLOADED FROM downloadcenter.nikonimglib.com.**

En