I AM THE DIFFERENCE MAKER
LITTLE SHAO

“Happy that I can finally have a compact body which integrates 45.7-megapixel resolution with fast shutter speeds and the best 153-point AF system.”

LUKE AUSTIN

“It’s not just an increase in resolution — I also love the focus shift function, tilting touch screen, silent photography and high ISO performance.”

JERRY GHIONIS

“Some of my favorite features include its medium format-level quality and detail with D-SLR flexibility, working in tandem with countless NIKKOR lenses, three RAW settings including 45.7 megapixels at 9fps... the list goes on!”

MARSEL VAN OOSTEN

“You will really appreciate the incredible amount of detail throughout the image. But it’s not just about the pixel count: it’s about the quality of these pixels.”

LITTLE SHAO and BEYOND CONTENT

“This camera is the perfect one for me. I love the fact that I can deal with video at this high level with my photographer’s mind and logic.”

— Little Shao

“This camera is the perfect one for me. I love the fact that I can deal with video at this high level with my photographer’s mind and logic.”

— Little Shao

“The combination of 4K UHD, superb low-light performance and light weight means the D850 comes on more shoots, gets used more, and more shots make it into more edits.”

— Steve Leavesley, Director, Beyond Content
HIGHER RESOLUTION. HIGHER SPEED. GREATER VERSATILITY.
PURE POTENTIAL FOR STILLS AND VIDEO.
45.7 MEGAPIXELS AND ENHANCED PERFORMANCE DELIVER LANDSCAPE IMAGES THAT ASTOUND
**Magnificent images with stunning detail — Nikon FX-format, backside illumination CMOS sensor delivering 45.7 megapixels with ISO 64-25600**

The D850 allows landscape 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 harness the sharpness 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.

*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. The D850 intends at 7 fps with the EN-EL15b/EN-EL15s.

**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.
Unparalleled resolving power to match 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.

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 landscape photographers.

AF-S NIKKOR 70-200mm f/2.8E FL ED VR

This fast f/2.8 telephoto zoom with reduced weight enables highly agile shooting in diverse situations. Movable parts and other sections are sealed to maximize dust- and drip-resistant performance. Further enhanced optical performance is realized with a newly developed optical system and the adoption of fluorite, ED glass and HRI lens elements, as well as NANO Crystal Coat. The VR system provides a powerful effect equivalent to a shutter speed 4.0 stops* faster in Normal mode. AF drive and AF tracking performance have also been enhanced, while stable AE control is obtained with the adoption of an electromagnetic diaphragm.

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.

AF-S NIKKOR 100-400mm f/4.5-5.6E ED VR

This versatile AF-S telephoto zoom with VR employs new optical design technology to achieve high-performance, compact, lightweight design. The VR system provides a powerful effect equivalent to a shutter speed 4.0 stops* faster in Normal mode. Thanks to the new electromagnetic drive system, the AF drive mechanism is more reliable and quieter, while the electromagnetic diaphragm provides smooth AE control. A fluorine coat on lens surfaces is employed to repel water and dust for easier maintenance.

AF-S NIKKOR 200-500mm f/5.6E ED VR

This fast f/5.6 super-telephoto zoom provides outstanding image quality characterized by extreme image stabilization. The VR system provides a powerful effect equivalent to a shutter speed 5 stops* faster in Normal mode. This lens also features a tripod mount ring to enhance portability and durability, while the electromagnetic diaphragm delivers smooth AE control.

* Based on CIPA Standards. This value is achieved when attached to an FX-format D-SLR camera, with zoom set at the maximum telephoto position.
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 NIKKOR 28mm f/1.4E ED

With an angle of view similar to the viewfield of human sight, naturally spreading space and depth can be reproduced. The maximum aperture of f/1.4 delivers large and beautiful bokeh characteristics. Two ED glass elements and three aspherical lens elements minimize various types of aberrations. Nano Crystal Coat effectively controls ghost and flare effects for clear images. Body is designed to ensure superb dust- and drip-resistant performance, while fluorine coat is applied for easy maintenance.

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

When capturing a night sky blanketed with stars, you probably want to avoid even the tiniest image blur to maximize the advantage of 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. 6.6-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.
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 landscape shooters. 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.

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.
Powerful AF in the dark and more compositional freedom — 153-point AF system and AF down to -4 EV

The D850’s powerful 153-point AF system — the same acclaimed technology used in the flagship D5 — delivers over 130% of the D810’s frame coverage, with 99 cross sensors offering powerful detection. Thanks to a Multi-CAM 20K autofocus sensor module, developed to keep noise to an absolute minimum, the central point functions at -4 EV* and other focus points at -3 EV*. Accurate AF is possible in challenging low-light or low-contrast situations — a great asset for landscape photographers shooting in the hours when light is scarce, such as at sunrise and sunset, and especially useful for capturing nighttime scenes.

* At ISO 100 and 20°C/68°F.

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. 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.

Auto AF fine-tune system

1. Focus achieved in live view.
2. Difference of defocus amount (A) between contrast-detect AF (live view) and phase-detection AF (viewfinder photography) is calculated.
3. (A) is recorded as the AF tuning value and applied to viewfinder photography.
Greater convenience in the field — Touch-operable, tilting 8-cm/3.2-in. 2359k-dot monitor

Whether lowering the camera down for a macro shot or pointing upwards at a starry night sky, 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.

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.

Accurate manual focus confirmation — Focus peaking display

Many landscape 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.

More accuracy in manual focus — Electronic rangefinder with improved precision

In addition to offering superb autofocus performance, the D850 also makes manual focusing more precise. Its electronic rangefinder identifies whether a subject is in focus more accurately than ever before, allowing you to capture sharp images when focusing in manual mode, or using a manual focus lens.
Bring everything in focus for focus stacking — Focus shift photography

When shooting a landscape 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.

Focus shift photography steps

Set the number of shots (nine in the example illustration above), focus step width (the amount of shifted focus distance with each shot) and interval between shots.

Note: Exposure smoothing and silent photography options are available.

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.

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

FX

Note: When data is read from SONY SF-G128 (128 GB) SD card and written to Lexar Professional 2933× (128 GB) XQD card.
Keep shooting under harsh conditions — Superior weather-/dust-resistant performance and a robust body

Working in environments such as tropical forests or desert, landscape 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 landscape 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.
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/EN-EL15 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/EN-EL15 Rechargeable Li-ion Battery in the body and the EN-EL18b/EN-EL18a in the MB-D18. Optional BL-5 Battery Chamber Cover required for use of the EN-EL18b/EN-EL18a.

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.

RAW image-processing software with auto retouch brush — Capture NX-D (free download)

Nikon’s Capture NX-D software offers the best way of processing original RAW (NEF/NRW) files without losing any of their extremely rich data. It incorporates an auto retouch brush that lets you remove dust spots on pictures. You can also adjust options such as exposure compensation, white balance, Picture Controls and unsharp mask. JPEG and TIFF files are also compatible.

Optimal management of still images and movies — ViewNX-i (free download)

ViewNX-i is Nikon’s free software for viewing and editing JPEG, RAW and movie files, as well as RAW files edited with Capture NX-D. It incorporates ViewNX-Movie Editor, which can be used to edit movies, including 4K UHD footage. Access to various web services is also available.

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.

*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.
HIGH RESOLUTION MEETS HIGH SPEED, ADDING NEW VALUE TO YOUR COMMERCIAL SPORTS PHOTOGRAPHY
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 required.
*2 When using a 64 GB XQD (Sony QD-G64E) memory card.

More speed, more battery life and more comfortable vertical shooting — MB-D18 Multi-Power Battery Pack (optional)

The new, optional MB-D18 Multi-Power Battery Pack boosts the D850’s high-speed continuous shooting speed up to 9 fps*1, while increasing the number of frames that can be photographed per full battery charge up to 5140*2 (1840 frames with body alone). Its ergonomically designed grip ensures the camera is comfortable and secure in your hands, with dedicated control buttons and dials for vertical composition. And like the camera body, it features a durable magnesium alloy shell with weather- and dust-sealing. The MB-D18 accepts one EN-EL15a/EN-EL18*3 Rechargeable Li-ion Battery, eight AA-size batteries or the EH-5c/EH-5b AC Adapter (requires EP-5B Power Connector) as a power source.

*1 With the EN-EL18b/EN-EL18a Rechargeable Li-ion Battery inserted. Optional BL-5 Battery Chamber Cover required for use of the EN-EL18b/EN-EL18a.
*2 Based on CIPA Standards. With the EN-EL15a/EN-EL15 Rechargeable Li-ion Battery in the body and the EN-EL18b/EN-EL18a in the MB-D18.
*3 EN-EL15, EN-EL18a and EN-EL18 can also be used.

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

Accurate focusing is crucial to large-pixel-count images. The D850 comes equipped with the same powerful 153-point AF system as the flagship D5 — a technology widely praised by editorial sports photographers. The 153 densely packed focus points (95 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 such as an athlete’s eye, but is also designed to immediately acquire fast, often random movements and track them tenaciously. The D850 also comes with the same AF lock-on adjustment menu as the D5, helping to focus more accurately on subjects moving toward the camera. Furthermore, the central point functions at -4 EV* and all other focus points at -3 EV*, thanks to the Multi-CAM 30K autofocus sensor module, which was developed to keep noise to an absolute minimum, allowing for accurate AF in challenging light.

* At ISO 100 and 20°C/68°F.
Fast, accurate focusing — Dedicated AF engine

Like the D5, the D850 employs a dedicated AF engine. Working in parallel with the sequence control microcomputer, it achieves simultaneous rangefinding at all 153 focus points, which contributes to fast, accurate focusing. As a result, when shooting an athlete portrait in auto-area AF, for example, it eliminates the need to select focus points each time you change your composition, contributing to a more efficient workflow.

Precise focus on distant subjects with teleconverters — Powerful AF compatible with an effective aperture of f/8

The D850 demonstrates powerful AF performance even when using a teleconverter. All 153 points are compatible with effective apertures of f/5.6 or faster*. And fifteen focus points, including nine selectable points, are compatible with an effective aperture of f/8.

* Number of effective cross sensors varies with certain lens combinations.

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. Focus achieved in live view.

2. Difference of defocus amount (A) between contrast-detect AF (live view) and phase-detection AF (viewfinder photography) is calculated.

3. (A) is recorded as the AF tuning value and applied to viewfinder photography.

**Auto AF fine-tune system**

1. Focus achieved in live view.

2. The new calibration has been added to the “fn4” button. Press and hold the “fn4” button until the next dialogue appears.

3. Select “Yes” to save the tuning value. 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.

Focus points capable of AF and electronic rangefinding when using AF-S/AF-I teleconverters

For effective apertures slower than f/5.6 and faster than f/8

For effective aperture of f/8

**CMOS sensor**

**AF sensor**

**Mirror**

**Pentaprism**

**CMOS sensor**

**AF sensor**

**Mirror**

**Pentaprism**

A

1. Focus achieved in live view.

2. Difference of defocus amount (A) between contrast-detect AF (live view) and phase-detection AF (viewfinder photography) is calculated.

3. (A) is recorded as the AF tuning value and applied to viewfinder photography.
**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.

![180K-pixel RGB sensor](Image)

- **ISO 100, f/1.4 lens, 20°C/68°F, using matrix or center-weighted metering.**
- **Stable exposure 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.

**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. The D850 shoots at 7 fps with the EN-EL15a/EN-EL15.

**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. It boosts contrast in backlit scenes, which some sports photographers prefer. What's more, it maintains a consistent look across multiple images during continuous shooting, even when there are small variations in brightness or angle between each frame.
Truly dynamic action photography — Nikon FX-format, backside illumination CMOS sensor for 45.7 megapixels with ISO 64-25600

The D850 allows commercial sports photographers to capture moments of dynamic action in sumptuously rich detail — even during 9-fps continuous shooting. 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*. And because the sensor is designed without an optical low-pass filter, it can harness the sharpness 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 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.

*2 When printed at 300 dpi.

Unparalleled resolving power to match 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, with a diverse lineup including many telephoto lenses. 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.

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 HR 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 faster. Other notable features include an electromagnetic diaphragm mechanism, fluorine coat and highly durable body.

* Based on CIPA Standards. This value is achieved when attached to an FX-format D-SLR camera, with zoom set at the maximum telephoto position.
AF-S NIKKOR 70-200mm f/2.8E FL ED VR
This fast f/2.8 telephoto zoom with reduced weight enables highly agile shooting in diverse situations. Movable parts and other sections are sealed to maximize dust- and drip-resistant performance. Further enhanced optical performance is realized with a newly developed optical system and the adoption of fluorite, ED glass and HR lens elements, as well as Nano Crystal Coat. The VR system provides a powerful effect equivalent to a shutter speed 4.0 stops*1 faster in Normal mode. Meanwhile, Sport mode brings the same level of viewfinder image stability in handheld shooting that you would expect when using a monopod. AF drive and AF tracking performance have been enhanced, while stable AE control is obtained with the adoption of an electromagnetic diaphragm mechanism.

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.

AF-S NIKKOR 14-24mm f/2.8G ED
This lens delivers exceptional wide-angle coverage and superb image quality, with minimal distortion and flare. The lens is designed for professional use in low-light and dynamic situations, offering fast AF performance and excellent handling.

** 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.
* Based on CIPA Standards.

Greater convenience in the field — Touch-operable, tilting 8-cm/3.2-in. 2359k-dot monitor
When capturing action from a unique angle, the D850’s tilting LCD monitor makes it easier to get the shot. 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.

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.
Confident operation under wet conditions —
Superior weather-/dust-resistant performance
and a robust body

Commercial sports photographers may sometimes use splashes of water or sand for dramatic effect, which can result in the camera getting wet or dirty. 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 D850’s buttons and dials are arranged in a convenient ergonomic layout designed to facilitate comfortable operation in fast-action shooting. 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 camera models. Furthermore, the D850 has illuminated buttons on the rear left side and release mode dial, making it simpler to change settings when shooting in the dark.

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.
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.

*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.

RAW image-processing software with auto retouch brush — Capture NX-D (free download)

Nikon’s Capture NX-D software offers the best way of processing original RAW (NEF/NRW) files without losing any of their extremely rich data. It incorporates an auto retouch brush that lets you remove dust spots on pictures. You can also adjust options such as exposure compensation, white balance, Picture Controls and unsharp mask. JPEG and TIFF files are also compatible.

Optimal management of still images and movies — ViewNX-i (free download)

ViewNX-i is Nikon’s free software for browsing and editing JPEG, RAW and movie files, as well as RAW files edited with Capture NX-D. It incorporates ViewNX-Movie Editor, which can be used to edit movies, including 4K UHD footage. Access to various web services is also available.
HIGH RESOLUTION AND AMAZING VERSATILITY LET YOU CAPTURE SPECIAL MOMENTS IN STYLE
Stunning beauty with exquisite detail — Nikon FX-format, backside illumination CMOS sensor delivering 45.7 megapixels with ISO 64-25600

The D850 allows fashion and wedding photographers to capture beautiful moments in sumptuously rich detail, even when subjects are moving under low light. 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 harness the sharpness of 45 megapixels.

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.

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 wedding photography involves — from posed portraits and multiple flash set-ups to low-light candid shots — 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 (25.5 MP) and small (11.3 MP). And whichever option you use, in-camera RAW processing is still available.

*1 When using the optional MB-D18 Multi-Power Battery Pack with the EN-EL18b/EN-EL18a.
* When using the optional MB-D18 Multi-Power Battery Pack with the EN-EL18a/EN-EL18b Rechargeable Li-ion Battery. The D850 shoots at 7 fps with the EN-EL15a/EN-EL15.
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.

*1 Approx. range at height of about 1.2 m/4 ft; varies according to weather conditions, presence of obstacles and radio communication conditions.


*3 At 35 mm zoom head position, in FX format, standard illumination pattern.

Unparalleled resolving power to match 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.

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 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* faster. Other notable features include an electromagnetic diaphragm mechanism, fluorine coat and highly durable body.

* 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.

**AF-S NIKKOR 70-200mm f/2.8E FL ED VR**

This fast f/2.8 telephoto zoom with reduced weight enables highly agile shooting in diverse situations. Movable parts and other sections are sealed to maximize dust- and drip-resistant performance. Further enhanced optical performance is realized with a newly developed optical system and the adoption of fluoride, ED glass and HRI lens elements, as well as Nano Crystal Coat. The VR system provides a powerful effect equivalent to a shutter speed 4.0 stops* faster. Other notable features include an electromagnetic diaphragm mechanism, fluorine coat and highly durable body.

The D850 lets you depict the spontaneous energy of a fashion shoot in gloriously high resolution. 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*) 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** (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 required.

*2 Maximum number of pictures (large, 14-bit lossless compressed RAW) that can be shot in a single burst of high-speed continuous shooting

The new, optional MB-D18 Multi-Power Battery Pack boosts the D850’s high-speed continuous shooting speed to 9 fps*, while increasing the number of frames that can be photographed per full battery charge up to 5140* (1840 frames with body alone). Its ergonomically designed grip ensures the camera is comfortable and secure in your hands, with dedicated control buttons and dials for vertical composition. And like the camera body, it features a durable magnesium alloy shell with weather- and dust-sealing. The MB-D18 accepts one EN-EL15a/EN-EL18b* Rechargeable Li-ion Battery, eight AA-size batteries or the EH-5c/EH-5b AC Adaptor (requires EP-5B Power Connector) as a power source.

*1 With the EN-EL18b/EN-EL18a Rechargeable Li-ion Battery inserted. Optional BL-5 Battery Chamber Cover required for the use of the EN-EL18a/EN-EL18.

*2 Based on CIPA Standards. With the EN-EL15a/EN-EL15 Rechargeable Li-ion Battery in the body and the EN-EL18b/EN-EL18a in the MB-D18.

© Jerry Ghionis

**Exposure:** [A] mode, 1/400 second, f/5.6  
**White balance:** Direct sunlight  
**Sensitivity:** ISO 800  
**Picture Control:** Standard

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**Exposure:** [M] mode, 1/400 second, f/6.3  
**White balance:** Direct sunlight  
**Sensitivity:** ISO 64  
**Picture Control:** Auto

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More speed, more battery life and more comfortable vertical shooting — MB-D18 Multi-Power Battery Pack (optional)

* 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.
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 auto white balance, i-TTL balanced fill flash, autofocus, Active D-Lighting. Notably, it delivers stronger face detection when using the optical viewfinder in scenes with moving subjects — an invaluable feature for wedding and fashion photographers. Furthermore, metering is available down to -3 EV* which is helpful when shooting low-light scenes.

* ISO 100, f/1.4 lens, 20°C/68°F, using center 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 colour in the clothes, try highlight-weighted metering. This setting delivers a richer tonality in images by giving priority to the brightest portions of the scene and avoiding white clipping.

Smoother, more productive shooting — 153-point AF system with reliable auto-area AF

The D850 comes equipped with the same powerful 153-point AF system as the flagship D5. Fashion and wedding photographers will feel the difference in AF performance and the flexibility it brings. In auto-area AF, the D850 automatically detects and achieves focus on the closest subject, and the camera quickly changes the AF point according to the subject’s movement or changes of framing. This means the photographer doesn’t need to move the focus point manually when changing composition, resulting in a smoother shoot with sharp focus on faces. Pre-assigning a specific AF-area mode to a custom button also improves workflow, allowing you to temporarily switch modes during a shoot — for instance, if you shoot mainly using auto-area AF but want to use single-point AF to achieve pinpoint focus on a bride’s eye when needed. Furthermore, AF compatibility down to -4 EV* at the central focus point and -3 EV* at all other points enables you to focus smoothly on low-contrast subjects such as a bride in a white dress.

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.

Avoid white clipping and preserve tones in highlights — Highlight-weighted metering

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More accuracy in manual focus — Electronic rangefinder with improved precision

In addition to offering superb autofocus performance, the D850 also makes manual focusing more precise. Its electronic rangefinder identifies whether a subject is in focus more accurately than ever before, allowing you to capture sharp images when focusing in manual mode, or using a manual focus lens.

Clearly confirm your entire view — 0.75x optical viewfinder

The D850 provides a wide field of view for easier subject confirmation with a 0.75x 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 — Fully touch-operable, tilting 8-cm/3.2-in. 2359k-dot LCD monitor

If a unique angle is what you need to give you the creative edge, the D850’s tilting LCD monitor makes it easier to get the shot. 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.

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

When you’re capturing the moment a couple ties the knot at their wedding ceremony, the sound of a camera shutter might ruin the atmosphere. The D850’s silent photography function* 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**.

*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.

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 x 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.

In-focus indicator

FX

5:4

-1

-1.2 × crop

DX

• Lens: AF-S NIKKOR 70-200mm f/2.8E FL ED VR • Exposure: [A] mode, 1/800 second, f/3.5 • White balance: Direct sunlight • Sensitivity: ISO 64 • Picture Control: Standard  © Jerry Ghionis

• Lens: AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED • Exposure: [M] mode, 1/200 second, f/3 • White balance: Direct sunlight • Sensitivity: ISO 800 • Picture Control: Standard  © Jerry Ghionis
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.

Versatile remote camera control from a computer — Camera Control Pro 2 software

Nikon's Camera Control Pro 2 lets you remotely control the D850 from a computer connected via wired or wireless LAN. Its capabilities have expanded to meet the demands of professional photographers. You can now use it to activate/deactivate live view, as well as release the shutter, start playback and change settings such as AF and metering modes in live view shooting. It also lets you use unified flash control*, enabling you to change the settings of SB-5000 Speedlight units. In studies as well as outdoors, it makes remote camera control more versatile and more efficient.

* Camera Control Pro 2 must be Ver. 2.26.0 or later.

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

The D850’s buttons and dials are arranged in a convenient ergonomic layout designed to facilitate comfortable operation. 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 camera models. Furthermore, the D850 has illuminated buttons on the rear left side and release mode dial, making it simpler to change settings when shooting in the dark.

RAW image-processing software with auto retouch brush — Capture NX-D (free download)

Nikon’s Capture NX-D software offers the best way of processing original RAW (NEF/NRW) files without losing any of their extremely rich data. It incorporates an auto retouch brush that lets you remove dust spots on pictures. You can also adjust options such as exposure compensation, white balance, Picture Controls and unsharp mask. JPEG and TIFF files are also compatible.

Optimal management of still images and movies — ViewNX-i (free download)

ViewNX-i is Nikon’s free software for browsing and editing JPEG, RAW and movie files, as well as RAW files edited with Capture NX-D. It incorporates ViewNX-Movie Editor, which can be used to edit movies, including 4K UHD footage. Access to various web services is also available.
THE D-SLR CAMERA THAT EXPANDS THE POTENTIAL OF 8K TIME-LAPSE MOVIE PRODUCTION
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.

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.

* To P and S modes, aperture drive mode occurs.

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** and lets you shoot starry night skies using aperture-priority auto mode when employed with silent interval timer shooting mode***. 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.

*1 ISO 100, f/1.4 lens and 20°C/68°F.

** Also available with silent time-lapse and silent focus shift photography.

Extended low-light metering range

Thanks to the exposure metering capability beyond -3 EV, you can rely on the camera’s AE to capture changes in the sky after sunset and into the night, even stars gradually appearing.

* 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.
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 a convenient, in-camera RAW batch-processing feature, which enables you to quickly apply the same adjustments to selected images. It can process 1000 RAW files*1 in approx. 25 minutes*2. 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.

*1 When converting 14-bit lossless RAW into JPEG Fine, Large. Time varies according to conditions.

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

Smaller size of RAW files — 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.

Clearer, more beautiful images regardless of the light — ISO 64-25600

The D850 delivers superior image quality in diverse lighting situations. While taking a huge leap in effective pixel count from the D810, it also achieves a wider standard sensitivity range of ISO 64-25600 thanks to its backside illumination CMOS image sensor and EXPEED 5 image-processing engine. The camera consistently outputs images rich in detail and with minimal noise, even in its high ISO range, while images at ISO 64 are reproduced with faithful tones and nuances in highlights. Sensitivity is expandable down to Lo 1 (ISO 32 equivalent) or up to Hi 2 (ISO 102400 equivalent*3), extending the possibilities for your shooting. Even when shooting starscapes, the D850 consistently delivers high-quality images with minimum noise in interval timer photography.

* Hi settings are not available in silent shooting.

Unparalleled resolving power to match 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 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.

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 producing wide-angle time-lapse videos.
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. A great choice for landscapes and indoor scenes.

TIME-LAPSE

- Exposure: [M] mode, 20 seconds, f/2.8
- White balance: Color temperature (3600 K)
- Sensitivity: ISO 3200
- Picture Control: Standard

© Marsel van Oosten

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

When working outdoors for extended periods, time-lapse photographers regularly 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.
Ergonomic operation offers 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 AE, encourages time-lapse 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.

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

Whether pointing the camera upwards at a starry night sky or down on a street full of traffic, 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.

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

Making time-lapse movies involves an enormous volume of images, so fast and reliable storage media is essential. 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

Capturing a time-lapse sequence from dusk till dawn places enormous demands on power consumption. 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/EN-EL15 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/EN-EL15 Rechargeable Li-ion Battery in the body and the EN-EL18b/EN-EL18a in the MB-D18. Optional BL-5 Battery Chamber Cover required for use of the EN-EL18b/EN-EL18a.

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.
A comprehensive multimedia D-SLR, featuring 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

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: This aspect ratio is 16:9.

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 for audio recording.

Take beautifully clean 4K UHD videos even in dark situations — Superior low-noise performance at high ISO settings

Even in dark scenes, you can rely on the D850 for consistently sharp video with low noise. Despite the great leap in effective pixel count from the D810, the camera achieves a wider standard sensitivity range of ISO 64-25600 for both stills and movies. This is thanks to the greater light-gathering efficiency of the new backside illumination CMOS structure, and the EXPEED 5 image-processing engine’s ability to effectively reduce noise while maintaining details. You can also widen the possibilities for your shooting by extending sensitivity up to Hi 2 (ISO 102400 equivalent). The D850 encourages videographers to explore their creativity in a variety of scenes.

Automatic adjustment to brightness changes — Auto ISO control for fixed aperture/shutter speed in M mode

Imagine filming a scene where the brightness changes significantly, such as following a subject from a dark corridor into the noonday sun, within one take. The Auto ISO function in M mode ensures the camera automatically adjusts its ISO settings to changes in brightness, while maintaining a specific depth of field and shutter speed. This helps achieve appropriate exposure throughout the scene.

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 — including subject colors, brightness and texture. 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.

Minimize highlight clipping for grading — Highlight-weighted metering

While brightness control can be applied in post-production, it cannot compensate for blown-out highlights. The D850’s highlight-weighted metering is an invaluable tool for video shooting, helping to minimize overexposure. This setting delivers a richer tonality in images by giving priority to the brightest portions of a scene and avoiding white clipping. Used together with Flat Picture Control, you can acquire footage with even richer tones and less over-exposed highlights.
The defining strength of your 4K UHD video creation — Incredibly sharp NIKKOR lenses

Only high-performance lenses with high resolving power can draw out the full potential of 4K UHD video. The diverse NIKKOR lens lineup, from wide angle to telephoto, features superior optical performance and reliability, highly praised by cinematographers around the world. The optical system delivers high resolution even in the peripheral areas of the frame, elaborately designed bokeh characteristics that depict subject impressively with natural depth, and high reproduction capability for point light sources even at the maximum aperture. These features empower you to create the movie productions of your dreams.

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 \\button during movie recording gives you direct access to the movie-shooting settings, providing both convenience and efficiency during your shoot.

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

When you encounter a subject that just cries out to be shot from a creative angle, but don’t have access to an HDMI monitor, the D850’s smooth, tilting LCD monitor gives you the flexibility you need. It has the most extensive touch functionality, including menu and \\button menu operation, found in any Nikon D-SLR camera to date, bringing a new level of convenience and causing less unwanted operational noise than button operation.

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 multimedia creators.

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 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.
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.

Accurate manual focus confirmation — Focus peaking display

Many professional videographers use manual focus for accurate focusing. The D850’s focus peaking display* makes it easier to confirm manual focus. 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. For users’ convenience, this peaking information will not be recorded on the external device when connected via HDMI.

* Available with Full HD and HD.

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 automatically reduces the microphone sensitivity to the appropriate level — allowing smooth recording with clear sound.

Preserve details in highlights and shadows — Active D-Lighting

The EXPEED 5 image-processing engine makes it possible to apply Active D-Lighting to Full HD and HD movies. This popular function in still-photo shooting preserves details in highlights and shadows when recording high-contrast scenes, giving your footage richer tonal gradation and a more natural brightness. This comes in handy when you need to use footage straight out of the camera without post-production editing.

Confident hand-held video shooting — Electronic vibration reduction

When shooting movies hand-held in Full HD or HD, the D850’s electronic vibration reduction function* reduces the effects of camera shake in the horizontal, vertical and rotational directions (centering on the lens). This is invaluable when limitations of time and location make it difficult to set up a tripod. Used in combination with NIKKOR’s optical VR technology, the benefits are even more apparent.

* Image area will be slightly smaller in Full HD.
Keep shooting under harsh conditions — Superior weather-/dust-proof performance and a robust body

Expensive, high-performance, professional movie cameras often can’t be taken to sandy or rainy outdoor locations. 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.

Continue filming without worry — Long battery life

Filming for hours on end means that battery life is always a source of concern. The D850 allows you to concentrate on shooting without worry. The camera can shoot up to approx. 70 minutes of video*1 from a single charge of an EN-EL15a/EN-EL15 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, allowing filming up to approx. 215 minutes*2.

*1 Based on CIPA Standards.
*2 Based on CIPA Standards. With the EN-EL15a/EN-EL15 Rechargeable Li-ion Battery in the body and the MB-D18. Optional BL-5 Battery Chamber Cover required for use of the EN-EL18b/EN-EL18a.

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**BRING YOUR FILM PICTURES TO LIFE WITH THE HIGH-RESOLUTION D850**

The quick, easy way to convert film to digital data — Negative digitizer

Some seasoned photographers may be exploring ways to convert their film assets created with old cameras into digital data. Taking advantage of its high-pixel count of 45 megapixels, the D850 offers an option for digitizing film (35mm-format), which can handle color and monochrome negatives. First, set an optional ES-2 Film Digitizing Adapter onto a lens such as the AF-S Micro NIKKOR 60mm f/2.8 ED attached to the D850. Then, insert the film to be digitized in an FH-4 Strip Film Holder or FH-5 Slide Mount Holder, and shoot. The camera’s digitizing function automatically reverses the colors and stores them as JPEG images. This once time-consuming process involving a film scanner can be done much more quickly. You can enjoy pictures with family and friends while selecting and digitizing by displaying them on a large TV monitor connected via an HDMI cable. Enjoy your old film images by digitizing them with the D850.

---

**Movie footage that can be recorded per single battery charge (CIPA Standards)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Time (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D850</td>
<td>70*1</td>
</tr>
<tr>
<td>D810</td>
<td>40*2</td>
</tr>
</tbody>
</table>

*1 When using an EN-EL15a/EN-EL15 Rechargeable Li-ion Battery.
*2 When using an EN-EL15 Rechargeable Li-ion Battery.
### FEATURES GUIDE

#### Image sensor size and resolution

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.9 × 23.9 mm (FX)</td>
<td>35.9 × 23.9 mm (FX)</td>
<td>35.9 × 24.0 mm (FX)</td>
</tr>
</tbody>
</table>

#### Effective megapixels

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.7 megapixels</td>
<td>20.8 megapixels</td>
<td>24.3 megapixels</td>
</tr>
</tbody>
</table>

#### Backside illumination CMOS sensor structure

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
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</tr>
</tbody>
</table>

#### ISO sensitivity range

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 64 to 25600 Expandable down to ISO 32 and up to ISO 102400</td>
<td>ISO 100 to 102400 Expandable down to ISO 50 and up to ISO 32800</td>
<td>ISO 100 to 12800 Expandable down to ISO 50 and up to ISO 51200</td>
</tr>
</tbody>
</table>

#### Picture Control Auto

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

#### RAW file size options

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAW L, M, S††</td>
<td>RAW L, M, S††</td>
<td>RAW L</td>
</tr>
</tbody>
</table>

#### File format

- [•NEF (RAW) + JPEG](#)
- [•JPEG](#)
- [•TIFF](#)
- [•12-/14-bit uncompressed/lossless compressed/NEF (RAW)](#)
- [•12-/14-bit uncompressed/lossless compressed/NEF (RAW)](#)

#### AF

- 15 f/8-compatible points
- 153 focus points: 99 cross-type sensors, 51 focus points: 15 cross-type sensors, 11 f/8-compatible points

#### AF detection range**

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4 to 20 EV</td>
<td>-4 to 20 EV</td>
<td>-3 to 19 EV</td>
</tr>
</tbody>
</table>

#### AF lock on

- Adjustable with two parameters; blocked shot AF response and subject motion
- Adjustable with two parameters; blocked shot AF response and subject motion
- Adjustable by strength levels only

#### Auto AF fine-tune

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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</tbody>
</table>

#### Pinpoint AF (live view)

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

#### AE

- 185K-pixel RGB sensor
- 195K-pixel RGB sensor
- 195K-pixel RGB sensor

#### Exposure smoothing function

- Internal (modified ISO
- External (modified ISO

#### Extended low-light metering during exposure smoothing function

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
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</table>

#### Highlight-weighted metering

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</table>

#### Auto white balance

3 options: 3 options: 2 options

#### Flicker reduction (still photography)

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

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†† Medium and small size files are available at 12-bit lossless compressed (RAW (NEF)).

‡‡ ISO 100 and 20°C/68°F.

††† ISO 100 to 12800 Expandable up to ISO 51200 Expandable up to ISO 51200 Expandable up to ISO 51200

*With EN-EL14a battery inserted in an MB-D14 Multi-Power Battery Pack.

**With EN-EL18a battery inserted in an MB-D18 Multi-Power Battery Pack.

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### FEATURES GUIDE

#### Silent, reduced-vibration photography

- Silent photography at 45 MP/approx. 6 fps or 6 MP/approx. 30 fps (in DX format, JPEG format) for up to 3 s
- Silent interval-timer photography
- Silent time-lapse movie recording
- Silent focus shift photography

#### Quiet photography

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</table>

#### Electronic front-curtain shutter

Available in Mup, Q and Qc modes

#### High-speed continuous shooting

- Frame advance rate: up to approx. 11*4 fps or 12*5 fps
- Buffer capacity: up to approx. 14*4 shots (JPEG XQD-type) for up to 5 s
- Electronic front-curtain shutter
- 4K UHD recording frame rates
- Available in full frame
- Full HD recording frame rates
- Available in crop

#### Movie quality, frame size and frame rate

- 4K UHD: 3840 × 2160 crop
- 4K UHD: 3840 × 2160 crop
- Full HD: 3840 × 2160 crop
- Full HD: 3840 × 2160 crop

#### Movie image quality

- ISO 64 to 25600 Expandable up to ISO 102400
- ISO 100 to 102400 Expandable up to ISO 3280000
- ISO 100 to 12800 Expandable up to ISO 51200

#### Auto ISO control in M mode

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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#### Highlight-weighted metering

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<tr>
<th>D850</th>
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<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</table>

#### Active D-Lighting for movies

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes (full HD)</td>
<td>Yes (full HD)</td>
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</tr>
</tbody>
</table>

#### Movie operation

#### Dedicated movie shooting menu

<table>
<thead>
<tr>
<th>D850</th>
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<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Highlight (zebra) display

- 2 selectable zebra patterns
- Highlight brightness level adjustable

#### Peaking display

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Yes</td>
<td>No</td>
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</table>

#### Electronic VR

<table>
<thead>
<tr>
<th>D850</th>
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</thead>
<tbody>
<tr>
<td>Yes (full HD)</td>
<td>Yes (full HD)</td>
<td>No</td>
</tr>
</tbody>
</table>

#### Power aperture control

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
<th>D750</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### File format

- MOV or MP4
- MOV
- MOV

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*††††† With EN-EL14a battery inserted in an MB-D14 Multi-Power Battery Pack.
### FEATURES GUIDE

<table>
<thead>
<tr>
<th>D850</th>
<th>D5</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Movie audio recording</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenuator</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Audio recording format</td>
<td>Linear PCM or AAC</td>
<td>Linear PCM</td>
</tr>
<tr>
<td>Selectable audio frequency range</td>
<td>Wide or voice</td>
<td>Wide or voice</td>
</tr>
</tbody>
</table>

| **Image viewing** | | |
| Optical viewfinder magnification** | 0.75x | 0.75x | 0.7x |
| Image monitor | 3.2 in. 2359k dot | 3.2 in. 2359k dot | 3.2 in. 1229k dot |
| Tilt screen | Yes | No | Yes |
| Touch-screen function | Yes (including fully touch-operable menu screens and 4 button menu and touch shutter release) | Yes | No |

| **Advanced features** | | |
| Minimum interval for interval-timer photography | 0.5 s | 0.5 s | 1 s |
| Multiple exposure modes | Add, average, lighten overlay and darken overlay | Add, average, lighten overlay and darken overlay | Auto-gain on and off |
| Focus shift photography | Yes | No | No |

| **Camera handling** | | |
| Button illumination | Yes | Yes | No |
| Sub-selector | Yes | Yes | No |
| Fo buttons | 2 | 3 | 3 |
| Memory card slots | SD + XQD | 2 x XQD or 2 x CF | 2 x SD |
| Shutter durability | 200,000 cycles | 400,000 cycles | 150,000 cycles |
| Multi-Power Battery Pack | MB-D18 | MB-D18 | MB-D16 |

| **Speedlight control** | | |
| Built-in flash | No | No | Yes |
| Radio-controlled Advanced Wireless Lighting compatibility | Yes | Yes | No |

| **Network communication** | | |
| Wired and Wireless LAN | With WT-7/A/B/C Wireless Transmitter | With WT-7/A/B/C or WT-5/A/B/C Wireless Transmitter | With WT-7/A/B/C or WT-5/A/B/C Wireless Transmitter |
| Built-in Wi-Fi (SnapBridge) | Yes | Yes | No |
| Built-in Bluetooth (SnapBridge) | Yes | Yes | No |

| **Size & weight** | | |
| Dimensions | Approx. 146 x 124 x 78.5 mm/5.8 x 4.9 x 3.1 in | Approx. 160 x 158.5 x 92 mm/6.3 x 6.3 x 3.7 in | Approx. 145.5 x 113 x 78 mm/5.7 x 4.5 x 3.1 in |
| Weight | Approx. 1005 g/2 lb 3.5 oz** | Approx. 1455 g/5 lb 1.6 oz** | Approx. 1229g/4 lb 1.9 oz** |
| XQD-type: Approx. 1455 g/5 lb 1.6 oz** | Approx. 1229g/4 lb 1.9 oz** | Approx. 840 g/2 lb 13.7 oz** |

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*Antennas: D5: 4 bands at infinity, -1.0 m-1.
*With battery and an XQD card but without body cap.
*With battery and card type CF card but without body cap and accessory shoe cover.
*No SD memory card reader/SD memory card types.
**With battery and an XQD card but without body cap.
††Supplied accessory. 
**Note: This product can be downloaded from the application store of each device (free). 
††Can be downloaded from Nikon website (free).
### SPECIFICATIONS

- **Exposure metering modes**: • Matrix: 3D color matrix metering III (type G, E and D lenses); color matrix metering
- **Auto focus (AF)**: Single-servo AF (AF-S); full-time-servo AF (AF-F) • Manual focus (M)
- **Shutter**: Electronically controlled vertical-travel focal-plane mechanical shutter; electronic
- **Battery**: One EN-EL15a/EN-EL15 Rechargeable Li-ion Battery
- **Dimensions (W × H × D)**: Approx. 146 × 124 × 78.5 mm/5.8 × 4.9 × 3.1 in.
- **Weight**: Approx. 1460 g (51 oz) (camera body only), 1760 g (62 oz) (with lenses and accessories)
- **Max. resolution (pixels)**: • FX (36×24) image area: 8256 × 5504 (L: 45.4 million), 6192 × 4128 (M: 25.5 million),
- **ISO sensitivity**: 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
- **White balance**: Auto (3 types), natural light auto, incandescent, fluorescent (7 types), direct sunlight,
- **Image size (pixels)**: • FX (36×24) image area: 8256 × 5504 (L: 45.4 million), 6192 × 4128 (M: 25.5 million),
- **Audio input**: Stereo mini-pin jack (3.5-mm diameter; plug-in power supported)
- **Video compression**: H.264/MPEG-4 Advanced Video Coding
- **Max. burst**: 9 fps, 10 frames (AF-S, AF-C modes), or up to approx. 20 frames (AF-C)
- **Movie**: Video compression, Monitor, Power, battery, Exposure (A), Shutter speed (S), Aperture (A)
- **Gamma**: Standard, Vivid, Flat, Colorimetric
- **Image sensor cleaning**: Image sensor cleaning, Image Dust Off reference data (Capture NX-D software
- **Dust-reduction system**: Image sensor cleaning, Image Dust Off reference data (Capture NX-D software
- **Total pixels**: 46.89 million
- **Effective pixels**: 45.7 million
- **Effective angle of view**: Nikon FX format
- **Lens mount**: Nikon F mount (with AF coupling and AF contacts)
- **Focal plane mark**: 6880 × 4584 (L: 31.5 million), 4128 × 2752 (S: 11.3 million) • 1.2× (30×20) image area:
- **Movie ISO sensitivity**: • Exposure modes: Auto, P, S, A, M
- **Flash sync speed**: X=1/250 s; synchronizes with shutter at 1/250 s or slower; auto FP high-speed sync
- **Playback**: Full-frame and thumbnail (4, 9 or 72 images) playback with playback zoom, playback
- **Audio output**: Mono, stereo
- **Headphone connector**: 3.5 mm stereo mini jack
- **Battery-chamber cover**: Supplied Accessories EN-EL15a Rechargeable Li-ion Battery
- **HDMI output**: HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or
- **Control**: Function, Quick Control, My Menu, Playback, Setup, Live View, Viewfinder, Image Review,
- **Release**: Single, Continuous, Bulb, Remote release, Wireless remote release, (10 frames/sec)
- **Auto focus (AF)**: Single-servo AF (AF-S); full-time-servo AF (AF-F) • Manual focus (M)
- **Monitor**: 8-cm/3.2-in., approx. 2359k-dot (XGA) tilting TFT touch-sensitive LCD with 170°
- **SOE**: • Standard, Vivid, Flat, Colorimetric
- **Video**: Video compression
- **Viewfinder**: Electronic Viewfinder, 1.2× magnification, approx. 100% frame coverage, viewfinder
cover, eyepiece correction, eyepiece interpupillary distance adjustment, diopter adjustment
- **Image size (pixels)**: • FX (36×24) image area: 8256 × 5504 (L: 45.4 million), 6192 × 4128 (M: 25.5 million),
- **Frame size**: 4128 × 2752 (S: 11.3 million) • 1.2× (30×20) image area: 6880 × 4584 (L: 31.5 million),
- **Flash**: Flash sync speed X=1/250 s; synchronizes with shutter at 1/250 s or slower; auto FP high-speed sync
- **Viewfinder magnification**: 1.0×, 0.7×, 0.5×, 0.2×
- **Movie**: Video compression, Monitor, Power, battery, Exposure (A), Shutter speed (S), Aperture (A)
- **Gamma**: Standard, Vivid, Flat, Colorimetric
- **Image sensor cleaning**: Image sensor cleaning, Image Dust Off reference data (Capture NX-D software
- **Playback**: Full-frame and thumbnail (4, 9 or 72 images) playback with playback zoom, playback
- **Audio output**: Mono, stereo
- **Headphone connector**: 3.5 mm stereo mini jack
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