Nikon releases the D850 digital SLR

The next-generation full-frame digital SLR camera with an optimized combination of high resolution and high-speed performance across multiple genres of photography

TOKYO - Nikon Corporation is pleased to announce the release of the D850, a Nikon FX-format digital SLR camera that optimizes the combination of high resolution and high-speed performance to set the standard for next-generation full-frame cameras for professional photographers and serious hobbyists across landscape, commercial sports, fashion and wedding genres, and multimedia content.

The D850 has an effective pixel count of 45.7 megapixels, and supports the ISO 64-25600 range of standard sensitivities (expansion to Lo 1, ISO 32 equivalent and Hi 2, ISO 102400 equivalent is possible). The camera itself is capable of high-speed continuous shooting at approximately 7 fps, but when the optional MB-D18 Multi-Power Battery Pack is used, the rate increases to approximately 9 fps. Adoption of the same high-speed, high-precision 153-point AF system used by the D5 gives the D850 greater certainty of capturing moving subjects. It has a new backside illumination Nikon FX-format CMOS sensor and the latest image-processing engine, EXPEED 5.

Movie capabilities have also been enhanced even further for multimedia content creators who wish to shoot both stills and videos. With the D850, Nikon introduces its own full-frame recording of 4K UHD (3840 x 2160)/30p movies, as well as 4x and 5x slow-motion movies*3 in Full HD. This will enable impressive expressions of movement in Full HD. In addition, the camera supports the creation of 8K time-lapse videos from still images captured using interval timer photography, while also offering silent photography, and in-camera batch processing of RAW images, all of which demonstrate the strength of the D850 as a multimedia digital SLR.

From landscape, commercial sports, fashion, and wedding photography to multimedia applications, the D850, combined with the power of NIKKOR's extensive selection of lenses, greatly expands the possibilities for versatile imaging expression across a wide variety of photographic genres. Catering not only to professional photographers and serious hobbyists, the D850 also targets the hybrid photographers who require both photo and video qualities that play an equally important part in their work.

Primary Features

1. An effective pixel count of 45.7 megapixels and a new backside illumination Nikon FX-format CMOS sensor

The D850 is Nikon's first digital SLR camera to be equipped with a backside illumination CMOS sensor. Together with the camera's low-noise performance, this enables it to achieve a maximum standard sensitivity of ISO 25600 (with expansion up to Hi 2, ISO 102400 equivalent) despite its high pixel count, with incident light more effectively guided to the photodiodes. The same minimum standard sensitivity of ISO 64 (with expansion to Lo 1, ISO 32 equivalent) supported by the D810 is also offered by the D850, achieving an incredibly broad range of sensitivities. In addition, no optical low-pass filter means that the D850 is able to make the most of high-resolution NIKKOR lenses to produce extremely sharp and clear images. Images captured with the D850 can be enlarged up to A2 size* for printing, and even used for 8K digital signage displays.

•*At 300 dpi.

2. High-speed continuous shooting at approximately 7 fps/9 fps captures motion

The D850 is equipped with a backside illumination CMOS sensor capable of high-speed readout of high-volume data, the EXPEED 5 image-processing engine that processes an incredibly large amount of information at high speed, and newly designed shutter and mirror mechanisms. These three features work together to enable high-speed continuous shooting at up to approximately 7 fps*1 with just the camera, and up to approximately 9 fps*1,*2 when the MB-D18 Multi-Power Battery Pack is used. What's more, up to approximately 51 14-bit or 170 12-bit (image size L) RAW images with lossless compression can be captured in a single burst of continuous shooting*3. Further, adoption of the same high-performance 153-point AF system used by the D5 ensures certain capture of intended subjects including those that are moving, in a wide variety of scenes, effectively expanding the practical range of this high-pixel-count camera.

•*1With continuous-servo AF, manual or shutter-priority auto exposure, a shutter speed of 1/250 s or faster, and other settings at default values.

•*2When an EN-EL18b/EN-EL18a Rechargeable Li-ion Battery (available separately) is used. Optional BL-5 Battery Chamber Cover is required for use of the EN-EL18b/EN-EL18a.

•*3When a Sony QD-G64E XQD memory card and EN-EL15a/EN-EL15 are used with shooting at ISO 100.

3. Silent photography eliminates the sound of shutter release and mechanical vibrations with capture of 45-MP images

The D850 is equipped with a silent photography feature with which the image sensor performs operations normally performed by the mechanical shutter's front and rear curtains with live view photography, enabling silent capture of full-frame images. The sound of shutter release and mechanical vibrations are completely eliminated, making this an effective choice in situations when the sound of shutter release is distracting or impolite, as at a museum or wedding, or when mechanical vibrations are a concern, such as when photographing starscapes or heavenly bodies.

•Note: In M (manual) or A (aperture-priority auto) exposure mode. In P (programmed-auto) or S (shutter-priority auto) exposure mode, the sound of aperture operation can be heard.

4. Nikon's first digital SLR camera to support full-frame 4K UHD (3840 x 2160) movie recording

The D850 supports full-frame, 4K UHD (3840 x 2160)/30p recording, allowing users to record movies that make the most of wide-angle lenses' broad angles of view, as well as the superior resolution at the edges of the frame exhibited by NIKKOR lenses. In addition, 4x and 5x slow-motion movies* can be recorded in Full-HD format (100- or 120-fps readout is recorded at 24p, 25p, or 30p). This enables dramatic expression of a moment's movement in slow motion. Further, the addition of a dedicated movie shooting menu, the ability to choose the format in which movies are recorded from MOV and MP4, and the ability to apply detailed settings for highlight display make the D850 a much more convenient way to record movies for multimedia users.

•*Image quality is fixed at normal and image area is fixed at DX regardless of settings.

5. 8K time-lapse video creation that makes the most of interval timer photography

The interval timer shooting function has been significantly enhanced with the D850. The interval timer shooting function is not only capable of recording still images (8256 x 5504) that can be used to create time-lapse movies with a frame size that exceeds that of the 8K format*1, but it also offers a silent photography option that can be enabled to capture a large volume of images without concern for the mechanical shutter wear. When silent interval timer photography and exposure smoothing options are enabled, not only are the variations in exposure between individual shots effectively suppressed, but the camera is also able to meter exposure with significantly less light than the -3 EV*2 that is minimally required. This makes it possible for photographers to use A (aperture-priority auto) exposure mode in situations where it is impossible to use manual exposure to capture a series of images, all of which exhibit optimal exposure, of the sky's transition from sunset to starry night sky or from starry night sky to sunrise, for example. The D850 also meets the requirements of professional time-lapse movie creation, offering fast, in-camera batch processing of a huge number of RAW images.

•*1Requires third-party software for creation.

•*2ISO 100, f/1.4 lens, 20°C/68°F, using matrix or center-weighted metering.

6. Other Features

•Equipped with a 180K-pixel RGB sensor that greatly increases the precision and accuracy of automatically controlled functions, such as autofocus (AF), auto exposure (AE), and auto white balance (AWB)

•Auto Picture Control, with which the camera automatically fine-tunes images in accordance with the scene

•The new natural light auto white balance option that achieves more accurate color reproduction for a variety of scenes captured under natural lighting

•RAW image size can be selected from large, medium*1, and small*1 depending upon how images will be used

•A magnification of approximately 0.75x that enables a broad view has been achieved for the optical viewfinder

•The convenient 8-cm/3.2-in., approximately 2359k-dot, tilting TFT touch-sensitive LCD monitor

•A power-saving design that enables capture of approximately 1,840 shots or approximately 70 minutes of movie recording*2 on a single charge*3

•A focus shift function that makes it easy to acquire the materials (shots) needed for the technique known as focus stacking*4, used to increase depth of field

•A negative digitizer that makes it easy to convert color or black-and-white film negatives to digital data (JPEG)*5

•Support for radio-controlled Advanced Wireless Lighting, which increases the flexibility of multi-flash photography

•*1Recorded in 12-bit, lossless compressed format.

•*2With testing in accordance with CIPA standards. Maximum length is 29 min. 59 s. with a single recording.

•*3When an EN-EL15a/EN-EL15 Rechargeable Li-ion Battery is used.

•*4Focus stacking requires third-party editing software.

•*5The ES-2 Film Digitizing Adapter (available separately) is required.

- *Specifications, design, product name and supplied accessories may differ by country or area. Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer.