



At the heart of the image

D4

Nikon

D4

65
million
NIKKOR

ALL EDGE, NO EXCEPTIONS

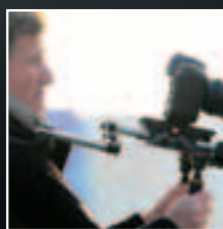
The professional world slows down for no one. In fact, the pace only grows faster, and the pressure on photographers continues to rise. When advances in technology present new ways of working in photography and video, you can expect one professional digital SLR to give you a winning edge. Get ready for the D4, Nikon's newest flagship camera and a tangible symbol of the quest for innovation. Built upon a foundation of industry firsts, the D4 shatters many barriers that today's professionals face, delivering new levels of quality, speed and precision for both still images and broadcast quality video. The world's ultimate imaging machine and its 16.2-megapixel FX-format sensor offer you uncompromised performance in some of the most demanding ambient lighting and environmental conditions imaginable. Take advantage of this newfound power, and utilize the incredibly fast AF acquisition and Nikon's next-generation EXPEED 3 image-processing engine's speeds. Freeze an action sequence at approx. 10 frames per second thanks to advances in buffer speed. Expect full AF and AE performance throughout, even in FX format, and experience incomparably accurate shutter control, autofocus detection and motion tracking.

The D4 makes these advantages a reality, all while raising its effective pixel count by 33 percent over its predecessor, the D3S. Despite the additional 4 megapixels of image data to process, you can expect zero trade-off when it comes to speed and accuracy due to tremendous technological improvements in image processing and sensor design. The incredible Advanced Scene Recognition System pushes performance even further with its 91K-pixel RGB sensor. The revolutionary autofocus helps you shoot accurately in lower light than ever. For multimedia demands, there is multi-area mode Full HD D-Movie that offers three imaging formats for movies — for the first time in the world — and an optimized image-processing system that excels in extremely difficult conditions, making the D4 one of the most powerful broadcasting tools on the planet. With durability, precision and reliability like this, and the extensive Nikon System of lenses and Speedlights at your disposal, it's time to truly push the limits of your craft. The professional world may be speeding up, but with the D4, you set the pace.



What a Pro Wants Most

Some battle rapid-fire deadlines at a breakneck pace. Others lie in wait for hours or even days, waiting for one precious, fleeting moment. They are professional photographers, and no matter whether they work solely in stills or in the growing field of multimedia, their livelihood hinges on anticipating, capturing and delivering winning images. The world's leading photographers have never pushed their boundaries further or faster than today, striving to accomplish more, while carrying less. As the professional landscape evolves, Nikon adapts to the changes and delivers a camera that excels where professionals need it most. Nikon called on five of the world's top photographers and asked them to push the D4 to the limit, relentlessly testing five areas essential to today's professionals: image quality, reliability, speed, workflow fluidity and broadcast quality video. Here is how they responded.



Bill Frakes (U.S.A.)
Photojournalism/Sports (stills and video)

In order to realize my creative vision, it is critical that I be one with my camera. I must rely on it to transfer my ideas into physical manifestations that I can share across multiple platforms. It must be easy to use, quick to respond, rugged, consistent and offer every imaging option I desire. The D4 is all of this and much, much more — all while offering me unfettered access to the over 65 million F-mount lenses that Nikon has produced since 1959. The world needs photojournalist storytellers now more than ever, and this is the tool that I have been waiting for. Capable of capturing audio, high-resolution stills and HD video in one piece of equipment, the D4 is the complete imaging machine.



Matthias Hangst (Germany)
Sports (stills)

For my type of assignments, 100% reliability is essential, with fast and accurate focusing considered priority number one. The D4 has a faster initial AF detection speed and an improved dynamic AF system, both of which help me concentrate on being creative without worrying about focusing performance. I regularly shoot fine JPEGs together with uncompressed RAW, so I am really happy that the D4 has such an impressive buffer, which allows high-speed continuous shooting for longer periods of time. The D4 also offers the possibility of IPTC data recording, which makes my work much easier for an editor to handle during post-production.



Vincent Munier (France)
Nature/Wildlife (stills and video)

As a wildlife photographer, I frequently wait for days in remote areas for a single shot. Durable and dependable gear is essential. For this assignment, the Tibetan plateau remained near -35°C/-31°F with strong, dusty wind. Days from the nearest camera repair, my team slept in tents alongside the indigenous nomadic people, with little time or opportunity for gear maintenance. Despite such extreme conditions, the D4 proved its reliability daily. Its AF accuracy was astounding, especially in low light: there were times when a half-moon provided enough illumination for sharp focus. The ability to use AF at f/8 has also been extremely helpful, giving me extra reach. I look forward to bringing the D4 back into the field. It is the perfect instrument to help me witness the natural world.



Corey Rich (U.S.A.)
Action/Extreme Sports (stills and video)

I tell stories in some of the most extreme environments on the planet: rain, snow, dust, wind, falling rock — this is my office. Much of what I shoot happens only once, so there is no going back for a second take. Every piece of equipment I use must perform under the harshest conditions, and the D4 lives up to my highest standards. It offers the durability, reliability and versatility I need for incredibly challenging assignments, whether they require stills, video, audio or all three. The D4 does it all. Never do I need to question the camera's ability to perform. With trust like this, I can focus on being creative.



Joe McNally (U.S.A.)
Photojournalism/Commercial (stills and video)

On assignments for *Life Magazine*, *Sports Illustrated* and *National Geographic*, I have encountered all manner of shooting conditions: from location portraiture to heavy production work; from stylized studio sessions to "run-and-gun" journalism. The D4 can handle them all. It's fast and responsive, with technical options that conform to virtually any need I have in the field. The files and skin tones are exactly the quality I need, and with the flick of a switch, I can seamlessly go from detailed stills to shooting full-frame, 1080p high-def video. Advancements in the camera's meter make the already formidable Nikon Creative Lighting System even stronger, and coupled with Nikon's legendary optics, the D4 is the complete package for every assignment, of any kind.



*Reigning World Champion
in the Triple Jump,
Christian Taylor.*

- Lens: AF-S NIKKOR 400mm
f/2.8G ED VR
- Image quality: 14-bit RAW (NEF)
- Exposure: [M] mode,
1/1,000 second, f/5.6
- White balance: Auto 1
- Sensitivity: ISO 6400
- Picture Control: Standard

©Bill Frakes



• Lens: AF-S NIKKOR 70-200mm
f/2.8G ED VR II
• Image quality: 14-bit RAW (NEF)
• Exposure: [M] mode,
1/1,250 second, f/4
• White balance: Color
temperature (5,000 K)
• Sensitivity: ISO 6400
• Picture Control: Standard
©Matthias Hangst



- Lens: AF-S NIKKOR 70-200mm f/2.8G ED VR II
- Image quality: 14-bit RAW (NEF)
- Exposure: [M] mode, 1/200 second, f/14
- White balance: Auto 1
- Sensitivity: ISO 100
- Picture Control: Standard

©Joe McNally

16.2 MP FX-format sensor with an extended sensitivity range of ISO 100 to 12800

16.2-megapixel resolution and full-frame FX format: a perfect balance



Seeking to offer uncompromised performance in both video and still photography, the D4 is a brand new camera fitted with a new 16.2-megapixel

FX-format sensor of unprecedented speed, size, resolution and sensitivity. Despite a 33% increase in effective pixels over its predecessor, the D3S, the D4 delivers and processes data faster than any Nikon camera before it, providing photographers with up to 11-fps performance in FX format. Close examination of a D4 image reveals 16.2 megapixels of stunning depth and detail that ensure flexibility in post-production, from magazine-quality prints to web publishing. Image quality this versatile is a direct result of Nikon's sophisticated approach to sensor design. The internal design of the sensor is carefully engineered to collect the maximum amount of light and render the highest possible image quality in the most diverse and difficult lighting conditions. At high ISO sensitivities, incredibly clear, smoothly graded results are maintained thanks to an optimized noise-reduction design and 14-bit A/D conversion incorporated within the sensor. Unique to Nikon, the D4 expands your still image shooting possibilities with four image area options: FX format (36.0 x 23.9 mm), 5:4 crop (29.9 x 23.9 mm), 1.2x crop (29.9 x 19.9 mm) and DX format (23.4 x 15.5 mm). The camera also offers three image area options for Full HD video thereby tripling its potential for moviemaking. All these creative options are supported by a vast array of NIKKOR FX and DX lenses.



• Lens: AF-S NIKKOR 14-24mm f/2.8G ED • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/60 second, f/4.5 • White balance: Auto 1
• Sensitivity: ISO 100 • Picture Control: Standard
©Joe McNally

Optimum use of light: Nikon's proprietary image sensor technology

Such exceptional image integrity across such a wide ISO sensitivity range is made possible through Nikon's proprietary and exclusive sensor technologies. The pixels are spaced at a pitch of 7.3 μm while gapless micro-lenses are employed, and anti-reflective coating is used on various parts — all of which results in minimized ghost and flare. This detailed design gives the D4 an unprecedented ability to channel all available light efficiently and directly into the sensor. The advantage is maintained through improved sensor quantum efficiency, ensuring optimum conversion of light into electric signals, and delivering digital files at ISO 100 to 12800 with a wide dynamic range and an outstanding signal-to-noise ratio. The benefit of a high-efficiency sensor is enhanced by an integrated approach to noise reduction. The layout of electronics within the sensor has been carefully configured to minimize noise. Despite operating at the amazing speed required to realize approx. 11 fps, the D4's image sensor consumes less power, contributing to extended battery life.

Standard ISO 100 to 12800, expandable from ISO 50 to ISO 204800 equivalent

Nikon flagship digital SLRs have long been recognized by professionals for their clean performance at high sensitivity settings, and the new 16.2-megapixel D4 offers low-noise performance at ISO 12800. It also extends the range one EV further, compared with that of the D3S, making ISO 100 standard; a welcome addition that allows the use of slow shutter speeds in bright sunlight. For more challenging conditions, equivalent sensitivities of ISO 50 and ISO 204800 are also available. The D4 is confidently capable of shooting still images and video* in nearly any light — even in places where the human eye has difficulty in recognizing details. Photographers are able to work in the harsh glare of the midday sun and the low-key light of dawn, and can capture images in the soft shadows of a dimly lit interior or a moonlit forest at midnight. In these situations, the camera's superb ISO sensitivity range offers photographers great flexibility in their approach to the subject matter.

*D-Movie standard ISO sensitivity from ISO 200 to ISO 12800, with higher sensitivity options up to Hi 4.

• Lens: AF-S NIKKOR 85mm f/1.4G
• Image quality: 14-bit RAW (NEF)
• Exposure: [M] mode, 1/160 second, f/1.4
• White balance: Incandescent
• Sensitivity: ISO 12800
• Picture Control: Standard
©Joe McNally

EXPEED 3: the super-charged engine behind faithful colors, fine tones and an extraordinary dynamic range



• Lens: AF-S NIKKOR 70-200mm f/2.8G ED VR II • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/200 second, f/11 • White balance: Auto 1 • Sensitivity: ISO 100 • Picture Control: Standard ©Joe McNally

Fast, intelligent and powerful 16-bit image processing

The EXPEED 3 is the latest embodiment of Nikon imaging expertise in miniature, a sophisticated system that is designed to analyze and process images at blindingly fast speeds with uncompromised

precision. The EXPEED 3 imaging-processing engine, optimized for D-SLRs, delivers faithful, well-saturated color, natural depth and subtle, nuanced tones from pitch black all the way to snow white. In dim lighting at high ISO settings, the camera's intelligent noise reduction lowers noise without degrading image sharpness. High-speed 16-bit image processing delivers smooth gradation with abundant tone and detail that can be applied to image integrity for a diverse range of uses. Even JPEGs straight out of the camera maintain the accuracy required when directly submitting to a magazine, newspaper or web publication. The EXPEED 3 has been optimized for video as well. Movie is rendered with suppressed moiré, reduced false colors and minimized "jaggies". Noise reduction

technology specifically designed for video preserves clarity and sharp edges — even in low light. The powerful EXPEED 3 is fast, accurate and exceptionally energy efficient, prolonging the camera's ability to endure extended assignments.

Edge-to-edge sharpness: lateral chromatic aberration reduction

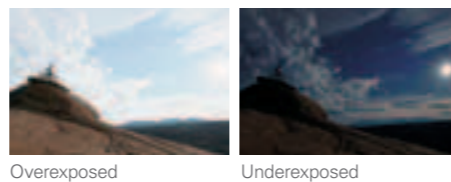
High-megapixel sensors can really test the quality of a lens, but the combination of brilliant NIKKOR lenses and Nikon's intelligent processing measures will significantly reduce the risk of lateral chromatic aberration, or color fringing, to give you incredibly natural-looking results. Unlike other correction methods that simply eliminate chromatic aberration, Nikon's method compensates for these color differences in a resolving index for each color, making it particularly effective in producing images with stunning edge-to-edge sharpness. Moreover, because these corrections are made regardless of the NIKKOR lens used, this feature contributes substantially to the sharpest images possible.

Details in highlight and shadow: Active D-Lighting upgrades

When working with extremely high-contrast lighting that exceeds the camera's dynamic range, and when movement in the subject or background is inherent in your images, the D4's upgraded Active D-Lighting helps to maintain highlight details. In addition to the conventional range of settings, the D4 now includes one additional "extra high" option for more versatility when facing harsh and difficult lighting conditions.

Fully saturated, high-contrast images: HDR (High Dynamic Range)

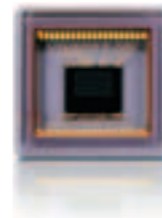
In addition to Active D-Lighting, the D4 offers an HDR mode that is ideal for capturing a scene that has an extremely wide dynamic range. Most suitable for landscapes, interiors and studio work, in this mode the D4 shoots two frames in a single shutter release: one overexposed, and the other underexposed. The two are then instantly combined to create a single image that encompasses the full dynamic range of the original scene with reduced loss of detail in highlights and shadows even in high-contrast conditions. The resulting images are fully saturated and display a rich tonality compared to those normally produced by HDR, even in a high-contrast shooting situation that requires additional image manipulation. The exposure differential of the two images can also be extended by up to 3 EV, while the smoothness of the edge where the two exposures meet can be adjusted.



HDR

Advanced Scene Recognition System based on an advanced 91K-pixel RGB sensor

A new level of accuracy in auto operation with a 91K-pixel RGB sensor



With Nikon's original Advanced Scene Recognition System, the D4 achieves new standards of accurate autofocus, auto exposure, i-TTL flash, Active D-Lighting and auto white balance results. At the

heart of the system is a precise RGB sensor that meticulously reads each scene via 91K-pixels. With unprecedented precision, the data that has been collected pixel-by-pixel is then used to meter and analyze the scene's color information and brightness levels. The system also recognizes human faces when shooting with the optical viewfinder. This rigorously analyzed pixel data then automatically triggers a variety of in-camera controls that help the image files appear more natural and appealing. Advanced Scene Recognition System delivers incredibly high accuracy for various auto controls by flawlessly calculating vast amounts of scene information — even at up to 10 frames per second.

Accurate subject detection: application for AF

First introduced in the legendary D3 camera series, Nikon's auto-area AF and 3D-tracking are AF-area modes that use the color and brightness information from the subject to determine correct focus. The D4 is equipped with the latest subject recognition algorithms for both AF-area modes, which can be advantageous when taking high-quality still images. In auto-area AF mode, the camera can accurately recognize and target focus on human faces — useful when faces are a priority and time to choose the focus point is not available. It focuses on a subject's body when the face is out of the AF area. In 3D-tracking mode, the 91K-pixel RGB sensor's high-precision data combines with a specifically optimized AF algorithm that recognizes detailed patterns in order to realize exceptional subject-tracking precision.

Auto white balance

Incorporating years of research into ambient lighting, the unique Nikon auto white balance technologies in the D4 are capable of identifying and compensating for a broad range of artificial and natural light sources. Using data from the image sensor and 91K-pixel RGB sensor, the camera can automatically render white as white with supreme accuracy, or can incorporate the warmth of ambient, incandescent lighting as required.

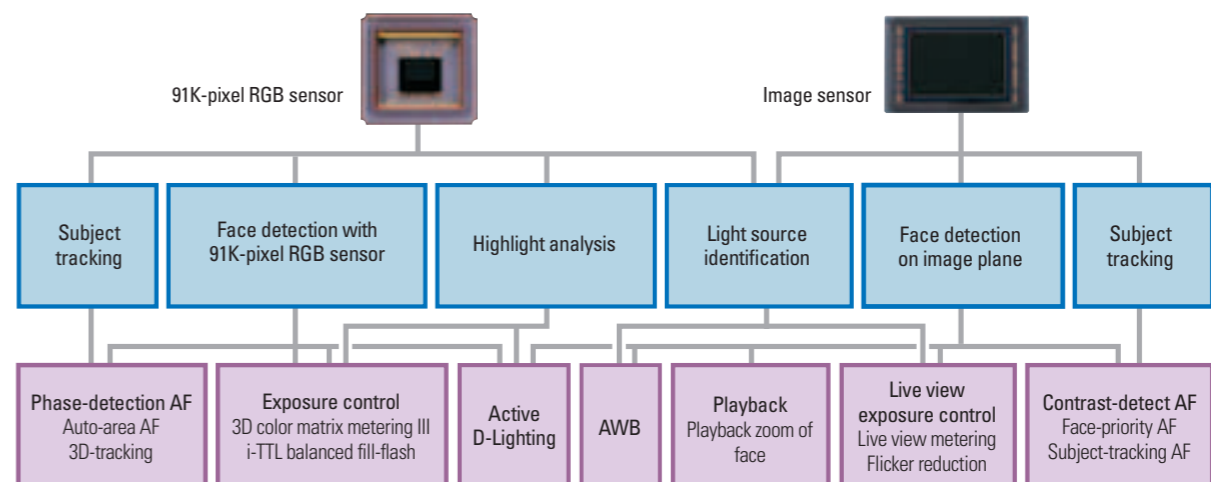
3D color matrix metering III: application for AE

Thanks to the 91K-pixel RGB sensor, the D4 has incredibly detailed scene information at its disposal — including data on prominent human faces in the viewfinder. This data helps Nikon's 3D color matrix metering III to deliver more desirable auto exposures, especially when there are human faces present. In situations where exposure compensation is required, such as a dark face against a bright background or conversely, a bright face against a dark background, the D4 can now determine exposure balanced with the background considering the size of the face relative to a frame and its brightness. Accurate metering is possible in low-lit scenes as low as -1 EV with 3D color matrix metering III and center-weighted metering.

Application for i-TTL balanced fill-flash and Active D-Lighting

With the D4's enhanced i-TTL balanced fill-flash paired to either a hot shoe or wired Nikon Speedlight(s), human faces can be illuminated in relation to their surroundings with outstanding precision. Moreover, face detection, when paired with Active D-Lighting, delivers images that retain highlights and shadows in high-contrast scenarios, making faces look as they are seen, whether in sunlight or shade.

The Advanced Scene Recognition System



10/11 frames-per-second continuous shooting in FX format for up to 200 frames

Faster to the winning frame: high-speed continuous shooting with large buffer



The D4 is built for speed, but not for speed alone. The D4's readiness and agility go hand in hand with incomparably accurate control of shutter speed, aperture value, autofocus detection and tracking, auto exposure, auto white balance and other control options that get photographers closer to capturing the decisive moment than ever before. Expect 10-fps shutter bursts with full AF and AE performance in FX format. The frame rate can also be boosted to up to 11 fps*^{1,2} in FX format. The camera's large buffer memory allows shooting up to approx. 100 frames*³ in RAW and up to 200 frames*⁴ in JPEG (when using SONY XQD Memory Card H series QD-H32 with 32 GB capacity). This enables photographers to maintain high-speed continuous shooting without worrying about buffer memory capacity — a real advantage that cannot be measured by fps rates alone.

- *1 The frame rate assumes continuous-servo AF, manual or shutter-priority auto exposure, a shutter speed of 1/250 s or faster, and other settings at default values. Frame rate may drop at extremely small apertures (high f-numbers) or slow shutter speeds, when vibration reduction (available with VR lenses) or auto ISO sensitivity control is on, or when the battery is low.
- *2 In continuous high-speed mode at 11 fps, some of the second and subsequent shots in each burst may not be in focus and exposure may not accurately track poorly lit subjects.
- *3 98 frames on average, image quality: 12-bit compressed RAW, under test conditions established by Nikon.
- *4 Image quality: JPEG (fine/Medium)



• Lens: AF-S NIKKOR 600mm f/4G ED VR • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/800 second, f/4.5 • White balance: Preset manual
• Sensitivity: ISO 6400 • Picture Control: Standard
©Matthias Hangst

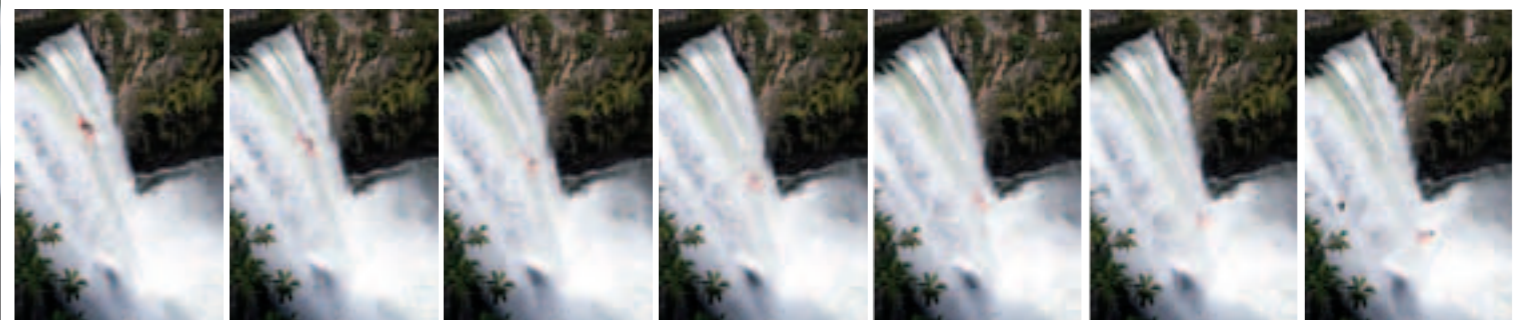
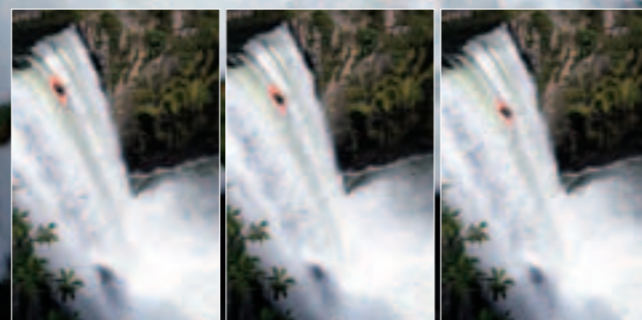
Faster response that supports comfortable shooting

The D4's speed runs across its entire workflow. The camera is ready to shoot in approx. 0.12 s*¹, and release time lag is minimized to a mere approx. 0.042 s*¹. The camera's precise sequential mechanism has been redesigned to reach 10/11 fps even more accurately, and optimum card recording speed is ensured with the CF card compatible with UDMA 7, and the next-generation recording media, the XQD memory card, that can be set simultaneously with dual card slots. The XQD memory card's read/write speed is 125 MB/s*². High-speed data transfer to a PC is achieved with the XQD memory card reader*³ that

supports USB 3.0, delivering outstandingly faster workflow. The D4's powerful data communication and control system makes both wired and wireless LAN file transfer speeds both faster and easier than ever.

- *1 Based on CIPA Guidelines.
- *2 SONY XQD Memory Card H series QD-H32 with 32 GB capacity. Under test conditions established by SONY; may vary according to measurement conditions.
- *3 SONY XQD Memory Card Reader MRW-E80. Under test conditions established by SONY.

• Lens: AF-S NIKKOR 16-35mm f/4G ED VR
• Image quality: 14-bit RAW (NEF)
• Exposure: [M] mode, 1/1,250 second, f/5.6
• White balance: Direct sunlight
• Sensitivity: ISO 250
• Picture Control: Standard
©Corey Rich



51 AF points for sharper, faster detection with any AF NIKKOR lens, even in low light



• Lens: AF-S NIKKOR 200mm f/2G ED VR II • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/2,500 second, f/4 • White balance: Auto 1, B2, M1 • Sensitivity: ISO 6400 • Picture Control: Standard ©Matthias Hangst



• Lens: AF-S NIKKOR 600mm f/4G ED VR • Image quality: 14-bit RAW (NEF) • Exposure: [M] mode, 1/2,000 second, f/8 • White balance: Auto 1 • Sensitivity: ISO 2500 • Picture Control: Standard ©Bill Frakes

Phenomenal speed and accuracy



Experience the speed needed to keep fast-moving subjects in focus. With the introduction of the Advanced Multi-CAM 3500FX autofocus sensor module, AF

performance reaches new heights. Like its predecessor, the D4's sensor module utilizes 51 strategically placed AF points that are designed to capture the subject in a variety of ways: by working together like a net to capture moving subjects or for pinpoint accuracy, by using a single AF point to home in on the exact place on the chosen subject. All 51 AF points of the D4 are usable with every AF NIKKOR lens of f/5.6 or faster. The D4 delivers high performance even in extremely low-lit situations. AF detection is fast and accurate down to an impressive -2 EV (ISO 100, 20°C/68°F), which is approximately the physical limit of human visibility through an optical viewfinder. Consistent, reliable performance can be expected at night stadium assignments, in poorly lit indoor arenas, theaters and any other low-lit venue.

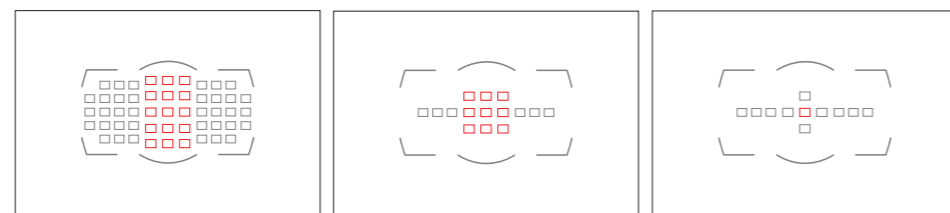
Fast initial AF detection

The D4's AF is designed to work as fast as a professional's reflexes. Its faster initial AF detection captures decisive moments like never before, which is advantageous when there is not enough time to press the shutter-release button halfway to focus, or if the subject moves fast or appears unexpectedly. It is especially capable in sports photography. Volleyball, soccer, track and field and swimming — no matter what the sport, the D4 is ready. Also, a new "Focus+release" option is provided as an AF-C priority selection. This option prioritizes focus over release in the first frame, and then prioritizes frame rate from the second frame, when shooting a low-contrast and low-lit subject. It is effective for high-speed continuous shooting with the emphasis on the focusing rate of the first frame.

15 cross-type sensors in the central area and 11 focus points compatible with f/8

The D4 aligns its 15 cross-type sensors in the central viewfinder area to detect contrast in both vertical and horizontal lines for better AF performance. Each cross-type sensor is responsive with f/5.6 and provides its full performance with all AF-NIKKOR lenses. Moreover, the five central focus points and three points to the left and right of them in the middle line are compatible with f/8. Highly accurate focusing is realized even with the effective aperture value of f/8 by combining a 2.0x teleconverter with super-telephoto NIKKOR lenses, that are frequently used for sports shooting. This delivers a new level of potential when shooting distant subjects, such as sports or wildlife.

Available focus points according to aperture



Compatible with f/5.6

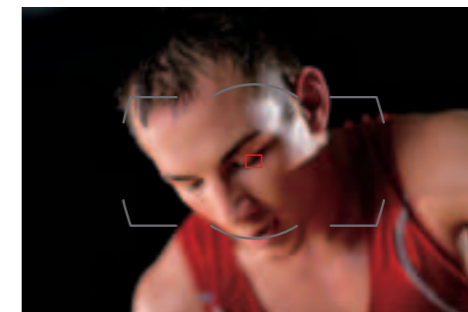
Compatible with aperture slower than f/5.6 and faster than f/8

Compatible with f/8

■ Perform as cross sensors
□ Perform as line sensors

AF modes and AF-area modes

From fast-breaking news stories and high-speed sports and action to unpredictable wildlife and dimly lit wedding receptions, the D4's optimized AF options are ready to respond to a wide range of needs. There are two AF modes; AF-C activates AF servo continuously and is recommended for moving subjects, while AF-S activates AF servo once to lock-in focus and is recommended for stationary subjects. For AF-area modes, there are four choices: single-point AF, dynamic-area AF, 3D-tracking and auto-area AF. Single-point AF offers the pinpoint accuracy needed for portraiture or for a sports image where the exact focus point placement is crucial. Dynamic-area AF has three more choices: 9, 21, and 51. With each option, 9, 21, or 51 AF points work together to continuously detect moving subjects. The 3D-tracking mode locks onto moving subjects, moving the AF point and allowing the photographer to concentrate on composition. In concert with the Advanced Scene Recognition System, the D4 can recognize detailed patterns and color within the frame and then use this information to improve tracking accuracy. Auto-area AF automatically chooses the AF point based on the most appropriate human face using face detection. Despite the wide range of options, with the D4, switching between modes has never been easier: simply use the AF-mode button and sub- or main-command dial to switch between modes, whilst looking through the viewfinder.



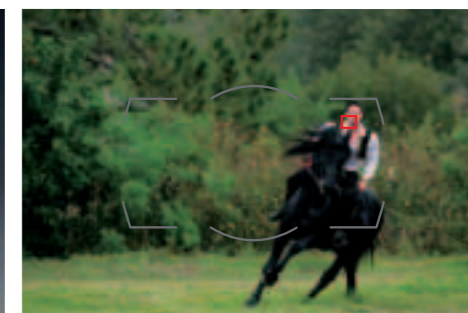
Single-point AF mode



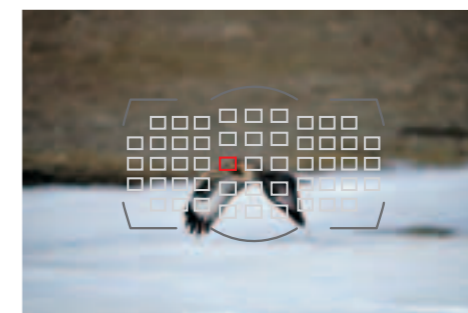
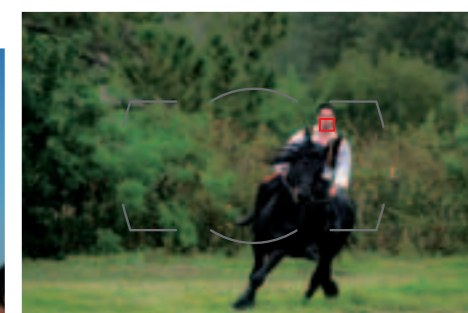
Auto-area AF mode



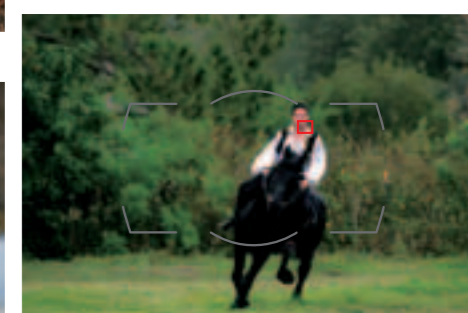
Dynamic-area AF mode (9 points)



Dynamic-area AF mode (21 points)



Dynamic-area AF mode (51 points)



3D-tracking mode

Note: Only the selected focus point is shown on actual images. Also, if focus points are selected in a peripheral area of an image when [9 points] or [21 points] is chosen, the number of focus points actually used may be less than 9 or 21.



1080p Full HD, high-fidelity audio recording, and an uncompressed video output option

Optimum camera control for live view movie and stills

The D4's live view operation has become even more intuitive with specifically optimized live view modes for still photography and video.



Live view photography mode permits the shooting of still images using the extremely accurate contrast AF, and by selecting a silent shutter-release option, makes the operation virtually noise-free. A magnification of up to approx. 15x means that exact focus can be checked. For video live view, the D4 incorporates dedicated exposure controls that enable smooth exposure transitions, even during dramatic changes in lighting, such as when moving from a bright, backlit window into a dark interior. Full manual control is available to keep the same look from start to finish. Also, it is possible to shoot still images in 16:9 aspect ratio by pressing the shutter-release button.

Auto flicker detection

Reducing flicker effects caused by artificial lighting during live view and video recording has become easier than ever. The Auto mode in the flicker reduction menu can automatically identify the flicker frequency for the appropriate control. Manual selection of 50 Hz and 60 Hz is available when needed.

High-fidelity audio recording with refined controls

The D4 is designed for crisp audio recording with a built-in external stereo microphone terminal. Attach the compact Stereo Microphone ME-1 to record high-quality sound while significantly reducing mechanical noise. An external headphone terminal enables use of headphones to effectively monitor and control audio in isolation. The audio level indicators offer visual confirmation of audio level and the microphone sensitivity can be controlled precisely in 20 incremental steps.



An external headphone terminal is provided.



Setting display of audio sensitivity

Uncompressed video output via HDMI

For the purest video output for professional quality editing, uncompressed video output can be recorded directly to an external storage device via HDMI interface during movie live view. The video signal is also available simultaneously on an external monitor* while using an HDMI connection.

*Movies may be output at a frame size smaller than that selected for frame size/frame rate.



HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE



Audio level indicator

Time-lapse photography

Capture a variety of scenes and subjects at a breathtaking pace. The D4's time-lapse capability includes a choice of intervals and frame rates to accelerate slow-moving activity into dramatic high-speed sequences. The D4 allows time-lapse photography with replay rates from 24 times to 36,000 times faster than natural time. The sequence of images captured during time-lapse photography files is automatically saved as a movie file within the camera, removing the need for post-production.

Custom functions

In response to requests from top professional videographers, the D4 has been fitted with convenient custom control options for D-Movie operation. The new index marking feature can save valuable time by designating important frames while filming, allowing the convenient location of key points at the later stages of in-camera editing. Markings are indicated along with the timeline*¹, and are easy to confirm visually. Instead of rotating the command dial, power aperture*² now enables fine-tuning of aperture settings during movie live view using a function button and preview button designated via the custom menu, which is convenient for confirming depth of field. Furthermore, if the "record movies" function is assigned to a shutter-release button, it is possible to shoot movies using the shutter-release button or remote cord. Also, if "live frame grab" is selected, the camera records still images*³ with a frame size of 1,920 x 1,080 pixels without interrupting movie recording.

*¹ Available in movie editing with the D4 only.

*² Activates in A or M exposure mode.

*³ Aspect ratio matches that of the movie frame. Image quality: JPEG fine.

From amazing stills to inspired video

Switching from stunning still images to broadcast-quality video is one simple click with the D4. With its comfortable form factor and rugged design, shooting HD video in even the most demanding conditions becomes readily attainable enhancing any photographer's ability to tell a story. The D4 can record 1080p Full HD video at 30/25 or 24p in H.264/MPEG-4 AVC format with broadcast quality full of fine tones and natural colors. Maximum recording time for a single clip is 29 min. 59 s*. Thanks to Nikon's latest image-processing algorithms, the D4's video offers smooth results with reduced unwanted "jaggies" and moiré, yet maintains sharp edges even in dark conditions with noise reduction technology that is designed specifically for video. ISO ranges from ISO 200 to ISO 12800 as standard, with the option to expand up to an ISO 204800 equivalent.

*20 min. depending on frame size/rate and movie quality settings.

Multi-area mode Full HD D-Movie

Image sensor size plays a major role in the artistic look of video: larger sensors deliver a shallower depth of field (DOF), while smaller sizes extend the depth. Using its full-frame FX format and 16.2 megapixels, the D4 offers three formats for Full HD video, recording in either FX-based, DX-based or 1,920 x 1,080 crop movie format. The FX-based format renders exquisitely shallow depth of field with beautiful bokeh effects and offers the fullest use of wide-angle lenses. It ensures beautiful movies even at high ISO sensitivity with minimal noise. When a DX lens is attached, DX-based format is automatically selected. This format is useful when it is impossible to get close enough with an existing lens. For extreme telephoto effects, the 1,920 x 1,080 crop format gives an approx. 2.7x increase to the focal length. Furthermore, this crop format delivers outstanding video quality and detail, obtaining 1080p Full HD. This versatility of multiple image formats, combined with the comprehensive selection of NIKKOR lenses makes the D4 a highly creative video capture tool.

Nikon D4

1,920 x 1,080 crop format

DX-based format

FX-based format

The image above shows three image area options (aspect ratio 16:9) on an FX-format image area for viewfinder shooting or live view photography.

Reliability and Smooth Operation: What a Pro Wants Most

To a professional photographer, true reliability means being able to capture a picture at the decisive moment, regardless of weather, location, lighting or subject matter. Capturing the right pictures is exactly what the D4 delivers, with operation so well thought-out that using the camera controls becomes an intuitive, reflex action. Weight, balance and ergonomics have been carefully designed to make the camera feel like a natural extension of the body. Eyes, fingers, mind and camera working together as one: the Nikon D4 is the ultimate in reliable imaging technology.



GIUGIARO
DESIGN

Perfect harmony of Giugiaro design and Nikon

Together with the Nikon design team, legendary Italian industrial designer Giorgetto Giugiaro is in constant pursuit of shapes, forms and textures that enhance camera operation. From the shape of the grip to the tiniest curves and contours of the camera body, every element of the camera's exterior is designed to heighten the photographer's concentration and align his or her creative vision with the camera's optical axis. Smooth, round surfaces combine with sharp ridges to create a sculptural form that helps unlock the enormous creative potential hidden within the camera.



Shutter-release button and command dial ergonomics

From an ergonomic standpoint, the most frequently used controls should be the most intuitively designed. That's why Nikon engineers tilted the shutter-release button forward by 35° for a more natural finger movement. Located next to the shutter-release button is the D-Movie button, allowing video recording with only a slight finger movement, keeping the camera steady. In addition, sub-command dial operation is now faster thanks to closer placement to the shutter release button and incorporates a specially designed texture that aids smooth finger movement.

Improved vertical shooting operation

The D4 is designed to make operation in both horizontal and vertical orientations as intuitive as possible. Each orientation has identically laid-out controls, consisting of a main command dial, a sub-command dial, an AF-ON button and a multi-selector. The vertical hold is also now more secure with a newly added thumb grip and an extended grip area for the fingers. For frequent switching between horizontal and vertical shooting, the function button can be customized to quickly access certain functions, such as exposure compensation.



Speedier AF point selection

In addition to the round multi-selector used for AF point selection, the D4 incorporates a new sub-selector made of tactile rubber providing a more responsive touch. Positioned for optimal control during both horizontal and vertical shooting, this new button permits a more confident shift of AF points.

Improved AF modes, AF area modes selection

Control the desired AF mode (continuous or single servo) and AF area mode (single-point, dynamic-area, 3D-tracking or auto-area AF) without leaving the viewfinder. By using a dedicated AF-mode button and command dials, modes can be switched without interruption.

Illuminated buttons

The D4 is designed to operate and perform even in complete darkness. A simple turn of the power switch illuminates various operation buttons and the release mode dial for clear visibility of control surfaces in the dark. Buttons and dials use LED illumination for easy identification of each button and icon.



Highly accurate shutter unit and sequential control mechanism, tested for durability to 400,000 cycles on a fully assembled camera

For the utmost reliability and performance, the D4's shutter and sequential control mechanism have been tested to 400,000 cycles on fully assembled cameras. The mirror balancer minimizes the unwanted bounce of the mirror's down movement to allow extended AF and AE detection time — an important contribution to the accurate autofocus, focus tracking performance and exposure control of the D4 during high-speed continuous shooting.

Self-diagnostic shutter monitor

The D4's shutter speed ranges from 1/8,000 s to 30 s. To sustain precise shutter operation throughout the mechanism's life span, the D4 incorporates intelligent shutter monitor technology. Continuous tracking of shutter movement is done in-camera. Should any shutter speed variance be detected, the camera automatically performs correction procedures to adjust between the actual speed and the correct shutter speed.

Magnesium alloy body with weather sealing

For robust performance even in the most demanding environmental conditions, the D4's body is comprised of strong, lightweight magnesium alloy. Thorough measures have been taken to seal and protect against invasive moisture, dust and even electromagnetic interference. Its comprehensive sealing, combined with additional Nikon-engineered measures keeps the camera operational in a wide range of severe conditions.



Quiet and silent modes during live view photography

When shooting in situations that are sensitive to the sounds of a camera shutter, the D4 live view feature offers two solutions. The quiet mode keeps the mirror in the up position. When using the silent mode, the mirror remains up and the shutter remains open, which can be useful during events such as concerts and conferences. Silent mode* enables high-speed continuous shooting at either 12 fps (in CL mode) or 24 fps (in CH mode) for 2.5 megapixel files.

*Maximum frame size is 1,920 x 1,280 pixels in silent mode. Image quality is fixed at JPEG fine.



Intelligent power management

The D4 uses the newly developed Rechargeable Li-ion Battery EN-EL18 that realizes superior performance at low temperatures while delivering long battery life and the ability to shoot up to approx. 2,600 shots* per charge. Power consumption and power management systems have been meticulously engineered throughout the D4 for optimum battery longevity.

*Based on CIPA Standards. Approx. 5,500 shots in continuous mode under test conditions established by Nikon. When using SONY XQD Memory Card H series QD-H32 with 32 GB capacity.



Dual-axis virtual horizon

The D4 incorporates position detection in both horizontal dimensions, (side-to-side and front-to-back) in 5-degree increments on the LCD or by 1-degree increments through the optical viewfinder. Landscape, architecture and still life photographers will benefit from this added level of compositional accuracy.



Glass prism optical viewfinder with approx. 100% frame coverage

The D4 offers approx. 100% frame coverage for FX format, with a viewfinder that is designed to minimize visual fatigue over long periods of use. The approx. 0.7x magnification enhances the confirmation of every visual element in the frame. The large, bright viewfinder image and focusing screen are carefully designed to aid precise focusing in both manual and autofocus modes. In addition, grid lines can optionally be placed across the viewfinder for accurate vertical and horizontal orientation. Furthermore, the viewfinder eyepiece coated with thermal shield finish supports comfortable viewing in more diversified situations.



Precision 8-cm (3.2-in.), approx. 921k-dot wide viewing angle LCD monitor

The large and sharp color LCD monitor offers bright, crisp image playback with an extended color reproduction capacity. The anti-reflective design offers clear, glare-free performance even under bright conditions. Moreover, if monitor brightness is set to "Auto", the camera automatically adjusts LCD brightness when the monitor turns on according to the environmental lighting conditions measured by the ambient brightness sensor, allowing easy image confirmation in both bright and low-lit places — very useful when shooting video and stills. The ability to zoom up to 30x (Large-size images in FX format) permits rapid and reliable confirmation of focus points.



High-speed dual card slots

Fast and reliable card reading and recording are crucial to a smooth and productive workflow. The D4 is equipped with two card slots, one for a CF card compatible with UDMA 7 and another for the XQD memory card, the next-generation recording media. Several recording options are possible: record two full cards of data, record the same data onto two cards for backup, record RAW and JPEG simultaneously onto separate cards, or transfer data from one card to another.



Picture Control button

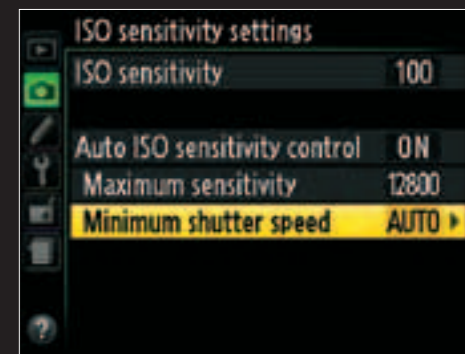
Direct access to Picture Control

With Nikon's unique Picture Controls, the look of stills and videos can be customized by fine-tuning parameters such as sharpening, saturation, hue and monochrome. The D4 now allows access to Picture Control instantly and directly from a button on the camera body rather than via the menu, greatly enhancing operation when using live view.



Minute white balance controls

In response to professional demands, the D4's white balance has been enhanced, giving auto options of Auto 1, which renders white as white, and Auto 2, which renders warmer hues under incandescent light sources. Also, the camera can store up to four values for preset white balance in presets d-1 through d-4, as well as manual control of white balance in 10-kelvin increments or in mired units for finer control. Furthermore, the hue of the image displayed in the monitor can be altered in live view photography. For studio shooting with flash, the hue of the monitor image can be adjusted to match that of the resulting image so that a photographer is able to shoot while confirming the appearance of the results in live view.



Auto shutter speed control for auto ISO

The D4 comes equipped with an auto option that automatically controls minimum shutter speeds and ISO sensitivity combinations based on the focal length of a lens being used. When fitted with a telephoto zoom lens, the camera can automatically choose a shutter speed to minimize camera blur for the selected focal length. Auto ISO sensitivity can be directly accessed via the ISO button and sub-command dial.

Optical masterpiece: NIKKOR lenses

The defining strength for exceptional stills and videos

To bring out the full potential of the D4, look no further than the vast array of NIKKOR lenses designed and tested to match the D4's resolution and image integrity with sharpness, accuracy, and field-proven reliability. Equip the camera for still and video shooting with a NIKKOR lens, and realize each shot without sacrificing delicate tones or nuance. From f/1.4 primes to fast f/2.8 zooms to f/4 zooms with VR, the latest line of FX-format lenses — many featuring our renowned Nano Crystal Coat — is fully optimized for the challenging lighting conditions in which the Nikon D4 is built to excel.

Nano Crystal Coat

Delivers superb, clear results. NIKKOR lenses with Nano Crystal Coat easily manage difficult lighting, even when the light source is behind the subject and distracting "ghosting" would have been considered unavoidable previously. In scenes with strongly contrasted dark foregrounds and bright backgrounds, incredibly clear images with minimized flare become possible. Originally developed for use in the high-precision world of industrial semiconductor manufacture, Nano Crystal Coat minimizes diffused reflections of light within the lens, delivering sharper and more accurate stills and videos.



VR (Vibration Reduction)

An empowering advantage for sports photographers, VR effectively reduces the effects of camera shake to the equivalent of using shutter speeds of up to three or four stops faster. This means sharper images across more situations, such as night stadiums and low-lit indoor venues. Creative options can be extended permitting the aperture to be closed down while still maintaining clarity for reliable spot metering, achieving your desired exposure. As the stabilization takes place in the lens, the viewfinder image is also improved, allowing for easier composition, and quicker and more precise AF.



- Lens: AF-S NIKKOR 600mm f/4G ED VR
 - Image quality: 14-bit RAW (NEF)
 - Exposure: [A] mode, 1/3,200 second, f/4
 - White balance: Auto 1
 - Sensitivity: ISO 160
 - Picture Control: Landscape
- ©Vincent Munier



- Lens: AF-S NIKKOR 14-24mm f/2.8G ED
 - Image quality: 14-bit RAW (NEF)
 - Exposure: [A] mode, 1/2.5 second, f/4
 - White balance: Auto 1, A2
 - Sensitivity: ISO 400
 - Picture Control: Standard
- ©Joe McNally



65 million NIKKOR

Wired and wireless for faster, easier and more efficient workflow

For some professionals, there are assignments that the whole world is waiting to see. Being the first to publish can make a huge difference in reputation and career development. When workflow speed makes all the difference, the D4 provides a clear advantage. The D4 employs a built-in wired LAN function of IEEE802.3u standard (100BASE-TX). What's more, the D4 is compatible with the compact, easy-to-connect, newly developed Wireless Transmitter WT-5A/B/C/D* (optional) that realizes high-speed wireless transmission. Also, IPTC (International Press Telecommunications Council) data can be automatically added to the images within the camera. In addition to input with a camera, it is possible to add information to a series of images at high speed to realize an even more efficient workflow by creating an IPTC file with IPTC Preset Manager, a software for IPTC preset registration (can be downloaded from Nikon's website), and registering the file to a camera. Furthermore, the D4 incorporates a variety of communication functions to enhance the workflow speed.



*Wireless Transmitter WT-4A/B/C/D/E is also compatible.

The D4's main communication functions

FTP upload/Image transfer mode: Transmit images to an FTP server or computer, either automatically or by manually selecting images.

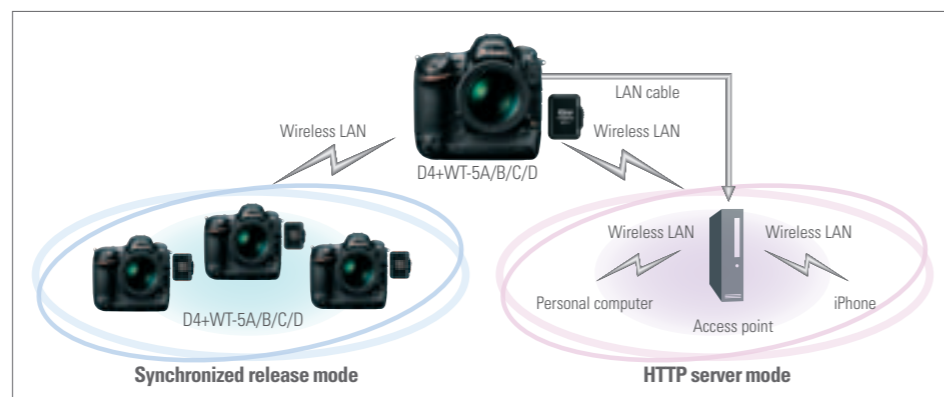
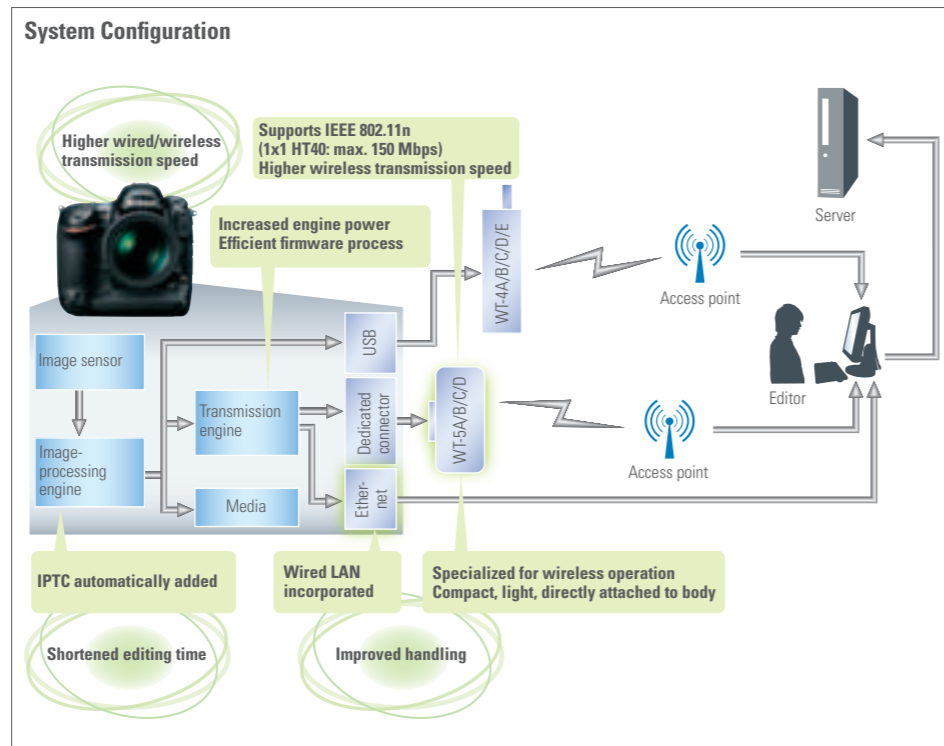
Camera control mode: Operate the D4 via optional software Camera Control Pro 2.

HTTP server mode: Using a web browser via computer or iPhone, show thumbnails of images stored in the camera's memory cards, or make slide shows, view images, operate simple camera controls for remote shooting or begin live view shooting, including video.

Synchronized release mode: From one master camera, release up to 10 remote D4 and WT-5A/B/C/D combinations.

Compact and lightweight Wireless Transmitter WT-5A/B/C/D (optional) enables high-speed data transfer

The WT-5A/B/C/D's compact module design is realized by dedicating it for wireless transmission and utilizing power from the body. It can be directly attached to a peripheral connector to greatly enhance handling capability. It supports IEEE 802.11n (1x1 HT40: max. 150 Mbps) in addition to IEEE 802.11a/b/g and enables data transmission substantially faster than that of Wireless Transmitter WT-4A/B/C/D/E (optional).



Small, versatile and portable studio-quality light

Nikon Speedlights: studio-quality lighting, virtually anywhere

The Nikon Creative Lighting System is a well-respected answer to the needs of the industry, offering accuracy, flexibility and lighting possibilities that are unavailable with other equipment. The advantages are best experienced through the Advanced Wireless Lighting System which allows precise control of remote flash units, adding more depth and quality to your images. Using the high-precision i-TTL flash control with its intuitive operations, supplementary lighting can be as versatile and comprehensive as the situation demands. In addition to conventional global flash and background exposure compensation, there is a new setting with the D4 that applies exposure compensation only to the background brightness. This enables easy compensation with a single operation.



Exposure compensation applied to background only.

• Lens: AF-S NIKKOR 14-24mm f/2.8G ED • Image quality: 14-bit RAW (NEF) • Exposure: [A] mode, 1/50 second, f/5.6
• Group A: TTL, 0 EV (camera: -2.0 EV, speedlight: 0 EV) • White balance: Auto 1 • Sensitivity: ISO 100
• Picture Control: Standard

©Joe McNally

SB-910

Fast, empowering software

Capture NX 2 (optional): Fast, powerful and creative image processing

Nikon RAW (NEF: Nikon Electronic Format) files maintain the richest-possible data from an amazing image sensor. Capture NX 2 renders more from an NEF file than any other RAW processing software, with accuracy that is based on close matching between the camera file format and the software processing algorithms. With the enhanced processing speed of the algorithms, processing time is shortened by approx. 40%*. So, in addition to its simple, intuitive Color Control Point operations for image enhancement procedures, the latest Capture NX 2 is faster and more powerful than ever.

*Compared with conventional versions, under test conditions established by Nikon.

ViewNX 2: Browse, edit, share and more

This bundled, all-in-one software implements an easy-to-use interface for photos and movies. ViewNX 2 is designed to browse images, edit image files (including RAW),

perform image enhancements and enable D-Movie edit and playback.

Wireless Transmitter Utility

This software enables setup of the Wireless Transmitter WT-5A/B/C/D, WT-4A/B/C/D/E or built-in Ethernet. Available to download with installer of the supplied software ViewNX 2. Image files can be transferred using either Wi-Fi or an Ethernet connection.

Note: It is not packaged in the ViewNX 2 CD-ROM.

IPTC Preset Manager

Software to add IPTC (International Press Telecommunications Council) information on the images using a PC. Available to download with installer of the supplied software ViewNX 2.

Note: It is not packaged in the ViewNX 2 CD-ROM.

Camera Control Pro 2 (optional): Extremely versatile remote camera controls

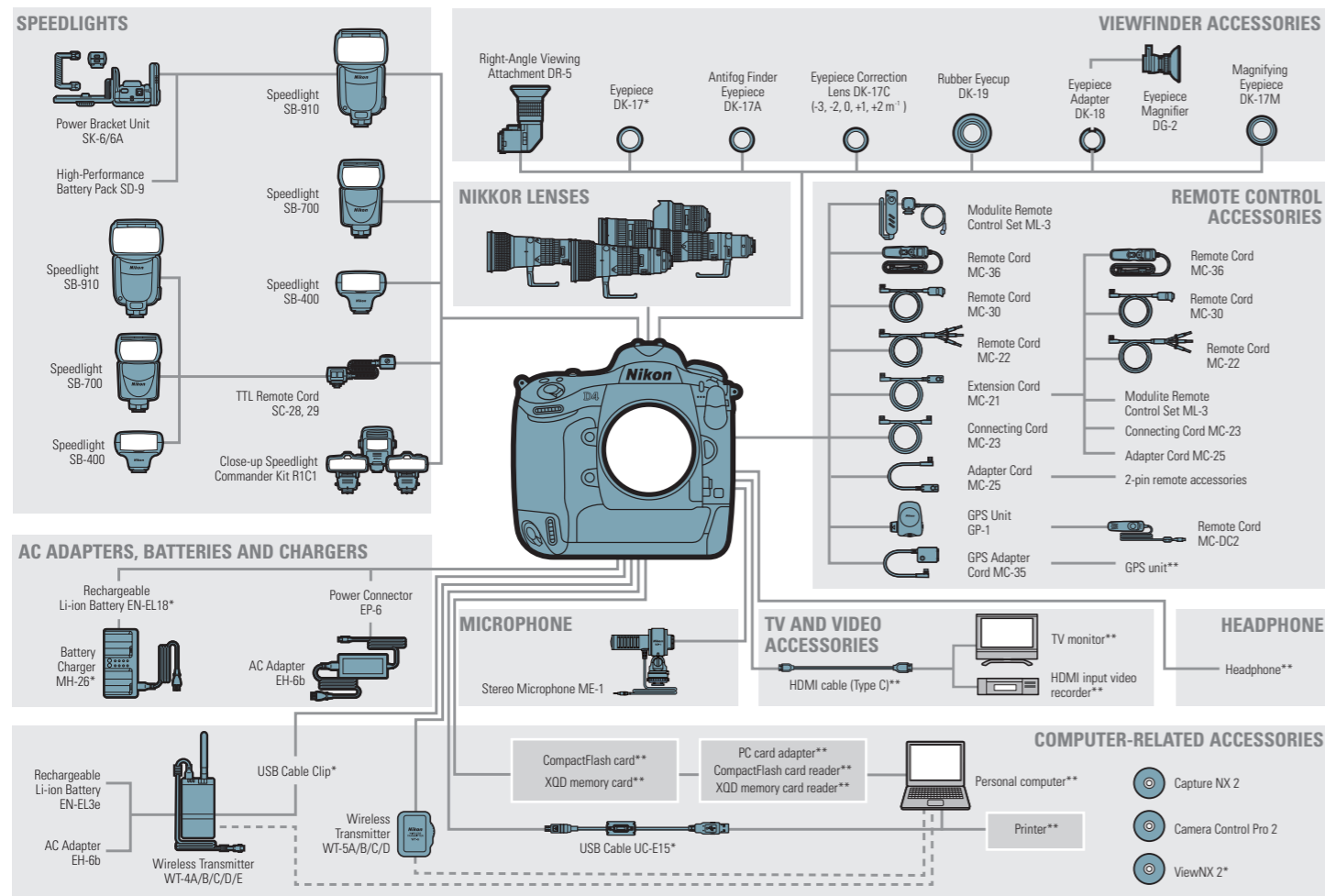
This intuitive software permits the control of camera settings and various features from a distance via computer. Aside from the basic camera settings, the software offers remote start/stop for movie shooting and switching

between live view for stills and movies while using an external computer monitor. Additional features include the display of audio level indicators during movie shooting, and with the optional Wireless Transmitter WT-5A/B/C/D or WT-4A/B/C/D/E, image files can be transferred using either Wi-Fi or an Ethernet connection.



Capture NX 2

System chart



Memory card capacity

The following table shows the approximate number of pictures that can be stored on a SONY XQD Memory Card H series QD-H32 (32GB) at different image quality, image size, and image area settings.

Image quality	Image size	File size ²		No. of images ²		Buffer capacity ³	
		FX (36x24) ¹	DX (24x16) ⁵	FX (36x24) ¹	DX (24x16) ⁵	FX (36x24) ¹	DX (24x16) ⁵
NEF (RAW), Lossless compressed, 12-bit	—	15.4 MB	7.2 MB	1100	2400	92	200
NEF (RAW), Lossless compressed, 14-bit	—	19.4 MB	8.9 MB	872	1900	75	172
NEF (RAW), Compressed, 12-bit	—	13.9 MB	6.6 MB	1500	3200	98	200
NEF (RAW), Compressed, 14-bit	—	17.0 MB	7.9 MB	1200	2700	76	196
NEF (RAW), Uncompressed, 12-bit	—	26.5 MB	12.0 MB	1100	2400	77	133
NEF (RAW), Uncompressed, 14-bit	—	34.3 MB	15.3 MB	872	1900	69	114
TIFF (RGB)	L	49.1 MB	21.5 MB	612	1400	55	61
	M	28.3 MB	12.6 MB	1000	2300	59	68
	S	13.2 MB	6.2 MB	2200	4700	66	83
JPEG fine ⁴	L	7.9 MB	3.7 MB	2900	5800	170	200
	M	5.4 MB	2.8 MB	4600	8800	200	200
	S	3.0 MB	1.9 MB	8500	13500	200	200
JPEG normal ⁴	L	4.5 MB	2.3 MB	5600	11100	182	200
	M	2.8 MB	1.6 MB	9000	16200	200	200
	S	1.6 MB	1.1 MB	15700	24400	200	200
JPEG basic ⁴	L	2.2 MB	1.2 MB	10800	20300	200	200
	M	1.5 MB	0.9 MB	16800	28700	200	200
	S	0.9 MB	0.7 MB	27100	40700	200	200

1. Includes images taken with non-DX lenses when On is selected for Auto DX crop.
 2. All figures are approximate. File size varies with scene recorded.
 3. Maximum number of exposures that can be stored in memory buffer at ISO 100. Drops if optimal quality is selected for JPEG compression or auto distortion control is on.
 4. Figures assume JPEG compression is set to Size priority. Selecting optimal quality increases the file size of JPEG images, number of images and buffer capacity drop accordingly.
 5. Includes images taken with DX lenses when On is selected for Auto DX crop.

Nomenclature



- 1 Sub-command dial
- 2 Pv button
- 3 Mirror
- 4 Meter coupling lever
- 5 Microphone (for movies)
- 6 Self-timer lamp
- 7 Flash sync terminal (under cover)
- 8 Ten-pin remote terminal (under cover)
- 9 Mounting index
- 10 Lens release button
- 11 AF-mode button
- 12 Focus-mode selector
- 13 Fn button (vertical)
- 14 Shutter-release button for vertical shooting
- 15 Vertical shooting shutter-release button lock
- 16 Sub-command dial for vertical shooting
- 17 Fn button
- 18 Tripod socket
- 19 Playback button
- 20 Deletion button/Formatting memory cards button
- 21 Eyepiece shutter lever
- 22 Viewfinder eyepiece
- 23 Monitor
- 24 AF-ON button
- 25 Main command dial
- 26 Eyelet for camera strap
- 27 Sub-selector
- 28 Multi selector
- 29 Memory card slot cover
- 30 Ambient brightness sensor for automatic monitor brightness control
- 31 Focus selector lock
- 32 Card slot cover release button (under cover)
- 33 Memory card access lamp
- 34 AF-ON button for vertical shooting
- 35 Main command dial (vertical)/Speaker
- 36 Rear control panel
- 37 ISO sensitivity button/Auto ISO sensitivity control button/Two-button reset button
- 38 Image quality button/Image size button
- 39 White balance button/Two-button reset button
- 40 Microphone button
- 41 Live view button
- 42 Live view selector
- 43 Microphone (for voice memos)
- 44 Multi selector (vertical)
- 45 Menu button
- 46 Protection button/Picture Control button/Help button
- 47 Playback zoom in button
- 48 Thumbnail button/Playback zoom out button
- 49 OK button
- 50 Info button
- 51 Bracketing button
- 52 Exposure mode button/Formatting memory cards button
- 53 Movie-record button
- 54 Power switch
- 55 Shutter-release button
- 56 Exposure compensation button
- 57 Flash mode button/Flash compensation button
- 58 Metering button
- 59 Release mode dial
- 60 Accessory shoe (for optional flash unit)
- 61 Focal plane mark
- 62 Diopter adjustment control
- 63 Top control panel
- 64 Peripheral connector
- 65 Headphone connector
- 66 Ethernet connector
- 67 USB connector
- 68 Connector for external microphone
- 69 HDMI mini-pin connector
- 70 Battery-chamber cover latch
- 71 Battery chamber (under cover)

Nikon Digital SLR Camera D4 Specifications

Type of camera	Single-lens reflex digital camera
Lens mount	Nikon F mount (with AF coupling and AF contacts)
Effective pixels	16.2 million
Image sensor	36.0 × 23.9 mm CMOS sensor (Nikon FX format)
Total pixels	16.6 million
Dust-reduction system	Image sensor cleaning, Image Dust Off reference data (requires optional Capture NX 2 software)
Image size (pixels)	<ul style="list-style-type: none"> FX format (36×24): 4,928 × 3,280 (L), 3,696 × 2,456 (M), 2,464 × 1,640 (S) 1.2× (30×20): 4,096 × 2,720 (L), 3,072 × 2,040 (M), 2,048 × 1,360 (S) DX format (24×16): 3,200 × 2,128 (L), 2,400 × 1,592 (M), 1,600 × 1,064 (S) 5.4 (30×24): 4,096 × 3,280 (L), 3,072 × 2,456 (M), 2,048 × 1,640 (S) FX-format photographs taken in movie live view (16:9): 4,928 × 2,768 (L), 3,696 × 2,072 (M), 2,464 × 1,384 (S) DX-format photographs taken in movie live view (16:9): 3,200 × 1,792 (L), 2,400 × 1,344 (M), 1,600 × 896 (S) FX-format photographs taken in movie live view (3:2): 4,928 × 3,280 (L), 3,696 × 2,456 (M), 2,464 × 1,640 (S) DX-format photographs taken in movie live view (3:2): 3,200 × 2,128 (L), 2,400 × 1,592 (M), 1,600 × 1,064 (S)
File format	<ul style="list-style-type: none"> NEF (RAW): 12 or 14 bit, lossless compressed, compressed or uncompressed • TIFF (RGB) JPEG: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8) or basic (approx. 1:16) compression (Size priority); Optimal quality compression available NEF (RAW)+JPEG: Single photograph recorded in both NEF (RAW) and JPEG formats
Picture Control System	Can be selected from Standard, Neutral, Vivid, Monochrome, Portrait, Landscape; selected Picture Control can be modified; storage for custom Picture Controls
Storage media	XQD and Type I CompactFlash memory cards (UDMA compliant)
Dual card slots	Either card can be used for primary or backup storage or for separate storage of NEF (RAW) and JPEG images; pictures can be copied between cards
File system	DCF (Design Rule for Camera File System) 2.0, DPOF (Digital Print Order Format), Exif (Exchangeable Image File Format for Digital Still Cameras) 2.3, PictBridge
Viewfinder	Eye-level pentaprism single-lens reflex viewfinder
Frame coverage	<ul style="list-style-type: none"> FX (36×24): Approx. 100% horizontal and 100% vertical • 1.2× (30×20): Approx. 97% horizontal and 97% vertical • DX (24×16): Approx. 97% horizontal and 97% vertical 5.4 (30×24): Approx. 97% horizontal and 100% vertical
Magnification	Approx. 0.7× (50 mm f/1.4 lens at infinity, -1.0 m ⁻¹)
Eye point	18 mm (-1.0 m ⁻¹); from center surface of viewfinder eyepiece lens)
Dioptric adjustment	-3 to +1 m ⁻¹
Focusing screen	Type B BriteView Clear Matte Mark VIII screen with AF area brackets and framing grid
Reflex mirror	Quick return
Depth-of-field preview	When Pv button is pressed, lens aperture is stopped down to value selected by user (A and M modes) or by camera (P and S modes)
Lens aperture	Instant return, electronically controlled
Compatible lenses	<ul style="list-style-type: none"> Compatible with AF NIKKOR lenses, including type G and D lenses (some restrictions apply to PC-NIKKOR lenses), DX lenses (using DX (24×16) image area), AI-P NIKKOR lenses, and non-CPU AI lenses (exposure modes A and M only); IX-NIKKOR lenses, lenses for the F3AF, and non-AI lenses cannot be used The electronic rangefinder can be used with lenses that have a maximum aperture of f/5.6 or faster (the electronic rangefinder supports the 11 focus points with lenses that have a maximum aperture of f/8 or faster)
Shutter type	Electronically-controlled vertical-travel focal-plane shutter
Shutter speed	1/8,000 to 30 s in steps of 1/3, 1/2 or 1 EV, bulb, X/250
Flash sync speed	X=1/250 s; synchronizes with shutter at 1/250 s or slower
Release modes	S (single frame), CL (continuous low speed), CH (continuous high speed), Q (quiet shutter-release), Ⓢ (self-timer), MUP (mirror up)
Frame advance rate	Up to approx. 10 fps (CL) or approx. 10 to 11 fps (CH)
Self-timer	2 s, 5 s, 10 s, 20 s; 1 to 9 exposures at intervals of 0.5, 1, 2 or 3 s
Exposure metering	TTL exposure metering using RGB sensor with approx. 91K (91,000) pixels
Metering method	<ul style="list-style-type: none"> Matrix: 3D color matrix metering III (type G and D lenses), color matrix metering III (other CPU lenses); color matrix metering available with non-CPU lenses if user provides lens data Center-weighted: Weight of 75% given to 12-mm circle in center of frame; diameter of circle can be changed to 8, 15 or 20 mm, or weighting can be based on average of entire frame (non-CPU lenses use 12-mm circle or average of entire frame) Spot: Meters 4-mm circle (about 1.5% of frame) centered on selected focus point (on center focus point when non-CPU lens is used) Matrix or center-weighted metering: -1 to 20 EV Spot metering: 2 to 20 EV
Metering range	(ISO 100, f/1.4 lens, 20°C/68°F)
Exposure meter coupling	Combined CPU and AI
Exposure modes	Programmed auto with flexible program (P); shutter-priority auto (S); aperture-priority auto (A); manual (M)
Exposure compensation	-5 to +5 EV in increments of 1/3, 1/2 or 1 EV
Exposure bracketing	2 to 9 frames in steps of 1/3, 1/2, 2/3 or 1 EV
Exposure lock	Luminosity locked at detected value with the center of the sub-selector
ISO sensitivity	ISO 100 to 12800 in steps of 1/3, 1/2 or 1 EV; can also be set to approx. 0.3, 0.5, 0.7 or 1 EV (ISO 50 equivalent) below ISO 100 or to approx. 0.3, 0.5, 0.7, 1, 2, 3 or 4 EV (ISO 204800 equivalent) above ISO 12800; auto ISO sensitivity control available
Active D-Lighting	Can be selected from auto, extra high +2/+1, high, normal, low or off
ADL bracketing	2 frames using selected value for one frame or 3 to 5 frames using preset values for all frames

A DX-based format is used for photographs taken using the DX (24×16) 1.5× image area; an FX-based format is used for all other photographs

Autofocus	Nikon Advanced Multi-CAM 3500FX autofocus sensor module with TTL phase detection, fine-tuning, 51 focus points (including 15 cross-type sensors; f/8 supported by 11 sensors)
Detection range	-2 to +19 EV (ISO 100, 20°C/68°F)
Lens servo	<ul style="list-style-type: none"> Autofocus (AF): Single-servo autofocus (AF-S); continuous-servo autofocus (AF-C); predictive focus tracking automatically activated according to subject status Manual focus (M): Electronic rangefinder can be used
Focus point	Can be selected from 51 or 11 focus points
AF-area modes	Single-point AF, 9-, 21- or 51-point dynamic-area AF, 3D-tracking, auto-area AF
Focus lock	Focus can be locked by pressing shutter-release button halfway (single-servo autofocus) or by pressing the center of the sub-selector
Flash control	TTL i-TTL flash control using RGB sensor with approx. 91K (91,000) pixels is available with SB-910, SB-900, SB-800, SB-700, SB-600 or SB-400; i-TTL balanced fill-flash for digital SLR is used with matrix and center-weighted metering, standard i-TTL flash for digital SLR with spot metering
Flash modes	Front-curtain sync, slow sync, rear-curtain sync, red-eye reduction, red-eye reduction with slow sync, slow rear-curtain sync; auto FP high-speed sync supported
Flash compensation	-3 to +1 EV in increments of 1/3, 1/2 or 1 EV
Flash bracketing	2 to 9 frames in steps of 1/3, 1/2, 2/3 or 1 EV
Flash-ready indicator	Lights when optional flash unit is fully charged; flashes after flash is fired at full output
Accessory shoe	ISO 518 hot-shoe with sync and data contacts and safety lock
Nikon Creative Lighting System (CLS)	Advanced Wireless Lighting supported with SB-910, SB-900, SB-800 or SB-700 as a master flash, and SB-600 or SB-R200 as remotes, or SU-800 as commander; auto FP high-speed sync and modeling illumination supported with all CLS-compatible flash units except SB-400; Flash Color Information Communication and FV lock supported with all CLS-compatible flash units
Sync terminal	ISO 519 sync terminal with locking thread
White balance	Auto (2 types), incandescent, fluorescent (7 types), direct sunlight, flash, cloudy, shade, preset manual (up to 4 values can be stored), choose color temperature (2,500 K to 10,000 K); all with fine-tuning
White balance bracketing	2 to 9 frames in steps of 1, 2 or 3
Live view modes	Live view photography (quiet or silent), movie live view
Live view lens servo	<ul style="list-style-type: none"> Autofocus (AF): Single-servo autofocus (AF-S); full-time servo autofocus (AF-F) Manual focus (M)
AF-area modes	Face-priority AF, wide-area AF, normal-area AF, subject-tracking AF
Autofocus	Contrast-detect AF anywhere in frame (camera selects focus point automatically when face-priority AF or subject-tracking AF is selected)
Movie metering	TTL exposure metering using main image sensor
Frame size (pixels) and frame rate	<ul style="list-style-type: none"> 1,920 × 1,080; 30p (progressive), 25p, 24p • 1,920 × 1,080 crop; 30p, 25p, 24p • 1,280 × 720; 60p, 50p, 30p, 25p • 640 × 424; 30p, 25p Actual frame rates for 60p, 50p, 30p, 25p, and 24p are 59.94, 50, 29.97, 25, and 23.976 fps respectively; all options support both high and normal image quality
File format	MOV
Video compression	H.264/MPEG-4 Advanced Video Coding
Audio recording format	Linear PCM
Audio recording device	Built-in monaural or external stereo microphone; sensitivity adjustable
ISO sensitivity	Automatically adjusted in the range ISO 200 to 12800 or ISO 200 to Hi 4
Maximum length	29 min. 59 s (20 min. depending on frame size/rate and movie quality settings)
Other movie options	Index marking, time-lapse photography
Monitor	8-cm (3.2-in.), approx. 921k-dot (VGA) TFT LCD with 170° viewing angle, approx. 100% frame coverage, and automatic monitor brightness control using ambient brightness sensor
Playback	Full-frame and thumbnail (4, 9 or 72 images) playback with playback zoom, movie playback, photo and/or movie slide shows, histogram display, highlights, photo information, GPS data display, auto image rotation, voice memo input and playback, and IPTC information embedding and display
USB	Hi-Speed USB
HDMI output	Type C mini-pin HDMI connector; can be used simultaneously with camera monitor
Audio input	Stereo mini-pin jack (3.5-mm diameter; plug-in power supported)
Audio output	Stereo mini-pin jack (3.5-mm diameter)
10-pin remote terminal	Can be used to connect optional remote control, GPS Unit GP-1 or GPS device compliant with NMEA0183 version 2.01 or 3.01 (requires optional GPS Adapter Cord MC-35 and cable with D-sub 9-pin connector)
Ethernet	RJ-45 connector
Peripheral connector	For Wireless Transmitter WT-5A/B/C/D
Supported languages	Arabic, Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Thai, Turkish, Ukrainian
Battery	One Rechargeable Li-ion Battery EN-EL18
AC adapter	AC Adapter EH-6b; requires Power Connector EP-6 (available separately)
Tripod socket	1/4-in. (ISO 1222)
Dimensions (W × H × D)	Approx. 160 × 156.5 × 90.5 mm/6.3 × 6.2 × 3.6 in.
Weight	Approx. 1,340 g/2 lb 15.3 oz with battery and XQD memory card but without body cap and accessory shoe cover; approx. 1,180 g/2 lb 9.6 oz (camera body only)
Operating environment	Temperature: 0 to 40°C/32 to 104°F; humidity: less than 85% (no condensation)
Supplied accessories	Rechargeable Li-ion Battery EN-EL18, Battery Charger MH-26, USB Cable UC-E15, Camera Strap AN-DC7, Body Cap BF-1B, Accessory Shoe Cover BS-2, Eyepiece DK-17, Battery Chamber Cover BL-6, USB Cable Clip, ViewNX 2 CD-ROM

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Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. February 2012 ©2012 Nikon Corporation

WARNING

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

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Nikon U.K. Ltd. Nikon House, 380 Richmond Road, Kingston upon Thames, Surrey KT2 5PR, U.K. www.nikon.co.uk
 Foto Distributors Nikon House, 68 Kyalami Boulevard, Kyalami Business Park, Midrand, 1684, Republic of South Africa www.nikon.co.za
 Nikon Canada Inc. 1366 Aerowood Drive, Mississauga, Ontario, L4W 1C1, Canada www.nikon.ca
 NIKON CORPORATION Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo 100-8331, Japan www.nikon.com