Specifications and design specifications are subject to change without notice. The information in this manual is current as of the time of publication. Nikon reserves the right to change or improve the specifications of the product described herein at any time without notice. Nikon will not be held liable for damages that may result from any mistakes that this manual may contain. The appearance of this manual on computer screens is for display purposes only and does not reflect the actual appearance of the printed manual.
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 unfiltered 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 -31˚F/-35˚C 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, flooding 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.)
Photography/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 studio and 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.

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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
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.

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.

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

**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**

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* D-Movie standard ISO sensitivity from ISO 200 to ISO 12800, with higher sensitivity options up to Hi 4.
EXPEED 3: the super-charged engine behind faithful colors, fine tones and an extraordinary dynamic range

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.

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 submitted 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.

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.

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

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 and 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-pixel sensors. 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.

Accuracy 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 incorporate the warmth of ambient, incandescent lighting as required.

The Advanced Scene Recognition System

19K-pixel RGB sensor Image sensor

Subject tracking

Face detection with 19K-pixel RGB sensor Highlight analysis Light source identification Face detection on image plane

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, with subject tracking, when paired with Active D-Lighting, delivers images that retain highlights and shadows in high-contrast scenarios, making facial looks as they are seen, whether in sunlight or shade.

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 balance with the background considering the size of the face relative to a frame and its brightness. Auto metering is possible in low-light scenes as low as -1 EV with 3D color matrix metering III and center-weighted metering.
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.

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.

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

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Faster response that supports comfortable shooting

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*1 The frame rate assumes continuous-servo AF, manual or shutter-priority auto exposure, a shutter speed of 1/1,000 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, focus will be fixed at the value for the first shot in each burst and, when the subject is poorly lit, exposure will also be fixed at the value for the first shot.

*3 98 frames on average, image quality: 12-bit compressed RAW, under test conditions established by Nikon.

*4 Image quality: JPEG (fine/medium)

©Matthias Hangst

©Corey Rich

©Renee Roberts

©Sony Red
Easy AF detection

15 cross-type sensors in the central area

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 fast-moving subject. 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.

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 portraituring 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.

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

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

©Matthias Hangst

• White balance: Auto 1, B2, M1 • Sensitivity: ISO 6400 • Picture Control: Standard

• Lens: AF-S NIKKOR 200mm f/2G ED VR II • Image quality: 14-bit RAW (NEF)

©Bill Frakes

• White balance: Auto 1 • Sensitivity: ISO 2500 • Picture Control: Standard

• Lens: AF-S NIKKOR 600mm f/4G ED VR • Image quality: 14-bit RAW (NEF)
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.

The D4’s video offers smooth results with Nikon’s latest image-processing algorithms, for a single clip is 29 min. 59 s*. Thanks to the D4’s live view photography and video modes, the D4’s optimal camera control for live view movie and stills become readily attainable enhancing any photographer’s ability to tell a story. The D4 can record 1080p Full HD video at 30p 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.

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 16:9 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 gives an approx. 2.7x increase to the focal length. Furthermore, this crop 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. 2x increase to the focal length. 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.

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. The audio level indicators offer visual confirmation of audio level and the microphone sensitivity can be controlled precisely in 20 incremental steps.

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.

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 repeat 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*, and are easy to confirm visually. Instead of rotating the command dial, power aperture* 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 with 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** with a frame size of 1,920 x 1,080 pixels without interrupting movie recording.

50 Hz and 60 Hz is available when needed. *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. ** Frame size: 1,920 x 1,080 pixels.
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.

Reliability and Smooth Operation: What a Pro Wants Most

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 finest 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.

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.

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.

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.
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 balance 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. Throughput 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.

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 directly accessed via the ISO button and sub-command dial.

Precision 3.2-in. (8-cm), 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 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 the SD 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 frames per second onto separate cards, or transfer data from one card to another.

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 CM mode) for 2.5 megapixels 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 an 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.

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.

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.

Auto White Balance

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 D1 through D4, as well as manual control of white balance in 10-kelvin increments or in mixed 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.

Minute white balance controls

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.

White balance options

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

Self-diagnostic shutter monitor

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.
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.

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.

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.

The defining strength for exceptional stills and videos

Optical masterpiece: NIKKOR lenses
**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 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-4A/B/C/D/E (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 WT-4A/B/C/D/E or WT-5A/B/C/D/E (optional) that realizes high-speed wireless transmission. Also, IPTC Preset Manager allows the user to create 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.

**Small, versatile and portable studio-quality light**

Nikon Speedlights: studio-quality lighting, virtually anywhere

The Nikon Creative Lighting System is a well-researched and developed 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-performance TTL flash control with its intuitive operations, supplementary lighting can be as versatile and comprehensive as the situation demands. In addition to conventional 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.

**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 processing procedures, the latest Capture NX 2 is faster and more powerful than ever.

**Wireless Transmitter Utility**

This software enables setup of the Wireless Transmitter WT-4A/B/C/D/E or WT-5A/B/C/D/E or WT-4A/B/C/D/E, image files can be transferred using either Wi-Fi or an Ethernet connection.

**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/E or WT-4A/B/C/D/E, image files can be transferred using either Wi-Fi or an Ethernet connection.
Memory card capacity

The following table shows the approximate number of pictures that can be stored in a Nikon D3X Memory Card (SD/SDHC/SDXC) according to image quality, image size, and image area settings.

<table>
<thead>
<tr>
<th>Image quality</th>
<th>Image size</th>
<th>File size</th>
<th>Buffer capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard (12-bit)</td>
<td>36MP (3648 x 2496)</td>
<td>15.4 MB</td>
<td>7.2 MB</td>
</tr>
<tr>
<td>NEF (RAW)</td>
<td>12-bit</td>
<td>compressed</td>
<td>15.4 MB</td>
</tr>
<tr>
<td>TIFF (RGB) L</td>
<td>12-bit</td>
<td>14-bit</td>
<td>26.5 MB</td>
</tr>
<tr>
<td>JPEG fine</td>
<td>12-bit</td>
<td>14-bit</td>
<td>34.3 MB</td>
</tr>
<tr>
<td>JPEG normal</td>
<td>12-bit</td>
<td>14-bit</td>
<td>50.8 MB</td>
</tr>
</tbody>
</table>

Nomenclature

Viewfinder display

Approved memory cards

The following CompactFlash memory cards are listed in the following sections. Other cards have not been tested.

Approved CompactFlash memory cards

- Lexar Media
  - Lexar Professional Platinum II 80x 2 GB, 4 GB, 8 GB, 16 GB
  - Lexar Extreme II 600x 8 GB, 16 GB, 32 GB
  - Lexar 300x 2 GB, 4 GB, 8 GB, 16 GB
- SanDisk
  - SanDisk Extreme 32GB
  - SanDisk Ultra II 16GB, 32GB, 64GB, 128GB
  - SanDisk Extreme Pro 64GB, 128GB, 256GB

Approved XQD memory cards

- Lexar Media
  - Lexar Professional Platinum II 80x 2 GB, 4 GB, 8 GB, 16 GB
  - Lexar Extreme II 600x 8 GB, 16 GB, 32 GB
  - Lexar 300x 2 GB, 4 GB, 8 GB, 16 GB
- SanDisk
  - SanDisk Extreme 32GB
  - SanDisk Ultra II 16GB, 32GB, 64GB, 128GB
  - SanDisk Extreme Pro 64GB, 128GB, 256GB

*Approved memory cards are tested and approved for use in the camera. Other cards have not been tested.

**Approved memory cards are tested and approved for use in the camera. Other cards have not been tested.