Nikon Digital SLR Camera D4 Specifications

**Image sensor** 36.0 × 23.9 mm CMOS sensor (Nikon FX format)

**Effective pixels** 16.2 million

**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

**Exposure bracketing** 2 to 9 frames in steps of 1/3, 1/2, 2/3 or 1 EV

**Exposure modes** Programmed auto with flexible program (P); shutter-priority auto (S); aperture-priority auto (A); manual (M) or by camera (P and S modes)

**Active D-Lighting** Can be selected from auto, extra high +2/+1, high, normal, low or off

**Metering method**
- Matrix: 3D color matrix metering III (type G and D lenses); color matrix metering III
- Center-weighted: Weight of 75% given to 12-mm circle in center of frame; center-weighted: Weight of 100% given to entire frame; center-weighted: Weight of 50% given to entire frame

**Frame advance rate** Up to approx. 10 fps (CL) or approx. 10 to 11 fps (CH)

**Released modes** S (single frame), CL (continuous low speed), CH (continuous high speed), Q (quiet shutter-release), B (bulb) or T (time), M (movie)

**Lens aperture** Instant return, electronically controlled

**Lens servo**
- Autofocus (AF): Single-servo autofocus (AF-S); continuous-servo autofocus (AF-C); focus lock; focus preз></textarea>
Reigning World Champion in the Triple Jump, Christian Taylor.

- Lens: AF-S NIKKOR 400mm f/2.8G ED VR
- Exposure: [M] mode, 1/1,000 second, f/5.6
- White balance: Auto 1
- Sensitivity: ISO 12800
- Picture Control: Standard

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ALL EDGE, NO EXCEPTIONS

Unparalleled image integrity accompanied by speed

16.2 megapixels in a newly designed FX format image sensor

The D4 is engineered to achieve image integrity in the most diverse and difficult lighting conditions, thanks to an optimized balance between the FX-format sensor size (36.0 x 23.9 mm) and 16.2 effective megapixels. Uncompromised data readout speed delivers up to 11 fps performance in FX format — faster than any other Nikon camera. The 16.2 megapixels yield not only stunning detail and fidelity, but also more flexibility in post-production cropping for magazine-quality prints and web publishing. Image quality this versatile is a direct result of Nikon’s sophisticated approach to sensor design. Each pixel is as large as 7.3 µm, and painstakingly engineered to collect the maximum amount of light and render the highest possible image quality in both bright and dark conditions. Incredibly clean images with smooth gradations even at high ISO sensitivities can be realized thanks to the optimized noise-reduction design and 14-bit A/D conversion built into 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 recording: FX format (36.0 x 23.9 mm), 5:4 crop (29.9 x 23.9 mm), and 1.2x crop (29.9 x 19.9 mm).

Super-charged EXPEED 3 image-processing engine

EXPEED 3 performs multiple tasks at blindingly fast speeds, a result of engineering expertise and meticulous attention to detail. This imaging engine, optimized for D-SLRs, delivers faithful, well-saturated color, natural depth and an exceptionally wide dynamic range, giving subtle and nuanced tones — from pitch black to shimmering whites — a new level of definition and realism. EXPEED 3’s sophisticated approach to sensor design ensures the camera’s highest ISO sensitivities can be captured without degrading image sharpness, the massive, high-speed 16-bit image processing delivers smooth gradation and abundant tone detail that can be applied to image integrity for a diverse range of usages. Submission-ready JPEGs straight out of the camera can be expected for immediate supply to magazines, newspapers, and web publications. EXPEED 3 has been optimized for video as well, rendering movie with reduced moiré, false colors and “jaggies.”

Reliable ISO 12800 performance as standard

The D4 provides true-noise performance at ISO 12800 and extends the range one EV further, compared with that of the D3S, making ISO 100-12800 standard; a welcome addition when using slow shutter speeds in bright sunlight. For more challenging conditions, equivalent ISO 50 and ISO 204800 sensitivities are available. The D4 can shoot still images and video confidently and clearly in nearly any light. From the harsh glare of high noon to the pale gray of dusk; from a dimly lit interior to a moonlit forest at midnight; the camera’s superior ISO sensitivity controls enable photographers to take a bolder approach to their subject matter.

High-speed performance that captures the moment

Faster to winning frames: approx. 10/11 fps continuous shooting in FX format with accuracy for up to 200 frames

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 in FX format. The camera’s large buffer memory allows shooting up to approx. 100 frames2 in RAW and up to 200 frames2 in JPEG (when using SONY XQD Memory Card H series QD-H32 with 32 GB capacity, saving critical moments that were once spent waiting for the buffer memory to empty — a real advantage that cannot be measured by fps rates alone.

Faster total workflow speed

The D4’s speed runs across its entire workflow. The camera is ready to shoot in approx. 0.12 s, and release time lag is minimized to a mere approx. 0.042 s1. The camera’s precision sequential mechanical system 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 data transfer speed is 125 MB/s1 — the industry-leading speed2. High-speed data transfer to a PC is achieved with the memory card reader3 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.

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Image quality in the most diverse situations

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1.2x crop
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5:4 crop
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FX format
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Advanced Scene Recognition System

A new level of accuracy in auto operation with 51K-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 51K pixels. With this 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 and versatile Auto Area AF tracking, allowing for flawless calculating vast amounts of scene information — even up to 10 frames per second.

Face detection for improved AF, AE, i-TTL balanced fill-flash and Active D-Lighting

When people’s faces are priority subjects, the Advanced Scene Recognition System delivers particularly outstanding performance. The camera’s auto-area AF mode accurately recognizes human faces and achieves sharp focus immediately and automatically — usually when there’s no time to manually choose focus point. It focuses on a subject’s body when the face is out of the AF area. Better auto exposures can be anticipated with Nikon’s 3D color matrix metering III, even 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. With the D4’s enhanced i-TTL balanced fill-flash paired with Nikon Speedlights, 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 appealing. Advanced Scene Recognition System delivers incredibly high accuracy for various and versatile Auto Area AF tracking, allowing for flawless calculating vast amounts of scene information — even up to 10 frames per second.

The Advanced Scene Recognition System

Phase-detection AF

Active-area AF

3D-tracking

51K-pixel RGB sensor

Image sensor

Subject tracking

Face detection with 51K-pixel RGB sensor

Highlight analysis

Light source identification

Face detection in image plane

Subject tracking

Available focus points according to aperture

Advanced Multi-CAM 3500FX autofocus sensor module

Faster, sharper subject detection with all 51 AF points with any AF NIKKOR lens, even in low light

Experience the speed needed to capture fast-moving subjects in sharp focus. The Advanced Multi-CAM 3500FX autofocus sensor module utilizes 51 strategically placed AF points that are designed to capture your subject as chosen. Like a net, they work individually and together to capture moving subjects. For absolute accuracy, a single AF point allows the precise placement of the focus point on the subject. All 51 AF points are usable with every AF NIKKOR lens at f/5.6 or faster. The D4 drives high performance even in extremely low-light situations. AF detection is fast and accurate even in low-contrast areas, down to an effective -2 EV (ISO 100, 20°C/68°F), which is approximately the physical limit of human vision through an optical viewfinder. Consistent, reliable performance can be expected at night stadium assignments, in poorly lit indoor arenas, theaters and any other low-light venue.

Fast initial AF detection speed

The D4s AF is designed to work as fast as a professional’s reflexes. Its faster initial AF detection nails decisive moments like never before and is especially capable in sports photography. Volleyball, soccer, track and field and swimming — whatever the sport, the D4 is ready. A new “focus-release” is provided as an AF-C priority selection option, enabling high-speed continuous shooting to quickly focus on the subject. Even when the subject unexpectedly changes position or distance from the camera, the D4’s advanced Active D-Lighting system constantly illuminates the face, ensuring a beautiful cinematic look with high-ISO sensitivity even in dark conditions, by using noise-reduction technology specifically designed for video. With the D4, Full HD video can be recorded in three formats: FX-based, DX-based 1,920 x 1,080 crop format. The DX-based format renders exquisitely shallow depth of field (DOF) as well as wide-angle shooting. 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 for creating an extension to the focal length of an existing lens. For an even stronger telephoto-effect, the 1,920 x 1,080 crop format brings, as an option, a 2.7x crop of the picture angle while delivering outstanding video quality and detail, obtaining 100fps Full HD. Versatility like this lets you explore different moods with the large and comprehensive selection of NIKKOR lenses.

Unrivalled versatility for professional needs

Durability in severe environmental conditions

The D4s body is comprised of strongly-built lightweight magnesium alloy. This assures the camera’s super-reliability even in the most demanding environmental conditions. The D4’s shutter has been tested for 400,000 cycles on fully assembled cameras at demanding continuous burst rates and under extended time periods. Thermochromatic paint has been taken to seal and protect against invasive moisture, dust, and even electromagnetically interference. Its comprehensive sealing, combined with additional Nikon-engineered measures keeps the camera operational in a wide range of severe conditions. Where more, thanks to meticulous re-engineering at a detailed level, the D4 is actually lighter than a D3S yet maintains the same exceptional durability.

Optical viewfinder with grid line option

The D4 offers optional 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 bright, high-visibility 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.

Professional expandability

Wired and wireless communication system

The D4 employs a built-in wired LAN function of IEEE802.3u standard (IEEE802.3, IEEE802.3ABX). Moreover, 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, i-TTL (International Telecommunication), which allows to send technical information to a series of images at high speed using an IPTC file created on a D4, can be supported.

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