Nikon

At the heart of the image

D500

Technology Digest

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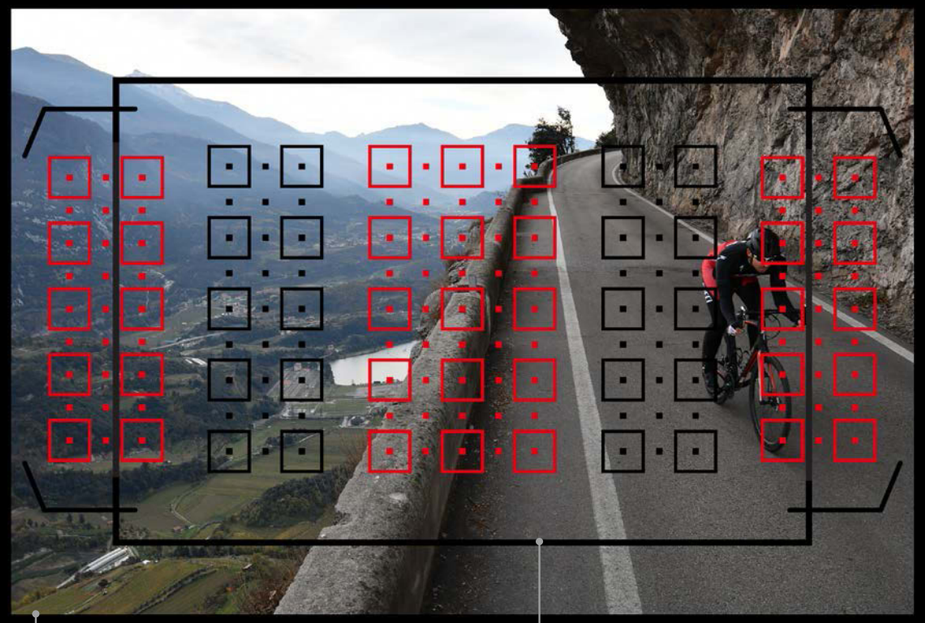
1. AF

1-1. 153 focus points with wider, denser image area coverage

	Total focus points	Total cross sensors	Focus points' low light performance
D500	153	99	-4 EV (central focus point), -3 EV (other 152 focus points)
D5			

- **Broader, denser image area coverage allows incredible subject acquisition performance.**
- **AF is effective in dark and low-contrast situations.**

153 focus-point configuration that densely covers image area



DX
153 focus points: ⊡ / ⊡ / ■ / ■ (99 cross sensors: ⊡ / ■)
55 selectable points: ⊡ / ⊡ (35 cross sensors: ⊡)

1.3×
117 focus points: ⊡ / ⊡ / ■ / ■ (63 cross sensors: ⊡ / ■)
45 selectable points: ⊡ / ⊡ (25 cross sensors: ⊡)

1-2. Dedicated AF engine

	Dedicated AF engine
D500	Incorporated (works together with Multi-CAM 20K autofocus sensor module and sequence control microcomputer)
D5	

- **Camera quickly acquires fast-moving and erratically moving subjects, and maintains accurate focus.**

1-3. AF performance when using a teleconverter

With AF-S/AF-I teleconverter

	Effective maximum apertures slower than f/5.6 and faster than f/8	Effective maximum apertures at f/8
D500	Focus points: 37 (including 25 cross sensors)	Focus points: 15 (including 5 cross sensors)
D5		

- **Many focus points can be used even with slower effective maximum aperture, allowing more flexible AF shooting when using a teleconverter.**

1-4. AF lock-on

	AF lock-on settings	
	Blocked shot AF response	Subject motion
D500	Allows AF response when the subject is obscured by another object, can be set from "Quick" to "Delayed"	Can be adjusted according to the subject's movement characteristics from "Erratic" to "Steady"
D5		

- **Refined AF lock-on settings allow more intuitive adjustments in accordance with photographer's intentions.**

1-5. Auto AF fine-tune

	AF fine-tuning process
D500	Achieves focus in live view photography → Automatic setting of adjustment value with a few button operations
D5	

- **Easy to fine-tune for minor variations in AF between lens and camera, achieving accurate focusing in simple steps after lens changes.**

2. High-speed performance

2-1. High-speed continuous shooting and buffer capacity

	High-speed continuous shooting (with AF/AE)	Buffer capacity (14-bit lossless compressed RAW)*1
D500	Approx. 10 fps*2	200
D5	Approx. 12 fps*3	200

*1 With Lexar Professional 2933x XQD 2.0 (64 GB).

*2 Approximate frame rates for a fully charged EN-EL15 Rechargeable Li-ion Battery, using continuous-servo AF, a shutter speed of 1/250 s or faster, and with other settings at default values.

*3 Approximate frame rates when using continuous-servo AF, a shutter speed of 1/250 s or faster, and with other settings at default values.

• More chances to capture decisive moments of fast-moving subjects.

3. Agility

3-1. Added agility for comfortable telephoto shooting

Image area: DX (24×16)	Image area: 1.3× (18×12)
Provides an angle of view equivalent to that of a lens with approx. 1.5× longer focal length*	Provides an angle of view equivalent to that of a lens with about double the focal length* (approx. 1.3× equivalent of DX format)

*35mm-format equivalent.

• It is possible to get closer to a distant subject with a smaller lens.

Superior agility brings an edge to telephoto shooting

Combinations that deliver an angle of view equivalent to a 600 mm focal length lens*1

D5 + AF-S NIKKOR 600mm f/4E FL ED VR
Approx. 5215 g/11 lb 8.0 oz*2 (XQD-Type)

D500 + AF-S NIKKOR 80-400mm f/4.5-5.6G ED VR
Approx. 2430 g/5 lb 5.8 oz*2

*1 35mm-format equivalent.
*2 Includes battery, one XQD memory card (two XQD cards for the D5) and lens cap.

More powerful telephoto shooting possible using 1.3× image area

If you want to get closer to your subject but don't have time to change the lens, the D500's 1.3× image area may be just what you need. By providing an angle of view equivalent to that of a lens with roughly double the focal length in 35mm format (approx. 1.3× equivalent of DX format), it allows quick, dramatic changes of composition. This is especially useful for video, as it provides Full-HD movies in cropped size.

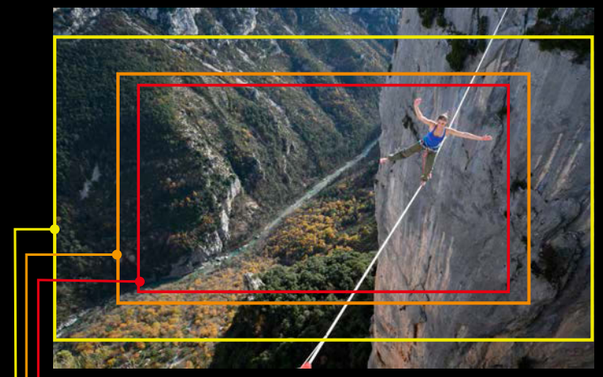
4. Movies

4-1. 4K UHD (3840 × 2160) movie recording

	Movie image areas
3840 × 2160	4K UHD (3840 × 2160): 30p/25p/24p
DX-based movie format	Full HD (1920 × 1080): 60p/50p/30p/25p/24p
1.3×-based image area	

	Maximum duration for movie recording	
	4K UHD	Full HD / HD
D500	29 min. 59 s (recorded in separate files)	29 min. 59 s
D5	3 min.	29 min. 59 s

• HDMI output of uncompressed 4K UHD movie data to an external recorder is also possible.



Note: Aspect ratio of movies is 16:9 regardless of the selected image area.

4-2. New functions that enhance movie quality

New movie functions employed on the D500 (In Full HD, HD)
Electronic Vibration Reduction, Active D-Lighting

Electronic Vibration Reduction (VR) allows comfortable hand-held video shooting for Full HD and HD

When shooting movies hand-held in Full HD or HD mode, the D500's electronic VR function* reduces the effects of camera shake in the horizontal, vertical and rotational directions (centering on the lens). This is convenient when the shooting location or time constraints make setting up a tripod impossible. Used in combination with NIKKOR's optical VR technology, the benefits are even more apparen

*Image area will be slightly smaller in Full HD.

Active D-Lighting available for Full HD and HD videos

Thanks to the new EXPEED 5 image-processing engine, Active D-Lighting can now be applied to Full HD and HD movies. This function preserves details in highlights and shadows when shooting high-contrast scenes, giving your footage richer tonal gradation and a more natural brightness. This comes in extremely handy when you need to use footage straight from the camera without making post-production adjustments.

Active D-Lighting: Off

Active D-Lighting: High

4-3. Time-lapse photography

Time-lapse photography (image size: frame rates)	Exposure smoothing function
• 3840 × 2160 (4K UHD): 30p/25p/24p • 1920 × 1080: 60p/50p/30p/25p/24p • 1280 × 720: 60p/50p	Supported

• Effortless production of beautiful 4K UHD time-lapse movies within the camera.
• Exposure smoothing function produces time-lapse movies with less flicker effects by automatically reducing the subtle exposure variance of each frame when shooting with an auto exposure mode such as aperture-priority.
• Exposure smoothing function can also be used to reduce exposure variance of frames in interval timer photography.

5. High image quality

5-1. Wide standard sensitivity range and high image quality at high ISO

	ISO sensitivity
D500	ISO 100 to 51200, expandable to Lo 1 (ISO 50 equivalent) and Hi 5 (ISO 1640000 equivalent)
D5	ISO 100 to 102400, expandable to Lo 1 (ISO 50 equivalent) and Hi 5 (ISO 3280000 equivalent)

- **Combined with enhanced metering and AF capability in low-light situations, it's now easier to capture dark scenes that were once difficult to reproduce.**
- **Same wide ISO range — including the expanded sensitivity range — can be used in movie recording.**

5-2. New EXPEED 5 image-processing engine with enhanced performance

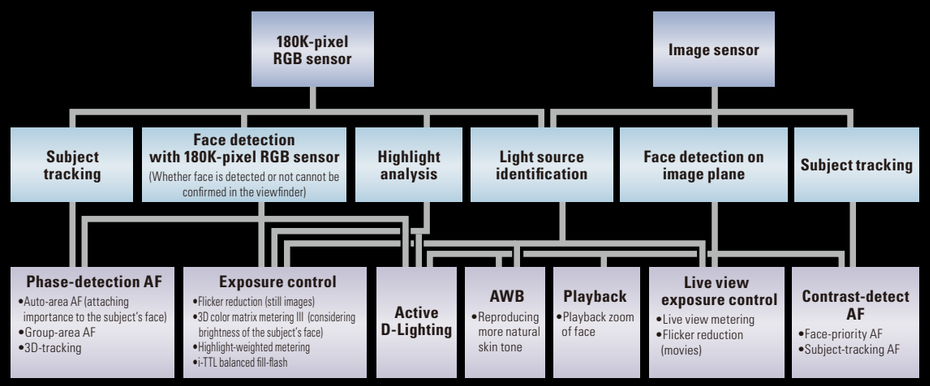
	Image-processing engine
D500	EXPEED 5
D5	

- **Delivers superior image quality at high sensitivities.**
- **Supports continuous shooting at approx. 10 fps.**
- **Auto white balance consistently delivers natural color reproduction under diverse light sources.**
- **Supports movie recording at 4K UHD (3840 × 2160)/30p.**

5-3. Advanced Scene Recognition System with 180K-pixel RGB

	Scene Recognition System
D500	Advanced Scene Recognition System with 180K-pixel RGB sensor
D5	

- **Smaller, moving faces can be detected and focused on accurately.**
- **Faces can be exposed more precisely with auto exposure or Active D-Lighting than previously.**



5-4. Three types of auto white balance

	Auto 0	Auto 1	Auto 2
D500	Faithfully renders white under any light sources the environment contains	Maintains a balance of the original subject color and the ambient lighting	Renders color with a natural sense of warmth, retaining the color of incandescent or other lighting
D5			

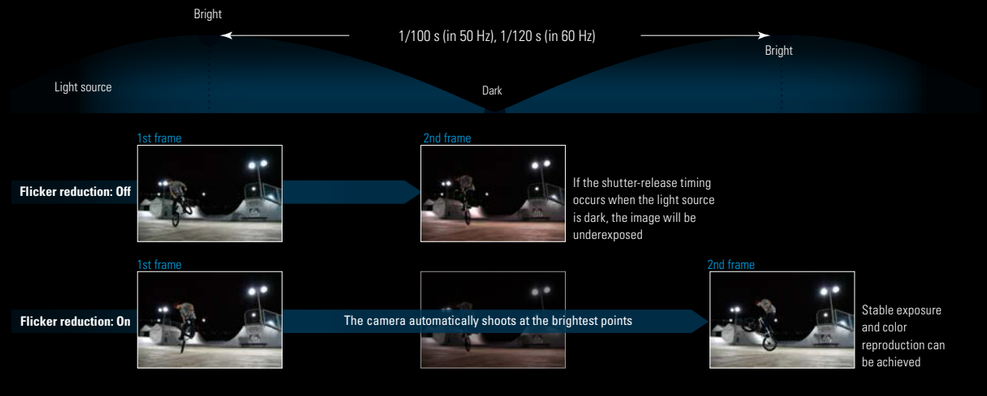
- **Three auto modes selectable depending on purpose of the picture.**
- **[Auto 0]: Renders white uniforms faithfully even under complex light sources at sports arenas.**
- **[Auto 1]: Brings out the full white of dresses at wedding banquets.**

5-5. Flicker reduction function for still images

	Flicker reduction function (still images)	Flicker reduction function (movies)
D500	Supported	Supported
D5	Not supported	Supported

- **Flickering effect cannot be seen on stills taken under fluorescent or mercury-vapor light sources.**

Flicker reduction function (in continuous shooting)



You can choose to display **FLICKER** icon in the viewfinder when flicker is detected

6. Superior operability and reliability

6-1. Touch-operation, tilting high-resolution LCD monitor

	Touch screen	Tilting structure	Size	Resolution
D500	✓*	✓	8 cm/3.2 in.	approx. 2359k dots
D5	✓	—		

*Touch-operation functions such as touch shutter during live view photography (can be switched to touch AF) and touch AF (during movie live view and movie recording) are employed in addition to those included in D5.

- **Instant image switching is available using the frame advance bar during image playback.**
- **Rapid pinch-to-zoom operation allows easy focus confirmation.**
- **Touch AF is possible during movie live view and movie recording.**
- **Touch a spot on the screen during live view to preset white balance.**
- **Effortless text entering via touch operation.**
- **Comfortable shooting from a high or low angle with a stable posture.**

6-2. Refined ergonomic operation/Button illumination

New controls/functions/menus in D500	
Optical viewfinder featuring viewing angle of approx. 30.8°, approx. 1.0× magnification and approx. 100% frame coverage	Subjects can be tracked in real time across a wide field of view, resulting in more comfortable continuous shooting.
Buttons and control layout consistent with the D5	Similarity of the control system to that of the D5 makes it easy for D5 owners to use the D500 as a secondary camera.
Button illumination	Button illumination, employed on DX model for the first time, enhances operation in darkness.
i button settings	Quick access to the functions increases operational efficiency.
Easy-to-hold grip and superior environment-resistant performance	DX agility with firm grip and ruggedness expand shooting field.

6-3. Energy-saving design

Battery		Maximum number of shots per charge*	Maximum filming duration possible per charge*
Body	EN-EL15	Approx. 1240	Approx. 50 min.
MB-D17 Multi-Power Battery Pack	EN-EL15	Approx. 1240	Approx. 50 min.
	EN-EL18a	Approx. 2510	Approx. 130 min.
	R6/AA-size batteries	Approx. 1260	Approx. 60 min.

*Based on CIPA Standards.

- **Allows photographers to concentrate on shooting without having to worry about battery life.**
- **Eases the burden of having to prepare extra batteries.**

EN-EL15 Rechargeable Li-ion Battery

MB-D17 Multi-Power Battery Pack (optional) attached to the D500

6-4. Dual memory card slots

Dual memory card slots
SD memory card × 1 + XQD memory card × 1 can be loaded

- **SD and XQD memory cards can be used, offering fast writing speeds.**
- **It is possible to use both types of memory card at once, and there are multiple recording options available: recording two full cards of data, recording the same data onto two cards for instant backup, or recording RAW and JPEG simultaneously onto separate cards.**

6-5. SnapBridge supported

Convenient SnapBridge functions that can be enjoyed with the D500
• Automatic image transfer to a smart device • Browse images on the camera with a smart device • Use location and date/time information from a smart device • Embed credit information into images • Remote shooting • Automatic image uploads to NIKON IMAGE SPACE

- **With constant connection, the enhanced experience of taking and sharing images with a digital SLR camera is possible.**

7. System

7-1. SB-5000 Speedlight

Versatile, high-output Nikon SB-5000 Speedlight can be controlled wirelessly via radio waves

The SB-5000 is the first Nikon Speedlight that can be controlled via radio waves. When used as a remote flash for wireless multi-flash shooting, it provides greater lighting flexibility, as it is only minimally affected by obstacles or ambient lighting compared with conventional optical control (radio-controlled Advanced Wireless Lighting*[1]). The SB-5000 employs a cooling system that prevents the flash panel from overheating due to consecutive bursts. As a result, it can fire consecutively for longer than conventional models, without flash cool-down time between bursts, while maintaining a powerful output at the guide number of 41m/134.5 ft*[2].

*1 WR-R10 Wireless Remote Controller and WR-A10 WR Adapter (both optional) are required. The WR-R10's firmware must be updated to be compatible with radio-controlled AWL (check Nikon website for details).

*2 ISO 100, at 35 mm zoom head position, in DX format, standard illumination pattern.

SB-5000 Speedlight

7-2. WT-7/A/B/C Wireless Transmitter (optional)

Newly developed WT-7/A/B/C Wireless Transmitter (optional) allows high-speed wired/wireless LAN communication

WT-7/A/B/C Wireless Transmitter (optional)

Nikon's WT-7/A/B/C Wireless Transmitter is aimed at professionals who need to transfer images more quickly and securely than they can with SnapBridge. It permits images and movie files to be transferred to computers*[1] or FTP servers via both wired and wireless LAN. Wired LAN supports 1000BASE-T and offers transmission speeds of up to approx. 1000 Mbps*[2], while wireless LAN supports IEEE802.11ac and enables transmission at up to approx. 866.7 Mbps*[2], over distances of up to approx. 200 m/656.1 ft*[3]. Used in conjunction with Camera Control Pro 2 (optional), it is also possible to control the D500 remotely*[1].

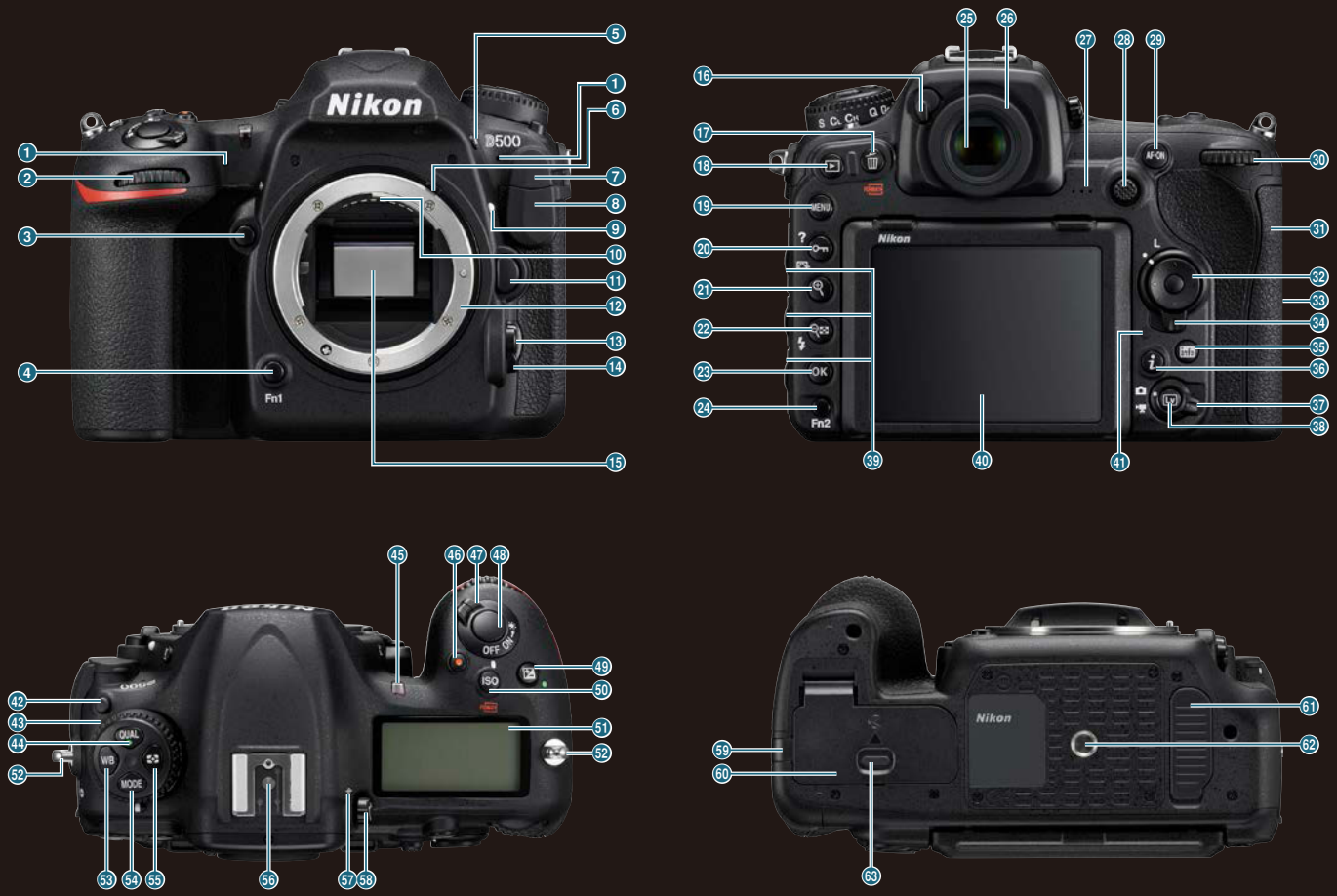
*1 Requires Wireless Transmitter Utility (available for download from Nikon website).

*2 Maximum logical data rates according to IEEE standard. Actual rates may differ.

*3 With large antenna at wireless LAN access point. Range may vary according to signal strength and presence or absence of obstacles.

WT-7/A/B/C Wirless Transmitter (optional) attached to the D500

Nomenclature



1. Stereo microphone
2. Sub-command dial
3. Pv button
4. Fn1 button
5. Bracketing button
6. Meter coupling lever
7. Flash sync terminal (under cover)
8. Ten-pin remote terminal (under cover)
9. Lens mounting mark
10. CPU contacts
11. Lens release button
12. Lens mount
13. AF-mode button
14. Focus-mode selector
15. Mirror
16. Eyepiece shutter lever
17. Delete button/Formatting memory cards button
18. Playback button
19. Menu button
20. Protect button/Picture Control button/Help button
21. Playback zoom in button
22. Playback zoom out button/Thumbnails button/ Flash mode button/Flash compensation button
23. OK button
24. Fn2 button
25. Viewfinder
26. Viewfinder eyepiece
27. Speaker
28. Sub-selector
29. AF-ON button
30. Main command dial
31. Memory card slot cover
32. Multi selector
33. N-Mark (NFC antenna)
34. Focus selector lock
35. Info button
36. ƶ button
37. Live view selector
38. Live view button
39. Connector cover (USB connector/Headphone connector/ Connector for external microphone/HDMI connector)
40. Tilting monitor
41. Memory card access lamp
42. Release mode dial lock release
43. Release mode dial
44. Image quality/image size button/Two-button reset button
45. Self-timer lamp
46. Movie-record button
47. Power switch
48. Shutter-release button
49. Exposure compensation button/Two-button reset button
50. ISO sensitivity button/Auto ISO sensitivity control button/ Formatting memory cards button
51. Control panel
52. Eyelet for camera strap
53. White balance button
54. Exposure mode button
55. Metering button
56. Accessory shoe (for optional flash unit)
57. Focal plane mark
58. Diopter adjustment control
59. Power connector cover
60. Battery-chamber cover
61. Contact cover for optional MB-D17 Multi-Power Battery Pack
62. Tripod socket
63. Battery-chamber cover latch

Specifications

Type of camera	Single-lens reflex digital camera
Lens mount	Nikon F mount (with AF coupling and AF contacts)
Effective angle of view	Nikon DX format; focal length in 35 mm [135] format equivalent to approx. 1.5× that of lenses with FX format angle of view
Effective pixels	20.9 million
Image sensor	23.5 × 15.7 mm CMOS sensor
Total pixels	21.51 million
Dust-reduction system	Image sensor cleaning, Image Dust Off reference data (Capture NX-D software required)
Image size (pixels)	• DX (24×16) image area: 5568 × 3712 [L], 4176 × 2784 [M], 2784 × 1856 [S] • 1.3× (18×12) image area: 4272 × 2848 [L], 3200 × 2136 [M], 2128 × 1424 [S] • Photographs with image area of DX taken during movie recording: 5568 × 3128 [L], 4176 × 2344 [M], 2784 × 1560 [S] • Photographs with image area of 1.3× taken during movie recording: 4272 × 2400 [L], 3200 × 1800 [M], 2128 × 1192 [S] • Photographs taken during movie recording at a frame size of 3840 × 2160: 3840 × 2160
File format	• NEF (RAW): 12 or 14 bit (lossless compressed, compressed or uncompressed); large, medium and small available (medium and small images are recorded at a bit depth of 12 bits using lossless compression) • TIFF (RGB) • JPEG: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8) or basic (approx. 1:16) compression; Optimal quality compression available • NEF (RAW)+JPEG: Single photograph recorded in both NEF (RAW) and JPEG formats
Picture Control System	Standard, Neutral, Vivid, Monochrome, Portrait, Landscape, Flat; selected Picture Control can be modified; storage for custom Picture Controls
Storage media	XQD, SD (Secure Digital) and UHS-II compliant SDHC and SDXC memory cards
Dual card slot	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 2.0, Exif 2.3, PictBridge
Viewfinder	Eye-level pentaprism single-lens reflex viewfinder
Frame coverage	• DX (24×16) image area: Approx. 100% horizontal and 100% vertical • 1.3× (18×12) image area: Approx. 98% horizontal and 98% vertical
Magnification	Approx. 1.0× (50 mm f/1.4 lens at infinity, -1.0 m^{-1})
Eyepoint	16 mm (-1.0 m^{-1}; from center surface of viewfinder eyepiece lens)
Diopter adjustment	-2 to +1 m^{-1}
Focusing screen	Type B BriteView Clear Matte Mark II screen with AF area brackets (framing grid can be displayed)
Reflex mirror	Quick return
Depth-of-field preview	Pressing Pv button stops lens aperture 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	Compatible with AF NIKKOR lenses, including type G, E and D lenses (some restrictions apply to PC lenses) and DX lenses, AI-P NIKKOR lenses, and non-CPU AI lenses (A and M modes 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 15 focus points with lenses that have a maximum aperture of f/8 or faster, of which 9 points are available for selection)
Shutter type	Electronically controlled vertical-travel focal-plane mechanical shutter; electronic front-curtain shutter available in mirror up release mode
Shutter speed	1/8000 to 30 s in steps of 1/3, 1/2 or 1 EV, bulb, time, X250
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), QC (quiet continuous shutter-release), ⏲ (self-timer), MUP (mirror up)
Approximate frame advance rate	CL: 1 to 9 fps, CH: 10 fps, QC: 3 fps
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. 180K (180,000) pixels
Metering method	• Matrix: 3D color matrix metering III (type G, E 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 8-mm circle in center of frame; diameter of circle can be changed to 6, 10 or 13 mm, or weighting can be based on average of entire frame (non-CPU lenses use 8-mm circle) • Spot: Meters 3.5-mm circle (about 2.5% of frame) centered on selected focus point (on center focus point when non-CPU lens is used) • Highlight-weighted: Available with type G, E and D lenses
Metering range (ISO 100, f/1.4 lens, 20°C/68°F)	• Matrix or center-weighted metering: -3 to 20 EV • Spot metering: 2 to 20 EV • Highlight-weighted metering: 0 to 20 EV
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 lock	Luminosity locked at detected value
ISO sensitivity (Recommended Exposure Index)	ISO 100 to 51200 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, 4 or 5 EV (ISO 1640000 equivalent) above ISO 51200; auto ISO sensitivity control available
Active D-Lighting	Auto, extra high, high, normal, low or off
Autofocus	Multi-CAM 20K autofocus sensor module with TTL phase detection, fine-tuning, and 153 focus points (including 99 cross sensors and 15 sensors that support f/8), of which 55 (35 cross sensors and 9 f/8 sensors) are available for selection
AF detection range	-4 to 20 EV (ISO 100, 20°C/68°F)
Lens servo	• Autofocus (AF): Single-servo AF (AF-S); continuous-servo AF (AF-C); predictive focus tracking automatically activated according to subject status • Manual focus (M): Electronic rangefinder can be used
Focus point	153 focus points, of which 55 or 15 are available for selection
AF-area modes	Single-point AF; 25-, 72- or 153-point dynamic-area AF; 3D-tracking; group-area AF; auto-area AF
Focus lock	Focus can be locked by pressing shutter-release button halfway (single-servo AF) or by pressing the center of the sub-selector
Flash control	TTL: i-TTL flash control using RGB sensor with approx. 180K (180,000) pixels; i-TTL balanced fill-flash for digital SLR is used with matrix, center-weighted and highlight-weighted metering, standard i-TTL fill-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, off; auto FP high-speed sync supported
Flash compensation	-3 to +1 EV in increments of 1/3, 1/2 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)	i-TTL flash control, Advanced Wireless Lighting (optical/radio), auto FP high-speed sync, modeling illumination, FV lock, unified flash control, flash color information communication and AF-assist illumination for multi-point AF
Sync terminal	ISO 519 sync terminal with locking thread
White balance	Auto (3 types), incandescent, fluorescent (7 types), direct sunlight, flash, cloudy, shade, preset manual (up to 6 values can be stored, spot white balance measurement available during live view), choose color temperature (2500 K to 10000 K), all with fine-tuning
Bracketing types	Exposure, flash, white balance and ADL
Live view modes	📷 (photo live view), 🎥 (movie live view)
Live view lens servo	• Autofocus (AF): Single-servo AF (AF-S); full-time-servo AF (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
Movie metering method	Matrix, center-weighted or highlight-weighted
Frame size (pixels) and frame rate	• 3840 × 2160 (4K UHD); 30p (progressive), 25p, 24p • 1920 × 1080; 60p, 50p, 30p, 25p, 24p • 1280 × 720; 60p, 50p Actual frame rates for 60p, 50p, 30p, 25p and 24p are 59.94, 50, 29.97, 25 and 23.976 fps respectively; ★high quality available at all frame sizes, normal quality available at all frame sizes except 3840 × 2160
File format	MOV
Video compression	H.264/MPEG-4 Advanced Video Coding
Audio recording format	Linear PCM
Audio recording device	Built-in stereo or external microphone; sensitivity adjustable
ISO sensitivity	• Exposure modes P, S and A: Auto ISO sensitivity control (ISO 100 to Hi 5) with selectable upper limit • Exposure mode M: Auto ISO sensitivity control (ISO 100 to Hi 5) available with selectable upper limit; manual selection (ISO 100 to 51200 in steps of 1/3, 1/2 or 1 EV) with additional options available equivalent to approx. 0.3, 0.5, 0.7, 1, 2, 3, 4 or 5 EV (ISO 1640000 equivalent) above ISO 51200
Active D-Lighting	Extra high, high, normal, low or off
Maximum length	29 min. 59 s
Other movie options	Index marking, time-lapse movies, electronic vibration reduction
Monitor	8-cm/3.2-in., approx. 2359k-dot (XGA) tilting TFT touch-sensitive LCD with 170° viewing angle, approx. 100% frame coverage and manual monitor brightness control
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, location data display, auto image rotation, picture rating and IPTC information embedding and display
USB	SuperSpeed USB (USB 3.0 Micro-B connector); connection to built-in USB port is recommended
HDMI output	Type C HDMI connector
Audio input	Stereo mini-pin jack (3.5-mm diameter; plug-in power supported)
Audio output	Stereo mini-pin jack (3.5-mm diameter)
Ten-pin remote terminal	Can be used to connect optional remote control, WR-R10 (requires WR-A10 WR Adapter) or WR-1 Wireless Remote Controller, GP-1/GP-1A GPS Unit or GPS device compliant with NMEA0183 version 2.01 or 3.01 (requires MC-35 GPS Adapter Cord and cable with D-sub 9-pin connector)
Wireless standards	IEEE 802.11b, IEEE 802.11g
Authentication	Open system, WPA2-PSK
Bluetooth communication protocols	Bluetooth Specification Version 4.1
NFC operation	NFC Forum Type 3 Tag
Supported languages	Arabic, Bengali, Bulgarian, Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Marathi, Norwegian, Persian, Polish, Portuguese (Portugal and Brazil), Romanian, Russian, Serbian, Spanish, Swedish, Tamil, Telugu, Thai, Turkish, Ukrainian, Vietnamese
Battery	One EN-EL15 Rechargeable Li-ion Battery
Battery pack	Optional MB-D17 Multi-Power Battery Pack with one EN-EL18a or EN-EL18 Rechargeable Li-ion Battery (available separately), one EN-EL15 Rechargeable Li-ion Battery or eight R6/AA-size alkaline, Ni-MH or lithium batteries; a BL-5 Battery Chamber Cover is required when using EN-EL18a or EN-EL18 battery
AC adapter	EH-5b AC Adapter; requires EP-5B Power Connector (available separately)
Tripod socket	1/4 in. (ISO 1222)
Dimensions (W × H × D)	Approx. 147 × 115 × 81 mm/5.8 × 4.6 × 3.2 in.
Weight	Approx. 860 g/1 lb 14.4 oz with battery and XQD memory card but without body cap; approx. 760 g/1 lb 10.9 oz (camera body only)
Operating environment	Temperature: 0 to 40°C/32 to 104°F; humidity: 85% or less (no condensation)
Supplied accessories (may differ by country or area)	EN-EL15 Rechargeable Li-ion Battery, MH-25a Battery Charger, DK-17F Fluorine-Coated Finder Eyepiece, UC-E22 USB Cable, USB Cable Clip, HDMI Cable Clip, AN-DC17 Camera Strap, BF-1B Body Cap