

Tech Specs

Type

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. 1.5x that of lenses with FX format angle of view

Image sensor format

DX

Image sensor type

CMOS

Sensor size

23.5 mm x 15.7 mm

Total pixels

21.51 million

Dust-reduction system

Image sensor cleaning, Image Dust Off reference data (Capture NX-D software required)

Effective pixels

20.9 million

Image size (pixels)

DX (24x16) image area (L) 5568 x 3712 (20.6 million) (M) 4176 x 2784 (11.6 million) (S) 2784 x 1856 (5.1 million) 1.3x (18x12) image area (L) 4272 x 2848 (12.1 million) (M) 3200 x 2136 (6.8 million) (S) 2128 x 1424 (3 million)

Photographs with image area of DX taken during movie recording (L) 5568 x 3128 (17.4 million) (M) 4176 x 2344 (9.7 million) (S) 2784 x 1560 (4.3 million)

Photographs with image area of 1.3X taken during movie recording (L) 4272 x 2400 (10.2 million) (M) 3200 x 1800 (5.7 million) (S) 2128 x 1192 (2.5 million)

Photographs taken during movie recording at a frame size of 3840 x 2160: 3840 x 2160 (8.2 million)

File format

NEF (RAW): 12 or 14 bit, lossless compressed or compressed 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

Auto, Standard, Neutral, Vivid, Monochrome, Portrait, Landscape, Flat ; selected Picture Control can be modified; storage for custom Picture Controls

Media

SD, SDHC (UHS-I compliant), SDXC (UHS-I compliant)

File system

DCF 2.0, Exif 2.31, PictBridge

Viewfinder

Eye-level pentaprism single-lens reflex viewfinder

Frame coverage

DX (24x16) image area: Approx. 100% horizontal and 100% vertical 1.3x (18x12)
image area: Approx. 97% horizontal and 97% vertical

Magnification

Approx. 0.94x (50 mm f/1.4 lens at infinity, -1.0 m(*1))

Eyepoint

18.5mm (-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

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 AI-P NIKKOR lenses and non-CPU AI lenses (M mode only). IX NIKKOR lenses, lenses for the F3AF, and non-AI lenses can not be used. The electronic rangefinder can be used with lenses that have a maximum aperture of f/5.6 or faster (the electronic rangefinder supports the center 1 focus point with lenses that have a maximum aperture of f/8 or faster).

Type

Electronically-controlled vertical-travel focal-plane mechanical shutter; electronic front-curtain shutter available in mirror up release mode

Speed

1/8000 to 30 s in steps of 1/3 or 1/2 EV, bulb, time, X250

Flash sync speed

X=1/250 s; synchronizes with shutter at 1/320 s or slower (flash range drops at speeds between 1/250 and 1/320 s)

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

Up to 8 fps • CL: 1 to 7 fps • CH: 8 fps Note: Frame rates assume continuous-servo AF, manual or shutter-priority auto exposure, a shutter speed of 1/250 s or faster, Release selected for Custom Setting a1 (AF-C priority selection), and other settings at default values.

Self-timer

2 s, 5 s, 10 s, 20 s; 1 to 9 exposures at intervals of 0.5, 1, 2, or 3 s

Remote control modes

Delayed remote, quick-response remote, remote mirror-up

Metering system

TTL exposure metering using RGB sensor with approximately 180K (180,000) pixels

Metering mode

Matrix: 3D color matrix metering III (type G, E, and D lenses); color matrix metering III (other CPU lenses) Center-weighted: Weight of approximately 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 circle with diameter of about 3.5 mm (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

Range

(ISO 100, f/1.4 lens, 20 °C/68 °F) Matrix, center-weighted, or highlight-weighted metering: 0 to 20 EV Spot metering: 2 to 20 EV

Exposure meter coupling

CPU

Mode

Auto modes (auto; auto, flash off); scene modes (portrait; landscape; child; sports; close up; night portrait; night landscape; party/indoor; beach/snow; sunset; dusk/dawn; pet portrait; candlelight; blossom; autumn colors; food); special effects modes (night vision; super vivid; pop; photo illustration; toy camera effect; miniature effect; selective color; silhouette; high key; low key); programmed auto with flexible program (P); shutter-priority auto (S); aperture-priority auto (A); manual (M); U1 (user settings 1); U2 (user settings 2)

Exposure compensation

Can be adjusted by –5 to +5 EV in steps of 1/3 or 1/2 EV in P, S, A, M, SCENE, and EFFECTS modes

Exposure lock

Luminosity locked at detected value

ISO sensitivity (Recommended Exposure Index)

ISO 100 to 51200 in steps of 1/3 or 1/2 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

Can be selected from Auto, Extra high, High, Normal, Low, or Off

Autofocus system

Nikon Advanced Multi-CAM 3500 II autofocus sensor module with TTL phase detection, fine-tuning, 51 focus points (including 15 cross-type sensors; f/8 supported by 1 sensor), and AF-assist illuminator (range approx. 0.5 to 3 m/1 ft 8 in. to 9 ft 10 in.)

Detection range

-3 to +19 EV (ISO 100, 20 °C/68 °F)

Lens servo

Continuous-servo AF (AF-C), Auto AF-S/AF-C selection (AF-A) , predictive focus tracking activated automatically according to subject status Manual focus (M): Electronic rangefinder can be used

Focus point

51 Can be selected from 51 or 11 focus points

AF-area mode

Single-point AF; 9-, 21-, or 51-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 AE-L/AF-L button

Built-in flash

Auto, portrait, child, close up, night portrait, party/indoor, pet portrait, super vivid, pop, photo illustration, toy camera effect: Auto flash with auto pop-up P, S, A, M, food: Manual pop-up with button release

Guide number

Approx. 12/39, 12/39 with manual flash (m/ft, ISO 100, 20 °C/68 °F)

Control

TTL: i-TTL flash control using RGB sensor with approximately 180K (180,000) pixels is available with built-in flash; 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

Mode

Auto, auto with red-eye reduction, auto slow sync, auto slow sync with red-eye reduction, fill-flash, red-eye reduction, slow sync, slow sync with red-eye reduction, rear-curtain with slow sync, rear-curtain sync, off; Auto FP High-Speed Sync supported

Flash compensation

-3 to +1 EV in steps of 1/3 or 1/2 EV

Flash-ready indicator

Lights when built-in flash or 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, radio-controlled Advanced Wireless Lighting, optical Advanced Wireless Lighting, modeling illumination, FV lock, Color Information Communication, Auto FP High-Speed Sync, AF-assist for multi-area AF

Sync terminal

AS-15 sync terminal adapter (available separately)

White balance

Auto (2 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 10,000 K), all with fine-tuning

Bracketing types

Exposure, Flash, White balance, ADL

Modes

Photo live view, Movie live view

Lens servo

Autofocus (AF): Single-servo AF (AF-S); full-time servo AF (AF-F) Manual focus (M)

AF-area mode

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)

Metering system

TTL exposure metering using main image sensor

Metering mode

Matrix, center-weighted, or highlight-weighted

Frame size (pixels) and frame rate

3840 x 2160 (4K UHD); 30p (progressive), 25p, 24p 1920 x 1080; 60p, 50p, 30p, 25p, 24p 1280 x 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 sizes except 3840 x 2160

File format

MOV, MP4

Video compression

H.264/MPEG-4 Advanced Video Coding

Audio recording format

Linear PCM, AAC

Audio recording device

Built-in stereo or external microphone; sensitivity adjustable

ISO sensitivity (Recommended Exposure Index)

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 or 1/2 EV) with additional options available equivalent to approximately 0.3, 0.5, 0.7, 1, 2, 3, 4, or 5 EV (ISO 1640000 equivalent) above ISO 51200 Modes P, S, and A: Auto ISO sensitivity control (ISO 100 to Hi 5) with selectable upper limit Night vision (EFFECT) mode: Auto ISO sensitivity control (ISO 100 to Hi 5) Other modes: Auto ISO sensitivity control (ISO 100 to 12800)

Active D-Lighting

Can be selected from Same as photo settings, Extra high, High, Normal, Low, or Off

Other options

Index marking, time-lapse movies, electronic vibration reduction

Monitor size

8 cm (3.2 –in.) diagonal

Monitor type

tilting TFT touch-sensitive LCD with 170° viewing angle, approximately 100% frame coverage, manual monitor brightness control, and an eye-sensor controlling display on/off

Monitor resolution

Approx. 922 k-dot (VGA)

Playback

Full-frame and thumbnail (4, 9, or 72 images or calendar) playback with playback zoom, playback zoom cropping, movie playback, photo and/or movie slide shows, histogram display, highlights, photo information, location data display, picture rating, and auto image rotation

USB connector

Hi-Speed USB with Micro-B connector; connection to built-in USB port is recommended

HDMI output connector

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)

Accessory terminal

Wireless remote controllers: WR-1, WR-R10 (available separately) Remote cord: MC-DC2 (available separately) GPS unit: GP-1/GP-1A (available separately)

Standards

IEEE 802.11b, IEEE 802.11g

Operating frequency

2412 to 2462 MHz (channels 1 to 11)

Maximum output power

8.4 dBm (EIRP)

Security

Authentication: Open system, WPA2-PSK

Communication protocols

Bluetooth Specification Version 4.1

Range (line of sight)

Approximately 10 m (32 ft) without interference; range may vary with signal strength and presence or absence of obstacles

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-EL15a rechargeable Li-ion battery

AC adapter

EH-5c AC adapter; requires EP-5B power connector (available separately)

Tripod socket

1/4-in. (ISO 1222)

Dimensions (W x H x D)

Approx. 135.5 x 104 x 72.5 mm (5.4 x 4.1 x 2.9 in.)

Weight

Approx. 720 g (1 lb 9.4 oz) with battery and memory card but without body cap;
approx. 640 g (1 lb 6.6 oz; camera body only)

Operating environment

Temperature: 0 °C to 40 °C (+32 °F to 104 °F) Humidity: 85% or less (no condensation)

Supplied accessories

DK-28 Rubber Eyecup, BF-1B Body Cap, EN-EL15a Rechargeable Li-ion Battery with terminal cover, MH-25a Battery Charger (comes with either an AC wall adapter or power cable of a type and shape that varies with the country or region of sale), DK-5 Eyepiece Cap, AN-DC3 BK Strap, E20 USB Cable

