Nikon Digital SLR Camera D3100 Specifications

Type
- Single-lens reflex digital camera

Flash control
- TTL: i-TTL balanced fill-flash and standard i-TTL flash for digital SLR using 420-pixel RGB sensor are available with built-in flash and SB-900, SB-800, SB-600, or SB-400 (i-TTL balanced fill-flash is available when matrix or center-weighted metering is selected).

Effective angle of view
- Approx. 1.5 x lens focal length (Nikon DX format)

Effective pixels
- 14.2 million

SB-50DX is fully charged; blinks for 3 s after flash is fired at full output

Accessory shoe
- ISO 518 hot-shoe with sync and data contacts and safety lock

Advanced Wireless Lighting supported with SB-900, SB-800, or SU-800 as commander; Flash Color Information Communication supported with built-in flash and all CLS-compatible flash units

Image sensor
- 23.1 x 15.4 mm CMOS sensor

Total pixels
- 14.8 million

Dust-reduction system
- Image sensor cleaning, Airflow Control System, Image Dust Off reference data (optional Capture NX 2 software)

Storage

- Image size (pixels)
  - 4,608 x 3,072 [L]
  - 3,456 x 2,304 [M]
  - 2,304 x 1,536 [S]

White balance

- File format
  - NEF (RAW)
  - JPEG: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8), or basic (approx. 1:16)

Picture Control System
- Standard, Neutral, Vivid, Monochrome, Portrait, Landscape; selected Picture Control can be modified

Media
- SD (Secure Digital), SDHC and SDXC memory cards

Live View

- 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)

Scene Auto Selector
- Available in auto and auto (flash off) modes

Frame coverage
- Approx. 95% horizontal and 95% vertical

Movie

- Metering
  - TTL exposure metering using main image sensor

- Metering method
  - Matrix

- Frame size (pixels)

- Focusing screen
  - Type B BriteView Clear Matte Mark VII screen

- Maximum recording time
  - 10 min.

- File format
  - MOV

- Video compression
  - H.264/MPEG-4 Advanced Video Coding

- Audio recording format
  - Linear PCM

- Lens

- Compatible lenses
  - • AF-S and AF-I: All functions supported.
  - • lenses not supported.
  - • Other AF NIKKOR: All functions supported except autofocus and 3D color matrix metering II. Lenses without a CPU or other CPU lenses (G and D) are supported with automatic exposure, but the exposure meter does not function.

- Note: Electronic rangefinder can be used if lens has a maximum aperture of f/5.6 or faster.

- LCD monitor
  - 3-in., approx. 230 k-dot TFT LCD with brightness adjustment

- Playback

- Histogram display, highlights, auto image rotation, and image comment (up to 36 characters)

- Interface

- USB
  - Hi-Speed USB

- Flash sync speed
  - X=1/200 s; synchronizes with shutter at 1/200 s or slower

- Video output
  - NTSC, PAL

- Tripod socket
  - 1/4 in. (ISO 1222)

- Battery

- One Rechargeable Li-ion Battery EN-EL14

- Battery charger
  - MH-24

- Eyepiece Cap
  - DK-5

- Rubber eyecap
  - DK-20

- Camera strap
  - AN-DC3

- Accessory shoe cover
  - BS-1

- Body cap
  - BF-1B

- ViewNX 2 CD-ROM

- Ferrite Core (2 types)

- Supported languages

- Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Turkish

- Metering method
  - • Matrix or center-weighted metering: 0 to 20 EV
  - • Spot metering: 2 to 20 EV

- Exposure meter coupling
- CPU

- Exposure modes
- Auto modes (auto, auto [flash off]); scene modes (portrait; landscape; child; sports; close up; night portrait);

- Exposure compensation
- -5 to +5 EV in increments of 1/3 EV

- Exposure lock
- Luminosity locked at detected value with AE-L/AF-L button

- Dimensions / weight

- ISO sensitivity

- (Recommended Exposure Index)
  - approx. 2 EV above ISO 3200 (ISO 12800 equivalent); auto ISO sensitivity control available

- Operating environment

- Focus

- Autofocus
  - Nikon Multi-CAM 1000 autofocus sensor module with TTL phase detection, 11 focus points (including one cross-type sensor), and AF-assist illuminator (range approx. 1 ft. 8 in. to 9 ft. 10 in.)

- Detection range
  - -1 to +19 EV (ISO 100, 68°F/20°C)

- Manual focus
  - • Lens servo
    - • Autofocus (AF): Single-servo AF (AF-S); continuous-servo AF (AF-C); auto AF-S/AF-C selection (AF-A); (may differ by country or area)
    - • Manual focus (MF): Electronic rangefinder can be used

- Focus point
  - Can be selected from 11 focus points

- AF-area mode
  - Single-point AF, dynamic-area AF, auto-area AF, 3D-tracking (11 points)

- Focus lock
  - Focus can be locked by pressing shutter-release button halfway (single-servo AF) or by pressing AE-L/AF-L

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WARNING
TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT. SOME DOCUMENTATION IS SUPPLIED ON CD-ROM ONLY.
A moving experience in digital photography that everyone can enjoy.

Easily capture the beauty of life’s fleeting moments with the new D3100. A feature-rich digital SLR camera that surprises you with simplicity, and positively delights with superb results. Whether shooting casual snapshots, a delicately composed still life or full HD movies, you’ll love the ease with which D3100 does it all.
The camera that amazes.
Shoot with D3100 and enjoy the beauty.

**Softly defocused backgrounds that only a D-SLR can produce**

- **DX-format, 14.2 effective megapixel CMOS image sensor**
  
  Nikon equipped D3100 with a newly developed CMOS sensor for outstanding subject detail and smooth color gradation. Whether shooting photos or full HD movies, the sensor is crucial to image quality. The high pixel count of D3100’s sensor produces photos of striking clarity, revealing all the nuances of the original scene with minimum noise — ideal for intricately detailed textures and grain-free background defocus.

**Faithful color reproduction and smooth, beautiful gradations**

- **EXPEED 2 — Nikon’s new image processing engine**
  
  Welcome to a new level of excellence with EXPEED 2. We’ve leveraged our vast technological know-how to bring you Nikon’s most advanced image processing engine yet. EXPEED 2 maximizes CMOS sensor performance for clear, noise-free images that exhibit vivid colors, reduced noise and smooth tonal gradations for outstanding photos and movies.

**Great performance and less blur in dimly lit settings**

- **ISO sensitivity 100-3200 (expandable to ISO 12800 equivalent)**
  
  A maximum ISO of 3200 (standard range) lets you shoot at fast shutter speeds, reducing camera-shake blur in dimly lit scenes. Twilight and indoor shots come alive with a refreshingly natural look without the need for a tripod or flash. Moreover, fast shutter speeds make it easy to freeze action in dynamic situations such as children at play and sports events. For added versatility, D3100’s Hi 1 and Hi 2 settings effectively boost ISO to the equivalent of 6400 and 12800, respectively.
The camera that teaches you how... Let D3100 satisfy your dreams of better photos.

Guide Mode – The sure way to obtain desired results

An enchanting portrait against a softly defocused background, or a radiant couple surrounded by sparkling lights. Taking photos like these is easy with D3100’s Guide Mode — in-camera guidance that shows you step-by-step how to change camera settings. Just select a Guide Mode setting that matches the scene then let Guide Mode assist. Not only will you obtain the desired results, you’ll understand how you achieved them. Guide Mode even displays sample photos so you’ll know what to expect from each setting.

**Easy operation**
- Auto
- Close-ups
- Landscapes
- No flash
- Sleeping faces
- Portraits
- Distant subjects
- Moving subjects
- Night portrait

**Advanced operation**
- Soften backgrounds
- Freeze motion (people)
- Show water flowing
- Bring more into focus
- Freeze motion (vehicles)

**Shoot**
- Use the viewfinder
- Use live view
- Shoot movies

**Select**

**Effortless Shooting**

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**Shoot**
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The joy of simplicity.  
Shooting great photos and full HD movies was never so easy.

New AF modes capture moving subjects

- **Live View with new AF modes and large 3-in. monitor**
  
  Live View gives you an intuitive, familiar way to photograph playful pets or children on the move. Just flip a switch and you're ready to go. When Live View is activated and new Full-time-servo AF (AF-F) is selected, the camera keeps subjects in focus without having to press the shutter-release button—convenient for photos and movies. There is also new Face-priority AF that looks for faces, even on people not directly facing the camera. Live View makes D3100 easy to use as a compact camera.

- **Full-time-servo AF (AF-F) NEW**
  
  Autofocus automatically begins after Live View is activated, tracking the subject continuously without having to press the shutter-release button. Note: When shooting movies, noise from the lens motor may be recorded.

- **Face-priority AF**
  
  The camera can recognize up to 35 faces at a time, then focus on the face that is determined to be nearest. Even if people in the frame move, the camera continues tracking and focusing.

Letting D3100 decide the best mode to match the scene

- **Scene Auto Selector**
  
  D3100 automatically selects the Scene Mode that matches the shooting situation and subject. During Live View shooting with the Mode dial on Auto or Auto (flash off), Scene Auto Selector automatically activates Portrait, Landscape, Close-up or Night portrait modes depending on the scene. For added convenience, an icon appears in the top-left corner of the LCD monitor that shows the selected mode.

- **D-Movie – Full high-definition quality NEW**
  
  Discover the difference a digital SLR makes when shooting movies. A wide selection of NIKKOR lenses gives you freedom to explore different angles and obtain lovely defocused backgrounds while D3100's advanced imaging system assures outstanding quality. And for action sequences, new Subject-tracking AF keeps subjects properly focused. After the shot, view movies on the large 3-in. LCD monitor and perform simple editing tasks like trimming scenes before or after a designated point and extracting still images. HDMI compatibility lets you connect D3100 to an HDTV with playback managed by the TV's remote control.

- **Large 3-in. monitor**
  
  Lens: AF-S DX NIKKOR 18-55mm f/3.5-5.6G VR  • Exposure: Sports mode, 1/500 second, f/5.3  • White balance: Auto  • ISO sensitivity: Auto (900)  • Picture Control: Standard

High-quality full HD movies and still images can be exported in MOV.
Nikon technology. The key to effortless shooting and satisfying results.

Quick, accurate autofocus ready for the decisive moment

**11-point AF system**

D3100’s precision high-speed autofocus responds immediately to changes in scene or composition, maintaining tack-sharp focus to capture fleeting expressions and fast-moving sports. The all-important central focus point features a cross-type sensor while the new superimposed display achieves a clear, undistracted viewfinder. Various autofocus modes cover nearly any situation, including auto-area AF that automatically selects the subject on which to focus, and 3D-tracking* that maintains focus on a subject regardless of changes in composition as long as the shutter-release button is pressed halfway.

Intelligent operation in any setting

**Scene Recognition System**

Nikon’s exclusive Scene Recognition System utilizes a 420-pixel RGB sensor to analyze a composition immediately before you take the shot. It then automatically optimizes exposure, autofocus, and white balance, allowing you to obtain beautiful photos without the hassle of making complicated camera adjustments yourself. Face detection also benefits from Scene Recognition System, exhibiting improved recognition accuracy and definition as well as enabling instant zoom-to-face in playback mode.

Beautiful balancing of light and shade

**Active D-Lighting**

Shooting in bright sunlight often produces pictures with extreme contrast between light and dark areas, resulting in loss of tone and detail. Active D-Lighting effectively combats this by preserving important details in shadows and highlights. The results are optimally exposed photos that better reflect the scene as you saw it.

Customizing images before the shot

**Picture Control**

Expand creative expression with Picture Control. Six settings — Standard, Neutral, Vivid, Monochrome, Portrait and Landscape — let you determine the look of photos and full HD movies before you shoot. In addition, sharpness, contrast, brightness and saturation can be adjusted to customize settings.

In-camera image and movie editing

**Ample image and movie editing functions**

Heighten your photographic enjoyment with D3100’s wide range of image and movie editing functions. Operations like Red-eye correction, Quick retouch, and Filter effects can be done in-camera, eliminating the need for a PC and enhancing convenience. You can also extract still images from movies and trim unnecessary frames.

* When autofocus is set to AF-A or AF-C.
Easy operation and take-anywhere portability

- Compact and lightweight
  At only approx. 1 lb. 1.6 oz.*, the compact and lightweight D3100 goes where you go. And it’s so easy to use thanks to the ergonomic grip that simplifies shooting, both in horizontal and vertical positions. New dedicated controls for frequently used functions like Live View, D-Movie and shutter release modes further enhance ease of use.
  * With battery and memory card but without body cap.

Additional light whenever needed

- Built-in pop-up flash
  When the light gets low or you find yourself shooting in tricky backlighting, use the built-in pop-up flash to brighten the scene. It activates automatically when needed depending on exposure mode*, or can be enabled manually. In addition, support for i-TTL flash control increases exposure accuracy.

Prevent dust from ruining photos

- Nikon Integrated Dust Reduction System
  D3100 is equipped with Nikon’s Integrated Dust Reduction System. This solution includes a special Airflow Control System that redirects dust away from the low-pass filter located in front of the image sensor. Additionally, when powering the camera on or off, the filter automatically vibrates at precise frequencies to release image-degrading dust that may adhere to it.

View photos with striking special effects

- Image playback with transitions
  Choose from a series of special transitions when viewing photos. For slideshows, enjoy interesting effects like Zoom/Hide and Cube. When viewing photos individually, you can amplify Slides in and Zoom/Hide. In addition, the large, bright LCD monitor makes playback a joy.

NIKKOR lenses. The right choice for amazing photos and full HD movies.

More ways to see the wonders of the world

- High-performance NIKKOR lenses
  Approx. 5x telephoto zoom lens with VR — Capture faces from afar

  55 mm

  200 mm

  300 mm

  35 mm prime lens — For softly defocused backgrounds

  AF-S DX NIKKOR 35mm f/1.8G

  85 mm micro lens — Easy hand-held macro photography

  AF-S DX Micro NIKKOR 85mm f/3.5G ED VR

Less camera-shake blur in images and viewfinder

- Nikon’s original VR system
  NIKKOR VR lenses reduce* blur in photos and full HD movies caused by camera-shakes that often occurs when shooting at slow shutter speeds, such as in dimly lit environments or when using macro or telephoto lenses. Unlike in-camera image stabilization systems, Nikon’s VR is in the lens, which allows it to correct blur in the viewfinder thereby aiding composition and focusing since the image remains stable.

* VR allows shooting handheld up to three stops slower. Four image samples with VR II or VR allows using non-VR lenses, based on Nikon measurements. Amount of correction varies depending on shooting conditions and photographer.
Smart image management with a PC

- **ViewNX 2 software — Your imaging toolbox (bundled)**

  ViewNX 2 is the convenient way to manage images, providing functions for storing, browsing, editing and sharing photos as well as movies. You can also attach labels to images to facilitate searches. This bundled software offers a wide range of editing functions, including rotate, re-size, crop, straighten, auto red-eye correction and more. Movie editing functions include the ability to delete scenes. ViewNX 2 integrates seamlessly with my Picturetown for simple, drag-and-drop uploads and online browsing.

Intuitive operation for the finishing touch

- **Capture NX 2 software — Expanded creative control (sold separately)**

  Capture NX 2’s easy-to-learn editing tools unlock image potential without degrading original image quality. This software is ideal for optimizing Nikon NEF (RAW) files as well as JPEG and TIFF images. With award-winning U Point® technology, tedious editing procedures are easier than ever.

  [http://www.capturenx.com](http://www.capturenx.com)

Share photos and movies on the web

- **my Picturetown — Free image sharing and storage**

  Nikon’s own image sharing website allows you to easily store, manage and share images with family and friends worldwide. Membership is free and permits storage of up to 2 GB of photos and/or movies. (Pay an additional fee and get up to 200 GB of storage). The service supports MOV and AVI movie files in addition to JPEG and RAW (NEF/NRW) still image files. Heighten your photographic enjoyment with my Picturetown!

  [http://my.picturtown.com](http://my.picturtown.com)

Memory card capacity**

The following table shows the approximate number of pictures that can be stored on a 4 GB SanDisk Extreme SDHC card at different image quality and size settings.

<table>
<thead>
<tr>
<th>Memory Card Capacity</th>
<th>NEF (RAW)</th>
<th>NEF (RAW) + JPEG</th>
<th>JPEG basic</th>
<th>JPEG fine</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 GB</td>
<td>512 MB</td>
<td>1024 MB</td>
<td>2048 MB</td>
<td>4096 MB</td>
</tr>
<tr>
<td>8 GB</td>
<td>1024 MB</td>
<td>2048 MB</td>
<td>4096 MB</td>
<td>8192 MB</td>
</tr>
<tr>
<td>16 GB</td>
<td>2048 MB</td>
<td>4096 MB</td>
<td>8192 MB</td>
<td>16384 MB</td>
</tr>
<tr>
<td>32 GB</td>
<td>4096 MB</td>
<td>8192 MB</td>
<td>16384 MB</td>
<td>32768 MB</td>
</tr>
</tbody>
</table>

- **Approved memory cards**

  The following SD memory cards have been tested and approved for use in the D3100. Cards with Class 6 write speeds are recommended for movie recording. Recording may end unexpectedly when cards with slower write speeds are used.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Card Size</th>
<th>Class 6 Write Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panasonic</td>
<td>4 GB</td>
<td>66 MB/s</td>
</tr>
<tr>
<td>Lexar</td>
<td>8 GB</td>
<td>100 MB/s</td>
</tr>
<tr>
<td>SanDisk</td>
<td>16 GB</td>
<td>133 MB/s</td>
</tr>
<tr>
<td>Sony</td>
<td>32 GB</td>
<td>200 MB/s</td>
</tr>
<tr>
<td>Kingston</td>
<td>64 GB</td>
<td>300 MB/s</td>
</tr>
<tr>
<td>MicroSD</td>
<td>128 GB</td>
<td>350 MB/s</td>
</tr>
</tbody>
</table>

- **CIPA standards**

  Based on CIPA standards.

- **Notifications**

  * Check that any card readers or other devices with which the card will be used support 2 GB cards.
  * Check that any card readers or other devices with which the card will be used are SDHC-compliant.
  * Check that any card readers or other devices with which the card will be used are SDXC-compliant.

- **Notes**

  * All figures are approximate. File size varies with scene recorded.
  * Drops when noise reduction is on.
  * Cards with Class 6 write speeds are recommended for movie recording. Recording may end unexpectedly when cards with slower write speeds are used.

- **Contact Nikon Customer Service for additional information.**

  - Long-lasting lithium-ion battery included
  - Includes rechargeable Li-ion Battery EN-EL14 included up to 38 minutes of charge time in standard charge mode. 1 hour and 20 minutes in high capacity charge mode
  - Includes rechargeable Li-ion Battery EN-EL14 charged up to 38 minutes of charge time in standard charge mode. 1 hour and 20 minutes in high capacity charge mode
  - Battery受不了変換"原装 Nikon product" with additional color

- **One touch action buttons**

  - Shutter-release button
  - Power switch
  - AF-assist illuminator/Red-eye reduction lamp
  - Self-timer lamp
  - Mode dial
  - OK button
  - Playback button
  - Menu button
  - Thumbnail button
  - Playback zoom
  - Multi selector
  - Out button
  - Help button

- **The D3100 is exclusively designed for use with AF-S and AF-I NIKKOR lenses that are equipped with an autofocus motor.**

- **Note:** AF-assist illuminator is disabled with SB-400.