



## **D3100 with Lens 18-55mm KIT**

Nikon Corporation is pleased to announce the release of the Nikon D3100, an entry level Nikon DX-format digital-SLR camera. The camera is equipped with a new CMOS image sensor developed by Nikon and a new image-processing engine that enable capture of high-definition images exhibiting superior image quality, and a Guide mode that allows users to capture images just as they intended.

### **D3100 with AF-S DX NIKKOR 18-55mm f/3.5-5.6G VR**

The number of people advancing from a compact digital camera to a digital-SLR camera for better quality images and a more authentic photography experience has been increasing in recent years. However, many have indicated that digital-SLR cameras are difficult to master. To respond to this concern of users advancing to a digital-SLR camera, Nikon began equipping its entry level digital-SLR cameras with a Guide mode that displays instructions for the most basic camera operations for shooting, image playback and editing and the application of camera settings, in the camera monitor. The first camera to be equipped with Guide mode was the Nikon D3000 released in August 2009. This function has proven to be very popular with users.

A new DX-format CMOS image sensor developed by Nikon and the new image-processing engine, EXPEED 2, have been adopted for the new D3100, enabling capture of images exhibiting excellent image quality and definition. The D3100 has also inherited Guide mode from the D3000, with the addition of more options and assist images that make the camera easier to understand and operate. The D3100 is also equipped with a live view function that allows the user to frame images in the monitor, and the D-Movie function that provides support for high-definition movie recording. While the D3100 offers authentic digital-SLR camera performance, it is also an extremely lightweight digital-SLR camera from which even beginners can expect beautiful images that accurately reflect their shooting intent.

## **Major Features of the Nikon D3100**

### **A new DX-format CMOS image sensor and image-processing engine, EXPEED 2, both developed by Nikon enable capture of high-definition images with superior image quality**

The D3100 is equipped with a new Nikon DX-format CMOS image sensor and a new image-processing engine, EXPEED 2, both developed by Nikon. The CMOS image sensor offers an effective pixel count of

14.2-million pixels (D3000: CCD image sensor with 10.2-million effective pixels) and enables capture of high-definition images exhibiting superior image quality with extremely detailed rendering and rich tones. The camera also makes the most of its standard sensitivity settings up to ISO 3200 (D3000: ISO 100–1600) and additional increases up to HI 2 (ISO 12800 equivalent), with shooting under dim lighting, such as in the evening or indoors, as well as with sports scenes of rapidly moving subjects.

EXPEED 2 is Nikon's new image-processing engine, developed by refining the concepts, know-how and technologies regarding digital images that Nikon has spent years cultivating. It maximizes the performance of the CMOS image sensor to suppress noise in still images and movies and produces images that faithfully reproduce vivid colors.

### **A refined Guide mode that is even easier to use**

Guide mode has been refined to make most camera operations even easier, from shooting to image playback and editing to the application of camera settings, regardless of the user's skill level.

### **Assist images**

The D3100 displays assist images that show the effect of various camera settings, giving users an idea of the results they can expect with specified settings. For example, when "Soften backgrounds" is selected and an aperture value is specified, the assist image displayed in the monitor changes to show the effect that aperture setting will have on images. This allows users to confirm that images will appear as they intended prior to shooting and reduces the number of unsuccessful shots.

### **Other new functions built into Guide mode**

- (1) Selection from 3 shooting techniques: "Use the viewfinder," "Use live view," "Shoot movies"
- (2) "Bring more into focus" and "Show water flowing" options have been added to the "Advanced operation" menu for shooting
- (3) "Movie settings," "HDMI," "Flicker reduction" and "Eye-Fi upload"\* options have been added to the "Set Up" menu for applying basic camera settings"

\*:Only available when compatible Eye-Fi memory card is inserted

### **Live view mode that allows users to use the camera monitor to easily frame still image or movies**

By simply rotating the live view switch, the view through the lens is displayed in the monitor, enabling immediate live view recording. This makes shooting feel more like shooting with a compact digital camera, easing the transition to digital-SLR for beginners. In addition, various information such as the shooting mode, time remaining (movie mode) and battery indicator, can be shown in the live view display.

### **D-Movie for recording and editing full-HD movies and AF-F (full-time servo AF) focus mode for movie recording**

The D3100 is equipped with the D-Movie function that enables recording of high-definition movies (with monaural sound) by simply pressing the movie-record button. Movies can be recorded with the same aperture and other settings applied in Guide mode, and movies that take full advantage of the characteristics of individual interchangeable lenses, whether wide-angle, telephoto or fisheye, can be recorded for movies that are only possible with a digital-SLR camera. In addition, the camera also offers an AF-F (full-time servo AF) focus mode for movie recording. When AF-F mode is enabled, the camera focuses continuously during movie recording without the need for holding the shutter-release button down halfway. The D3100 also offers in-camera movie editing functions that allow users to save a single frame as a still image or delete unnecessary portions from the beginning or end of movie files.

### **Scene auto selector built in**

The D3100 is equipped with the scene auto selector function. When live view mode is enabled in Auto or Auto (flash off) mode, the camera automatically analyzes the scene and selects the appropriate shooting mode from Portrait, Landscape, Close up or Night portrait.\* This function allows users achieve the intended images while leaving all settings up to the camera.

\*:Scene auto selector is disabled with manual focusing.

### Other functions and features new to the D3100

- Equipped with a face detection function capable of detecting up to 35 human faces (D3000-D5000 : up to 5 faces (Revised on August 24, 2010))
- Operation has been improved with the addition of an independent movie-record button and release-mode selector. In addition, the rubber grip provides a better fit.
- Equipped with a Consumer Electronics Control (CEC) bus that enables remote control playback of images and movies recorded with the camera when the camera is connected to a high-definition TV
- Equipped with a new exposure compensation algorithm for greater flexibility and performance with NEF (RAW) processing
- The new ViewNX 2 software is bundled with the D3100

## Supplied Accessories With Nikon D3100 DSLR

- Rechargeable Li-ion Battery EN-EL14
- Quick Charger MH-24
- Camera Strap
- Software Suite CD-ROM

<b>Technical Specifications</b>	<b>Nikon D3100 DSLR</b>
<b>Type</b>	
Type	Single-lens reflex digital camera
Lens mount	Nikon F mount (with AF contacts)
Effective angle of view	Approx. 1.5 x lens focal length (Nikon DX format)
<b>Effective pixels</b>	
Effective pixels	14.2 million
<b>Image sensor</b>	
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 required)
<b>Storage</b>	
Image size (pixels)	• 4,608 x 3,072 [L] • 3,456 x 2,304 [M] • 2,304 x 1,536 [S]
File format	• NEF (RAW) • JPEG: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8), or basic (approx. 1:16) compression • NEF (RAW) + JPEG: Single photograph recorded in both NEF (RAW) and JPEG formats
Picture Control System	Standard, Neutral, Vivid, Monochrome, Portrait, Landscape; selected Picture Control can be modified

Media	SD (Secure Digital), SDHC and SDXC memory cards
File system	DCF (Design Rule for Camera File System) 2.0, DPOF (Digital Print Order Format), Exif 2.21 (Exchangeable Image File Format for Digital Still Cameras), PictBridge
<b>Viewfinder</b>	
Viewfinder	Eye-level pentamirror single-lens reflex viewfinder
Frame coverage	Approx. 95% horizontal and 95% vertical
Magnification	Approx. 0.8 x (50 mm f/1.4 lens at infinity, $-1.0 \text{ m}^{-1}$ )
Eyepoint	18 mm ( $-1.0 \text{ m}^{-1}$ )
Diopter adjustment	$-1.7$ to $+0.5 \text{ m}^{-1}$
Focusing screen	Type B BriteView Clear Matte Mark VII screen
Reflex mirror	Quick return
Lens aperture	Instant return, electronically controlled
<b>Lens</b>	
Compatible lenses	<ul style="list-style-type: none"> <li>• AF-S and AF-I: All functions supported.</li> <li>• Type G or D AF NIKKOR without built-in autofocus motor: All functions except autofocus supported. IX NIKKOR lenses not supported.</li> <li>• Other AF NIKKOR: All functions supported except autofocus and 3D color matrix metering II. Lenses for F3AF not supported.</li> <li>• Type D PC NIKKOR: All functions supported except autofocus and some shooting modes.</li> <li>• AI-P NIKKOR: All functions supported except autofocus and 3D color matrix metering II.</li> <li>• Non-CPU: Autofocus not supported. Can be used in exposure mode M, but exposure meter does not function.</li> </ul> <p>Note: Electronic rangefinder can be used if lens has a maximum aperture of f/5.6 or faster.</p>
<b>Shutter</b>	
Type	Electronically controlled vertical-travel focal-plane shutter
Speed	1/4000 to 30 s in steps of 1/3 EV, Bulb
Flash sync speed	X=1/200 s; synchronizes with shutter at 1/200 s or slower
<b>Release</b>	
Release mode	(single frame), (continuous), (self-timer), (quiet shutter release)
Frame advance rate	Up to 3 fps (manual focus, mode M or S, shutter speed 1/250 s or faster, and other settings at default values)
Self-timer	2 s, 10 s

<b>Exposure</b>	
Metering	TTL exposure metering using 420-pixel RGB sensor
Metering method	<ul style="list-style-type: none"> <li>• Matrix: 3D color matrix metering II (type G and D lenses); color matrix metering II (other CPU lenses)</li> <li>• Center-weighted: Weight of 75% given to 8-mm circle in center of frame</li> <li>• Spot: Meters 3.5-mm circle (about 2.5% of frame) centered on selected focus point</li> </ul>
Range (ISO 100, f/1.4 lens, 20°C/68°F)	<ul style="list-style-type: none"> <li>• Matrix or center-weighted metering: 0 to 20 EV</li> <li>• Spot metering: 2 to 20 EV</li> </ul>
Exposure meter coupling	CPU
Exposure modes	Auto modes (auto, auto [flash off]); scene modes (portrait; landscape; child; sports; close up; night portrait); 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 EV
Exposure lock	Luminosity locked at detected value with AE-L/AF-L button
ISO sensitivity (Recommended Exposure Index)	ISO 100 to 3200 in steps of 1 EV; can also be set to approx. 1 EV above ISO 3200 (ISO 6400 equivalent) or to approx. 2 EV above ISO 3200 (ISO 12800 equivalent); auto ISO sensitivity control available
Active D-Lighting	On, Off
<b>Focus</b>	
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. 0.5 to 3m/1 ft. 8 in. to 9 ft. 10 in.)
Detection range	-1 to +19 EV (ISO 100, 20°C/68°F)
Lens servo	<ul style="list-style-type: none"> <li>• Autofocus (AF): Single-servo AF (AF-S); continuous-servo AF (AF-C); auto AF-S/AF-C selection (AF-A); predictive focus tracking activated automatically according to subject status</li> <li>• Manual focus (MF): Electronic rangefinder can be used</li> </ul>
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 button
<b>Flash</b>	
Built-in flash	Auto, Portrait, Child, Close up, Night portrait: Auto flash with auto pop-up P, S, A, M: Manual pop-up with button release

Guide number	Approx. 12/39, 13/43 with manual flash (m/ft, ISO 100, 20°C/68°F)
Flash control	<ul style="list-style-type: none"> <li>• 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)</li> <li>• Auto aperture: Available with SB-900/SB-800 and CPU lens</li> <li>• Non-TTL auto: Supported flash units include SB-900, SB-800, SB-80DX, SB-28DX, SB-28, SB-27, and SB-22S</li> <li>• Distance-priority manual: Available with SB-900 and SB-800</li> </ul>
Flash mode	Auto, auto with red-eye reduction, fill-flash, auto slow sync, auto slow sync with red-eye correction, and rear curtain with slow sync
Flash compensation	-3 to +1 EV in increments of 1/3 EV
Flash-ready indicator	Lights when built-in flash or optional flash unit such as SB-900, SB-800, SB-600, SB-400, SB-80DX, SB-28DX, or 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
Nikon Creative Lighting System (CLS)	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
Sync terminal	Sync Terminal Adapter AS-15 (available separately)
<b>White balance</b>	
White balance	Auto, incandescent, fluorescent (7 types), direct sunlight, flash, cloudy, shade, preset manual, all except preset manual with fine tuning.
<b>Live View</b>	
Lens servo	<ul style="list-style-type: none"> <li>• Autofocus (AF): Single-servo AF (AF-S); full-time-servo AF (AF-F)</li> <li>• Manual focus (MF)</li> </ul>
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
<b>Movie</b>	
Metering	TTL exposure metering using main image sensor
Metering method	Matrix
Frame size (pixels) and frame rate	<ul style="list-style-type: none"> <li>• 1,920 x 1,080 (24p): 24 fps (23.976 fps)</li> <li>• 1,280 x 720 (30p): 30 fps (29.97 fps)</li> <li>• 1,280 x 720 (25p): 25 fps</li> <li>• 1,280 x 720 (24p): 24 fps (23.976 fps)</li> <li>• 640 x 424 (24p): 24 fps (23.976 fps)</li> </ul>
Maximum recording time	10 min.
File format	MOV

Video compression	H.264/MPEG-4 Advanced Video Coding
Audio recording format	Linear PCM
Audio recording device	Built-in monaural microphone
<b>Monitor</b>	
LCD monitor	7.5-cm/3-in., approx. 230 k-dot TFT LCD with brightness adjustment
<b>Playback</b>	
Playback function	Full-frame and thumbnail (4, 9, or 72 images or calendar) playback with playback zoom, movie playback, slide show, histogram display, highlights, auto image rotation, and image comment (up to 36 characters)
<b>Interface</b>	
USB	Hi-Speed USB
Video output	NTSC, PAL
HDMI output	Type C mini-pin HDMI connector
Accessory terminal	<ul style="list-style-type: none"> <li>• Remote cord: MC-DC2 (available separately)</li> <li>• GPS unit: GP-1 (available separately)</li> </ul>
<b>Supported languages</b>	
Supported languages	Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Turkish
<b>Power source</b>	
Battery	One Rechargeable Li-ion Battery EN-EL14
AC adapter	AC adapter EH-5a; requires power connector EP-5A (available separately)
<b>Tripod socket</b>	
Tripod socket	1/4 in. (ISO 1222)
<b>Dimensions / weight</b>	
Dimensions (W x H x D)	Approx. 124 x 96 x 74.5 mm (4.9 x 3.8 x 2.9 in.)
Weight	Approx. 455 g / 1lb. (camera body only); Approx. 505 g (1lb. 1.8 oz.) with battery and memory card but without body cap
<b>Operating environment</b>	
Temperature	0 to 40°C (32 to 104°F)
Humidity	Less than 85% (no condensation)