Nikon

One standard, one goal...
two solutions.

Professional Digital SLR Cameras

D1x/D1H

EISA AWARDS
PRO DIGITAL CAMERA 2001-2002
Nikon D1X

European Pro
Digital Camera of the Year
2001-2002

TIPA
TECHNICAL IMAGE PRESS ASSOCIATION

Best Digital SLR System
Camera in Europe
2000-2001

Expanding professional digital photo graphy with Nikon Total Image Quality.

D1x

— The high-definition, high-performance professional digital SLR —

D1H

— The high-speed, high-performance professional digital SLR —

It began in the autumn of 1999 with the original Nikon D1, the camera that forever changed the face of photography with its skillful blend of highly advanced digital technology and superb camera design. We call it “Digital-ness” and “Camera-ness”. Digital-ness addresses the practical needs to create an extremely fine image, while Camera-ness speaks to the photographers’ needs to handle a camera that responds to their instincts and technical requirements … making great pictures doesn’t happen by accident … Nikon’s combination of digital and camera handling design reveal an exceptional effort to meet all the needs of picture making professionals while expanding the potential for digital photography.

Introducing the D1x and D1H, Nikon’s newest achievements in professional digital photography. The D1x’s 5.33-million effective pixel CCD enables image capture with superior detail and color vibrancy. The D1H features faster overall operation for enhanced workflow efficiency. Each camera embodies Nikon’s vision to address the needs of more professionals by widening the reach of digital SLR photography.

Reveal minute details for total image quality.

5. 33-million effective pixel CCD delivers high-definition images.

Fantastic Total Image Quality

The D1x's superb ability to create sharper pictures is derived from its **5.33-million effective pixel large-size CCD**, which delivers high-resolution **3,008 x 1,960-pixel** images, making A3 (297 x 420mm) or 11 x 14-inch prints possible at 200 dpi. A new, advanced Nikon algorithm enables high-quality, high-speed image processing while also ensuring vibrant and saturated color reproduction.
Furthermore, **3D Digital Matrix Image Control** automatically ensures the highest degree of total image quality and produces incomparable results.

Operating speed

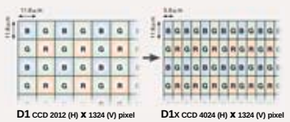
The D1x features fast workflow operation. The IEEE1394 interface enables large-volumes of data to be transferred from camera to computer at high speed. Continuous shooting capability of **3 fps for up to 9 consecutive shots** in JPEG or TIFF mode (6 consecutive for Raw data) enables more high-quality pictures more quickly.

Post-processing versatility

You can also do more with captured images, as the D1x incorporates a full suite of innovative features.
Optional **"Nikon Capture 2"** software enables the processing of TIFF and JPEG formats, and Raw data can be processed to full 16-bit precision in a fully ICC color managed environment. **"Nikon View 4"** software (bundled) allows easy, professional transfer of image data to your PC as the first step in a digital workflow.
Two Optimized Color Spaces: In accordance with the ever-evolving requirements of the professional color-managed workflow, the new D1x and D1H are capable of producing images that are optimized for **two color modes**—Mode I (optimized for sRGB) and Mode II (optimized for Adobe RGB), allowing you to choose based on application and workflow, making it easier to control and deliver the image that you had in mind when the shot was taken.
The D1x and D1H also include **Lossless-compression mode for Raw-file save mode**, accelerating image transfer without visually affecting image quality. This results in faster, more efficient data handling. The D1x's exceptional image quality, highlighted by Raw files capacity in "NEF" format, and possibilities for configuration make it the ideal imaging tool for commercial, medical and science photographers, for use in fields where enlarged images are required, as well as in all specialized fields where high detail is the priority.

About the D1x's CCD

How does the D1x obtain its high-definition images?



The D1x incorporates a newly designed 23.7 x 15.6mm RGB CCD image sensor with 5.47 million pixels, using 5.33 million for actual image resolution and the balance of pixels for other aspects of image processing.
The number of effective pixels is 4,024 x 1,324, twice that of the D1H/D1. The new CCD provides double resolution and maintains speed and dynamic range.

How does the D1x record image data captured by the CCD?

In order to offer users both high-quality images and fast processing within one camera, Nikon's engineers had to get creative. After some thought, they realized that increasing the number of horizontal pixels, and improving resolution in other directions resulted in the production of an output file that redistributed the added horizontal resolution both horizontally and vertically. This step was made possible by employing proprietary image processing algorithms. Actual horizontal resolution was then reduced to its physical amount, while vertical resolution was increased by 1.5x. Horizontal resolution is limited to 3/4 of the theoretical maximum, consequently allowing a higher quality vertical gain of 3/2. Conducted simultaneously at high speed, these processes enable image recording at an impressive 5.9 megapixels (equivalent pixel [spatial] resolution of 3,008 x 1,980). Pixel resolution, along with many other factors, has been carefully considered in the development of an image processing system that could ultimately become the benchmark for Total Image Quality.

Facing page photo

Photo by HAYAKAWA, Hiroyuki
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw ◆ **Lens**: PC Micro 85mm f/2.8D ◆ **Exposure mode**: Manual ◆ **Shutter speed** : 1/125 sec.
◆ **Aperture**: f/11 ◆ **White balance**: Flash mode ◆ **Sensitivity**: ISO-equivalent 125

Nikon D1x Major Features

Total image quality

- Large 23.7 x 15.6mm format, 5.33-million* effective pixel RGB CCD (4,024 x 1,324 sensor processed to output at 3,008 x 1,960 pixels**); **Raw data file size of 7.6MB at 12-bit color depth** can be processed to a 33.6MB 16-bit color depth file via optional "Nikon Capture 2" software
- Picture angle approx. 1.5x lens focal length (same effect as with D1H/D1)
- **Newly designed Advanced Image Processing System** with **3D Digital Matrix Image Control** featuring new algorithm enables Total Image Quality:
  - **Precise exposure control** from Nikon's exclusive 3D Color Matrix Metering
  - **Adaptive TTL White Balance control**
  - **Optimal color accuracy**
- **3D Multi-Sensor Balanced Fill-Flash** controlled by newly developed algorithm
- **Two selectable color modes** for different workflow environments (optimized for sRGB color space and Adobe RGB color space)
- Sensitivity range: ISO-equivalent **125-800** plus Custom Setting for two-step boost
- **New comprehensive noise-suppression design** reduces picture noise across all sensitivities

* 4,024 x 1,324 effective pixels; number of horizontal pixels is twice that of the D1H and D1 (2,012).
** 2,000 x 1,312-pixel recording is also available. Because of the higher spatial resolution of the D1x, image quality at this recording mode is superior to that obtainable by an ordinary 3-megapixel CCD model.

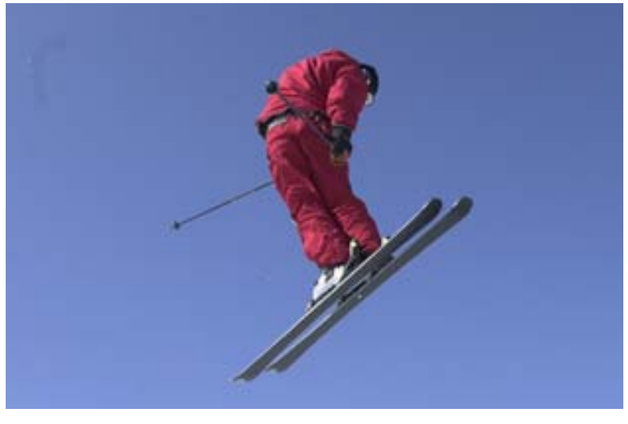
Enhanced speed

- Massive on-board image buffer memory for up to **9 consecutive shots** in JPEG or TIFF mode (6 for Raw data); frame rate of **3 frames per second** for all file types
- Top shutter speed of 1/16,000 sec. and flash sync speed with TTL operation up to 1/500 sec.; FP sync top speed of 1/8,000 sec.
- Short SLR shutter release time lag (58ms) and quick startup for electronic circuitry
- **High-speed image processing** with newly developed system LSI for rapid throughput and shutter availability
- **Enhanced IEEE1394 interface** with faster transfer speed (actual speed also dependent upon speed of computer to which camera is connected)

Improved operability

- Supports CompactFlash™ Card (Type I/II) and **Microdrive**™*
- **Newly developed 130,000-dot TFT color monitor with white LED backlighting**
- **Camera set-up via Custom Settings selectable on TFT color monitor** for fast, easy operation (available in four languages: English, French, German, Japanese)
- **One-Touch Playback for rapid review and instant return to Shooting Mode**
- Virtual 100% area-accurate playback coverage on TFT color monitor
- Thumbnail playback (in either 9 or **4** segments for fast image evaluation after shooting
- **One-Touch Zoom** allows playback image to be enlarged, and scrolling capability lets user view desired portion
- **Lossless-compression for Raw-file save mode** to improve CF card capacity and image-handling efficiency and throughput speed
- **GPS position information saved within image data file** if connected to compatible GPS unit** via RS-232C interface
- F-mount system compatibility with Nikon professional SLR body and accessories
- Lightweight, durable magnesium (Mg) alloy body
- **Opening of Raw files via Photoshop file/open plug-in**; Mac and PC version provided

* 512MB and 1GB types can be used; for other versions, please contact IBM Corporation.
** NMEA0183 Ver. 2.01 protocol-compatible models such as the GARMIN™ GPS III and the MAGELLAN™ COLORTRAK can be connected; connection cable not provided.



Enjoy high speed, high performance and Total Image Quality.

5 fps for up to 40 consecutive shots lets you more effectively capture action and shoot more sequences.

Faster operation and smoother workflow

The D1H boasts features that enable you to shoot faster picture sequences. You can shoot at a rate of **up to 5 frames per second** and Nikon's high performance autofocus with advanced Focus Tracking with Lock-On™ are fully functional.

Plus, with the D1H **40-image** buffer you can shoot more consecutive sequences.

"Nikon View 4" software (bundled) allows easy, professional transfer of image data to your PC as the first step in a digital workflow. Transferring images from the computer is also faster using a newly enhanced IEEE1394 interface. And the **Lossless-compression mode for Raw-file save mode** accelerates image transfer without affecting image quality.

Superior image quality

The D1H employs **2.66-million effective pixel CCD** performance. Using newly developed algorithms together with Nikon's 3D Digital Matrix Image Control and TTL flash control functions optimizes the performance of these features while at the same time delivering superb color reproduction.

Optional **"Nikon Capture 2"** software enables the processing of TIFF and JPEG formats, and Raw data can be processed to full 16-bit precision in a fully ICC color managed environment.

There are also **two color modes** — Mode I (optimized for sRGB) and Mode II (optimized for Adobe RGB), allowing you to choose based on the application, while making it easier to adjust image color on your PC.

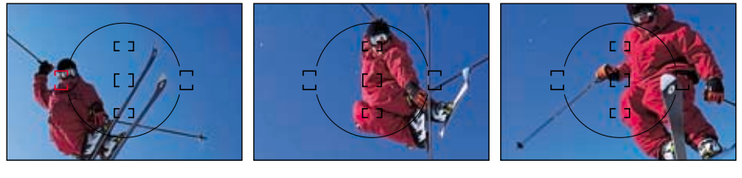
Broad compatibility

Most current AF Nikkor lenses and Nikon system accessories can be used with the D1H. You can also use a large selection of optional equipment and accessories that you've used with Nikon 35mm SLR cameras.

Batteries, chargers and other digital dedicated products can be used interchangeably among the D1H, D1X and D1.

When time is of the essence, the D1H's ability to deliver makes it a superb imaging tool for photojournalism, nature photography, sports and virtually all action-oriented subjects.

Focus Tracking with Dynamic AF



Facing page photo

Continuous shooting at 5 fps

◆ **Camera**: Nikon D1H ◆ **Image quality mode**: Fine ◆ **Lens**: AF-S 17-35mm f/2.8D IF-ED
◆ **Exposure metering mode**: 3D Color Matrix ◆ **Exposure mode**: Manual ◆ **Shutter speed**: 1/800 sec. ◆ **Aperture**: f/6.3
◆ **White balance**: Direct sunlight ◆ **Sensitivity**: ISO-equivalent 200

Nikon D1H Major Features

Total image quality

- High-quality 23.7 x 15.6mm, 2.66-million effective pixel RGB CCD (2,012 x 1,324 sensor processed to 2,000 x 1,312-pixel image); balance of pixels used for additional processes for **Raw data file size of 3.8MB at 12-bit color depth** via optional "Nikon Capture 2" software
- Picture angle approx. 1.5x lens focal length (same effect as with D1x/D1)
- **Newly designed Advanced Image Processing System** with **3D Digital Matrix Image Control** featuring new algorithm enables:
  - **Precise exposure control** from Nikon's exclusive 3D Color Matrix Metering
  - **Adaptive TTL White Balance control**
  - **Optimal color accuracy**
- **3D Multi-Sensor Balanced Fill-Flash** controlled by newly developed algorithm
- **Two selectable color modes** for different workflow environments (optimized for sRGB color space and Adobe RGB color space)
- Sensitivity range: ISO-equivalent **200-1,600** plus Custom Setting for two-step boost
- **New comprehensive noise-suppression design** reduces picture noise across all sensitivities

Enhanced speed

- Massive on-board image buffer memory for up to **40 consecutive shots** in JPEG or TIFF mode (26 for Raw data); frame rate of **5 frames per sec.***
- Top shutter speed of 1/16,000 sec. and flash sync speed up to 1/500 sec.
- Short shutter release time lag (58ms) and a quick startup for electronic circuitry
- **High-speed image processing** with newly developed system LSI for rapid throughput and shutter availability
- **Enhanced IEEE1394 interface** with faster transfer speed (actual speed also dependent upon speed of computer to which camera is connected)

* World's fastest among lens-interchangeable digital SLR cameras as of May 2001

Improved operability

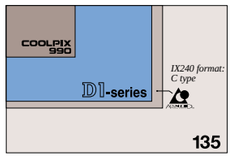
- Supports CompactFlash™ Card (Type I/II) and **Microdrive**™*
- **Newly developed 130,000-dot TFT color monitor with white LED backlighting**
- **Camera set-up via Custom Settings selectable on TFT color monitor** for fast, easy operation (available in four languages: English, French, German, Japanese)
- **One-Touch Playback for rapid review and instant return to Shooting Mode**
- Virtual 100% area-accurate playback coverage on TFT color monitor
- Thumbnail playback (either 9 or **4** segments) for fast image evaluation after shooting
- **One-Touch Zoom** allows playback image to be enlarged, and scrolling capability lets user view desired portion
- **Lossless-compression for Raw-file save mode** to improve CF card capacity, image-handling efficiency and throughput speed
- **GPS position information saved within image data file** if connected to compatible GPS unit** via RS-232C interface
- F-mount system compatibility with Nikon professional SLR body and accessory range
- Lightweight, durable magnesium (Mg) alloy body
- **Opening of Raw files via Photoshop file/open plug-in**; Mac and PC version available

* 512MB and 1GB types can be used; for other versions, please contact IBM Corporation.
** NMEA0183 Ver. 2.01 protocol-compatible models such as the GARMIN™ GPS III and the MAGELLAN™ COLORTRAK can be connected; connection cable not provided.

Breathtakingly beautiful, vibrant color

High-quality, large-size CCD

Both the D1x and the D1H employ a 23.7 x 15.6mm CCD, providing an identical aspect ratio for consistent composition and viewing. Both cameras feature a wide dynamic range, high sensitivity and benefit from Nikon's comprehensive noise-suppression design. With high-quality image processing, stable and consistent performance ensures true photographic quality image files with excellent color, smooth tone gradation and overall high quality.



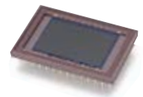


Image area size comparison

The D1x and D1H also employ a precision Low-Pass Filter just in front of the CCD to virtually eliminate color aliasing and moiré effects on detailed patterns and high-contrast edges.

High-quality, high-speed system LSI

A newly developed system LSI featuring an advanced image-processing algorithm with selectable JPEG compression enables high-speed image processing. Nikon Raw file format which is processed using optional "Nikon Capture 2" software enables the highest image quality. The newly added **Lossless-compression mode for Raw-file save mode** is particularly useful, enabling more images to be saved in the CF card with image-handling efficiency that does not sacrifice visual image quality. The algorithm features a Total Image Quality strategy, which utilizes spatial processing to maximize color fidelity, ensure smooth tone gradation and ensure crisp, accurate detail.

Charge-coupled electronic plus mechanical shutters

The D1x, D1H and D1 each incorporate a mechanical shutter in addition to the charge-coupled electronic shutter, which shields the CCD from continuous exposure to light and eliminates smear, further enhancing image quality.

3D Digital Matrix Image Control

Using Nikon's exclusive 3D Color Matrix Meter, featuring a 1,005-pixel RGB exposure/color metering sensor, the D1x and D1H are each capable of evaluating the image and intelligently and automatically optimizing the digital result. The three keys to this highly effective image-enhancing function are **1) 3D Color Matrix Metering**, **2) TTL White Balance** and **3) Tone Compensation**.

3D Color Matrix Metering calculates the optimum exposure value by comparing the brightness and color data, along with subject-to-camera distance, with a reference to a database of real photography. Use of a database distinguishes this meter from typical multi-segment meters.

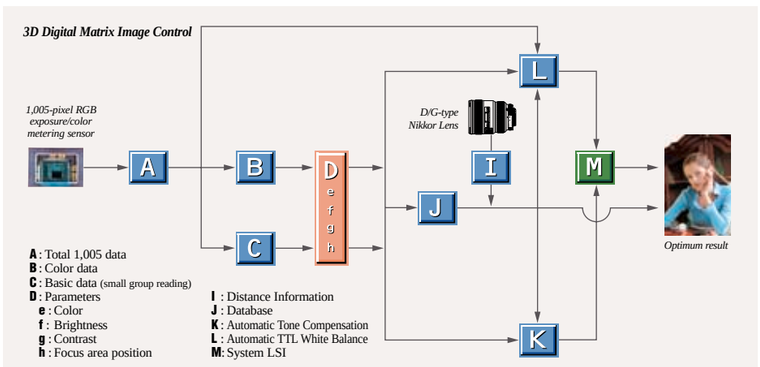
TTL White Balance evaluates color temperature and makes fine adjustments to the predetermined value, automatically achieving proper white balance. TTL White Balance, in conjunction with 3D Color Matrix Metering, adds significantly to the Total Image Quality of the D1x and D1H.

Tone Compensation selects the optimal tone curve to enable the reproduction of natural tones according to the scene brightness and contrast. Fixed values and Custom Settings are possible.

3D Digital Matrix Image Control's advanced performance gives you the power to perform tasks that until now had to be done during post-processing on a desktop computer.

In fact, the capability of both cameras to produce fully finished files is one of the major benefits of Nikon's Total Image Quality concept and superior workflow design.

3D Digital Matrix Image Control
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw ◆ **Lens**: AF-S 28-70mm f/2.8D IF-ED
◆ **Exposure metering mode**: 3D Color Matrix ◆ **Exposure mode**: Programmed Auto
◆ **Shutter speed**: 1/60 sec. ◆ **Aperture**: f/4.0 ◆ **White balance**: Auto ◆ **Sensitivity**: ISO-equivalent 200



Facing page photo

Photo by SAKATA, Eiichiro
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw ◆ **Lens**: AF 85mm f/1.4D IF
◆ **Exposure mode**: Manual ◆ **Shutter speed**: 1/250 sec. ◆ **Aperture**: f/2.8
◆ **Exposure compensation**: +0.3 EV ◆ **White balance**: Auto
◆ **Sensitivity**: ISO-equivalent 125

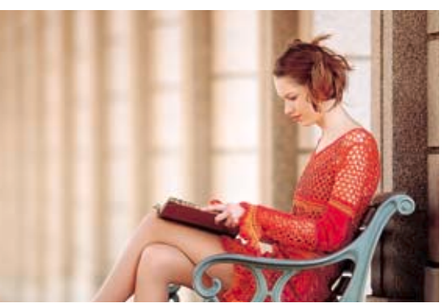
More comprehensive control means more creative power.

Digital imaging versatility

1) TTL White Balance
The D1x and D1H offer **Preset** and **Manual** modes, in addition to high-precision **Auto** mode to produce exceptional color quality.
In **Preset** mode, values previously measured by TTL white balance can be stored and recalled.
Manual mode provides six settings: 1) Incandescent, 2) Fluorescent, 3) Direct sunlight, 4) Flash, 5) Cloudy and 6) Shade, plus **seven-step fine-tuning** for personal control.
2) Tone Compensation
If you prefer alternative tone control than those automatically selected by **3D Digital Matrix Image Control**, you can choose from four preset tone curves via Custom Setting #24. Or, using the optional "Nikon Capture 2" control software, you can even create original tone curves with your personal computer and download it to the camera. This feature enables you to save customized tone curves for unusual light conditions that you have experienced.
3) Sharpness
Custom Setting #23 lets you choose from four preset values to control the sharpness of the image. This function is also one that until now had to be performed on a desktop computer—another excellent example of Nikon's concept of fully finished files. In-camera sharpness setting can be turned off if post-processing adjustment is preferred.

In-camera Color Mode selection

Mode	Description
I (optimized for sRGB)	Provides more vibrant color rendition, suitable for monitor display and Internet reproduction.
II (optimized for Adobe RGB)	Suited for the Adobe RGB wider range of color reproduction and is more effective for hard-copy printed output.



Aperture-Priority Auto mode
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw
◆ **Lens**: AF-S 300mm f/2.8D IF-ED II ◆ **Exposure metering mode**: Spot
◆ **Exposure mode**: Aperture-Priority Auto ◆ **Shutter speed**: 1/350 sec.
◆ **Aperture**: f/2.8 ◆ **White balance**: Direct sunlight
◆ **Sensitivity**: ISO-equivalent 200

The D1x and D1H each incorporate two color modes, selectable to best suit the intended application of your picture.

Exposure metering modes

3D Color Matrix Metering
Center-Weighted Metering
Spot Metering

Exposure control options

1) Four exposure modes
[P] Programmed Auto with Flexible Program
[S] Shutter-Priority Auto
[A] Aperture-Priority Auto
[M] Manual
2) Exposure compensation
Available from –5 to +5 EV, in 1/2 or 1/3 EV steps. Instant exposure compensation is possible even during shooting, using either of the two command dials via Custom Setting.
3) Auto Exposure Bracketing
Bracketing of two or three frames in 1/3 to 1 EV steps is possible in all exposure modes.

TTL flash control

Both cameras use the five-segment TTL Multi-Sensor, with five sensors configured to correspond to classic composition, and for precise flash output control. As the shutter release is pressed but before the actual exposure, the Nikon SB-28DX and SB-50DX Speedlights fire Monitor Pre-flashes. These pre-flashes, reflected from the shutter's gray surface, are used to calculate the necessary flash output for the actual exposure.
In addition, known reflectance values are compared to the actual values in order to determine the subject's reflectance and compensate for potential underexposure or overexposure from whiter or blacker subjects.
1) 3D Multi-Sensor Balanced Fill-Flash operation
The D1x and D1H incorporate Nikon's exclusive 3D Multi-Sensor Balanced Fill-Flash concept, which is controlled by the five-segment TTL Multi-Sensor and newly developed algorithm for superior flash control. This feature is available when the D1x and D1H are used with a Nikon SB-28DX or SB-50DX Speedlight and a D or G-type Nikkor lens. The combination performs automatic balanced flash, enabling superior and potentially more creative results. It is especially useful under high- and low-contrast conditions, backlight and for adding a pleasing catch light to the eyes. Automatic balanced fill flash is also very effective when shooting long exposures and you want to add light to brighten the foreground.

3D Multi-Sensor Balanced Fill-Flash
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw
◆ **Lens**: AF-S 28-70mm f/2.8D IF-ED
◆ **Exposure metering mode**: 3D Color Matrix ◆ **Exposure mode**: Manual
◆ **Shutter speed**: 1/90 sec. ◆ **Aperture**: f/4.0 ◆ **Exposure compensation**: +0.5 EV
◆ **White balance**: Flash mode ◆ **Flash sync mode**: Red-Eye Reduction
◆ **Sensitivity**: ISO-equivalent 200

In this scene, the camera ignores the top left area for TTL flash control according to the result of the Monitor Pre-flash.

2) Five flash sync modes
Both cameras offer: 1) Front-Curtain Sync (normal sync), 2) Red-Eye Reduction, 3) Red-Eye Reduction with Slow Sync, 4) Slow Sync and 5) Rear-Curtain Sync modes.

Sensitivity control

With the D1H, you can manually set the sensitivity between ISO-equivalent 200 and 1,600.
With the D1x, you can choose from ISO-equivalent 125 to 800.
With both models featuring a comprehensive noise-suppression design, picture noise is dramatically reduced across all sensitivities—especially in the high-sensitivity range. Custom Setting is also available, offering a one- or two-step boost to the highest ISO equivalency.

❶

❷

Versatile image quality modes

You can select from among compressed JPEG (approx. 1/4, 1/8, 1/16), uncompressed TIFF* (8-bit YCbCr-TIFF, 8-bit RGB-TIFF) and uncompressed Raw modes.
Lossless-compression mode for Raw-file save mode, which uses a special process and algorithm to compress image data by 50 to 60% without sacrificing viewed image quality, is also available.

*"Nikon View 4" or optional "Nikon Capture 2" software is required to reproduce images in Raw/YCbCr-TIFF mode.

❶❷*Photos by HANABUSA, Lyu*
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw ◆ **Lens**: AF-S 28-70mm f/2.8D IF-ED ◆ **Exposure mode**: Manual
◆ **Shutter speed**: 1/60 sec. ◆ **Aperture**: f/5.6 ◆ **White balance**: Auto ◆ **Sensitivity**: ISO-equivalent 125

Focus on high speed, great handling.

Rapid data transfer with IEEE1394

The high-speed interface IEEE1394 makes possible the transfer of great amounts of data at a very high rate. Used together with "Nikon View 4" and the optional "Nikon Capture 2" software, and an IEEE1394 connection between camera and computer, you can also enjoy the benefits of connectivity with a laptop computer, enhancing studio photography operations.

Quick response

The D1x, D1H and D1 offer a quick startup, a reduced shutter release time lag of approximately 58ms and fast data processing (1 frames' worth of data can be compressed and stored in approx. 2 sec.). These specs combine to ensure fast, smooth, worry-free operation.

1/16,000 sec. shutter speed, 1/500 sec. sync speed

The charge-coupled electronic shutter enables you to set shutter speeds from 30 sec. to an amazing **1/16,000** sec., enhancing exposure control capability. The maximum TTL flash sync speed of up to **1/500** sec. expands your aperture choices for fill-flash photography in daylight.
Sync speeds of up to 1/8,000 sec. are possible for manual FP exposure operation.

Consecutive shooting

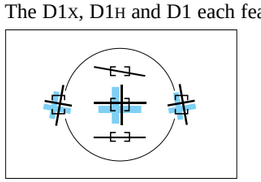
The new system LSI and the large on-board buffer memory capacity enhance the speed and duration of consecutive shooting.

	D1x	D1H
Max. number of consecutive shots for JPEG/TIFF data	9 (6 for Raw data)	40 (26 for Raw data)
Frame rate	3 fps	5 fps*

* World's fastest among lens-interchangeable digital SLR cameras, as of May 2001

High-speed five-area AF system

The D1x, D1H and D1 each feature a Multi-CAM1300 autofocus sensor module incorporating five AF sensors—the same performance-proven module provided in the F5, F100 and D1.
The AF sensor array pattern is suited for fast and creative composition, and because the photographer can designate any of the five sensors as primary sensor, the pattern is highly effective for action and sequence photography.



Position of AF sensor in the viewfinder

1) Focus modes
Choose from high-speed, accurate Single Servo **(S)** AF and Continuous Servo **(C)** modes, and the fully mechanical Manual focus **(M)** mode.
2) AF area modes
The D1x, D1H and D1 provide two AF area modes:
Single Area AF—this mode gives you five sensors that are aligned to classic rule of thirds composition. Selection of sensor in use is quickly made using the camera's thumb-activated Multi selector.
Dynamic AF—In **(C)** AF mode, as the subject moves among the AF sensor areas, it is instantly detected and accurate focus is maintained. Initial detection can be accomplished using any one of the five sensors (not restricted to first detection by center sensor). In **(S)** AF mode, the Closest Subject Priority function automatically selects the focus area with the closest subject so that you can concentrate on shutter timing. Custom Setting allows you to change to the desired subject, regardless of whether or not it's the closest one.

1/500 sec. sync speed
◆ **Camera**: Nikon D1x ◆ **Image quality mode**: Raw ◆ **Lens**: AF-S 28-70mm f/2.8D IF-ED
◆ **Exposure metering mode** : 3D Color Matrix ◆ **Exposure mode**: Shutter-Priority Auto
◆ **Shutter speed**: 1/500 sec. ◆ **Aperture**: f/11.0 ◆ **White balance**: Flash mode ◆ **Flash sync mode**: Normal
◆ **Sensitivity**: ISO-equivalent 200

3) Focus Tracking with Lock-On™
Automatically activated for moving subjects, Focus Tracking is augmented by **overlap servo**, which ensures constant lens focusing adjustment—even during focusing movement—and **Lock-On™**, which allows continuous tracking of a subject, even in the event that the subject is momentarily obscured.

Lightweight, tough body construction

The D1x, D1H and D1 are each housed in a rugged magnesium (Mg) alloy body, for valuable rigidity and strength as well as lighter, smaller construction. This body is also highly resistant to penetration by moisture, just like the F5. This permits the D1x and D1H to effectively operate under adverse conditions.

Custom Settings

Four combinations of selected settings can be memorized and recalled at the press of a button. Camera set-up via Custom Settings can be selected on the TFT LCD monitor for fast, easy operation (available in four languages: English, French, German, Japanese).

LCD Monitor

The 2.0-in. 130,000-dot low-temp. polysilicon TFT LCD Monitor displays captured images, menus and histogram indications.
White LED backlighting makes it easier to see even in bright light. 100% of the playback image can be viewed on the monitor. In One-Touch Playback mode, you can see the image before saving it. And the One-Touch Image Magnification ("One-Touch Zoom") feature lets you easily check details and image sharpness.

Custom Setting menu is displayed.

Thumbnail playback (9 segments)
Thumbnail playback (4 segments)

Various Playback modes

1) One-Touch Playback
You can view an image you've just taken by pressing the Monitor button. During review, you can choose to save or delete the image. Pressing the shutter release button instantly returns the camera to Shooting Mode.
2) One-Touch Zoom
The playback image can be enlarged at the press of a button, and can be magnified for critical viewing of details.

Histogram Indication

3) Thumbnail Playback and Slide Show
Augmenting one-frame playback is Thumbnail Playback, in either 9 or **4** segments. In Slide Show mode, you can view captured images in order, as they automatically advance one at a time.
4) Histogram Indication
You can see the histogram (graphical representation of brightness distribution among pixels) of the captured image's exposure in the LCD Monitor.
5) Highlight Point Display
This feature alerts you to overexposure by flashing in the overly bright areas.

Viewfinder

The D1x, D1H and D1 incorporate an optical-type fixed eye-level pentaprism viewfinder which features frame coverage of approximately 96%, an eyepoint at higher than 22mm at $-1m^{-1}$, and a diopter adjustment within -3 to $+1m^{-1}$

And more . . .

- **GPS position information** can be saved within an image data file if connected to a compatible GPS unit via RS-232C interface.
- **NTSC/PAL selectable**: You can view D1x and D1H images on an NTSC- or PAL-system monitor.
- **Anti-mirror-shock mode**: Raises the reflex mirror and then delays release of shutter to allow vibration to subside; effective for specialized applications that require long exposures and also for high magnification close-up and long telephoto photography.
- The D1x, D1H and D1 comply with **"Design rule for Camera File system"** and **"Digital Print Order Format"** standards.

Dedicated software

Nikon has designed software, which allows you to be more explorative in digital imaging, while also granting you systematic control via your personal computer. Depending on the sales programs in your area, this software and some accessories may be bundled with the camera. Check with your local dealer for details.

"Nikon View 4" Software

The new range of digital SLR cameras from Nikon is supported by a new "Nikon View" program that is filled with new features.

The transfer of images has been simplified with selectable size thumbnails and a one-button download of either all images in the camera, or just those that have been already tagged or untagged after shooting. Images can be renamed with a user-defined suffix and/or prefix such as the name of the photographer, and can incorporate the date or a sequence number within the filename.

The target directory into which images are copied can be chosen from any local or networked drive and the files can be automatically added to the index system of supporting third-party software. For more general industry-standard meta-data support, it is possible to copy the camera shooting data (exposure, camera configuration at time of shooting, user ID field, etc.) into the IPTC Caption field to every file during download. The support for IPTC text data is extended to include the possibility to add user-defined keywords into the file as it is transferred into from the camera into the computer under the control of "Nikon View 4".

"Nikon View 4"'s Graphic User Interface (GUI) features a new look, and also adds a new window where camera-shooting data of any selected image is visible. The contents of this text window may be copied to other documents via the computer's system clipboard. User-selectable thumbnail sizes have also been incorporated, allowing the easy preview of images under more difficult viewing conditions. "Nikon View 4" is compatible with Windows 2000/ME/98SE and Mac OS 8.6-9. "Nikon View 4" is supplied with plug-ins to enable Raw files and YcbCr-TIFF to be opened within Adobe Photoshop®.

"Nikon Capture 2" Control Software

A comprehensive camera control and image-editing software package, "Nikon Capture 2" allows the D1x and D1H to be controlled remotely via the IEEE1394 interface. Images can be downloaded directly into the computer, taking advantage of high-capacity, low-cost local and networked memory storage. Once in the computer the full advantage of Nikon's Total Image Quality processing algorithms can be applied to the file to produce stunning 16-bit color depth images of up to 33.6MB.

Its major new features are:

- Improved 2.7MB Raw data conversion algorithm is now compatible with 5.9MB Raw data for D1x.
- Extended exposure compensation capability and white balance adjustment for Raw data can also be performed using sliders, for broader image control and compensation during post-processing.
- Image data transfer to Adobe Photoshop possible via button click.
- Faster image processing filters (USM, Scale), CMS
- Auto-Save speed improved to enable the saving of images directly at designated location without the need for image processing.
- Batch processing for captured images.
- Compatible with Windows 98SE/2000/Millennium and Mac OS 8.6-9 releases.

"Nikon View 4" Software

"Nikon Capture 2" Control Software

The ideal blend of sophistication, ease of use and high performance.

Interchangeable Ni-MH Battery Pack EN-4

With the available interchangeable Ni-MH Battery Pack EN-4 fully charged, you can take up to approximately 1,000 pictures* with the D1x, D1H and D1. The battery pack can be recharged using the available Quick Charger MH-16 (100-240V AC) or MH-17 (12V DC; can be plugged into an automobile cigarette lighter).
The F100's Quick Charger MH-15 and the E3's EH-3 can also be used to charge the EN-4 battery.

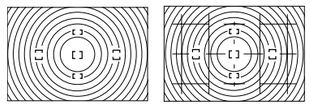
* Under Nikon's testing conditions

Nikon Speedlights SB-28DX and SB-50DX

The available SB-28DX and SB-50DX Speedlights are fully compatible with the TTL auto exposure control and five-segment TTL sensor for the D1x, D1H and D1. These Speedlights are also compatible with current Nikon 35mm SLR models. Both Speedlights operate with Nikon's advanced flash control features, including 3D Multi-Sensor Balanced Fill-Flash.
The SB-28DX also includes a built-in wide-angle diffuser for wide-angle lenses to 14mm, provides manual wireless slave flash capability and AA (Auto Aperture) Flash capability.

Interchangeable focusing screen

The B-type BriteView clear Matte screen III, which enables an unobstructed view and easy focusing, is interchangeable with the optional E-type screen with grid for the D1x, D1H and D1. This configuration is particularly well suited for use with PC (Perspective Control) Nikkor lenses, as the grid facilitates more precise composition.



10-pin remote control accessories

Accessories such as Remote Card MC-20/ MC-30/MC-22, Extension Cord MC-21 and Modulite Remote Control Set ML-3 can be used with the D1x, D1H and D1.
Via the MC-25 Adapter Cord, devices with two-pin terminals can also be used.

CompactFlash™ Card (Type I/II) / Microdrive™

In addition to Nikon's EC-CF series, the D1x, D1H and D1 may be used with the following CompactFlash™ Cards: SanDisk Corporation's SDC-FB8/16/32/48/ 64/96/128 and Lexar Media Corporation's CF008/016/032/048/064/ 080 4X USB, CF008/016/032/ 048/064/080 8X USB and CF128/160 10X USB. For the D1x/D1H, IBM Corporation's 512MB and 1GB Microdrive™ Cards are also supported.
For more details, please contact the respective company.

F-mount Nikkor lenses

The D1x, D1H and D1 can accommodate virtually any Nikkor lens featuring the Nikon F-mount—over 80 lenses in all, including the AF-S Nikkor lineup, which offers high-speed, extremely quiet autofocus operation. Most operations require Nikkor optics that feature a built-in CPU. Lenses without a CPU (manual focus lenses other than P-Nikkor) will operate with many automatic camera operations. Nikkor lenses with a built-in CPU include AF, AF-I, AF-S and P types.

Lens Compatibility Chart (IX-Nikkor lenses cannot be used)

Lens		Focusing		Exposure mode				Exposure metering mode		
		Autofocus	Electronic Rangefinder	P mode	S mode	A mode	M mode	Matrix	Center-Weighted	Spot
CPU lenses	AF-S & D-type AF Nikkors	✔	✔	✔	✔	✔	✔	✔(3D Color)	✔	✔[1]
	G-type AF Nikkors [2]	✔	✔	✔	✔	✔	✔	✔(3D Color)	✔	✔[1]
	AF-I Teleconverters [3]	✔[4]	✔[4]	✔	✔	✔	✔	✔(3D Color)	✔	✔[1]
	Non-D-type AF Nikkors	✔	✔	✔	✔	✔	✔	✔(Color)	✔	✔[1]
	AI-P-type Nikkor	—	✔[5]	✔	✔	✔	✔	✔(Color)	✔	✔[1]
	D-type PC Micro Nikkor	—	✔[6]	—	—	—	✔[7]	✔(3D Color)	✔[7]	✔[1,7]
Non-CPU lenses	AI-type Nikkors	—	✔[5]	—	—	✔	✔	—	✔	✔
	AI-modified Nikkors	—	✔[5]	—	—	✔	✔	—	✔	✔
	Reflex-Nikkors [8]	—	—	—	—	✔	✔	—	✔	✔
	PC-Nikkor [8]	—	✔[9]	—	—	✔[10]	✔[11]	—	✔	✔
	AI-type Teleconverters	—	✔[4]	—	—	✔	✔	—	✔[12]	✔[12]
	Bellows Focusing Attachment PB-7 [13]	—	✔[4]	—	—	✔[14]	✔[14]	—	✔	✔

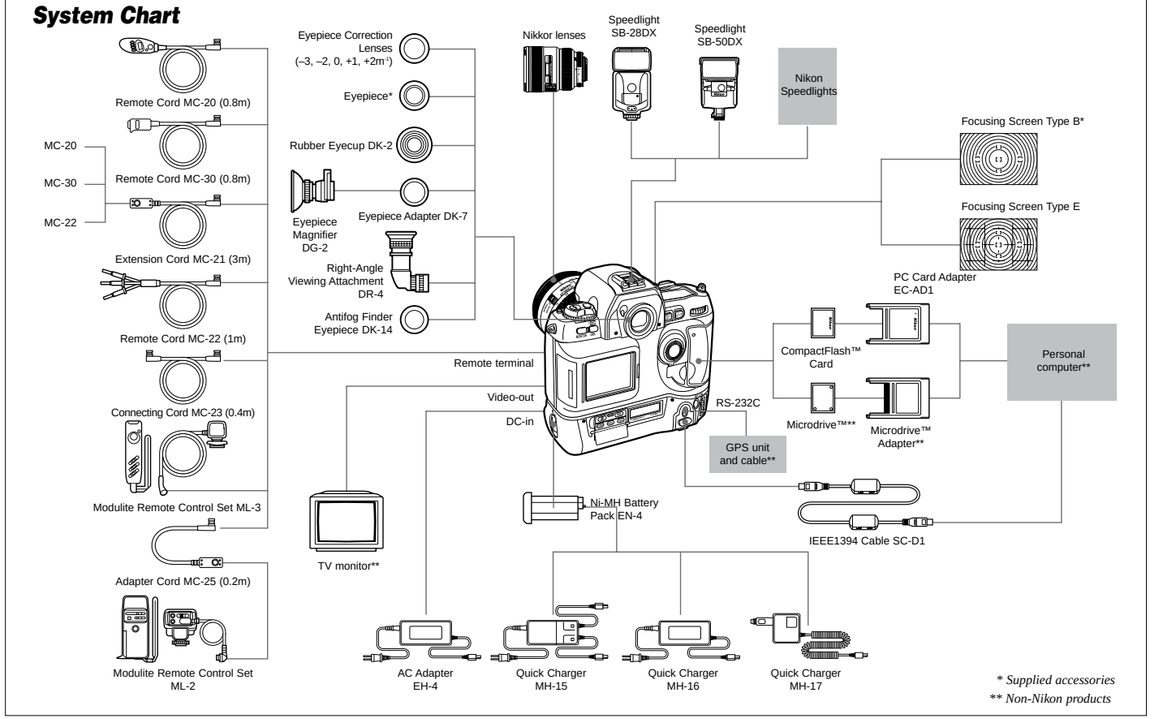
1 Metering area corresponds to the selected focus area.
2 G-type Nikkor has no aperture ring. Aperture should be selected from camera body.
3 Compatible with AF-S and AF-I Nikkor lenses except AF-S 17-35mm f/2.8D IF-ED and AF-S 28-70mm f/2.8D IF-ED.
4 With maximum effective aperture of f/5.6 or faster.
5 With maximum aperture of f/5.6 or faster.
6 Without shifting/tilting.
7 The camera's exposure metering and flash control system do not work properly when shifting and/or tilting the lens, or when using an aperture other than the maximum aperture.
8 Some lenses cannot be used.
9 Without shifting.
10 Exposure determined by presetting lens aperture. AE lock must also be done before shifting.
11 Exposure determined by presetting lens aperture. Exposure must also be determined before shifting.
12 With some lenses, exposure compensation is needed (Please refer to teleconverter's instruction manual).
13 Auto Extension Ring PK-11A, 12 or 13 is necessary.
14 Exposure determined by presetting lens aperture on bellows. Release the shutter after exposure metering.

Note: Picture angle approx. 1.5x lens focal length
Lens' angle of view does not change; lens' perspective and reproduction ratio at a given distance and aperture is identical to when the lens is used on a 35mm SLR; the difference in viewing is a result of the smaller dimensions of the CCD compared to that of 35mm film. In effect, the image is cropped according to the CCD format.

Nomenclature

❶ Sub-command dial
❷ Depth-of-field preview button
❸ Lens release button
❹ Sync terminal
❺ Video-out connector
❻ Focus-mode selector dial
❼ 10-pin remote terminal
❽ DC-in connector
❾ Battery pack latch
❿ Diopter adjustment knob
⓫ Metering selector lock button
⓬ Metering selector
⓭ Shutter-release button (vertical shooting)
⓮ Shutter release button lock (vertical shooting)
⓯ Auto-bracketing button
⓰ Mode dial lock release
⓱ Mode dial
⓲ Exposure mode/Format button
⓳ Power switch
⓴ Shutter-release button
㉑ Exposure compensation button
㉒ Flash sync mode button
㉓ Sensitivity button
㉔ Accessory shoe
㉕ Top control panel
㉖ LCD monitor
㉗ Monitor button
㉘ Delete/Format button
㉙ Eyepiece shutter lever
㉚ Eyepiece shutter
㉛ Viewfinder eyepiece
㉜ AE/AF lock button
㉝ AF start (AF-ON) button
㉞ Main-command dial
㉟ Cover for CompactFlash card slot
㊱ Memory card access lamp
㊲ Multi selector lock
㊳ Card slot cover release button (under cover)
㊴ AF start button (vertical shooting)
㊵ Main-command dial (vertical shooting)
㊶ Multi selector
㊷ Interface connector cover
㊸ MENU button
㊹ White-balance button
㊺ FUNC button
㊻ Protect button
㊼ Thumbnail button
㊽ Rear control panel
㊾ RS-232C connector (for GPS connection)
㊿ IEEE 1394 connector

System Chart



** Supplied accessories*
*** Non-Nikon products*

Nikon Professional Digital SLR Camera D1x/D1H Specifications

	D1x	D1H
Type of Camera	Lens-interchangeable digital SLR camera	
CCD	23.7 x 15.6mm RGB CCD; 5.47 million total pixels; 5.33 million effective pixels (4,024 x 1,324 array); captures 12-bit full-color image	2.74 million total pixels; 2.66 million effective pixels (2,012 x 1,324 array); captures 12-bit full-color image
Recording Pixels	3,008 x 1,960/2,000 x 1,312	2,000 x 1,312
Sensitivity	ISO equivalency 125-800 (variable in 1/3, 1/2 or 1 EV steps)	ISO equivalency 200-1,600 (variable in 1/3, 1/2 or 1 EV steps)
Storage	**System:** Digitally stored; JPEG Baseline (approx. 1/4, 1/8, 1/16 compressed), uncompressed (12-bit Raw*, 8-bit YCbCr-TIFF, 8-bit RGB-TIFF), monochrome mode **Media:** CompactFlash™ (CF) Card (Type I/II) and Microdrive™* **Modes and No. of frames (approx.) (with EC-96CF 96MB CF Card):**	

	D1x	D1H
	3,008 x 1,960 (Large)	2,000 x 1,312 (Medium)
Raw (uncompressed Raw)**	11	23
Hi (uncompressed YCbCr-TIFF)	8	17
Hi (uncompressed RGB-TIFF)	5	12
Fine (approx. 1/4 compressed)	29	66
Normal (approx. 1/8 compressed)	59	132
Basic (approx. 1/16 compressed)	114	265

* 512MB and 1GB types can be used. **Compressed Raw mode also available.

Shooting Modes	1) Single frame shooting (**S**) mode: advances one frame for each shutter release; capture preview mode available 2) Continuous shooting (**C**) mode: approx. 3 frames per sec. (up to 9 consecutive shots) 3) Self-timer mode: time duration can be set 4) Playback mode: playback, menu setting 5) PC mode: data transfer via personal computer	2) Continuous shooting (**C**) mode: approx. 5 frames per sec. (up to 40 consecutive shots)
White Balance	1) Auto (TTL control with 1,005-pixel CCD), 2) Manual (6 settings with fine tuning), 3) Preset (3 settings)	
LCD Monitor	2-in., 130,000-dot, low temp. polysilicon TFT LCD with white LED backlighting; backlight/brightness adjustment available	
Playback Menu	1) Protect setting, 2) Hide setting, 3) NTSC/PAL switching, 4) Indication directory switching	
Playback Function	1) 1 frame, 2) Thumbnail (4/9 segments), 3) Slide show, 4) One-touch zoom, 5) Histogram indication, and highlight point display	
Delete Function	1) Card format, 2) All frames delete, 3) Selected frames delete	
Video Output	NTSC or PAL (switchable)	
Interface	IEEE1394 and RS-232C [GPS unit (not Nikon product) connection]	
Usable Lenses	1) **D or G-type AF Nikkor:** All functions possible 2) **D-type Manual-Focus Nikkor:** All functions except autofocus possible 3) **AF Nikkor other than D or G-type:** All functions except 3D Color Matrix Metering and 3D Multi-Sensor Balanced Fill-Flash for D1 possible 4) **AI-P Nikkor:** All functions except 3D Color Matrix Metering, 3D Multi-Sensor Balanced Fill-Flash for D1 and autofocus possible 5) **Non-CPU:** Usable in [A] or [M] mode, Center-Weighted or Spot Metering; Electronic Rangefinder usable with lens with maximum aperture of f/5.6 or faster	
Picture Angle	Approx. 1.5x focal length in 35mm [135] format equivalent	
Viewfinder	Optical-type fixed eye-level pentaprism; built-in diopter adjustment (–3 to +1 m^{-1}); eyepiece shutter provided	
Eyepoint	22mm (at –1.0 m^{-1})	
Focusing Screen	B-type BriteView clear Matte screen III; interchangeable with optional E-type screen with grid for D1-series	
Viewfinder Frame Coverage	Approx. 96%	
Viewfinder Magnification	Approx. 0.8x with 50mm lens set to infinity and –1.0 m^{-1}	
Viewfinder Information	Focus indications, shutter speed, aperture, exposure mode, metering system, shutter speed lock, aperture lock, AE lock, electronic analog display, frame counter, ready-light, five sets of focus brackets (area)	
Reflex Mirror	Automatic, instant-return type	
Lens Aperture	Instant-return type, with depth-of-field preview button	
Autofocus	TTL phase detection, Nikon Multi-CAM1300 autofocus module; Detection range: EV –1 to EV 19 (ISO 100 equivalent, at normal temperature)	

	D1x	D1H
Lens Servo	1) Single Servo AF (**S**), 2) Continuous Servo AF (**C**), 3) Manual focus (**M**) Focus Tracking automatically activated by subject's status in (**S**) or (**C**) AF	
Focus Area	One of five focus areas can be selected	
AF Area Mode	1) Single Area AF, 2) Dynamic AF (Dynamic AF Mode with Closest Subject Priority is available)	
Focus Lock	Focus is locked by pressing [AE-L/AF-L] button or lightly pressing shutter release button in (**S**) AF	
Exposure Metering System	TTL full-aperture exposure metering system; 1) 3D Color Matrix Metering with 1,005-pixel CCD 2) Center-Weighted Metering (75% of the meter's sensitivity concentrated on the 8mm dia. circle) 3) Spot Metering (4mm dia. circle, approx. 2% of entire frame)	
Exposure Metering Range	1) 3D Color Matrix Metering: EV 0-20 2) Center-Weighted Metering: EV 0-20 3) Spot Metering: EV 2-20 (at normal temperature, ISO 100 equivalent, f/1.4 lens)	
Exposure Meter Coupling	CPU and AI combined	
Exposure Mode	1) [P] Programmed Auto (Flexible Program possible), 2) [S] Shutter-Priority Auto, 3) [A] Aperture-Priority Auto, 4) [M] Manual; shutter speed/aperture adjustable in 1/2 or 1/3 EV steps	
Exposure Compensation	Exposure compensated in ±5 EV range in 1/2 or 1/3 EV steps	
Auto Exposure Lock	Detected exposure value locked by pressing [AE-L/AF-L] button	
Auto Exposure Bracketing	Number of shots: two or three Compensation steps: 1/3, 1/2 or 1 EV steps	
Shutter	Charge-coupled electronic and mechanical shutter; 30 to 1/16,000 sec. and Bulb	
Sync Contact	X-contact only; flash synchronization up to 1/500 sec.	
Flash Control	1) Automatic Balanced Fill-Flash controlled by five-segment TTL Multi Sensor: • 3D Multi-Sensor Balanced Fill-Flash for D1 when used with SB-28DX/SB-50DX and D or G-type Nikkor lens • Multi-Sensor Balanced Fill-Flash when used with SB-28DX/SB-50DX and AF Nikkor other than D or G-type, AI-P Nikkor lens 2) AA (Auto Aperture)-type Flash available when used with SB-28DX/SB-50DX and lens with built-in CPU 3) Non-TTL Auto Flash with a Speedlight such as SB-28DX, 50DX, 28, 27, 22s, etc.	
Flash Sync Mode	1) Front-Curtain Sync (normal sync), 2) Red-Eye Reduction, 3) Red-Eye Reduction with Slow Sync, 4) Slow Sync, 5) Rear-Curtain Sync	
Ready-light	Lights up when flash fully charged with Speedlight SB-28DX, 50DX, 28, 27, 22s; blinks (3 sec. after flash) for full output warning	
Accessory Shoe	ISO 518 Standard-type hot shoe contact; safety lock screw provided	
Sync Terminal	ISO 519 Standard terminal, lock screw provided	
Self-timer	Electronically controlled; timer duration: 2-20 sec.	
Depth-of-field Preview Button	Stop-down lens aperture by pressing depth-of-field preview button	
LCD Panel Information	**Top LCD panel:** Exposure value (shutter speed/aperture), exposure mode, exposure compensation, exposure compensation value, aperture/shutter speed lock, flash sync mode, focus area, exposure bracketing information, electronic analog display, battery power, CF Card confirmation, number of shots taken, number of shots remaining, frame number at playback battery power for built-in clock, date/time **Rear LCD panel:** Number of shots remaining, sensitivity, white balance mode, image quality mode, monochrome mode, CF Card status, Custom function, number of pixels [L (Large)/M(Medium); D1x only]	
Remote Control	Via 10-pin remote terminal	
Power Requirements	Ni-MH Battery Pack EN-4 (7.2V DC), Quick Charger MH-17 (12V DC)/16/15; AC Adapter EH-4 (100-240V AC)	
Tripod Socket	1/4 in. (ISO 1222 Standard)	
Custom Settings	Can be selected on LCD; 36 settings (D1x), 35 settings (D1H)	
Dimensions (W x H x D)	Approx. 157 x 153 x 85mm (6.2 x 6.1 x 3.4 in.)	
Weight (without battery)	Approx. 1.1kg (2.5 lbs.)	
Standard Accessories*	Neck Strap, Video Cable, Monitor Cover, Body Cap, "Nikon View 4" Software *Standard accessories may differ in each country or area.	
Optional Accessories	Ni-MH Battery Pack EN-4, Quick Charger MH-17/16, AC Adapter EH-4, CompactFlash™ Cards, Speedlight SB-28DX/SB-50DX, IEEE1394 Cable SC-D1, Anti-fog Finder Eyepiece DK-14, "Nikon Capture 2" Control Software	

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. September 2001

WARNING TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT. SOME DOCUMENTATION IS SUPPLIED ON CD-ROM ONLY.

NIKON CORPORATION
FUJI BLDG., 2-3, MARUNOUCHI 3-CHOME, CHIYODA-KU, TOKYO 100-8331, JAPAN
www.nikon-image.com/eng/

ISO 9001 Certified
NIKON CORPORATION Imaging Company

Printed in Japan Code No. 6CE41141 (0109-15)K

E