

# DSLR Buying Guide



## Table of Contents

<b>Introduction</b>	<b>4</b>
<b>Sensor</b>	<b>4</b>
Sensor Types	5
Sensor Size	5
Resolution and Megapixels	6
Focal Length Multiplier Factor	6
<b>LCD Screen</b>	<b>7</b>
<b>Lens Mount</b>	<b>7</b>
<b>DSLR Advantages</b>	<b>7</b>
Economical	7
Light Sensitivity	8
Faster Performance	9
Customizable	9
<b>DSLR Features</b>	<b>10</b>
Image Stabilization	10
Sensor Dust Reduction	10
Autofocus Points	10
Body Construction	11
<b>Image Format</b>	<b>11</b>
JPEG	11
RAW	12
<b>Accessories</b>	<b>12</b>
Batteries	13
Wireless Transmitters	13
Shutter Release	13
Flash	14
Memory Cards	14
Tripod	15
Lens Filters	15
Software	16
Bags and Cases	16

<b>Types of Photography</b> _____	<b>17</b>
<b>Family Photographer</b> _____	<b>17</b>
<b>Price Range</b> _____	<b>17</b>
<b>Features</b> _____	<b>17</b>
<b>Amateur and Semi-Professional Photographers</b> _____	<b>18</b>
<b>Price Range</b> _____	<b>18</b>
<b>Features</b> _____	<b>18</b>
<b>Professional Photographers</b> _____	<b>19</b>
<b>Price Range</b> _____	<b>19</b>
<b>Features</b> _____	<b>20</b>



## Introduction

### ...what is a DSLR camera?

Besides the obvious size comparison, slim compact digital point and shoot cameras and digital SLRs have a myriad of significant differences. A Digital Single Lens Reflex (DSLR) camera, unlike a point and shoot model, uses a mirror behind the lens to direct light toward the viewfinder. This means when you are looking through the viewfinder, you see exactly what the image sensor will capture. Once you press the shutter button, the mirror moves out of the way and allows light to hit the sensor instead of the viewfinder. On the other hand, point and shoot cameras translate the image and show you a video version of your shot.



Typically a DSLR is much larger and bulkier than a point and shoots

One of the major advantages of buying a DSLR is its ability to let you choose and change different lenses. From wide angle to telephoto, you can customize your angle of view with a wide variety of lenses available, instead of shooting with the single multi-purpose lens found on a point and shoot. In addition to quality differences, DSLRs offer a number of adjustable functions like aperture, shutter speed, and white balance, each capable of full manual control.

## Sensor

### ...how does a sensor capture an image?

The sensor on a digital camera replaces film in the old models, but the principle is similar. Sensors, like film, are sensitive to light. Once the shutter is pressed, they record an image digitally. The size and type of light sensor are significant. It's clear there's an obvious physical size difference between a point and shoot camera and a DSLR. This is predominately due to size of the contained in the camera. The sensors found in DSLR models are much larger than those within point and shoot cameras, thus producing clearer images with less distortion and noise.

### Sensor Types

In today's market, sensors are available in two types: CCD and CMOS. CCD, or Charged-Couple Device, is used in almost all point and shoot cameras and in numerous digital SLR cameras. CCD sensors produce high quality images, although cameras equipped with this sensor tend to be more costly and consume more power than other types.

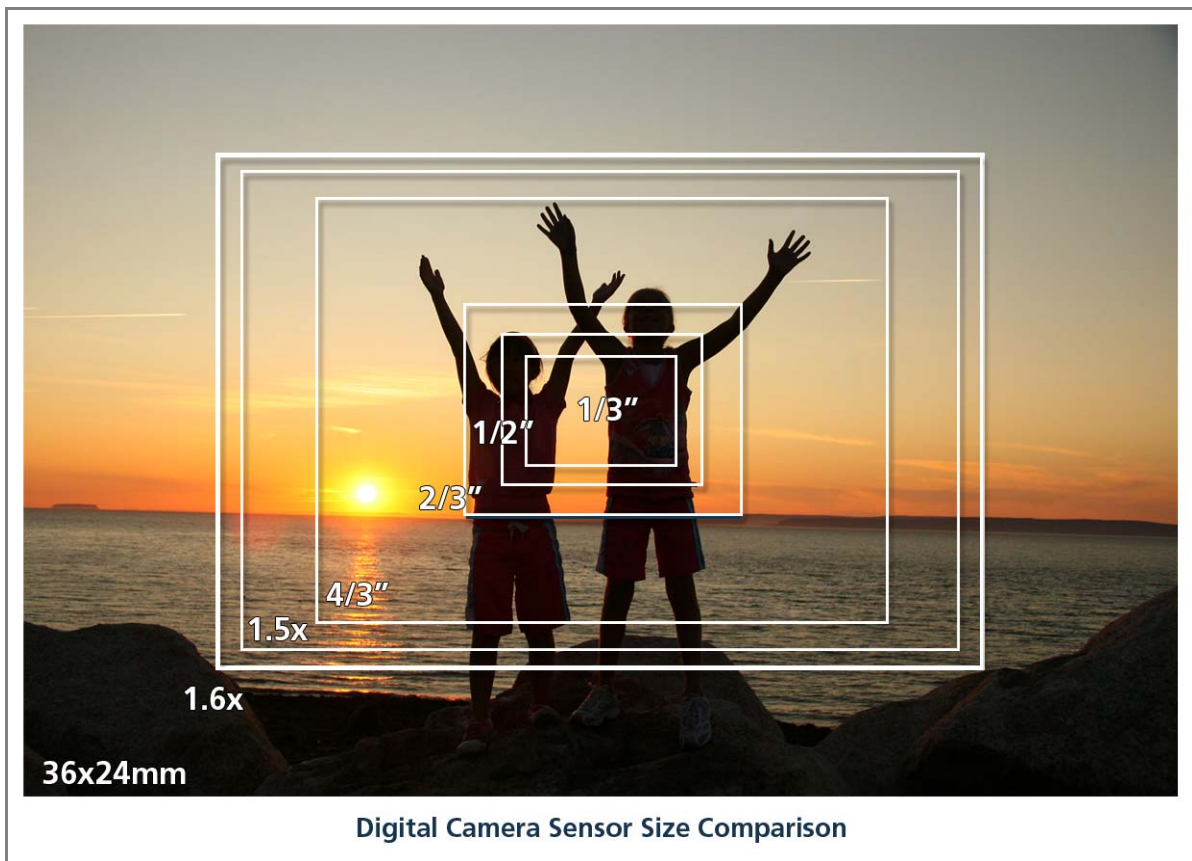
A CMOS sensor is larger than a CCD sensor so its surface is capable of capturing more light. As a result, CMOS sensors are more sensitive and produce images higher in quality compared to CCD sensors. CMOS sensors are easier and less costly to manufacture and use less power than CCDs. Because of their increased size, cameras using this type of sensor tend to be bulkier.

There has been some debate concerning the relative strengths of CCD versus CMOS. In practice, neither is "better"; each type works effectively and should be evaluated on its own merits.

### Sensor Size

The sensor size affects many factors in your images and the functions of your camera body. It has a major impact on the quality of your image, how your lens functions, and how it performs in low light conditions.

There are three basic size categories for sensors: Four Thirds, APS, and Full Film Format. As noted in the chart below, the smaller sensors are used in point and shoot cameras while the larger ones are found in DSLR models.



Four Thirds sensors have become a standard for Olympus and Kodak at a size of 13.5mm by 18mm, while APS sensors are close to that of the original APS film size. Most DSLR cameras fall into the APS size range (14mm by 21mm to 16mm by 24mm), often described as 1.5x, 1.6x, or 2.0x crop factors.

Sensors that are the same size as 35mm film format are also called full-frame sensors. This full frame sensor allows you to use lenses without the complication of focal length magnification factors and produce the highest quality images in DSLR cameras. The sensor size is a true 24mm by 36mm, just like a frame of 35mm film.

### **Resolution and Megapixels**

After all this talk of sensor sizes, as a major component of your digital camera choice, you may wonder how resolution and the size and number of pixels affect your images. It's a matter of size. Larger sensors have larger pixels which mean they're more sensitive to light and capable of producing images with more detail. For example, take an 8MP point and shoot camera versus an 8MP DSLR camera. Each has identical megapixel values (the same number of pixels) but because the DSLR has a larger sensor, the pixels are larger. These larger pixels are able to gather more light, reducing the chance of "noise" in the image due to signal distortion reduction.

Another advantage of this large sensor size is the ability to perform well under low light situations using a high ISO setting. The megapixels in your camera govern how large you can print your image without losing quality. Professional photographers like the option of printing large images and cropping them without losing quality.

### **Focal Length Multiplier Factor**

As described in our [Lens Buying Guide](#), the size of a DSLR's sensor affects the viewing angle of the lens. Lenses are described by their focal length and aperture size in a standard 35mm format. Since most DSLRs use sensors that are smaller than this 35mm format, the angle of view is magnified.

Let's explain this further. Compare a standard 35mm film camera equipped with a 50mm lens to a digital SLR with a sensor size of 22.5 x 15.0 mm. The DSLR's image sensor is smaller than the full frame 35mm camera's film area by a focal length multiplier of 1.6x. This means that the 50mm lens translates into a short telephoto lens of 80mm ( $50\text{mm} \times 1.6 = 80\text{mm}$ ) when used on this particular DSLR.

The magnification factor affects wide angle lenses as well, challenging the digital photographer to find a wide angle lens that is truly a wide angle. When translated by the multiplier, most wide-angle lenses only offer a standard angle of view, although some manufacturers are beginning to develop super-wide angle lenses that cater to digital photographers who require them. For example, a 20mm lens would be extremely wide on a full frame, camera, but has an "effective" focal length of 30mm, or moderate wide angle, on a DSLR.

Small sensor sizes have other advantages when it comes to telephoto lenses. To achieve a 300mm telephoto angle of view, using a camera with a 1.5x focal length multiplier factor, you can purchase a 200mm telephoto lens and get the same results. You're able to purchase telephoto lenses that cost less and carry less weight.

In addition, the quality of the image can be enhanced. Most lenses are sharpest near the center and tend to become less sharp around the edges. Since smaller sensors crop the frame's angle of view, the result is a sharper, higher quality picture using more economical lenses.

## LCD Screen

### ...where did the live preview go?

If you're familiar with point and shoots, chances are you use the LCD screen more often than the viewfinder. This option is not available to DSLR cameras due to the construction of the single lens reflex (although Olympus has developed a new technology to introduce live previews in its cameras). However, DSLR LCD screens can contain considerable information about the image.. Reviewing your image on the LCD screen can also reveal such camera settings as histogram, white balance, focal length, aperture, shutter speed and more.

Many of the advanced menu options can also be accessed on the LCD screen, allowing you to make finer adjustments and overrides.



## Lens Mount

### ...are all lenses compatible with every digital camera?

A digital SLR camera is equipped with a lens mount that allows you to attach a lens. This interchange function lets you change lenses depending on your shooting requirements and offers much greater flexibility than point and shoots cameras will allow.

The lens mount also acts as a connector, facilitating communication between the camera body and lens. Autofocus and aperture size are controlled by the body's electronics while their limitations are determined by the lens itself. Because manufacturers tend to use the same mount when developing new technologies in their product lines, it is often possible to use an older model lens on a new DSLR body. For example, some Nikon lenses of thirty years vintage and more will fit on a modern Nikon DSLR and operate well, even if limited to manual focus and exposure only.

The growth of digital photography has led manufacturers to develop exclusively digital lenses that are designed for the specific sensor sizes of digital SLRs. In general, a DSLR with a smaller sensor size can use a lens that was designed for a larger sensor size but not vice versa.

Third party lens manufacturers like Tamron, have developed their own lines of lenses that are digital camera specific. They come equipped with the camera mounts for major camera companies like Nikon and Canon.

## DSLR Advantages

### ... why choose a DSLR?

#### Economical

Although the initial cost may be greater than a traditional film SLR, digital SLRs make up ground by saving on developing fees and consumables such as film. Taking multiple frames is limited only by the size of your memory card and over-shooting has little or no cost impact. The digital camera revolution has allowed photographers to save on materials and has provided the freedom of shooting to their hearts' content without repercussions. Digital files are initially stored on your memory card, which is re-usable, but you can back up your images on inexpensive CDs or on your computer.



Save money without any consumables!

Film has to be stored properly to prevent degradation. It must be processed and printed in order to view the images. Digital cameras have eliminated most of the costs and waiting time!

With no need for consumables like film, digital cameras give you instant results. You can view your images on your LCD screen as soon as the image has been shot and you have the ability to delete images on the spot. Instead of printing every shot, you just load your images onto a computer, adjust the colour balance and exposure, crop the image, and send only those you want printed to the lab.

### **Interchangeable Lenses**

As stated above, DSLRs allow you to change lenses, offering more versatility. The lens quality itself is usually greater than point and shoots and allows for clearer images with better colour quality. Most professional lenses have exceptional features such as image stabilization, aspherical glass elements, extra low dispersion technology, and silent autofocus motors. All these elements combined with a DSLR produce the highest quality images.

### **Light Sensitivity**

Because the sensors are larger than those of point and shoots, you also gain the ability to shoot in low lighting and produce great images with less noise. The larger sensor is capable of capturing more light, allowing the DSLR to have a higher ISO.

Another great advantage of digital over film cameras is that you can change your ISO from image to image instead of roll to roll. DSLRs allow you to take multiple images in different lighting situations and, with a push of a button, instantly change the ISO for the next shot. The digital nature of the camera allows you to make split second changes to capture the exact shot with the right exposure.



Higher sensitivity allows for great photographs in low lighting  
© Benjamin Earwicker



Capture fast moving subjects with no blur

### **Faster Performance**

Compared to most point and shoot models, DSLR cameras offer faster shutter speeds, burst modes, and autofocus. Especially essential for fast moving subjects like sports or fashion photography, fast shutter speeds allow the photographer to capture movement without blur.

The burst mode of the camera allows the photographer to take multiple photographs in succession with only one push of the shutter release button. Taking a series of photographs increases the chances of capturing a moment at just the right time. DSLRs have better burst modes, enabling you to capture the winning goal, the perfect movement of hair on a model, a fleeting expression on a child's face and other fast action shots.

Battery life is also increased in a DSLR. Since there's no live preview, DSLR's conserve energy more efficiently than point and shoot cameras.

### **Customizable**

DSLRs allow you to customize your shooting parameters and customize your camera with photography accessories. Every DSLR has a hot shoe mount that accepts an external flash for greater control of lighting. Attaching a battery grip to your camera will give you increased peace of mind, as the charge is generally longer than a standard battery. These grips may also come equipped with a shutter release button for vertical portrait shots in a more comfortable hand position.

There is also a wide array of filters available, designed to protect your lens, enhance your images, control exposure, and eliminate reflections in water and glass and more.

## DSLR Features

...what kind of technology is built into DSLRs?

### Image Stabilization

The technology of image stabilization is constantly being refined and is being incorporated not only in lenses but in newer DSLR camera bodies as well. If the body has built-in image stabilization or vibration reduction, it usually allows for a couple of extra stops of leeway so handheld photography is steadier. This allows a slower shutter speed, but you can still produce a sharp image (with less required light!). "In-body" stabilization typically involves the sensor shifting to compensate for movement.



Not every manufacturer supplies camera bodies with internal image stabilization, but those that do utilize this feature with every lens you mount on the camera. Other manufacturers may incorporate this technology in their series of lenses, which may incur more cost than lenses with no image stabilization.

### Sensor Dust Reduction

A digital photographer's worst nightmare is dust on the camera's sensor. Usually dust entering the camera occurs during a lens change. In our [Lens Buying Guide](#), there are tips on how to change your lens while avoiding dust entering the body. Although not all cameras are equipped with anti-dust mechanisms, those that do can help shake off the dust currently on the sensor, saving you the trouble and risk of cleaning it by hand. These ultrasonic vibrations are usually triggered when you power off the camera.



With sensor dust reduction technology, your images remain clear and spot free

If your camera does not have an internal dust reduction system, you can bring your camera to a reputable photography service shop to have it cleaned, or purchase a sensor cleaning kit and do it yourself. Although there is greater risk than bringing it to a professional, the cleaning kit route is less expensive.

### Autofocus Points

These days many point and shoot cameras have multiple focus points for the autofocus function of the camera. Up to 9 points are incorporated into compact digital cameras, but there are limitations. Typically a point and shoot camera cannot select a particular point to be the focus. The options are usually set, allowing you to choose all the points, or a collection of points to be the reference for your focus.

DSLRs have completely customizable autofocus points. You can select a single point for your camera to focus on, or any of the pre-grouped points in your autofocus options. This allows greater creativity and control over your shots if you prefer to use the autofocus mode instead of the manual mode.



More autofocus points gives you more control over the focus of your image

## **Body Construction**

DSLRs are much larger than point and shoot cameras due to their sensor size and the lenses they must accommodate. When it comes to handheld photography, they are heavier and have a more solid feel. Each camera is ergonomically designed to fit your hands, with various buttons and wheel controls placed strategically at your fingertips.

You may notice that DSLRs are designed predominately for comfort and ease of operation instead of dazzling cosmetic esthetics. Although point and shoots may feature various colours with sleek designs and stylish attributes, professional DSLRs are noted for their ability to produce quality images over the physical appearance of the product itself.

The higher end camera bodies are manufactured with sealed seams along with rugged and durable materials to protect the body from physical damage. This is especially useful for journalistic and sports photography where moisture and dirt can become a problem. Outdoor photography can also benefit from these protected bodies, and coupled with lenses designed with the same elements, your camera system can withstand unexpected weather of all types.

## **Image Format**

### **...what's the difference between JPEG and RAW?**

Most point and shoot cameras capture your image as a JPEG (Joint Photographic Experts Group), a very common image file format. JPEGs are easy to edit and store since they are compressed. However, when you move into more professional photography, the need for unaltered images is significant. Serious photographers consider any loss of image quality or information completely unacceptable. Most DSLRs still capture photographs in JPEG and also RAW formats.

### **JPEG**

Most photographers have managed JPEGs before as they're the most efficient image file format. Because it is a compressed or "lossy" file format, its file size is reduced, making it easier to manage in terms of disc space. What is a lossy file? A lossy file is defined as an image that has some of its data discarded so that the file size may be compressed resulting in a smaller size. The more compression that is applied, the more the image will break down in quality.

With its smaller file size, JPEGs are much easier to manipulate. JPEGs are not only supported by many software editing programs but their size makes them easier to transport and share. Downloading time is shorter while thumbnail viewing on most PCs and Macs is faster.

The result is a file that's easy to work with but missing some vital information. The ability to edit such items as white balance, tone curve or sharpening will be hampered in its colour mode RGB.

The JPEG format is great for snapshots, quick proofs, and photography that do not require much post-production manipulation. Perfect for casual shots, JPEGs are ideal for websites and are easily transmitted over the web.

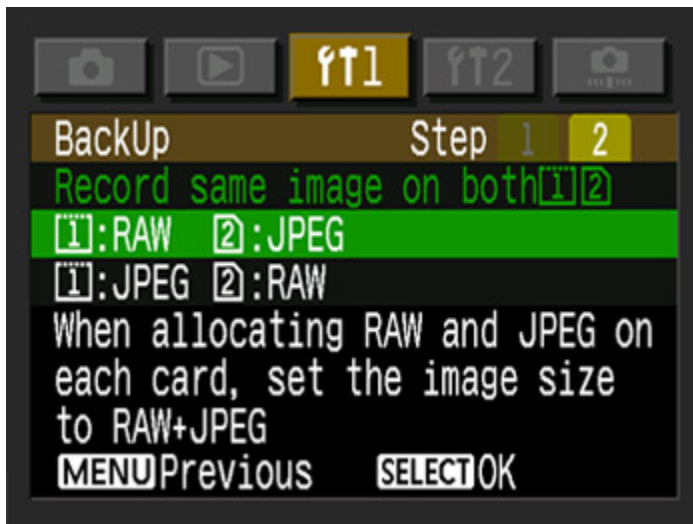
## RAW

Today most professional digital photographers shoot their images in RAW format because the uncompressed file has no loss of data and can be adjusted and manipulated by the photographer, allowing greater control of the final output of their image.

RAW files are larger than JPEGs but without the compression. A RAW image takes up more space on a memory card, but because it is not converted by your computer's processor, the file is pure and unscathed. Using the camera's supplied RAW file conversion program or third party ones such as Capture One, you can edit your image and convert it into a RGB image in either the JPEG or TIFF format.

Because your camera's processor is not compressing the RAW file, you have the ability to gain full control over the white balance, tone curve or sharpening of the image. RAW files are superior to JPEGs because the manipulation of the image is in the photographer's hands. When a JPEG image is corrected, it has already been adjusted by the camera's processor so the second time it begins to lose information or data. This results in a loss of colour gamut and bit depth.

Given the uncompressed nature of the RAW files, it goes without saying that the post-processing of these images is more time consuming. Even without editing the image itself for white balance or tonal curves, the images must at least be converted to a file format that is printable or publishable on the web. Because RAW formats are camera-specific, not every software program can support them. In addition to the camera's conversion software or a third party that supports your camera's RAW files, you will also require a powerful computer capable of managing the workflow.



Offering the most versatility and control, RAW file formats are ideal for professional photographers who require control over their images. The disadvantage in loss of speed and increased post-production time may not be ideal for photojournalist or sports photographers. As a compromise, there are cameras that shoot images in RAW and JPEG at the same time. The processor in the camera shoots in RAW, duplicates the file and compresses it into a JPEG.

## Accessories

### ...what other accessories compliment DSLRs?

In the world of digital photography there are numerous accessories to enhance the performance of your DSLR. Adding accessories to your camera allows you to customize your system to better suit your photographic style and needs. These accessories are designed to be aids and can be beneficial whether they provide more battery power, better lighting, more comfort or greater functionality. In short, they all lead to a better quality image from your camera and a more satisfying experience in your photography.

## Batteries

Every digital SLR needs power to keep shooting. Most camera bodies come with a standard lithium ion battery that is rechargeable. Many photographers purchase a second or even third battery in order to ensure there's always a good supply of power handy. With one battery in the camera, one in the charger, and a fully charged one in your pocket, you should be able to shoot without worry.

Those who travel for their photography can purchase an extra charger so batteries can remain charged throughout the trip.



While carrying extra batteries allows you to constantly have power for your camera, a battery grip is a one-device solution to extending your battery life. And it carries an extra bonus. With time-sensitive event photography and sports photography, changing a battery may not be an option without losing that fleeting moment or perfect shot. This is why professional photographers turn to a battery grips. This device attaches to the bottom of the camera with a portion of it entering the battery chamber, secured by the tripod mount. Typically two lithium ion batteries can be stored in the grip, effectively doubling your battery life.

[Battery Grips »](#)

In addition many battery grips allow you to use AA's as well as lithium. This can be beneficial should your lithium ion batteries die and you need to replace them in an instant. AA batteries can be purchased virtually anywhere. So even if you've forgotten your charger or are in a different country, you can always find AA batteries to power your DSLR.

[Alkaline Batteries »](#)

Here's an extra bonus: Most grip adapters include a vertical shutter release, situated for comfortable vertical shooting. If you're shooting on a tripod indoors and have access to a power outlet, the ideal power source is an adaptor. Connected right to your camera, a continuous power source eliminates the need to drain your batteries.

## Wireless Transmitters

Take advantage of your wireless router by equipping your camera with a wireless transmitter. Freed from the constriction of the length of your USB cord, you can shoot photos and transfer the images instantaneously to your computer. There are no cables to fuss with and no worries about full memory cards.

## Shutter Release

Mounted on a tripod, your camera immediately becomes more steady and stable. However, the simple press of the shutter button with your finger can cause the camera to move slightly, resulting in a soft image. Adding a shutter release cable to your camera will allow you to effectively "press" the shutter at the other end of the cable instead of on the actual camera. This will eliminate any camera shake and produce a clearer picture.

With the ever-growing technology in wireless transmission, many DSLRs are equipped with the ability to transmit a signal to a remote controller. Purchased separately, a compatible remote controller could be programmed to release the shutter and control the zoom. It's ideal in eliminating the possibility of camera shake and perfect for group photos.

[Shutter Release »](#)



### Flash

Most DSLRs come complete with a built-in flash that usually pops up from the top of the camera when needed. This flash is convenient, but there are many advantages to using a separate flash that mounts to your hot shoe..

The more powerful camera flash has a longer range than the built-in version. You can light a much larger area, and because of this longer range, you can also bounce the light off ceilings and walls to give your subject a well-lit exposure without harsh shadows. The position of the flash is also farther away from the lens and therefore from your subjects' eyes. This helps eliminate the "red eye" common when using built-in flashes.

Fairly inexpensive and easily portable, "on camera" flashes are essential in areas of low light and for filling shadows on sunny days. If the flash is being attached to a camera bracket, a sync cord would have to be attached to the camera from the flash.

[Mounted Flashes »](#)

### Memory Cards

To extend the number of frames you can shoot, invest in memory cards with large storage capacities. These cards are not only re-usable, but they are usually inexpensive. Although there are different brands and speeds of memory cards, your camera will use a specific type whether it's a Secure Digital (SD) or Compact Flash (CF) card. Make sure to purchase multiples in case you fill one card and need a backup – especially if you're shooting in RAW format.

Another inexpensive device is a card reader. You can purchase one specifically for your type of memory card or get one that supports many different types. Image transfer is usually faster, easier and doesn't tie up your camera for downloading – or drain its battery.

[Memory Cards »](#)



## Tripod

Like the shutter release cable, tripods help eliminate camera shake to produce sharper photos. Essential for portraiture and close-ups, tripods allow you to narrow your aperture and slow down your shutter speed without resulting in blurry photographs. With either a pan or a ball head, you can position your DSLR to capture the perfect image.



The photo demonstrates how a wise tripod choice will allow you to customize the height and stability of your camera.  
© Kristin Smith

Ensure that you choose an appropriate tripod that holds the weight of your camera and lens, especially if you plan to use a heavy telephoto lens.. Consider the environments where your tripod will be put to use, and choose a rugged tripod for outdoors or a steady, heavier one for indoor photography.

[Tripods »](#)

## Lens Filters

Filters are accessories that are added to the front of your lens to protect it and emphasize, eliminate, or change the colour density of the image. Typically made of glass, resin, or polyester, the transparency of the material allows for correction of light or colour balance. The most common DSLR filters are Ultra-Violet (UV), Neutral Density (ND), and Polarizers. These filters can eliminate aberrations that are much more difficult to remove using post-production software programs.

[Lens Filters »](#)



## Software

Post-processing software is essential for professional photographers to achieve superb results and ultimate control with the final printed product. If you're shooting in RAW format, you'll need a good RAW conversion program to edit and transform your images into JPEG or TIFF files. Although most DSLR cameras come packaged with basic RAW conversion software, third party software is far superior. Programs such as Capture One allow for easier and more efficient workflow by allowing batch processing, tethered shooting, advanced colour management, and custom settings.

Advanced editing programs are indispensable for photographers. With tools like Healing Brush that automatically matches surrounding pixels to eliminate blemishes and imperfections, this software also lets creative photographers add effects, simulate lens filters, enhance contrast, and much more.



Edit and convert your RAW files with advanced editing programs.

Thanks to the abundance of touch-up tools built into Photoshop, you can even fix common lens aberrations like colour fringing and barreling. Adding text and layering multiple images are also easily accomplished.

[Photo Software »](#)

[Calibration Software »](#)



## Bags and Cases

With the vast selection of bags and cases available for photographic equipment, it's no wonder that it is a wise investment to protect your gear. There are many styles but the main function of your bag and case should be easy portability and protection of your equipment. Soft cases are usually in the form of backpacks or messenger bag styles that may have different chambers or foam inserts for accessories and extra lenses. Hard cases are more rugged and durable and offer more weather resistance than soft cases. For heavier equipment, hard cases with wheels are available.

Consider how much equipment you need to store - whether it's just a DSLR with extra memory cards and batteries or a full line of lenses, flash, filters, adapters, and more. Comfort and easy accessibility will be considerations. How fast will you need to set up? Will you be adding more equipment in the future? Manufacturers have given the consumer the ability to customize their cases and bags to allow for the best storage for their equipment.

[Bags and Cases »](#)

## Types of Photography

### ...what kind of photographer are you?

Although you may be a combination the types described below, we have provided a general guideline to follow depending on what type of photography you predominately shoot. With all the accessories available for digital photography, it is easy to customize your system so it is the most suitable for your individual tastes and needs.

### Family Photographer

Entry-level photographers who are familiar with the manual functions of an advanced compact camera may wish to enter the world of DSLRs. There may be a price jump to consider, although today there are several affordable DSLRs. They're designed for photographers who like the flexibility of a DSLR that is still equipped with plenty of automatic features for fast, fun and easy photography.

This range of camera is designed for those that consider photography a hobby. These entry-level DSLRs are ideal for traveling, capturing family images, and experimenting with macro and telephoto photography, and allow the family photographer to be more creative.

### Price Range

Look for DSLRs that are packaged with a standard zoom lens. The standard zoom lens lets you shoot in almost any situation and is a great versatile lens for general purpose photography. Cameras in this range are approximately \$1000 for a full kit and under \$800 for just the body.



© David Nelson

### Features

The sensors in these cameras are larger than point and shoot cameras but are still lightweight and smaller than the professional DSLRs. With 6 to 8 megapixels, you can print up to 10"x14" photographs with excellent quality and 14"x17" with good quality. There are many automatic features available for the times when you don't want to experiment with the manual options.



A fast shutter speed and burst mode can freeze the action perfectly

Predominately constructed with a plastic body, these cameras are not weather resistant but have a decent burst rate of at least 2 fps. The autofocus will be sufficient for most applications.

## **Amateur and Semi-Professional Photographer**

Entry to mid-level photographers who are highly interested in exploring digital photography, budget conscious and want the ability to explore photography as a professional. Cameras in this range may overlap entry-level suggestions, but have the added benefit of more advanced features and better lenses.

Photography is your passion and you may have submitted photos to be published, participated in gallery shows, or shot the occasional wedding or event. Although serious about your work, you're working towards becoming a full time photographer when you've developed your portfolio and established your name in the industry.

### **Price Range**

In this range, there will be kits that include multiple lenses from either the same manufacturer as the body or coupled with third party lenses. For kits with only a single lens, the lens quality increases including such features as image stabilization and coated glass designed specifically for digital lenses. In this range, expect to pay \$1,500 to \$4,500 for a kit and \$1000 to \$3,000 for just the body.

### **Features**

Although usually bulkier than the entry-level DSLRs, many compact models that are fairly lightweight. With a range of 8 to 10 Megapixels you can print up to 16"x20" with excellent quality and 20"x24" with good quality. This better quality will allow you to submit your images to local newspapers or magazines and permit greater cropping ability.



Mid-Range DSLRs are great for close up photography

Your budget should allow for some more advanced features such as a heavy duty body and more rugged lens. Although still perfect for traveling and family portraits, these cameras have even more advanced features. Because you may need the versatility to shoot outdoors, indoors, and many different environments, weather resistant bodies and lenses are essential. The burst rate of these cameras can be up to 6 fps and the cameras should be packaged with raw conversion software and options allowing you to be tethered (connected to a computer while shooting).

The built-in flash could have a longer distance range and more control features for the photographer. More information will be displayed in the viewfinder and menus. Photographers with solid understanding of digital cameras will be able to take advantage of these features. Although the output is not 100% at the professional level, great prints can be made and the image quality is far superior to that of point and shoot cameras.



Semi-professional DSLRs can capture superb detail and show contrast in textures for stunning images  
© Simona Balint

Anti-Dust features which help keep dust off the sensor, become available in this range. Often histograms, which provide graphical displays of the tonal variations of the image, are also provided at this level.

### **Professional Photographers**

Budget is usually not a concern because photography is your livelihood and as a professional you need top of the line equipment to stay competitive in the industry. Whether you are a news and sports photographer or an artist, you require a large sensor in order to capture the best detail possible. The ability to enlarge your images to large banners or prints for gallery shows is very important.

### **Price Range**

The sky is the limit, because the sensor chips are the largest in the market, it's no wonder that the camera itself is very large. Because of the wide range of photography types, these professional bodies generally do not come in kits. They range from \$3,500 to \$8,500 for the body alone and are compatible with many professional lenses. Photographers purchase their lenses separately to suit their individual needs.

## Features

Designed for fast photography with super high quality image capturing, professional DSLR cameras offer astounding results and the fastest shutter speeds possible. With between 10 and 16 megapixels, large format prints can be made with excellent sharpness and colour. Larger colour gamuts are available over the other DSLR models and advanced features such as shooting JPEG and RAW simultaneously is available.

More information is displayed in the viewfinder, which provides more information and allows the photographer to capture images quickly instead of toggling around in the menu options. Frame rates are up to 8 fps, ideal for sports and wildlife photographers. The body construction is more durable and usually made out of 100% metal or a hybrid of metal and plastic. In this range, it is most likely that the body is also weather resistant.

For JPEG shooters, white balance controls can be finely tuned and the ability to shoot tethered is standard.



Even a simple scenic scene can produce stunning results with professional DSLRs

### **Is there a new DSLR in your sights?**

Whether you're just entering the DSLR world or upgrading your existing DSLR equipment, it's all about creativity and control. And the potential is virtually endless. The professional photographer can deliver spectacular results for publications and high quality fine art prints. Prosumers can use additional lenses and advanced controls to superb effect. The family photographer can achieve a whole new level, producing images he or she will be proud to display. With the right accessories to compliment your DSLR choice, your digital photography system will provide superb performance, whether it's for recreation or for professional use. Happy shooting!



Soft light and a blurred background combine perfectly in this floral close-up