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[Main](#) > [Electronics](#) > [Gadgets](#)

How Digital Cameras Work

by [Tracy V. Wilson](#) and [K. Nice](#) and [G. Gurevich](#)

Table of Contents

- Introduction to How Digital Cameras Work
- Understanding the Basics
- A Filmless Camera

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In the past twenty years, most of the major technological breakthroughs in consumer electronics have really been part of one larger breakthrough. When you get down to it, [CDs](#), [DVDs](#), [HDTV](#), [MP3s](#) and [DVRs](#) are all built around the same basic process: converting conventional analog information (represented by a fluctuating wave) into digital information (represented by ones and zeros, or [bits](#)). This fundamental shift in technology totally changed how we handle visual and audio information – it completely redefined what is possible.



A Nikon digital camera

The **digital camera** is one of the most remarkable instances of this shift because it is so truly different from its predecessor. [Conventional cameras](#) depend entirely on chemical and mechanical processes -- you don't even need electricity to operate them. On the other hand, all digital cameras have a built-in computer, and all of them record images electronically.

The new approach has been enormously successful. Since film still provides better picture quality, digital cameras have not completely replaced conventional cameras. But, as digital imaging technology has improved, digital cameras have rapidly become more popular.

In this article, we'll find out exactly what's going on inside these amazing digital-age devices.

Shopping for a digital camera?

Not sure what to get? For most people, a standard 4-megapixel, \$300 point-and-shoot camera is the best option. Check out the [StuffGuide.com](#) digital camera buying guide for more information.



Did you know?



Tiny, But Powerful

Ultracompact digital cameras are as small as a deck of cards, but most have 2 inch screens and take great snapshots. [Click here](#) to compare the best prices.

[Next Page](#) >>

Top Selling Digital Cameras

Sony Corp. v. Optimum Imaging Technologies LLC

	Canon PowerShot A610 Digital Camera 5.3 Megapixel, 4x Optical Zoom, Standard Point and Shoot, Video Capability Included, 2 in. LCD Panel, MMC Card, SD Card, Built-In ...	\$242 - \$300 compare prices from 46 stores
	Canon Powershot SD450 / IXUS 55 Digital Camera 5.3 Megapixel, 3x Optical Zoom, Compact, Video Capability Included, 2.5 in. LCD Panel, MMC Card, SD Card, Built-In Flash	\$277 - \$400 compare prices from 48 stores
	Canon PowerShot A620 Digital Camera 7.4 Megapixel, 4x Optical Zoom, Standard Point and Shoot, Video Capability Included, 4 in. LCD Panel, MMC Card, SD Card, Built-In ...	\$326 - \$400 compare prices from 44 stores

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[Next Page >>](#)

[HSW Home](#)

Table of Contents:

- › [Introduction to How Digital Cameras Work](#)
- › [Understanding the Basics](#)
- › [A Filmless Camera](#)
- › [Resolution](#)
- › [Capturing Color](#)
- › [More on Capturing Color](#)
- › [Exposure and Focus](#)
- › [Storage](#)
- › [Summary](#)
- › [Lots More Information](#)
- › [Compare Prices for Digital Cameras](#)

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