

Automated Video Optimization

Convert casual visitors into buyers with fast-loading, rich video across your e-commerce experiences.



Research shows that shoppers trust sellers who deliver online shopping experiences similar to the in-store browsing experience.

80% of shoppers claim that product videos make them feel more confident about their purchases and 73% say that videos influence their buying decision

Clearly, e-commerce success demands delivery of great video experiences.

Video-rich product galleries are now table stakes for e-commerce. Advanced features, such as 360° product video, full-HD quality video accompanied by 3D viewers are entering the mainstream to help shoppers connect with products in greater depth. Additionally, research has shown that shoppers have **more trust** in sellers who accord them the ability to interact with products online—an enjoyable experience that’s similar to browsing and making purchases in store.

As **captivating** as videos can be, they do present technical challenges. They take up a substantial amount of a page’s bandwidth.

The higher-quality the video, the higher the video bitrate and associated data.

More bandwidth usage means longer loading times and weaker site performance.

The solution to these issues? Video optimization.



Why High-Performing Video is Important

Two major reasons account for the importance of displaying fast-loading rich video on e-commerce sites.

Video has a Significant Impact on Performance

The use of video has exploded in recent years. According to [Hubspot](#), 91% of brands use video as a marketing tool. As video usage has gone up, so has bandwidth consumption. The latest [HTTP Archive data](#) shows that video now accounts for two-thirds of the average web page's total bandwidth - one of the most important factors in how fast a site loads, which in turn influences overall site engagement and conversion.

Video accounts for two-thirds of average web page's total bandwidth

Performance Is Inextricably Linked to Revenue

The effect of site performance on user experience (UX) and conversion rates can be the dealmaker or breaker. According to [Google](#), 53% of visits are abandoned if a mobile site takes longer than 3 seconds to load — apparently the breaking point for most online shoppers.

One-second delay in page load time can lead to 4.42% reduction in ecommerce conversion rates

Another [study](#) suggests that the highest ecommerce conversion rates occur on pages with load times between 0-2 seconds. With each additional second of load time, website conversion rates drop by an average of 4.42%. A one-second delay would cost an e-commerce business with a daily sales revenue of \$100,000 and an average conversion rate of 2.5%, a staggering \$1.6 million in lost sales per year!

1

To reach e-commerce conversion and revenue goals, fast page loads (< 3 seconds) are a must

2

Page load times are greatly impacted by bandwidth - video accounts for 2/3 of it

3

Optimizing video bandwidth is key to achieving e-commerce goals

Quality-first video optimization is achievable

Optimizing video bandwidth to achieve ecommerce conversion goals cannot come at the expense of the video quality itself. Video that streams at a lower resolution to save bandwidth leads to a sub-optimal viewing experience and has as detrimental an effect on conversion rate as slow load time or buffering.

In reality, compressing the size of the video while maintaining visual quality is achievable. So is maximizing engagement and conversion. By dynamically adapting video quality and size to the end user's device, internet connection, and browser it is possible to deliver quality-first video optimization that assists in achieving e-commerce conversion and revenue goals.

Automatically adapting video size and quality depending on end user's device, internet connection and/or browser is key to maximizing conversion

Automatic Video Optimization Tactics

Quality-first video optimization can be easily achieved without putting a strain on your technical resources or budget. There are 3 tactics to achieving this

1. Automatically resizing video dimensions
2. Automatic video format and quality encoding
3. Adaptive bitrate streaming (ABR)

Automatically resizing video dimensions

Raw video files are typically larger than is required for an ideal user experience. Even though many mobile devices can record videos in a 4K resolution, very few of them can actually replay 4K videos with that resolution. Automatically **resizing videos** to optimal pixels can save millions of pixels per frame, concurrently generating smaller file sizes. For instance, automatically resizing a 30-second video with 1280x720 dimensions to 960x540 reduces its weight from 25 MB to 10.7 MB — a whopping 60% reduction.



Automatic video format and quality encoding

A common solution is to compress videos with a tool that also ensures that the quality degradation after compression is imperceptible. This involves selecting video format/codecs that best meets your needs and automatically adjusting the quality based on the content.

In terms of format and codec, there are several to choose from. While H.264 MP4 is a popular format / codec that works on all browsers, H.265 or WebM with its VP8 and VP9 codecs could lead to up to 40% reduction in size without loss in visual quality. Unfortunately, they are not compatible with all browsers. **Automatic format/codecs selection** based on browser can ensure maximum reduction in video size without loss in quality.

Tools that **auto-select quality** based on the video content can lead to better user experience. For instance, simple one-shot videos with fewer movements could be optimized in favor of size compression vs. high-definition video with complex scenes could be optimized for quality in favor of size compression.

Adaptive bitrate streaming (ABR)

The above two tactics encapsulate what is referred to as delivering video as progressive streams. These are good tactics for videos that are shorter in length (< 30 seconds) or require additional transformations during delivery such as cropping, applying spotlights, etc. If you are delivering longer videos (>30 seconds) or videos with a higher resolution (>1080p and up) as a single file through progressive streaming and there is a sudden drop in internet connectivity, they might experience buffering issues, slow playback, or playback failures.

Since videos are viewed on different devices and at fluctuating internet speeds, you will want to optimize video bitrate, format, and resolution for smooth streaming. An effective solution is **Adaptive bitrate streaming** — a process in which the video is chunked into 2 to 10 second long scenes and an optimal profile (combination of bitrate, format, and resolution) is adaptively selected for each scene as the video streams. This ensures the best possible viewing experience based on device and internet connection while minimizing buffering interruptions.

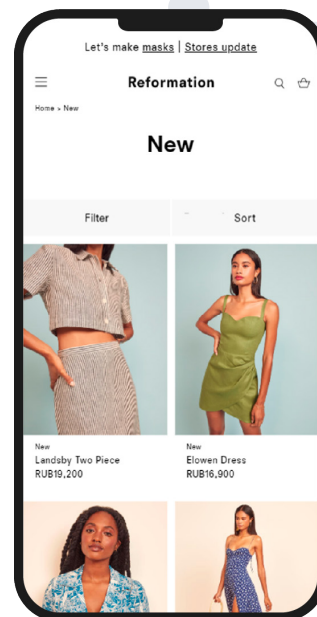
To ensure maximum size compression without loss in visual quality, select tools that support auto video format and content-aware quality encoding



Case Study: Reformation

As a leading sustainable fashion brand — Reformation — focuses primarily on eCommerce, with more than half of their customers visiting its website using mobile devices. Relying on a basic, out-of-the-box functionality of their existing eCommerce platform, Reformation struggled to deliver images and videos that were optimized to suit the context of every user's device and were choppy and hard to watch. Specifically, for videos, integrating clips through Vimeo produced unsteady playbacks.

After integrating Cloudinary into its eCommerce platform, Reformation was able to take advantage of Cloudinary's automated video optimization to deliver high-fidelity and high-performant videos. The merchandising team uploads video into its ecommerce platform - Workarea - and Cloudinary does the rest, including selection of optimal format and quality to ensure smooth streaming and no buffering interruptions regardless of the viewer's device or bandwidth. These changes simplified their media workflow and gave Reformation customers a better experience that resulted in up to 31% reduction in page load time and 67% reduction in bounce rate. "Most of our team doesn't even realize Cloudinary is there doing all those magical things" - says Jessica Chappell, Director of Product Management at Reformation.



By automating video optimization, Reformation reduced page load time by 31% and reduced bounce rate by 67%

Learn more

For a deeper dive into optimizing the performance of your videos, read Cloudinary's guide on [video optimization](#) and to schedule a quick demo [contact us](#) today!

About Cloudinary

Cloudinary's mission is to empower companies to deliver visual experiences that inspire and connect by unleashing the full potential of their media. With 60 billion assets under management and nearly 10,000 customers worldwide, Cloudinary is the industry standard for developers, creators and marketers looking to manage, transform, and deliver images and videos online. As a result, leading brands like Atlassian, Bleacher Report, Bombas, Grubhub, Hinge, NBC, Mediavine, Minted, Peloton and Petco are seeing significant business value in using Cloudinary, including faster time to market, higher user satisfaction and increased engagement and conversions. For more information, [visit www.cloudinary.com](http://www.cloudinary.com).