



Wirecast Reviewer's Guide

Wirecast® All-in-one live streaming production software

Ideal for streaming live events, news, sports, concerts, religious services, conferences, meetings, online games and more

Introduction

This Reviewer's Guide is designed to provide an overview of the features and functions of Wirecast and highlight the new features of the latest version to assist in the review process.

Please review this document along with the associated Telestream Wirecast User Guide, which provides complete product details.

Telestream provides this guide for informational purposes only; it is not a product specification. The information in this document is subject to change at any time.

Wirecast Overview

Turn your computer into a television studio with Telestream Wirecast®. This award-winning live streaming production software gives you everything you need to stream and produce professional-quality video from your Mac or Windows computer to any online streaming destination, including Facebook Live, YouTube Live, LinkedIn, Twitter/Periscope, and many more.

Wirecast supports an unlimited number of input sources ranging from web to professional cameras, local network NDI and IP sources, web and mobile devices and even remote guests.

Powerful production capabilities make it easy to switch between multiple live camera feeds while dynamically mixing in prerecorded video, audio, graphics and slides.

Stream, record, or choose from local outputs as well as NDI and IP multi-casting and unicasting on your LAN. Virtual camera and microphone outputs can push to other software like Zoom, Skype, Google Hangouts, and more.

Pricing

- Wirecast Studio (\$599 USD)
- Wirecast Pro (\$799 USD)

Both Mac and PC licenses include a one-year support subscription, which gives users access to our professional support technicians, and enables free downloads of software updates and upgrades. After the 12-month period ends, users can choose to renew their support contract annually to continue to receive support, new versions and new features of the software. If the support contract expires, the user can continue to use Wirecast software, but will no longer receive professional support or software updates.

Annual Support Subscription Renewal Rates:

- Wirecast Studio (\$99 USD)
- Wirecast Pro (\$99 USD)

Key Benefits

Easy to Use

- Intuitive user interface makes it possible to be up and streaming in minutes.
- Computer, camera and an internet connection are all that are needed.
- No experience needed to create professional, polished broadcasts.

Professional Production Capability

- Wirecast's unique multilayer system allows live compositing with up to 250 layers and unlimited shots which makes it easy to create and produce very complex, high quality broadcasts.



Professional Production Capability (continued)

- Includes professional video features like instant replay, ISO recording, chroma keyer support, multi-viewer, and more.

Integrated destination support

- API-level integration with a wide range of output destinations saves time in setting up live streams and makes it easier to manage every aspect of a live stream from within Wirecast.

Key Features

Some of the key features and capabilities of the software include:

Capture

- **Unlimited Sources:** Cameras, microphones, webcams, IP cams, or use the our free wireless camera app for iOS.
- **NDI input and output:** Bring any NDI source, including Skype, on your network directly into Wirecast. Output your program feed via NDI (available in Pro).
- **Built-in screen capture:** Capture any screen or computer on your network. Perfect for PowerPoint or Keynote presentations, online gaming, or for broadcasting live interviews using Skype or other chat clients.
- **Remote Conferencing:** Wirecast Rendezvous enables up to 8-way peer-to-peer remote conferencing with any Internet connected computer or smart device. Conduct panel interviews, talk shows, multiple points of view at live events and remote screen sharing and production with just a few clicks.
- **Multi-channel audio capture** allows Wirecast to ingest up to 16 channels of audio per source. Users can set up specific shots to contain any combination of input channels, allowing for the full automation of what would have previously required an additional operator.

Produce

- **Multiple user-definable layers:** Wirecast's unique multiple layer support allows live shot compositing with up to 250 layers and unlimited shots.
- **Graphics and Animated Titles:** Over 100 built-in graphics and titles.

- **Social Media Comments:** Built in Twitter comment curation and display.
- **Facebook Polling & Donations:** Create and receive polling data from Facebook on your live stream. If you have a Charity ID from Facebook, you can add a Live Donate button to your live stream posts.
- **Stock Media Library:** Access to over 500,000 unique media assets directly in Wirecast. The Stock Media Library has videos, music, lower thirds, backgrounds and more. Included with an active support subscription.
- **Instant Replay:** With Wirecast Pro you can record any source into a separate file and use for multi-angle replays
- **Playlists:** Queue a list of multiple videos, images, audio or live shots to play successively.
- **Chroma Key:** Transport your production to a new studio or location using Wirecast's high quality GPU accelerated real-time green screen solution.
- **Luma Key & Color Key:** Useful for keying out graphics with white or black backgrounds or for images that have color backgrounds.
- **Live Scoreboards & Clocks:** Use the built-in scoreboards, live clocks and timer templates to track scores and play time for live action sporting events.
- **3D Virtual Sets:** Create a virtual TV studio environment with Wirecast Pro's built- in sets.
- **Integration with Control Surfaces:** X-Keys Controllers and Elgato Stream Deck
- **Professional audio features** for increased workflow options:
 - **Mix up to 8 independent audio tracks per broadcast** and output them to independent destinations. Multi-track audio mixing also enables multilanguage productions. Users route audio sources to discrete tracks for both live productions and recordings.
 - **Support for multi-channel audio** interfaced over low latency protocols (WASAPI, ASIO and industry-standard audio APIs), allowing users to connect more professional audio devices and gear to Wirecast.



Stream (and more!)

- **Stream to multiple destinations and bitrates** simultaneously Wirecast allows you to stream and record to more than one destination at a time. Set up your project to simultaneously stream to multiple destinations and bitrates with just a few clicks.
- **Easy integrated destinations:** API-level integration with a wide range of output destinations saves time in setting up live streams
- **Stream and Record:** Stream and record at the same time. Great for archiving or off-line editing, record MP4 or MOV files to any drive.
- **Multi-view support for monitoring** up to 17 live sources independently on external monitors.
- **Program feed output** (with AJA & BlackMagic cards) Take your Wirecast feed out directly to Blackmagic Design Intensity or DeckLink hardware. Ideal for sending live feeds directly into editing, effects and broadcast design systems
- **Virtual Camera and Microphone output:** Wirecast video and audio output can be picked up as a source in other devices or software for example: Zoom, Skype, GoToMeeting (Windows only) and Google Hangouts
- **NDI Output:** Wirecast Pro can output its produced live feed over NDI, allowing it to be received by other devices or software on the local network.
- **ISO Record:** Record each individual source
- **Multi-track audio recording:** Route audio sources to discrete tracks for both live productions and recordings.

For a full list of features, check out the [product comparison chart](#).

New in Wirecast 14

Wirecast 14 is an epic release with a *lot* of stability and reliability improvements. Additionally, there are several new features including an all new Chroma Key with added Luma Key and Color Key options. New features include:

- **All new Chroma Key** (with Luma Key and Color Key)
 - New options for more accurate keying, including spill suppression, edge coloring, and clipping ranges. Plus a Luma Key and Color key - useful for keying images with white/black or colored backgrounds.
- **Improved ability to size and scale sources**
 - New options for sizing and scaling sources, to make it easier to precisely resize your videos and images on the canvas.

- **Text and font improvements**
 - Smoother text scrolling and a new font picker to select font variants
- **Better, more reliable incoming video source connections**
 - Improved reliability for Wirecast Go, Rendezvous and webstream sources, plus efficiency improvements with GPU decoding for NDI sources
- **Updated technologies**
 - Updated to NDI 4.5, ported OpenGL to Metal on macOS, updated webstream plugin (libVLC), for improved connectivity and efficiency

[For more information on Wirecast Gear, visit here.](#)

Wirecast Go iOS App

- iOS live streaming or camera source for Wirecast
- Integrates with Rendezvous natively
- Replaces Wirecast Cam for LAN/wifi camera

Wirecast System Requirements

	Minimum	Recommended
Operating System	Windows 10 1803 or higher, macOS Mojave, macOS Catalina	Windows 10 1909 or higher, macOS Mojave, macOS Catalina
Processor	i5 dual-core @ 2.3GHz ¹ 6th generation ² or higher	i7 quad-core @ 2.8GHz+ 6th generation ² or higher
Memory	4GB RAM	16GB+ RAM
Hard Drive	2GB ³ , 7200 RPM for record to disk	500GB+, Solid State OS Drive
Graphics Card	Intel HD ⁴ , DirectX 11 capable	Nvidia GeForce or AMD Radeon, 1GB+ video memory
Internet Connectivity	Open HTTP/HTTPS port 80, RTMP port 1935, port 7272 for Remote Desktop Presenter	If behind a firewall, check with your CDN for any sites to whitelist

¹ May be insufficient for 1080p+ or 60 fps workflows

² [How to check the generation of your Intel processor.](#)

³ Additional hard disk space required for record to disk.

⁴ Insufficient for advanced Multi-Viewer workflows.



Best Practices

Minimum Required Upload Speed

- It is recommended that an upload speed rate of at least double the selected video bitrate be available, especially for a total target bit-rate of 10Mbps (Megabits per second) or less, or when there are multiple outgoing streams.
- Upload speed can be tested at a website such as TestMy.net/upload.
- Additional tasks that can consume upload bandwidth on the network should be considered when determining how much of the available upload bandwidth can be allocated towards streaming.

Rendezvous

Wirecast Rendezvous uses WebRTC technology that can be very resource intensive. For the best experience, we suggest considering the following table when choosing hardware:

	Studio (2 guests + 1 host)	Pro (7 guests + 1 host)
Bandwidth ⁴	Add 4 Mbps	Add 5+ Mbps ⁵
Processor ⁴	i5 quad-core ⁶	i7 quad-core ⁶

⁴Based on a single simultaneous stream of 720p30 x264 @ 4.0Mbps.

⁵Bandwidth per guest will scale downwards as more are added to maintain reliability.

⁶Minimum recommended processor with example stream⁴. More demanding workflows may require a more capable CPU.

ISO Recording

- Solid State Drive or fast RAID array recommended for ISO Recording and Replay functionality.
- Actual data rates will vary depending on quality level selected for ProRes (Mac) or MJPEG recording (Windows), as well as the resolution and frame rate selected.
 - For Mac ProRes recording please refer to Apple's ProRes data rate specifications
 - For Windows, the MJPEG Best Quality Guidelines are (Megabytes per second):
 - » 1080i and 1080p 29.97 and 30 FPS, MJPEG Best Quality – ~25MB/sec
 - » 1080p 60 FPS, MJPEG Best Quality – ~50 MB/sec
 - » 720p 59.94 and 60 FPS, MJPEG Best Quality – ~20 MB/sec
- Total expected data rate should be compared to available disk write speed to ensure adequate disk throughput.

Note: Failure to ensure the available disk write speed is greater than the highest expected total data rate may result in frames being dropped from recordings (ISO, Replay, and Record-to-Disk).

Hardware accelerated encoding requirements:

- Intel Quick Sync Video encoding requires an Intel CPU with an Intel® QuickSync Video core. [List of Intel CPUs supporting QuickSync](#)
- NVIDIA NVENC encoding requires an NVidia GPU with Kepler architecture or newer. [NVIDIA only maintains a general list of supported GPUs](#)
- Apple Hardware Accelerated H.264 encoding requires a Mac with an integrated Intel GPU*.

* This may change in the future, as the Apple API decides what hardware acceleration method is used. At the time of this writing, only Quick Sync via an Intel GPU is supported.

High frame-rate streaming (60fps):

- High frame-rate streaming will result in increased CPU usage and require a higher bit rate (4Mbps or higher) for a quality encode.
- Simply switching to a higher frame-rate without ensuring the CPU and bitrate are sufficient may result in a lower quality encode.

CPU Usage:

- Consider lowering your canvas frame rate and/or streaming resolution to lower CPU usage.
- Maintained system CPU usage greater than 60% will increase the likelihood of dropped frames.

Additional Product Information, Tutorials And Documentation

<https://www.telestream.net/wirecast/resources.htm>

Graphics Resource

To access Wirecast logo/s and product images visit <http://www.telestream.net/company/press-kit/press-kit.htm>

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Company Overview

Telestream® provides world-class live and on-demand digital video tools and workflow solutions that allow consumers and businesses to transform video on the desktop and across the enterprise. Many of the world's most demanding media and entertainment companies such as CBS, BBC, CNN, FOX, CBC, Comcast, Direct TV, Time Warner, MTV, Discovery, and Lifetime, as well as a growing number of users in a broad range of business environments, rely on Telestream products to streamline operations, reach broader audiences and generate more revenue from their media. These companies choose to work with Telestream as they know they will get a trusted and highly skilled technical partner.

Telestream products span the entire digital media lifecycle, including video capture and ingest; live and on-demand encoding and transcoding; playout, delivery, and live streaming; as well as management and automation of the entire workflow. The company also partners closely with the industry's leading digital media companies across the entire digital media lifecycle, from consumer to enterprise. Telestream corporate headquarters are located in Nevada City, CA.

