



## Telestream Cloud

High quality video encoding service in the cloud

**Telestream Cloud** is a high quality, video encoding software-as-a-service (SaaS) in the cloud, offering fast and powerful encoding for your workflow. Telestream Cloud pricing is structured as pay-as-you-go monthly subscriptions for quick scaling as your workflow changes with no upfront expenses.

### Who uses Telestream Cloud?

**Telestream Cloud's elegantly simple user interface scales quickly and seamlessly for media professionals** who utilize video transcoding heavily in their business like:

- Advertising agencies
- On-line broadcasters
- Gaming
- Entertainment
- OTT service provider for media streaming
- Boutique post production studios

**For content creators and video producers**, Telestream Cloud encoding cloud service is pay-as-you-go, and allows you to collocate your video files with your other cloud services across multiple cloud storage options. The service provides high quality output in most formats to meet the needs of:

- Small businesses
- Houses of worship
- Digital marketing
- Education
- Nonprofits

Telestream Cloud provides the scalability to address peak demand times and encoding requirements for large files.

**For video pros** who work in:

- Broadcast networks
- Broadcast news or sports
- Cable service providers
- Large post-production houses

Telestream Cloud is a complementary service to the Vantage platform. During peak demand times, cloud service can offset the work load. The service also allows easy collaboration of projects across multiple sites or remote locations.

### Why choose Telestream Cloud?

#### The best video encoding quality for all formats & codecs:

An extensive set of encoding profiles built-in for all major formats to ensure the output is optimized for the highest quality. H.264, H.265, WEBM or Sony XDCAM—we've got it covered. Telestream Cloud is an Apple authorized ProRes Transcoder, and can produce video output for high quality, high performance video editing in Final Cut Pro X.

**Apple ProRes Support:** Telestream Cloud offers transcoding for Apple authorized ProRes video output. Certified ProRes presets deliver high quality video files that conform to Apple standards and ensure trouble free, cost efficient post production on Apple's Final Cut Pro platform for professional media workflows.

**Easy yet powerful API with 99.99% SLA (Service Level Agreement):** Automate your workflows & integrate your application with Telestream Cloud through our REST API. We support all major programming languages and there's extensive documentation to get started easily.

**Multiple storage options:** Pick the cloud space where we should send your encoded files. You can choose between Amazon S3, Google Cloud Storage, Aspera, RackSpace or FTP servers. Or we can provide Google based storage option with 20GB of space and data transfer included. For transfer/space above the limit we'll charge you standard Google fees.

**Cloud driven scalability:** From a startup to the enterprise, Telestream Cloud scales with you. And you can always add extra encoders on the fly without changing your monthly subscription.

**H.264 GPU Accelerated Encoding:** Now, there's now a faster way to encode your video files. Apart from the standard software encoders available in Telestream Cloud, you can also use GPU based hardware encoding, currently available for the H.264 video format. Using GPU instances for encoding is particularly beneficial when high parallel processing capability is required. Leveraging the NVIDIA Encoder (NVENC) to access the high performance H.264 hardware video encoders Telestream Cloud can shorten encoding times up to 10 times. You can take advantage of GPU encoding power with new H.264 GPU preset that is available through the Telestream Cloud user interface and API just like any other preset. GPU instances are available in US and EU regions for users on metered subscriptions.



**5X Faster Uploads with Multi-Chunk Parallel Uploader:** Telestream Cloud improves upload speed with a new parallel multi-chunk uploader. The updated uploader utilizes available network bandwidth much more efficiently by sending multiple chunks at the same time. The source file is divided into equal-length chunks, based on the file size. The uploader sends a number of chunks at the same time until all of them are uploaded and file is tested for integrity. If any chunks are missing (due to connection problems) they are re-sent and the upload is finished. The new uploader is not only up to 5 times faster but also more reliable.

**VP9 Fully Supported Including the Opus Interactive Audio Codec:** Telestream Cloud introduces support for VP9 with Opus audio codec (Vorbis audio is supported as well). VP9 is an open and royalty free video coding format developed by Google and provides an alternative for H.265 (HEVC). Opus is a lossy audio coding format developed by Xiph.Org Foundation. VP9 is available in Telestream Cloud WebM preset.

#### Telestream Cloud fully supports all video profiles defined by VP9:

- Profile 0 - 8-bits depth per sample and 4:2:0 chroma subsampling.
- Profile 1 - 8-bits depth per sample with support for 4:2:2 and 4:4:4 chroma subsampling, alpha channel support, and depth channel support.
- Profile 2 - 10-bits to 12-bits depth per sample with 4:2:0 chroma subsampling.
- Profile 3 - 10-bits to 12-bits depth per sample with 4:2:2 and 4:4:4 chroma subsampling, and alpha channel support.

**LiveSync Simplifies Your Workflow:** LiveSync is the easiest way to integrate with Telestream Cloud. We will monitor your specified AWS S3 source bucket and anytime you add a new file to it we will encode it automatically to all output profiles assigned to the factory. No need to write code or make an API call.

**Screenflow Publish to Telestream Cloud:** Direct publishing to Telestream Cloud with the release of Screenflow 6. Export from ScreenFlow to Telestream Cloud, and then create as many versions and formats of your video as you need.

**Vantage Integration into Telestream Cloud:** The Vantage Platform is now integrated into Telestream Cloud, giving customers a path to cloud transcoding services. Vantage jobs can be forwarded within Vantage workflows; status is tracked and output media location is reported in Vantage.

**Deliver in HD quality:** Encode your videos to work in any browser, with any player, on any device. From the smartphone to the big screen, your video will always look gorgeous in 1080p HD quality.

**Higher Resolution Output with Ultra HD 4K:** VP9 and H.265 (HEVC) codecs provide greater compression to deliver Ultra HD 4K video. Double the data compression ratio at the same level of video quality, or substantially improve the video quality at the same bit rate.

**Adaptive Bitrate HLS:** Telestream Cloud supports Apple HLS, primary adaptive bitrate streaming protocol that dynamically adjusts the bitrate to match the connecting device. It's also supported by majority of Android devices.

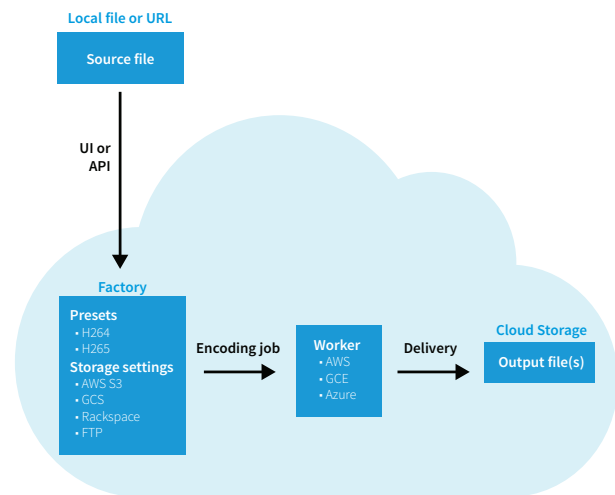
**Encoding regions in USA or Europe:** Reduce transfer times and choose whether you want your video to be encoded in the USA or in Europe.

#### How does Telestream Cloud work?

- User creates account, selects subscription
- Creates "factory" to define output presets and storage locations
- Submits source file through API, LiveSync folder (S3) or UI
- Encoding job is created
- Output files are delivered to defined storage location
- Payments by credit card or account

#### What's new in Telestream Cloud?

**Integration with Aspera Enterprise Server:** Telestream Cloud adds support for Aspera FASP high-speed transport protocol. The new integration allows TC users take advantage of Aspera's ability to securely and quickly transfer large video files significantly reducing overall processing time. Aspera Enterprise is now available as one of the storage options in Telestream Cloud. Support for FASP URLs as source when submitting jobs to Telestream Cloud has been added as well.



Aspera FASP stands for Fast, Adaptive, and Secure Protocol (FASP®). It is a transfer protocol that uses existing wide area network (WAN) infrastructure and commodity hardware to achieve speeds up to hundreds of times faster than FTP and HTTP.

**Motion compensated frame rate conversion:** Telestream Cloud adds cloud based, motion compensated frame rate conversion. It's a key feature for all media companies that need to convert their content to meet broadcasting requirements across multiple locations without sacrificing quality. Using motion compensation is more advanced approach to frame rate conversion and yields significantly better quality than simple frames duplication. It uses advanced algorithms to detect movement between two frames, analyze remaining information and create the extra frames for smoother output. Telestream Cloud leverages battle tested Telestream FPS conversion engine that uses variety of techniques to assure optimal video output quality.

**Common Encryption DRM for MPEG DASH:** Telestream Cloud adds support for Common Encryption based DRM for MPEG DASH. It offers enhanced access control over copyrighted material using number of available DRM platforms, including Microsoft PlayReady and Google Widevine. Each encoded MPEG-DASH segment is encrypted using AES128 based key before being delivered to distribution CDN or server infrastructure. Common Encryption uses existing web standards and is DRM platform agnostic.

It allows different digital rights management systems to share keys, key identifiers, encryption algorithm, parameters, and location to store proprietary data in a Protection System Specific Header (PSSH) while leaving details of DRM implementation to individual systems.

### Advanced Services in Telestream Cloud

New to Telestream Cloud, and designed to significantly extend the reach of transcoding capabilities to a wider audience seeking Telestream quality workflows, the company has developed a series of Advanced Services. These include:

- QC validation of input and output files as part of the transcoding process, enabling analysis and comparison of the quality of video and audio data streams.
- DVB subtitle rendering and multiplexing, TTML and WebVTT and rich CEA 608/708 closed captions that increase audience reach with multi-language support for distribution throughout Europe and North America
- Cinnafilm Tachyon motion-compensated video and image processing for frame rate conversion, standards conversion, de-interlacing, inverse telecine, rescaling and cadence correction.
- AMWA certified DPP Packaging solution for UK content delivery. The service automatically assembles the DPP timeline, including bars, tones, slates and correct multi-part spacing into compliant AS-11 MXF video, formats metadata and assembles DPP compliant packages.
- MXF for Production, AS-10 for system interoperability throughout production workflows. The service decodes AS-10 source and produces AS-10 compliant output for delivery.
- Audio Loudness Measurement and Correction is available in Advanced Services to measure and correct audio loudness for European EBU R148 and North American CALM Act compliance

Workflows will be added to Telestream Cloud accounts on an individual basis, according to customer requests. They will be accessible as presets through API and web interface, and priced by content minutes for the specified workflow. Telestream Cloud transcoding job progress tracking and reporting will be available.

For inquiries about Advanced Services, please contact our Cloud sales team at [cloudsupport@telestream.net](mailto:cloudsupport@telestream.net).

### Supported formats

#### Most common inputs formats:

- AAC
- AVI
- 3GP
- FLV
- MOV
- MXF
- MP3
- MP4
- MPEG
- MPEG2.ts
- MPEG2.ps
- OGG
- WAV
- WEBM
- WMA
- WMV

#### Most common output formats:

- AAC
- AVI
- FLV
- MOV
- MXF
- MP3
- MP4 (H.264)
- MP4 (H.265)
- OGG WEBM (VP8, VP9)
- HLS
- MPEG-DASH

For a complete list of formats visit:  
<http://cloud.telestream.net/formats>

## Telestream Cloud Pricing

<b>Flip</b>	\$99/month
Includes 5,000 minutes of SD output video	
\$0.020 for each additional minute	
<b>BigFlip</b>	\$999/month
Includes 55,000 minutes of SD output video	
\$0.018 for each additional minute	
<b>SuperFlip</b>	\$1899/month
Includes 120,000 minutes of SD output video	
\$0.016 for each additional minute	
<b>GigaFlip</b>	\$3999/month
Includes 290,000 minutes of output video	
\$0.014 for each additional minute	

## How are the minutes calculated?

We're applying multipliers based on output quality and resources required to create encoded files. In case where a number of multipliers are applicable they are added. For example, when creating HD output (2x) to one of pro formats (x5) each minute will count as 7 SD minutes (7x).

## Examples

Quality	Multiplier	Example
SD (less than 1280x720)	–	–
HD (1280x720 - 1920x1080)	2x	10 minutes of HD output count as 20 SD minutes
UHD (more than 1920x1080, up to 4096x2160)	4x	10 minutes of UHD output count as 40 SD minutes
4K+ (more than 4096x2160)	8x	10 minutes of 4K+ output count as 80 SD minutes
Pro Formats	Multiplier	Example
ProRes, XDCAM, MPEG-TS, MPEG-PS, AVC Intra, IMX	5x	10 minutes of Pro Formats SD output count as 50 SD minutes, 10 minutes of Pro Formats HD output count as 100 SD minutes
Standards Conversion	Multiplier	Example
Standard Video Processor	1x	–
Advanced Video Processor	4x	10 minutes of FPS converted SD output count as 40 SD minutes, 10 minutes of FPS converted HD output count as 80 SD minutes
Tachyon	–	For pricing details contact is at <a href="mailto:cloudsupport@telestream.net">cloudsupport@telestream.net</a>
Others	Multiplier	Example
Audio	0.25x	10 minutes of Audio output count as 2.5 SD minutes
Transmuxing	0.25x	10 minutes of Transmuxing output count as 2.5 SD minutes
Custom command-based profiles	5x	10 minutes of SD content encoded using custom command profile counts as 50 SD minutes

