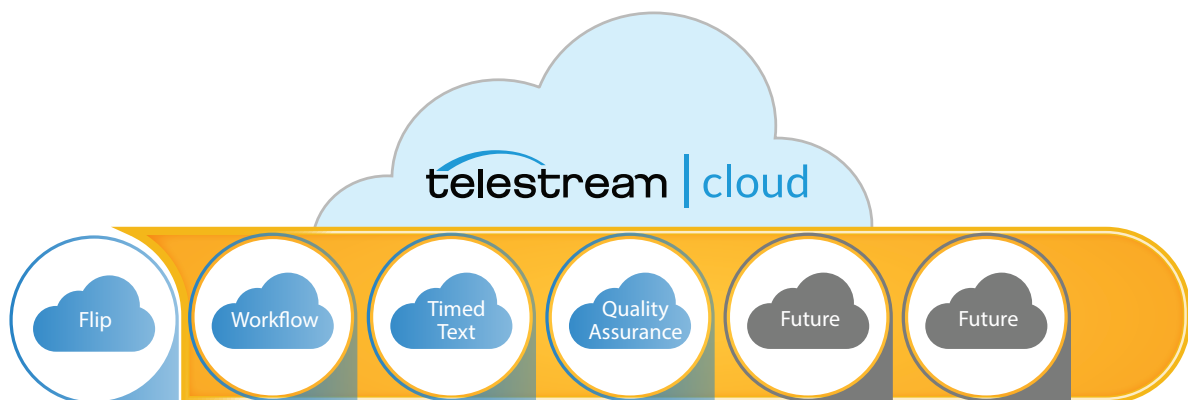# Telestream Cloud

High quality digital media processing services in the cloud.

Telestream Cloud is a platform that provides a variety of digital media processing capabilities. It operates across multiple cloud service providers and within numerous geographic regions. Services currently offered are:

- Flip
- Workflow
- Timed Text
- Quality Assurance

Each service is a separate stand alone service and presents a rich set of media processing capabilities. Each service has its underpinning on a specific set of Telestream products, with their own unique offerings. The monthly usage reporting and invoicing will span all the services that a customer has signed up for. The diagram below provides an overview of these services.

Flip Service

Telestream Cloud Flip Service is a high quality, video encoding software-as-a-service (SaaS) in the cloud, offering fast and powerful encoding for any type of media.

Flip Service pricing is structured as monthly subscriptions based on number of output minutes for quick scaling as your workflow changes.

Who uses Telestream Cloud Flip Service?

Flip Service is a versatile video encoding platform that scales quickly and seamlessly for media professionals who use 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, the Flip Service, is a cloud based encoding service that offers ease of integration and availability in multiple regions to reduce latency during ingest and delivery costs to storage of your choice. The service provides high quality output in all major formats to meet the needs of:

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

The Flip Service leverages Telestream Cloud's scalability and high availability, to easily address peak demand times and encoding requirements which results in faster time to market for video pros who work in:

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

Why choose Telestream Cloud Flip Service?

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, HLS or MPEG-DASH, XDCAM or MPEG-TS — we've got it covered.

Apple certified ProRes: Telestream Cloud produces 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 integration through simple yet powerful API: Automate your workflows & integrate your application with Telestream Cloud through our REST API. It comes with support for all major programing languages and with 99.99% SLA (Service Level Agreement).

Multiple storage options: Choose between Amazon S3, Google Cloud Storage, Aspera, Microsoft Azure, RackSpace or FTP server as your storage options for output files.

Watch-folders: LiveSync is the easiest way to integrate with Telestream Cloud. New files delivered to specified S3, Aspera or FTP source bucket are automatically encoded to chosen output profiles. No need to write a single line of code or make an API call, Telestream Cloud handles the all the necessary work for you.

Aspera FASP high-speed transport protocol: Aspera FASP (Fast Adaptive and Secure Protocol) uses existing wide area network (WAN) infrastructure and commodity hardware to achieve speeds up to hundreds of times faster than FTP and HTTP. Telestream Cloud users can take advantage of Aspera's ability to securely and quickly transfer large video files significantly reducing overall processing time.

GPU Accelerated Encoding: Leveraging NVIDIA Encoder (NVENC) to access the high-performance H.264 hardware video encoders Telestream Cloud can deliver up to 10 times better performance. GPU based hardware encoding is available for H.264, HLS and MPEG-DASH.

Globally distributed encoding regions: Reduce transfer times and costs by using distributed cloud infrastructure that is closest to your source content. Thanks to high-end instances and support for Aspera FASP protocol we're able to deliver the ultimate encoding performance.

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Dolby Digital Plus™ Support: Deliver high-quality 7.1 surround sound for mobile devices, home theaters, cinema or broadcast with Dolby Digital Plus™. Based on core Dolby® Digital technologies provides consistent audio quality across your content. Natively supported on latest Apple devices and built into Windows 10.

Tachyon® Standards Conversion in the cloud: The award-winning Tachyon® Video Processing Library from CinnaFilm provides you with access to high-quality format and standards conversions tools, which are now available in SaaS model with Telestream Cloud. Tachyon is already in broad use today by broadcasters and media content providers that require smooth motion playback at any frame rate.
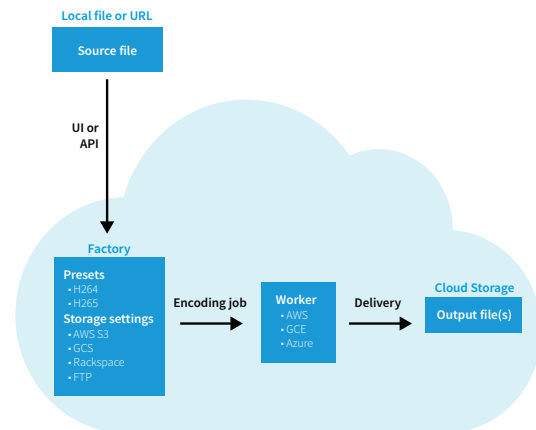
ABR encoding for multiscreen and OTT: Encode video for any device, anywhere with Apple HLS and MPEG-DASH, primary adaptive bitrate streaming protocols that dynamically adjust the bitrate to match the connecting device. Create localized content with multi-language WebVTT and TTML subtitles.

DRM protection for HLS and MPEG DASH: Each encoded segment is encrypted using AES128 based key before being delivered to distribution CDN or server infrastructure. We offer enhanced access control over copyrighted material using number of available platforms, including Microsoft PlayReady and Google Widevine.

Cloud driven scalability: Fully managed solution that scales seamlessly while eliminating infrastructure costs and need for maintenance work on your side. State-of-the art infrastructure from leading Cloud providers ensures rock solid performance for any encoding volume.

How does the Flip Service Work?

- Sign up and select the subscription that best matches your output volume
- Create Factory which defines output presets (you can customize them) and your storage location
- Submit your source files through API, LiveSync watch-folder or UI to start encoding job
- Output files are processed and delivered to your storage. Simple as that.

Local file or URL
Source file
UI or API
Factory
Presets
• H264
• H265
Storage settings
• AWS S3
• GCS
• Rackspace
• FTP
Encoding job
Worker
• AWS
• GCE
• Azure
Delivery
Cloud Storage
Output file(s)

Workflow Service

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 Custom Workflow Services powered by Vantage. These include:

- DVB subtitle rendering and multiplexing, TTML andWebVTT and rich CEA 608 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.

Workflows are 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 are available. For inquiries about Workflow Services, please contact our Cloud sales team at cloudsupport@telestream.net.

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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:

- H.264
- H.265
- OGG WEBM (VP8, VP9)
- HLS
- MPEG-DASH
- XDCAM
- Apple ProRes
- IMX
- DNxHD
- AVC Intra
- MPEG-TS
- MPEG-PS
- AAC
- AC-3
- Dolby Digital
- MP3

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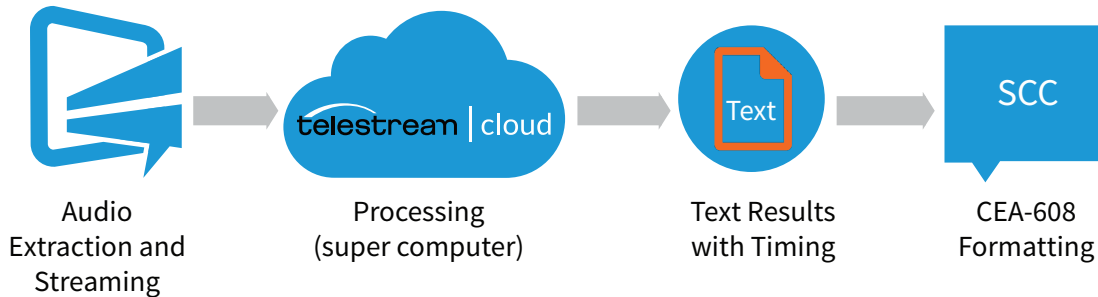http://cloud.telestream.net/formats

Workflow services are complementary services to the Vantage Platform. During peak demand times, Telestream Cloud Workflow services can be leveraged to offset the work load. The service allows for easy collaboration of projects across multiple sites or remote locations.

Timed Text Service

Timed Text Speech is an auto-transcription service being offered by Telestream that uses cloud-based processing and artificial intelligence for automated captioning. It delivers cost and time savings by automatically creating a text transcript of your media using speech-to-text technology. Customers can use their existing corpus files with domain specific vocabulary for even better accuracy.

TTS service is integrated with CaptionMaker and MacCaption providing an all-in-one transcription-captioning/subtitling tool.

Audio Extraction and Streaming → Processing (super computer) → Text Results with Timing → CEA-608 Formatting

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Quality Assurance Service

Telestream is one of the first companies to offer automated Quality Assurance for file based media in the cloud. As more file-based workflows move to the cloud such a solution is a natural consequence and allows you to take advantage of scalability, resource effectiveness, and cost flexibility native to the cloud. With the Quality Assurance service, it is possible to check the media for compliance with several industry leading specifications. The service checks for video and audio quality, legality and correctness. The service has standard templates for selected specifications, including:

- Broadcast Delivery
  - DPP/UK
  - DPP/Nabor
  - ARD ZDF
  - AS10

- PSE
- OTT Delivery
  - Netflix
  - iTunes
  - Amazon

Audio Loudness Measurement and Correction is available to measure and correct audio loudness for European EBU R128 and North American CALM Act compliance.

The Quality Assurance Service includes an integration with MulticoreWare LipSync software which offers a unique service for quick and easy identification of audio-video synchronization errors. It is based on deep learning and AI technology to analyze video and audio, looking for human faces and listening for human speech. If out-of-sync situations are encountered, the media is marked as out-of-sync.

Telestream Cloud is a dynamic platform and has been designed from the ground up to be highly performant, highly scalable, global and available any time, everywhere. The pricing for all services is deterministic and easily known even before one launches the service. This makes it an attractive platform for all your media processing needs.

For pricing and more information please visit https://cloud.telestream.net