

Lightspeed Live Stream

Product Sheet



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Live Multiscreen Encoding, Packaging and Deployment

Telestream® Lightspeed™ Live Stream can be deployed as a stand-alone solution for live multiscreen services or combined with the Vantage Media Processing Platform via the optional Lightspeed Live Capture product.

Stream Conditioning: Seamless content replacement and downstream digital ad insertion are possible with Lightspeed Live Stream's stream conditioning technology.

Enterprise-class Multiscreen Streaming

Telestream Lightspeed Live Stream delivers enterprise-class live streaming for media and entertainment companies, corporations, government agencies and educational facilities. Lightspeed Live Stream provides superior quality and efficiency adaptive bit rate encoding for SD, HD and UHD sources into AVC and HEVC. This integrated hardware and software appliance combines multiple CPU and GPU cores as well as targeted ASIC CODEC acceleration to deliver flexible and efficient encoding performance. Input support is available for SDI as well as IP sources, offering future-proof operation as delivery mechanisms change. Output can be delivered via RTMP to platforms such as YouTube and Facebook, as well as HTTP Live Streaming (HLS), MPEG DASH, and CMAF packages and MP4 files.

Video Processing and Encoding

Choice of 8 or 16bit video processing and support for AVC, HEVC (h.264 & h.265) and HDR encoding. Integrated multi-core multi-processor CPU, GPU, and ASIC compute allow for efficient balancing of encoding optimized for each processor type. CODEC selection includes the highest quality and efficiency x264 and x265 AVC and HEVC. Selectable CODECs and processing deliver choices for optimizing quality, efficiency and maximizing encoding density.

Packaging

Integrated HLS, MPEG DASH, and CMAF packaging. Encryption and DRM of output streams is also supported.

Delivery

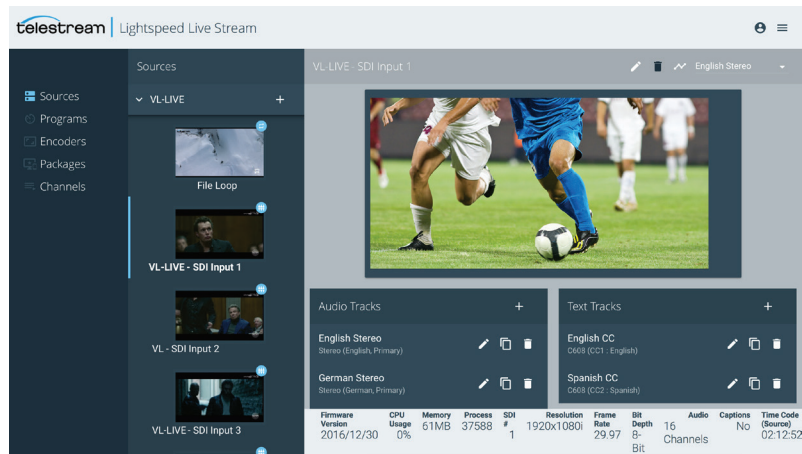
Deploy via RTMP, local origin, to CDNs and OVPs (online video platforms).

Live Source Support

Combining SDI and IP inputs for a flexible and future proof solution. Lightspeed Live's four 1080p60, 3Gb, HD-SDI inputs can be used individually or combined for UHD 3840x2160 60p SDI input. Four 10Gb Ethernet ports provide IP input as well as high performance delivery options.



The **Live Stream user interface** provides an intuitive configuration and monitoring experience. Delivering multi-point live monitoring of source video and audio, channel mapping, and *wysiwig* program composition



Live Sources:

SDI:

- HD-SDI up to 4 HD (1080 50/60p) or 1 UHD/4k (up to 2160 50/60p)
- AES Embedded Audio up to 16 channels

IP:

- MPEG-2 Transport Stream (SPTS, MPTS)
- MPEG-2 and AVC (h.264) Video
- SMPTE 302M, MPEG Layer2, AAC, AC-3, EAC3 Audio
- RTMP TCP protocol support for source input—including support for Wirecast RTMP input

Content file sources:

- Stills/Slate (TIFF, PNG, JPEG, GIF, and BMP)
- Logos w/alpha (TIFF, PNG, GIF, and BMP)
- Animations w/ alpha (ProRes and .MOV)
- Local clips (ProRes and .MOV)
- Playlists in the form of .smil files
- Audio (formats: AIFF, WAV, MP3)

Encoding:

- AVC (h.264 up to 4k 4:2:0 10bit) CPU and GPU
- HEVC (h.265 up to 4k Main 10bit) CPU, GPU & ASIC
- AAC LC, HEV1, HEV2
- AC3
- HDR10

Audio Processing:

- Channel Mapping
- Multi-language
- Mixing/Mixdown
- 5.1/Stereo/Mono
- Audio only renditions

Captions:

- CEA-608/CEA-708 passthrough

Packaging and Delivery:

- RTMP
- HLS
- MPEG DASH
- CMAF
- HTTP Origin
- HTTP Push to CDN
- Facebook Live, YouTube Live

UI/Monitoring/Control:

- Web UI with integrated multi-system management
- Integrated thumbnail, video & audio stream monitoring
- SNMP monitoring
- Template based program creation, encoding and packaging
- Management authentication
- 1+1 active-active redundancy
- Redundant contribution to CDN

Video Processing:

- Choice of 8-bit and 16-bit processing
- Deinterlacing
- Scaling
- Frame rate conversion

Segment triggers & Channel Security:

- Time of day
- Events
- SCTE35/104
- Recurring events
- Calendar-based channel scheduling

Restful API

- Status monitoring
- Control & scheduling
- Manual triggering
- Metadata insertion & management

Lightspeed Live Hardware & Software Specifications

Telestream Lightspeed Live ships with the following hardware configuration:

1 RU server:

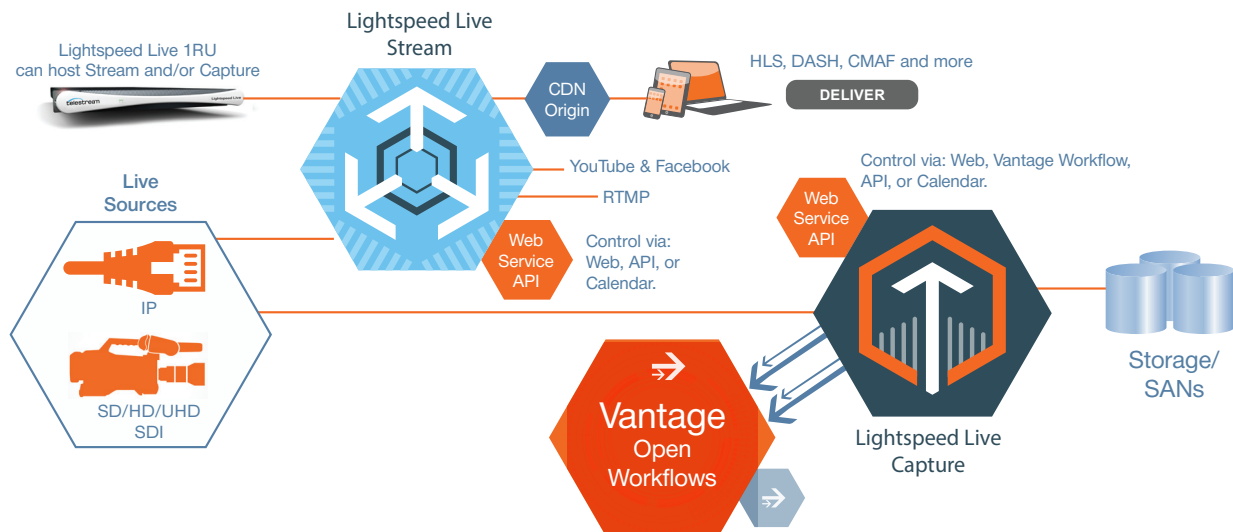
- Dual redundant power supplies
- OS: Windows Server 2012 R2 Standard Edition 64-bit
- OS Storage: 120Gb/s (enterprise class SATA SSD)
- Media Storage: 3.6TB RAID-5 (Four enterprise class 1.2TB SATA 6Gb/s drives)
- Ethernet: quad RJ45 10GBase-T ports (Intel X540 10GBase-T with support for 10BASE-T, 100BASE-TX and 1000BASE-T)
- Available I/O: 1 (x8) PCI-E 3.0
- Physical Dimensions: Height 1.7" (43mm) x Width 17.2" (437mm) x Depth 27.8" (707mm)
- Gross Weight 32 lbs (14.5 kg)

Temperature requirements:

- Operating Temperature: 10°C to 35°C (50°F to 95°F); Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)

Hardware options:

- 8Gb and 16Gb FibreChannel HBA for SAN access
- Additional 3.6TB RAID-5 (Four enterprise class 1.2TB SATA 6Gb/s drives)
- Hardware-accelerated HEVC (h.265) encoding



Lightspeed Live Stream is part of a unified live to file-based workflow that can utilize Vantage and Lightspeed Live Capture