

Lightspeed Live Capture VC-100 and VC-300

High Octane UHD
Video Capture



Telestream's Lightspeed Live Capture servers are flexible and scalable video capture solutions designed to meet the ever-increasing demands of mezzanine-quality SD, HD, and UHD/4K ingest.

With industry leading support for a multitude of file formats, the VC-100 and VC-300 Live Capture servers support up to sixteen concurrent 3G-HD SDI inputs or four concurrent UHD/4K inputs. Standard features now include RAID1 OS redundancy, and media storage capacity has been quadrupled compared to previous generations.

Lightspeed Live Capture offers 3G/12G SDI, 25/100GbE ST 2110, and compressed IP input options: TS, SRT, RTMP, and NDI.

Flexible Deployment and Scalability

- Offers flexible deployment options as a standalone capture device, as a part of a multi-server capture farm, or integrated into a Vantage domain of any size.
- Scales easily to increase channel capacity with additional Lightspeed Live Capture servers and shared database integration with control managed via common user interfaces.
- Integrates with Vantage for highly scalable, flexible, and powerful media processing.
- Offers support for streaming formats such as NDI, SRT, RTMP and MPEG2-TS.

Capture Anything, Anytime

- Maximizes recording flexibility with comprehensive capture options: 24/7/365 scheduled live feed recordings, RS-422 controlled capture from a VTR, manual record including Gang control, DAI (SCTE-104) triggering, Recurring Segment creation, and automated control through a simple Web Service REST API.
- Supports an extensive number of wrappers including MXF, MOV, MP4, MKV, DASH, HLS, TIFO and more
- Preserves closed caption and other ancillary data via MXF, QuickTime, TIFO and Avid/Apple proprietary schemes.
- Offers extensive support for popular 3rd party editing solutions including: Avid Media Central|Production (Interplay), Avid Media Composer, Adobe Premiere, DaVinci Resolve, Apple Final Cut Pro, and others.

Technical Specifications

Input Sources (VC-300)

- Up to 16 3G-SDI inputs - Supports up to 1080 50/60p (3G-SDI LEVEL A only) - non-loop-through mode
- 8 SD/HD/3G-SDI inputs and 8 SD/HD/3G-SDI outputs - Supports up to 1080 50/60p - loop-through mode
- Up to 4 Quad-Link Square Division/2 Sample Interleave input – Supports UHD/4K up to 2160 50/60p
- 4 SD/HD/UHD 12G-SDI inputs and 4 SD/HD/UHD 12G-SDI outputs - loop-through mode
- Configurable SDI loop-through outputs
- 25 or 100Gbe ST 2110 inputs with 2022-7 redundancy
- Up to 16 channels embedded SDI audio 48Khz/16/24bit / Uncompressed

Input Sources (VC-100)

- 4 SD/HD/3G-SDI inputs and 4 SD/HD/3G outputs - Supports up to 1080 50/60p (3G-SDI LEVEL A only)
- 1 Quad-Link Square Division/2 Sample Interleave input – Supports UHD/4K up to 2160 50/60p
- Up to 4 SD/HD/UHD 12G-SDI inputs and 4 SD/HD/UHD 12G-SDI outputs - loop-through mode
- Configurable SDI loop-through outputs
- 25 or 100Gbe ST 2110 inputs with 2022-7 redundancy
- Up to 16 channels embedded SDI audio 48Khz/16/24bit / Uncompressed

IP Input Sources

- MPEG-2 Transport Stream (SPTS, MPTS) with MPEG-2 or 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
- SMPTE ST 2110
- NDI
- SRT

VTR Machine Control for up to 4 VTR's (VC-100) and 8 VTR's (VC-300 3G)

- RS-422, 9 pin Sony Protocol

External API Control

- REST API

Time code sources

- Source SDI input (VITC/VBI)
- RS-422
- Analog LTC
- Computer Clock
- Free Run

Edit solutions

- Adobe Premier Pro CC
- Apple Final Cut Pro
- Avid Media Composer
- Avid Media Central Production
- DaVinci Resolve
- Many others

Primary output file formats

- Apple ProRes – 422HQ, 422SQ, 422LT, 422 Proxy
- DNxHD, HQX, HQ (220/185 Mbps), HQ TR (145/120 Mbps), SQ (145/120 Mbps), SQ TR (100 Mbps), LB (45/36 Mbps)
- DNxHR, HQX (10 bit), HQ, SQ, LB.
- JPEG2000 Lossy
- JPEG2000 Lossless
- DVCProHD
- AVC Intra - 50 Mbps 4:2:0, 100 Mbps 4:2:2, 200 Mbps 4:2:2
- AVC Ultra Log GOP 12,25,50
- AVC Baseline, Main, High. Bit Rate - 50 Mbps
- XDCAM HD - 18 Mbps CBR, 25 Mbps CBR, 35 Mbps VBR

- XDCAM HD422 - 50 Mbps CBR
- XDCAM EX - 35 Mbps VBR
- IMX – 30, 40, 50Mbps
- XAVC – Class 50 4:2:0, Class 100 4:2:2, Class 200 4:2:2, Class 300 4:2:2, Class 480 4:2:2, Class 25 Long GOP 4:2:2, Class 35 Long GOP 4:2:2, Class 50 Long GOP 4:2:2, QFHD Class 100 Long GOP 4:2:2, QFHD Class 140 Long GOP 4:2:2, QFHD Class 200 Long GOP 4:2:2
- DV - DV 25 Mbps, DVCPRO 25 Mbps, DVCPRO 50 Mbps, DVCPROHD
- H.264 Baseline, Main, High, High 10, High 4:2:2, max Bit Rate 50Mbps
- H.265/HEVC Main, Main 10, Main Intra,
- MPEG-2
- Uncompressed 10-bit (SD/HD V210)
- FFV1

Browser based control UI

- Manual Recording options
- 24/7/365 Scheduling
- Log and Capture with VTR control via RS-422¹
- Web Service API
- Multichannel Gang recording
- DAI (SCTE Trigger)

Containers

- MXF OP1a including RDD9 and RDD25 variants
- Avid MXF OPAtom
- QuickTime
- MP4 - complies with IEC-14496-14
- MPEG Transport Stream (with MPEG2 essence) and Manzanita multiplexing (optional purchase)
- Telestream TIFO

Proxy Output Formats

- MP4
- RDD25 MXF
- Op1A

- TIFO (including support for Avid proprietary proxy formats via Vantage Media Creation action)
- DASH and HLS

Streaming Output Formats

- SRT with H.264, HEVC and XDCAM

Software options

- Avid integration – Create Avid media and metadata for Media Composer or MediaCentral | Production
- GLIM – Perform visual QC and create sub-clips highlights from open, growing media files
- Live Schedule Pro – 24/7/365 orchestration and automation of multiple Capture systems complete with SDI and IP router control
- Vantage Transcode and Transcode Pro – Add industry leading file-based transcoding to your Live Capture ingest systems
- Vantage Analysis and Analysis Pro –Advanced media file inspection and reporting capabilities
- Vantage Metadata – Create, extract, manipulate and examine side-car and embedded metadata

Hardware options

- 10, 25 & 100Gbe networking options
- 11.5 TB (15TB raw) or 23TB (30Tb raw) RAID5 media storage options
- 4 channel RS422 Kit

VC-100 & VC-300

Standard Configuration VC-300 / VC-100

Base Chassis

1RU Supermicro Server

CPU

Intel (Dual) 6442Y (VC-300)

Intel (Dual) 4410Y (VC-100)

Number of Cores

2x 24c, 48c (VC-300)

2x, 12c, 24c (VC-100)

Memory

256GB (VC-300)

128GB (VC-100)

OS Drives

2x 800GB NVMe

Power Supply

2x 800/1200W Redundant

GPU

NVIDIA RTX 4000 ADA GPU

Media Drives

15TB or 30TB Raw of local RAID storage

OS

Windows Server 2019 or
2022 (Coming Soon)

Ethernet Connectivity

2-Port 1G/10G RJ45

Hardware

- 1 RU chassis
- Dual hot swap Power Supplies
- 2-Port 1G/10G RJ45 Ethernet Connectivity

Factory Fitted Options

Ethernet Option 1

2-Port 25G + SR SFP's

Ethernet Option 2

2-Port 100G QSFP + SFP's

Environmental Specifications

Operating Temperature

15°C to 30°C (59°F to 85°F)

Power Consumption (Idle)

345W/2.9A (VC-300)

255W/2.1A (VC-100)

Power Consumption (Full Load)

960W/8.6A (VC-300)

545W/4.5A (VC-100)

Size

H 1.75" x W 19" (w/ears) x L 32.25"

Weight

39 lbs

¹ requires optional RS422 kit