Lightspeed Live Capture VC-100 and VC-300

High Octane UHD Video Capture

The Lightspeed Live Capture servers are flexible and scalable video capture solutions designed to meet the ever increasing demands of high-quality SD, HD, and UHD media. With industry leading support for a multitude of file formats, the VC-100 and VC-300 Live Capture servers deliver high performance 4K encoding, capture for up to sixteen concurrent 3G-HD SDI inputs or four concurrent UHD/4K inputs, and quadruple the available media storage capacity when compared to previous models. Lightspeed Live Capture can greatly enhance media workflows by enabling transcoding through Telestream Vantage, allowing server investments to be leveraged for both live ingest and file-based processing. The VC-100 and VC-300 redefine video capture with complete media ingest, editing, packaging, and distribution for increased monetization opportunities.

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.

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

SDI Input Sources (VC-300)

- 8 SD/HD/3G-SDI inputs - Supports up to 1080 50/60p (3G-SDI LEVEL A only)
- 8 SD/HD/3G-SDI outputs - Supports up to 1080 50/60p
- Up to 2 Quad-Link Square Division/2 Sample Interleave input – Supports UHD/4K up to 2160 50/60p
- Up to 16 channels embedded SDI audio 48Khz/16/24bit / Uncompressed
- Configurable 3G-SDI loop-through outputs

SDI Input Sources (VC-100)

- 4 SD/HD/3G-SDI inputs - Supports up to 1080 50/60p (3G-SDI LEVEL A only)
- 4 SD/HD/3G-SDI outputs - Supports up to 1080 50/60p
- Up to 2 Quad-Link Square Division/2 Sample Interleave input – Supports UHD/4K up to 2160 50/60p
- Up to 16 channels embedded SDI audio 48Khz/16/24bit / Uncompressed
- Configurable 3G-SDI loop-through outputs

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 ST2110
- NDI
- SRT

VTR Machine Control for each SDI Input1

- RS-422, 9 pin Sony Protocol
- Control up to 8 VTRs per Capture system

External API Control

- Web service
- RS-422 (BVW/Sony 9-pin)1

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 Central Production
- DaVinci Resolve
- Many others

Primary output file formats

- Apple ProRes – 422HQ, 422SQ, 422LT, 422 Proxy, 444
- DNxHD - 444, HQX, HQ (220/185 Mbps), HQ TR (145/120 Mbps), SQ (145/120 Mbps), SQ TR (100 Mbps), LB (45/36 Mbps)
- DNxHR - 444, 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
- SRT, H.264, H.265, XDCAM

Browser based control UI

- Manual Recording options
- 24/7/365 Scheduling
- Log and Capture with VTR control via RS-422[1]
- Web Service API
- Multichannel Gang recording
- DAI (SCTE Trigger)

Container Wrappers

- 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

- MMP4
- RDD25 MXF
- Op1A
- TIFO (including support for Avid proprietary proxy formats via Vantage Media Creation action)
- SRT
- DASH and HLS
- RTMP

Software options

- Avid integration – Create Avid media and metadata for Media Composer or MediaCentral | Production
- GLIM – Create sub-clips and 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 TB (15TB raw) or 23TB (30Tb raw) RAID5 media storage options
- 4 channel RS422 Kit

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 GPU

Media Drives
2x 1.92TB SATA SSD

OS
Windows Server 2019 or 2022

Ethernet Connectivity
2-Port 1G/10G RJ45

Hardware

- 1 RU chassis
- Dual hot swap Power Supplies
- 2-Port 1G/10G RJ45 Ethernet Connectivity
- Up to 30TB of local RAID storage

[1] requires optional RS422 kit

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

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