

SAMMASolo HD



SAMMASolo HD is a patented migration process designed to provide archive quality migration of videotape content to multiple file formats in one single pass. This automated method of migrating analog and digital content to digital files preserves the legacy of archives and brings content out of retirement.





SAMMASolo HD offers an ease of use which flows seamlessly from accessioning your content with SAMMAprep, to cleaning your content with SAMMAclean, followed by migrating your content with SAMMASolo HD. Front Porch Digital's SAMMA solution offers a polished workflow which considers every aspect of a migration and consistently meets each archive's needs with a specialized solution.

PREPARE

The initial step in SAMMA's total workflow solution is SAMMAprep, a unique accessioning workflow which includes assigning a specific barcode to each asset, and selecting migration templates which can be applied in batches or per asset. Database ingest of previously existing library catalogs may also be ingested during the prep phase. SAMMAprep supports 1D and 2D barcode formats. Accessioning content prior to migration increases the speed and success of the migration workflow.

CLEAN

Tapes of unknown origin and storage conditions may cause migration problems. Cleaning the tapes can mitigate and improve migration success. SAMMAclean, available in U-Matic, Betacam, and VHS formats, gently removes particulate deposits and corrects abnormal tension and packing issues, while collecting metadata related to cleanliness, reflectivity, and tensioning. Customizable quality thresholds can be set to determine the pass/fail criteria for the tapes. As an optional second step in the total workflow solution, SAMMAclean provides archival-quality cleaning at 1/10th the typical VTR tension, while simultaneously collecting videotape health related metadata to an open XML format, all at faster than real time speeds.

MIGRATE

SAMMASolo HD is the heart of the migration process. The system offers a unique solution which not only reduces the need for technical operators, but also combines multiple migration steps in one single migration pass. SAMMASolo HD simultaneously creates multiple digital files, including proxy, for quick review; mezzanine, variations for most editing and playout applications; and a lossless preservation quality archive in JPEG2000. There is broad flexibility in creating output migration templates, selecting the specific formats that address the workflows in that specific environment, or specifically for a particular library of tapes. An unlimited number of templates can be created and used across multiple migration projects.

Output files are stored locally on a 7 TB RAID 5 SAMMASolo HD cache disk and can be passed through using the FTP gateway to any destination, or can be transferred to DIVArchive for storage, access and repurposing. An optional upgrade to 21 TB in RAID 5 is available.

ANALYZE

During migration, SAMMASolo HD captures crucial metadata related to migration success through an analysis engine which measures an array of critical signal parameters. The thresholds on these parameters are set by the user and determine the pass/fail standards for the library. The output data can then be analyzed using the SAMMAMetadata viewer. Operators can quickly identify any migration errors and make a determination about further required actions.

VIEW

As part of the migration solution, SAMMASolo migrations can include a lossless preservation quality JPEG2000file. Front Porch Digital offers a robust JPEG2000 Player, SAMMAplayer, which is included as a software player on SAMMASolo and publically available as a free player on the Front Porch Digital website. Optionally offered is a hardware version PCI codec for a Windows PC (XP or better) for broadcast-quality output with embedded multichannel audio.

SCALE

SAMMASolo has a unique non-technical design and operation which allows library staff to control up to eight networked SAMMASolos through one interface. Either through tiered graphic interfaces on one SAMMASolo, or connected to a KVM switch, SAMMASolo is capable of meeting the specific migration need with rapid interchangeability and a proven and polished workflow. For those libraries with an extensive migration need, SAMMARobot is available to completely automate the migration process.

Advancements

Advancements from older generations includes; improved physical design resulting in enhanced serviceability, greater build quality, increased cooling with 12 interior fans, two redundant power units, and hot swappable disk drives.

Downgrade to SD

SAMMASolo is also still available in an SD only version. Sold without Scaling and Frame Rate conversion, SAMMASolo SD offers a cost effective solution for those customers without an HD need.

SERVICE AND SUPPORT

The team at Front Porch Digital not only provides thorough pre-sales support in assisting with designing workflow solutions. Customer Service from Front Porch Digital is top-rated by customers. 24 x 7 support is provided and our remote access diagnosis helps quickly identify issues and provide the necessary solution.

HD

Available in two versions, HD and HD with Motion Compensation, SAMMASolo HD provides the most flexible video format conversion for digitisation of video and audio. It provides 10-bit broadcast quality picture scaling from SD to HD, and has a 20 point vertical and temporal aperture, motion adaptive standards conversion (frame rate conversion) built in for transparent operation with multi-standard tapes or video sources.

The Motion Compensated Solo HD provides the highest broadcast quality standards conversion using Phase Correlation techniques to provide accurate motion vectors on a per pixel basis enabling the smoothest frame rate conversion possible.





TECHNICAL SPECS

Supported formats

CVBS: PAL, NTSC, SECAM
YC: PAL, NTSC, SECAM
YPbPr: 525i, 625i, 1125i, 1250i (analog HD)
SDI: 525i/625i
HDSDI: 1080i
720P & 1080P

Format conversion

SD 525i/625i <-> SD 625i/525i
SD (525i/625i) <-> HD (720P/1080i/1080P)
HD (720P) <-> HD (1080i) <-> HD (1080P)

Synchronization

HD to HD (720P/1080i/1080P) or SD to SD (525i or 625i)
HD/SD bi or tri sync reference (SD/720P/1080i)
Cross-locking

Preview outputs

CVBS
HD/SD SDI
HDMI

Program outputs

HD/SD SDI channel with processed signal path.

Timecode

LTC, VITC, ATC and HD embedded.

Video input

1 x HD/SD SDI (BNC) (auto switching)
1 x CVBS (BNC) (SD only)
1 x YC (2 x BNC) (SD only)
1 x Y/Pb/Pr (3 BNC component)

Video output

3 x HD/SD SDI (BNC)
1 x HD/SD SDI (BNC) Preview
1 x CVBS (BNC) Preview. (SD only)
1 x HDMI v1.3 (Switchable program/preview output w/audio)

Audio inputs/outputs

8 Channels of Analogue
16 Channels of AES
16 Channels of Embedded Audio

Optional formats

H.264 AVC (HD High profile)
Avid DNxHD in MXF
DVCPPro 50/100 in MXF & MOV
iPhone and iPad MPEG4

Standard formats

Adobe Flash 8 On2 VP6
H.264 AVC
MainConcept MPEG-1 & MPEG-2, DVD, VCD, SVCD
Apple QuickTime MOV
Sony XDCAM/XDCAM-HD/XDCAM-IMX in MXF
DV in AVI
DVCPPro25 in MOV
JPEG2000 in MXF
RealVideo / RealAudio (Helix 9 & 10)
Image Sequences (18 still image formats)
Microsoft Windows Media 7 & 9
Microsoft Smooth Streaming (Silverlight)
Microsoft VC-1

Storage

RAID 1 Disk Drives for Operating System, 2 x 500GB SATA 2 (3Gbps)
RAID 5 Disk Drives for Storage (Hot Swapable)
8 x 1TB SAS 2 (6Gbps) for a total of 7TB of useable storage
N +1 Redundancy
RAID 5 LSI RAID Card with 512 MB Cache
500 MB/s Read / Write
Optional Upgrade for Increased Storage
8 x 3 TB SAS2 (6Gbps) for a total of 21 TB useable storage

Computing Power

Supermicro Dual Intel Xeon Motherboard
Dual Intel X5690 CPUs, Yielding 24 Cores
1000W Dual Redundant Power Supplies
CE and FCC Certified

SD

No Scaling or Frame Rate Conversion
Single intel Xeon X5650 CPU, 3GB RAM (12 Threads)
RAID 1 Disk Drives for Operating System
2 x 500GB SATA 2 (3Gbps)
RAID 5 Disk Drives for Storage (Hot Swapable)
4 x 1TB SAS 2 (6Gbps) for a total of 3TB of useable storage

Check Sums

MD5, SHA-1, SHA-256, SHA-384, and SHA-512

Analysis Engine

Hardware Multitap Filters for Broadcast Quality Scaling
Adaptive Filters for Linear Standards Conversion
Dual Analogue Composite Decoders
-Simple and Line Comb for VHS / Umatic (color under)
-Frame Comb for Studio Quality CVBS
TBC Frame Synchronizer
Dropout Compensation
Digital Recursive and Spacial Noise Reduction
Gamut Legalizer
Full 16 Channel Audio Router
Digital Time Code Support
-ATC-LTC
-ATC-VITC
Signaling Support
-WSS
-Video Indexing
-AFD
-Closed Captioning
Aspect Ration Conversion

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