

# SAMMA

*Videotape digitization for any archive*



The SAMMA Robot represents the highest level of automation within GrayMeta's SAMMA ecosystem an industrial-scale, multi-stream migration platform designed to digitize videotape archives with precision, efficiency, and minimal human intervention.

Built on SAMMA's patented single-pass architecture, SAMMA Robot transforms large-scale migration into a continuous, automated production workflow, capable of operating 24/7 while delivering consistent, preservation-grade outputs.

It integrates multiple SAMMA Solo ingest channels into a unified robotic system, enabling batch-based processing of large tape libraries with predictable throughput and minimal operational overhead.

**SAMMA Robot is designed around a complete, end-to-end workflow that aligns with GrayMeta's broader philosophy of intelligent, data-driven media processing:**

## Prepare

With SAMMA Prep, assets are accessioned using barcode workflows and enriched with existing metadata. This ensures that every tape entering the system is tracked, searchable, and aligned with downstream asset management systems.

## Clean

SAMMA Clean conditions tapes and captures metadata on tape health, improving migration success rates and preserving signal quality—critical for fragile or aging media.

## Migrate

The SAMMA Robot executes fully automated, multi-stream digitization using integrated SAMMA Solo engines. Each ingest channel simultaneously generates a preservation master and proxy files with original timecode, ensuring both archival integrity and immediate accessibility.

SAMMA Robot is delivered in either 8 Stream or 4 Stream configurations supporting Betacam, U-matic and DVCPRO format cassettes.

## Analyze

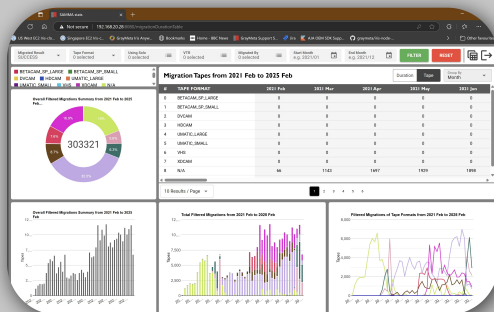
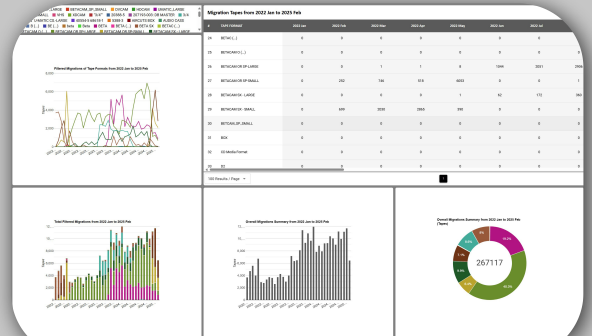
At the core of the system is SAMMA Eye, which delivers frame-level quality control using advanced signal analysis. Every frame is monitored for integrity, with automated detection of defects such as dropouts, black frames, and signal inconsistencies. Threshold-based automation allows the system to halt or flag issues in real time, ensuring only compliant assets are preserved.

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In parallel, SAMMA Stats provides real-time operational intelligence—tracking ingest rates, error conditions, and system utilization—enabling organizations to optimize workflows and maintain full visibility into large-scale migration projects.

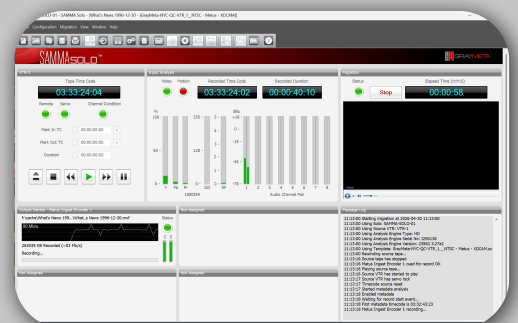
Beyond migration, SAMMA Robot enhances downstream workflows through automated metadata generation and shot-level analysis, including detection of black frames, color bars, and segment boundaries. This metadata enables faster editing, indexing, and AI-driven content enrichment.



The system's flexibility is a key differentiator. SAMMA Robot supports a wide range of videotape formats and can be reconfigured to handle mixed-format collections within a single deployment. Its scalable architecture allows organizations to expand from smaller projects to enterprise-scale migrations involving millions of assets, all within a consistent operational framework.

By combining automation, precision QC, and rich metadata capture, SAMMA Robot eliminates the inefficiencies and inconsistencies of manual digitization. The result is a high-throughput, low-touch migration environment that reduces cost, accelerates timelines, and ensures preservation-grade outcomes.

In today's media landscape, where speed, accuracy, and trust are critical, SAMMA Robot delivers a complete solution for large-scale archive transformation providing organizations with the tools to preserve, validate, and activate their most valuable assets with total confidence.



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## TECHNICAL SPECIFICATIONS

### INPUT – VIDEOTAPE FORMATS

#### U-Matic

Up to 4 VTRs, up to 48 cassettes  
Sony VO-9800 series VTRs NTSC or PAL  
Total capacity of 4, 12-cassette loading bins.  
4 bins provided (4 lg. cassettes or 4 sm. cassettes)

#### Betacam

Up to 8 VTRs, up to 60 cassettes  
Sony J-30 SDI Players  
Betacam, SP, IMX, SX, Digital Betacam  
NTSC or PAL  
Total capacity of 4, 15-cassette loading bins.  
4 bins provided (4 lg. cassettes or 4 sm. cassettes)

#### DVCAM/DVCPRO

Up to 8 VTRs and 80 standard size cassettes  
Total capacity of 4, 20-cassette loading bins  
4 bins provided (4 lg. cassettes or 4 sm. cassettes)

### OUTPUT FILE FORMATS (others available)

JPEG2000 Lossless MXF, FFV1.mkv  
MPEG 1, MPEG 2, MPEG 4/H.264  
AVI, MXF, IMX D10 MXF, Quicktime®

### TIME CODE INPUTS—OTHER

SDI, LTC, VITC, Reference (blackburst)

### OPERATING SYSTEM

Windows 11 Pro

### SIGNAL PROCESSING & ANALYSIS

Time Code Reader/Generator LTC/VITC  
Time Base Correction  
Standards Conversion  
Up/Down Conversion  
RF Dropout Compensator (U-matic only)  
Full Frame Synchronizer  
Signal Analyzer  
Digital Comb Filter  
Automatic Gain Control—AGC  
Automatic Chroma Control—ACC  
Chroma Transition Improvement—CTI  
Digital Noise Reduction

### OUTPUT – METADATA

XML—generated metadata file with:

- System configurations—encoder settings etc. ingest/migration results, checksums, logs, video file names & locations etc.
- Observations from the SAMMA Analysis Engine for every frame of video

### DIMENSIONS

Robotic Handler  
Weight = 450 lbs. (approx.),  
Height = 74”, Width = 28”, Depth = 36”  
(access 36” doorway) 84”  
Enclosed Equipment Rack, Keyboard,  
Video and Mouse