

LiveTouch™



Snell
Advanced
Media

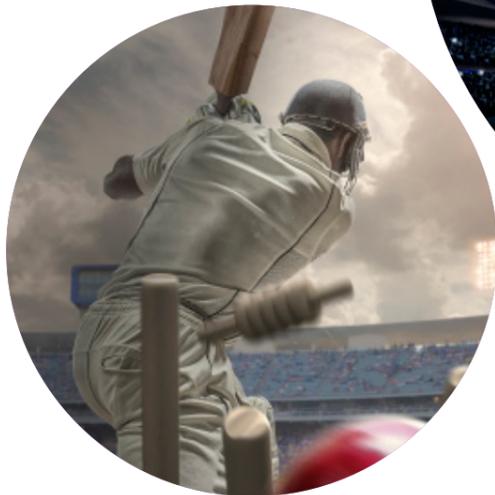
The only highlights & replay system that takes your HD sports workflows into 4K!



4K

LiveTouch is SAM's complete replay and highlights system for studio and sports applications. It's fast and easy to use, yet offers sophisticated highlight capabilities including integrated editing as standard. LiveTouch systems can scale to meet HD and UHD productions of any size.

Play it again SAM!



Contents

| | |
|-----------------|---|
| Overview | 3 |
| Features | 4 |
| LiveTouch Panel | 5 |
| LiveTouch 4K | 6 |



For further information on award-winning SAM products visit: www.s-a-m.com

System Overview

LiveTouch™ is a scalable sports highlights system that makes highlights and instant replay workflows fast and effortless. The intuitive touch screen panel is quick to learn and easy to use, making highlights selection sure, simple and robust. LiveTouch can scale to meet HD and UHD productions of any size. It is easily configurable to support large events and multiple studio productions. Uniquely, LiveTouch supports integrated editing with no delays due to media movement and without the cost of duplicating recordings or storage. Highlights packages get to air faster, and system design is dramatically simplified.

Seamless 4K handling

LiveTouch 4K is SAM's UHD sports replay and highlights system. The LiveTouch server and dedicated control panel enable instant shot selection and highlights sharing with 4K content. LiveTouch is the only system to truly bring your HD replay and production workflows into 4K.

Easy to Learn and Fast to Use

The LiveTouch interface was designed for the user, by the user. Operators can mark interest points, create clips and play content to air with live speed control. LiveTouch provides fast navigation, on-air playlist editing and easy search and sharing tools. A unique multicam interface provides fast, easy access to all camera angles in live productions.

Integrated Editing

LiveTouch integrates fully with SAM's editing environment, enabling concurrent operators to instantly create, edit and playout highlights.

Unique SAM Technology

LiveTouch uses SAM's unique FrameMagic™ technology, giving every frame on the system a unique identity. As operators save or publish highlights and playlists they appear instantly on the system as a unique asset. The publish is not a duplicate file, but merely metadata markers describing which sequence of frames the highlight is comprised of. This allows the same frame sequence to be instantly displayed and used in the highlight library or edit timeline giving replay operators and editors instant access to each other's media.

Strength and Flexibility

SAM's inter-server streaming allows superior scalability and powerful workflows on multiple server systems in both HD and 4K. Recordings, clips and playlists can be instantly streamed over the network to another server for playout. This allows operators to treat multiple servers as a single production pool.

Publish to Social Media

Using SAM's Momentum workflow technology, users can publish highlights and replays straight to social media at the touch of a button

Instant shot selection and highlights sharing

Publish to social media at the touch of a button



LiveTouch Features

Edit highlights instantly on the same application or share instantly to another workstation

LiveTouch Offers:

- Scales to meet HD and UHD productions of any size
- Designed for the demanding sports replay environment
- Instant effects and finishing tools
- Intuitive and simple touch screen control panel for fast highlight selection, playlist editing and live layout control
- More efficient UHD channel density than other systems
- More online storage than any other system
- Unique multi-cam grouping and workflows
- Tablet application for on-air talent to control their own layout
- Momentum integration for publishing to social media
- Simultaneous browse creation



Unbeatable Architecture

LiveTouch Client

The LiveTouch Client extends the panel UI to provide access to even more facilities and configuration options. The LiveTouch Client provides access to highlights and edits so they can be quickly played to air using the panel. The LiveTouch Client also provides complete editing capabilities that can be used when the system is not on air.

LiveTouch Manager

LiveTouch is built on a network architecture. The LiveTouch Manager keeps track of every user, server and highlight on the network. An open network architecture allows the LiveTouch Manager to provide users with open access to the system allowing panels to control any port on any server or numerous ports from different servers simultaneously. The LiveTouch Manager also allows highlights and playlists to be instantly searched and shared by any client connected to the system.

LiveTouch Server

The technical heart of the system, the LiveTouch Server, records incoming feeds and plays out highlights to air under control of the LiveTouch panel. The server has up to 12 SDI inputs and outputs and can store up to 200 hours of 100mb HD media internally or 600 hours externally. The servers' continuous record functionality ensures no media is ever missed.

The LiveTouch server offers native support for multiple compression formats including DVC Pro HD, AVC Intra, DNxHD and XAVC Intra Class 300 UHD. The server supports inter-server streaming over 10Gb Ethernet allowing a panel controlling an output port on one server to work with and playout highlights from a clip being recorded on a different server.



LiveTouch Panel

The operational heart of the system, the LiveTouch panel provides fast, intuitive highlights and instant replay capabilities

The LiveTouch panel is designed for the operator, by the operator. An intuitive touch screen provides quick clip selection, unique speed tools and configurable user options. The panel features familiar button placement as well as a number pad for fast navigation by clip number and timecode. A responsive jog wheel gives users agile navigation and a high precision T-bar provides precise control on slow motion playout.

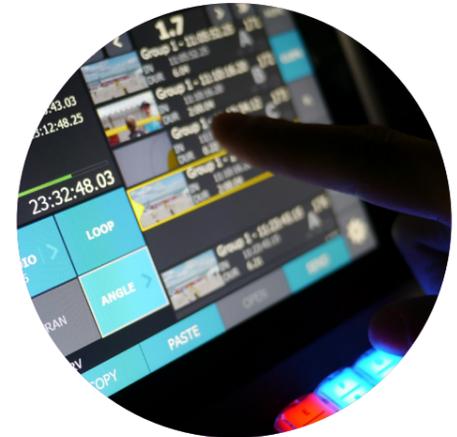
In developing the LiveTouch panel, SAM consulted extensively with sports broadcasters and their on-air operators to ensure that it exactly meets the rigorous needs of live sports production making the interface easily accessible to any experienced operator.

LiveTouch Web Bin

The LiveTouch Web Bin allows clips and playlists from any server to be instantly searchable by user, category or key words. Clips and playlists can then be dragged into the local library and used instantly.

LiveTouch Tablet Application

The LiveTouch Tablet Application allows on-air talent to control LiveTouch ports and playlists via wifi on a simple tablet application. Users can cue and play clips in LiveTouch playlists as well as having access to jog, shuttle and slow motion.



LiveTouch 4K offers the fastest, most efficient workflow at 4K giving instant access and collaboration by all users on the system.

Density and Scalability

LiveTouch's inter-server workflows allow the system to thrive in 4K. Multiple 4K servers can be pooled together allowing LiveTouch to seamlessly scale to larger 4K productions, providing familiar workflows to customers while also preserving rack space in trucks and studios. Larger LiveTouch zones can be treated as a single multi-camera production bank, allowing instant access to more camera and feeds than other systems.

4K Editing

LiveTouch is tightly integrated with SAM's 4K editors eliminating the need to move media and breaking the physical link between replay and editing workflows. This offers innovative new 4K production workflows completely unique in the industry.

Essence Handling

LiveTouch's 4K media is stored and accessed as a single UHD XAVC class 300 image rather than Quad HD. This avoids tearing and sync complications on playback.

4K Workflow

LiveTouch offers the fastest, most efficient workflows in 4K. SAM's LiveTouch and sQ editing systems also offer 720p browse generated on input, unlocking powerful workflows both locally and remotely. Users can instantly create, share and playback 4K content with ease.

RT Software, tOG Sports Packages Available

LiveTouch now offers tOG sports telestration and graphics directly from the panel touch screen. Illustration tools, key frame tracking, split screen views and more can be applied to LiveTouch highlights and played back to air quickly and easily. tOG Sports and LiveTouch provide enhanced storytelling and in depth analysis tools for live sports production.

Product Specification

| | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ports | Up to 12 HD Up to 4 UHD |
| Size | 3RU |
| Storage | 14.4 TB Internal 43.2 TB External |
| Server Formats | AVC-Intra Class 50 and 100 DVC Pro HD DnXHD XAVC Class 300 UHD |
| Browse Formats | MPEG 1 or H.264 |
| Audio Tracks | 16 tracks per channel |
| Networking | Quad 1 Gb or Dual 10 Gb |
| Includes | LiveTouch Server LiveTouch Manager (1U PC and software) LiveTouch Client (Desktop PC and software) LiveTouch panel LiveTouch Edit (software licence only) |

LiveTouch scales to meet HD and UHD productions of any size

4K - Ready when you are



