EMBEDTEK

Sabot 0525:
Data Recorder

This system provides real-time multiple audio and HD video streams via a networked API. The COTS components are optimized for the customer's application-specific software (a military simulation system), but it could be configured for any type of image capture application.

Performance Characteristics:
The platform uses dual Intel® Xeon™ processors to support real-time pass-through, as well as playback, recording and bookmarking of up to 5 concurrent audio and 24-bit 1280x1024 video streams at 30 frames per second.

Ergonomics:
The 4U chassis supports a variety of drive configurations with options for fixed or removable drive bays.

Regulatory/Environmental:
The system is designed to be FCC, UL, CE and other safety and emissions standards compliant.

Lifecycle:
Seven year availability.

Sabot 0525

Product Realization: Sabot 0525

The OEM manufacturer of military simulation equipment implemented the AVR000-525 as a hardware and software solution. The system records and plays back five channels of video and audio for after-action review.

R&D Proof of Concept:
Established design requirements and identified COTS components that were available as building blocks for custom software and hardware development. Proved the concept syncing limited number of channels.

Design:
Wrote software using underlying system clocks to synchronize audio, video and data. Set performance benchmarks that would be necessary across system channels to allow video to pass through while recording. Designed compression methodology to allow maximum storage time with minimal hard drive space. Physical requirements included depth and weight restrictions, as well as ruggedization provisions to meet shock/vibe requirements.

Prototypes & Validation:
Provided shared prototypes to support co-development of software, as well as integration of software with full simulation software suite and custom APIs. Physical validation included shock and vibration, cabling, integration in custom shipping containers.

Launch:
Refined software images, APIs, labeling and software image load to integrate with customer's manufacturing system.

Production, End-of-Life:
The software and hardware are revision-controlled to ensure consistent performance in our customer's end application. The COTS components are carefully monitored for availability and future changes. Strategic platform changes are carefully planned to reduce overall platform cost; software enhancements are coordinated to coincide with the platform change.

EmbedTek designs, invents, and manufactures computers, software, sensors, cameras, and displays for original equipment manufacturers. Our systems improve the quality of imaging in healthcare, simulation programs in the military, video analytics in security, and much more. Throw any challenge at us, from demanding environment and ergonomic requirements to High Level Assembly and nonstandard I/O. We'll evaluate it, carefully attack it, and solve it.