Sabot 3025: Medical Audio Recorder

This small form factor PC accepts several different IP camera and analog video inputs as well as XLR audio with phantom power. The current system is used for recording/playback in a medical simulation system.

Performance Characteristics:

Intel® Core™ i7 processor with different audio/visual options for flexible image grabbing and encoding. Base configuration uses COTS components and accepts four IP video (power over Ethernet) inputs plus a fifth input (analog or digital). Balanced XLR audio includes on-board phantom power. Space for two hard drives.

Ergonomics:

Set top box with Rack and Wall Mount Options. 13.75" (343mm) W x 3" (51mm) H x 9" (229mm) D.

Regulatory/Environmental:

Supports system level CE, ETL, FCC and other safety and emissions standards.

Lifecycle:

Seven-year availability.

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Product Realization:
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Currently used for review and analysis of simulations in medical training, this flexible design can serve as the backbone of any number of different audio visual solutions.

Overall challenge:
To consolidate multiple image capture and encoding devices into a single appliance, reducing overall program costs and simplifying management.

Design:
Original objective was to bring together multiple systems into a single chassis; the solution we provided included upgraded components that delivered better performance, and long-term availability. Overall costs were cut in half. By combining inputs and power supply in a single box, we replaced several discrete boxes and simplified cable management. Our design solution included a custom PCB which we manufactured and a Linux driver which we wrote in order to take advantage of existing COTS technology.

Prototypes & Validation:
Greatly exceeded customer expectations by delivering full prototypes (with production-quality sheet metal) in less than two weeks.

Launch:
Evolving options include additional inputs, color and finish of metal chassis, and the ability to mount unit.

Production, End-of-Life:
Ongoing production takes place in a controlled facility, with quality management systems audited to ISO 9001 and ISO 13485. Program includes 100% testing after integration and shipping directly to end-user. As a result, the entire market entry required minimal capital investment and accommodates highly variable customer demand.

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.