

B1927: High Performance Image Generator

This high-performance video capture system provides real-time vision as well as record/playback. It is designed to fit a particular customer's slim line card, and is ideal wherever a high-performance system needs to fit into a limited physical space.

Performance Characteristics

COTS system is designed for high throughput of multiple video formats. Supports latest Intel® CPU and multiple high-performance graphics processors. Typically used with HD imaging in a medical cart or similar enclosure.

Ergonomics:

7" (178mm)H x 10" (254mm)W x 12.5" (317mm)D embedded PC with custom branding (paint, silkscreen). Options include top vs rear exhaust.

Lifecycle:

Seven-year availability.

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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.

Product Realization: B1927



A healthcare customer uses the system to grab video from several inputs and then play the video back immediately in multiple formats. It can be used wherever a high throughput video device needs to operate in a custom form factor.

Overall challenge:

To provide the customer with the best possible solution using today's COTS components, while also allowing for lifecycle support through 2019.

Design:

When we engaged the customer, they were already committed to a specific cart design. Additionally, their design included carefully defined aesthetics, with demanding fit and trim requirements. We established a working plan that included Intel® processors and a video card. The design also included a custom thermal management system that functioned within tight acoustic standards.

Prototypes & Validation:

Early prototypes for electrical and software development ensured that product worked with customer's camera and display systems. Production prototypes for FDA pilot validation at field sites were produced shortly thereafter and in parallel we supported their EMI/regulatory efforts.

Launch:

Established the process for forecasting, order management, packaging and shipment. Developed the cosmetic and functional test and acceptance criteria, defined the Certificate of Conformity and the information contained in the Device History Record.

Production, End-of-Life:

Medical Devices are typically designed to work within a 5+ year major product upgrade cycle. EmbedTek worked closely with component suppliers to ensure a strategic upgrade path, and to establish a reliable supply chain through the product lifecycle.

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