

SSD Solutions for Medical Devices

Virtium fulfills mission-critical medical device requirement



Challenge

Industrial Embedded Technology for an Interconnected World

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A leading medical device customer had several challenges in their device design.

First and foremost, the product was a mission-critical heart monitor device – requiring a fail-proof design with component specs far beyond consumer grade. In addition to new designs, they needed to retrofit older designs using older PATA spinning drives with a more durable and up-to-date SSD replacement.

The medical industry has strict FDA qualification rules and long production cycles – so sometimes it is more efficient to continue with proven existing designs instead of starting new ones. And it was important the storage replacement could drop in to extend the existing product life cycle.

Additionally, operating rooms are becoming more streamlined requiring that more equipment fit into less space which translates into physically smaller and lower power medical devices. In addition, medical equipment needs to be extra durable to ensure that they are reliable even with rugged use or exposed to wide temperature and altitude variations.

Also, data security was important pursuit to HIPAA (Health Insurance Portability and Accountability Act of 1996) and ePHI (Electronic Protected Health Information).

Other storage design consideration concerns include how power anomalies affect data integrity with the common practice of devices suddenly switched off and on; frequent alternation between AC and battery backup power; and encountering the spikes, surges, brownouts, and blackouts common in most commercial power supplies.

Solution

The medical device customer turned to Virtium – an industry leader in rugged, industrial-embedded storage and memory. Virtium offered a drop-in SLC PATA replacement that would extend the life of the existing design, as well as offer robust iTemp operation for extreme environmental conditions. Lastly, high capacity was not an issue with this design, so Virtium's lower capacity options and overall advanced design consumed less power as well.

Virtium's SED (Self Encrypting Drives) could also be used to ensure an extra layer of hardware encryption would protect sensitive data.

Virtium's extensive test processes also ensured the core storage component of this design would remain rock solid and virtually fail proof.

Once this legacy replacement was test-proven, Virtium was able to offer its array of SSD form factors to support new future designs.

Result

By using Virtium's industrial-embedded storage, this medical device manufacture was able to improve even their legacy and existing critical designs and assure industry users of mission critical operation, while reducing overall cost of ownership and further limiting liability risks.

Virtium manufactures memory and storage solutions for the world's top industrial embedded OEMs. For two decades we have designed, built and supported our products in the USA - fortified by a network of global locations. Our world-class technology and unsurpassed support provide a superior customer experience that continuously results in better industrial embedded products for our increasingly interconnected world.

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