

Avalue Introduces Medical-Grade SSD Solution to Strengthen Healthcare Data Security and System Reliability

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/EINPresswire.com/ -- As AI-assisted diagnostics, high-resolution medical imaging, and intelligent healthcare applications continue to advance, medical systems are processing unprecedented volumes of imaging and patient data. Storage has become more than a matter of capacity and speed—it is now fundamental to system reliability, data security, and regulatory compliance. Compared with commercial SSDs, storage deployed in healthcare environments must deliver long-term operational stability while withstanding electrostatic discharge (ESD), sustained high workloads, and increasingly stringent cybersecurity requirements to support mission-critical clinical applications.



To address the growing demand for highly reliable medical storage, Avalue Technology Inc. (TPEx: 3479.TWO), a provider specializing in industrial computing, introduces its new Medical-Grade SSD Solution. Available in M.2 2280 PCIe NVMe and 2.5-inch SATA III form factors with capacities ranging from 256 GB to 2 TB, the solution offers enterprise-grade endurance of up to 1 Drive Write Per Day (DWPD) and is backed by a five-year warranty. Designed specifically for medical imaging systems, diagnostic equipment, surgical platforms, and AI-powered healthcare devices, it combines advanced protection, intelligent thermal management, and hardware-based encryption to help medical device manufacturers build healthcare systems with greater reliability, security, and regulatory readiness.

Built for Demanding Clinical Environments

Medical devices often operate continuously in environments populated by healthcare professionals and sensitive electronic equipment. Electrostatic discharge (ESD) generated by personnel, medical carts, or surrounding devices can lead to data corruption or unexpected system interruptions. Avalue's Medical-Grade SSD incorporates enhanced protection designed

for healthcare environments. Compliant with IEC 60601-1-2 electromagnetic compatibility (EMC) requirements, it supports ESD protection of up to 15 kV air discharge and 8 kV contact discharge, helping reduce the risk of ESD-induced data corruption and ensuring stable long-term operation for mission-critical medical equipment.

Intelligent Thermal Management for Sustained Performance

Applications such as ultrasound, endoscopy, medical imaging, and image-guided therapy require continuous high-speed data recording. Conventional SSDs may experience thermal throttling under sustained workloads, potentially causing delays or interruptions during image acquisition. Avalue's Medical-Grade SSD integrates Adaptive Thermal Control (ATC) technology to dynamically optimize operating performance based on workload and temperature conditions. By minimizing thermal throttling, the solution maintains consistent data throughput even during prolonged, data-intensive imaging applications, ensuring smooth and reliable system performance.

Hardware-Based Encryption for Enhanced Data Protection

As healthcare cybersecurity regulations continue to evolve, protecting sensitive patient information has become an essential requirement for modern medical devices. Avalue's Medical-Grade SSD supports TCG Opal 2.01 Self-Encrypting Drive (SED) technology, providing hardware-based encryption that protects sensitive medical data without compromising system performance.

The solution also supports Crypto-Erase, enabling encryption keys to be securely removed when devices are retired, serviced, or redeployed. This renders stored data permanently inaccessible within seconds, significantly reducing storage sanitization time while helping medical device manufacturers comply with international security and data sanitization standards, including HIPAA, GDPR, and NIST SP 800-88.

Proven Performance in Medical Imaging Applications

Avalue's Medical-Grade SSD has been successfully deployed in an Image-Guided Therapy system. During continuous high-intensity imaging workloads, the solution delivered zero frame drops while maintaining stable performance without thermal throttling, ensuring smooth, real-time medical imaging throughout operation.

Combined with enhanced ESD protection and hardware-based encryption, the solution improves overall system reliability while helping medical equipment manufacturers meet hospital cybersecurity requirements, accelerating system qualification and deployment.

Building a Reliable Foundation for Intelligent Healthcare

As AI-driven healthcare, intelligent diagnostics, and digital medical services continue to evolve, reliable storage has become a critical foundation for modern healthcare systems. Avalue remains committed to expanding its medical computing portfolio, offering comprehensive solutions that include Medical Panel PCs, embedded computing platforms, Edge AI systems, and medical-grade storage products. Together, these solutions enable medical device manufacturers to develop secure, high-performance, and long-lasting healthcare systems that support the next generation of intelligent healthcare.

For more information, visit [Avalue Website](#), or contact us using our [online contact form](#).

About Avalue Technology

Avalue Technology was founded in 2000 and is a provider specializing in industrial computer solutions. Avalue Technology has a proven track record of success in the industrial control industry, and we leverage that experience to provide reliable and trustworthy customized products and services. Our primary products are embedded and industrial computer solutions, with a focus on smart healthcare, smart manufacturing, smart transportation, smart retail, and Internet of Things (IoT) applications. Avalue is committed to the sustainable growth of our company. We are guided by the business philosophy of "stability, innovation, diligence, and enthusiasm, and enjoyment of work and life." We are dedicated to leveraging the power of intelligence and sustainability to disrupt the future of digital blueprints and to drive positive, long-term change in the smart industry.

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