Success Story - They Chose Apacer

Challenges

· data integrity, shock/vibration resistance, thermal stability

Solutions

· mSATA (SV250-300B)

Value-added technologies

· Shock/Vibration testing (MIL-ST-810G)
· Wide temperature testing
· DataDefender™

The Customer and Application

Electronic transportation systems are developing rapidly. To raise their performance benchmarks, manufacturers demand more reliable memory products with low latency to keep transmission speeds competitive. With this in mind, let's consider a European manufacturer based in Moscow, Russia. They specialize in making modern equipment for transportation, and their technology is used in railway systems that have to traverse cold, mountainous regions. Their video surveillance system is used to store and retrieve archive video footage in railway systems.

Challenges

For this manufacturer, finding a dynamic embedded storage solution that met the performance and capacity requirements of their new platform was a tremendous challenge. And due to the nature of the transportation industry, the manufacturer knew they needed components with resistance to shock, vibration and temperature fluctuations, while still maintaining excellent data integrity. They also knew that unexpected power supply issues could crop up without warning, so they were looking for some kind of protection against these circumstances.

Solutions and Technologies

Apacer worked closely with the customer to seek an optimum solution best suited for their new platform. Our engineering team recommended adopting an SV250-300B storage device that offers high capacity as well as a rugged mechanical design that complies with MIL-STD-810G. This shock/vibration resistance is essential because even a few seconds of disruption could lead to footage loss and potentially increase the risk of adverse effects on the system.

It was a great fit for the new platform thanks to its ability to withstand wide temperature swings and to reduce possible damage to the SSD during thermal expansion and contraction. It also incorporates Apacer's DataDefenderTM protection to ensure data integrity even during periods of power instability that are likely to occur in challenging environments. Even if power is suddenly and unpredictably cut, DataDefenderTM will detect the power drop and then trigger a proprietary algorithm to inform the host to stop sending data to the SSD. On receiving this command, the host will flush data in the volatile RAM section of the controller into flash memory, preventing data loss and allowing for a smooth reboot when power is restored.

Results and Benefits

By adopting Apacer's suggested device, the customer replaced their existing legacy platform with a powerful, modern new system promising superior performance. This economic solution eliminated some secondary costs by increasing device longevity as well as minimizing maintenance management fees. Since then, the company has continued to co-work with Apacer and is considering other cutting-edge storage devices for upcoming applications.

Additional Support

Longevity

Fixed BOM solution,
EOL & LTB notice

Strong customization capabilities

Strong HW/FW
engineering know-how

Service

Real-time and responsive
after-sales service