



Industrial Embedded
Technology for Our
Interconnected World



Industry Solutions

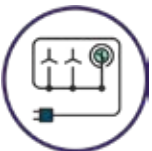
Virtium's industrial-grade solid-state storage and memory solutions feature:

- Data protection against unexpected power loss
- Industrial temperature support (-40°C to 85°C)
- Balanced sequential and random read/write
- ESD, vibration and humidity resistance
- Low power / longest product life-cycles
- Wide range of capacities
- Multiple interfaces and form factors
- Legacy support
- 99.9% uptime
- ROHS and REACH compliance



Communications

Communications equipment continues to experience exponential increases in demand for data while simultaneously maintaining quality of service, reducing total power consumption, and increasing the return on investment on a bit-transfer basis. Implementations include base stations, DSLAMs, PBX systems, multi-service gateways and remote access servers.



Energy

Energy segment is subjected to electrostatic discharge (ESD), extreme temperatures and high humidity. Urban sprawl means more demands on energy grids so the backbone systems require efficient, uninterrupted operation and high durability. Implementations include: substation control, monitoring/diagnostics, data loggers, smart grid controllers and distribution systems.



Industrial Automation

Industrial Automation environments are diverse yet share common requirements with regard to form-factor, legacy support and endurance. Implementations include large production plants, industrial PCs, factory automation/robotics, kiosks, ATMs, terminals, process control units and data loggers.



Medical

Medical applications are increasing in complexity and moving closer to the patient. This requires low-power, low-latency solutions at low costs. Implementations include therapeutic devices, medical imaging, patient diagnostics, measurement and monitoring equipment.



Networking

Networking applications represent the “last mile” of IT data/content. They continue to require quality-of-service, a reduction in total power consumption and return on investment. Implementations include switches and routers, supervisor and mezzanine cards, firewall and VPN equipment and small cell network.



Smart Cities

Smart Cities is a fast-growing frontier for Industrial IoT and embedded technologies, including sensors, vision systems, self-service kiosks and devices connected by mesh networks to data centers for analyzing data and adjusting to changing usage patterns. This segment requires compact form factors with low power requirements and tolerance to extreme temperature, humidity, shock and vibration, as well as resilience to unexpected power loss.



Transportation

Transportation applications are inherently subject to extreme temperatures, shock and vibration, and high humidity. Implementations include: simple data loggers, GPS / geo-location and navigation, rugged PCs, in-vehicle control, monitoring, diagnostics and a wide range of architectures and software.



Video and Signage

Professional media companies range from high-performance HD video capture to broadcast video serving and digital signage applications. Some devices require heavy write performance (data capture), while others require high read performance (video serving). Implementations include professional video capture/editing, broadcast, ad terminals, indoor/outdoor multimedia signage, casino gaming and surveillance/security.

Industrial Solid State Storage

Virtium's solid-state storage solutions are ideal for heavy-duty industrial embedded applications that include boot drives, data logging, caching and backup. Virtium's solid-state drives (SSDs) are made for extreme conditions in industrial embedded applications. Virtium's SSDs carry three-year or five-year warranties.

StorFly SSDs

StorFly® SSDs are available in three classes for specific industrial-embedded designs and budgets:

- **CE** (MLC *1X)
- **XE** (pSLC *7X)
- **PE** (SLC *30X)

* Endurance Baseline = an entire drive-write per day for entire warranty period.



Form factors include: 2.5" SATA, M.2 SATA and PCIe, mSATA, Slim SATA and CFast. Small/large capacities are tailored for industrial embedded needs that balance size with power.

TuffDrive SSDs

TuffDrive® solutions are ideal for heavy-duty networking and embedded non-SATA designs. Their form factors include eUSB, USB key, PATA, CF and SD. Virtium continues to support legacy form factors that other manufacturers have ceased supporting, because the industrial embedded market needs to maintain longer-life legacy designs.



Industrial SSD Software



- Power loss protection
- Environmental extremes - temperature, shock/vibration
- Low power operation
- Integrated into all Virtium SSDs
- Optional temperature profiling



- AES-256 encryption
- TCG authentication
- Crypto and military secure erase
- Write protection
- Optional on Virtium SSDs



- Manage field updates
- Command line-based test and data collection
- Create custom tests with only a few lines of code
- Open source
- Compatible with all SSDs



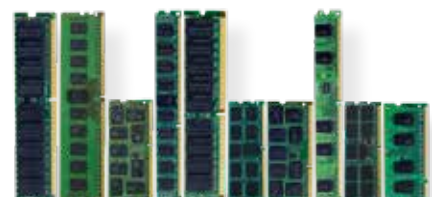
- Compare SSDs for easier qualification
- Trigger preventative maintenance alerts
- Make in-application decisions
- Compatible with all SSDs

Industrial Memory

Virtium's 22-year-plus business legacy started with memory. We have perfected the process with our patented advanced chip placement and stacking techniques, enabling higher densities in smaller footprints.

DIMM, SODIMM and Mini-DIMM DRAM memory modules are designed to meet mission-critical, extreme temperatures, high-reliability and long-life requirements for the most demanding embedded designs.

Virtium offers Standard, VLP and ULP heights with high-temperature and vibration features, such as 30µ gold-finger, thermal heat spreaders, conformal coating, thermal sensors and under fill. Memory modules carry five-year warranties.



See our specification matrices and datasheets for more details.

About Virtium

Serving the world's top industrial embedded OEM customers for more than two decades, Virtium designs, builds and supports solid-state-storage, memory and semiconductor modules in the USA. It provides a dedicated software team for custom storage solutions – all fortified by a network of global locations. The company's intelligent industrial embedded solutions provide the robust performance, reliability and functionality needed in the most demanding applications.

- Serving the industrial embedded market for over 22 years.
- Fully integrated hardware, firmware and software supported by industry's strongest application engineering team.
- Made in the USA following strict processes and ISO-9001 and ISO-14001 standards.
- Leading innovator in small-form-factor, high-capacity, high-density, high-reliability designs.
- Broad product portfolio from latest technology to legacy designs.
- High service level unmatched by competition.
- Strategic supply continuity through partnerships with leading technology suppliers.
- Long-term direct relationships with leading suppliers ensure on-time priority allocations and longer availability.
- Worldwide distribution, sales and FAE support.



Made with pride in the USA.

www.virtium.com



© Copyright 2019. All rights reserved. Virtium®, StorFly®, TuffDrive®, vtView® and vtSecure® are registered trademarks, and vtGuard™ and vtTools™ are trademarks of Virtium LLC. All other non-Virtium product names are trademarks of their respective companies.
Front panel image copyright: 123RF/nexusplexus

30052 Tomas, Rancho Santa Margarita, CA 92688
Phone: 949-888-2444

SB01-0519-01