

Accelerating Data Access

World-class engineering. Enterprise-class solid-state solutions.



It Takes World-Class Engineering to Make Enterprise-Class SSDs



The controller determines the reliability, availability and serviceability (RAS) of an SSD. This is why SSD controller technology, and not the media itself, is what separates an enterprise-class SSD from less reliable alternatives.

STEC invests world-class engineering resources to design and develop advanced SSD controller technologies that help enterprise users reduce total cost of ownership, break data access bottlenecks and accelerate the most demanding storage and server applications.

STEC's fourth-generation SSD controller technologies are engineered from the ground-up for demanding environments with high workloads and continuous duty cycles:

- Secure Array of Flash Elements™ (S.A.F.E.), is a groundbreaking technology that enhances flash reliability through advanced redundancy techniques
- CellCare™ Technology maximizes enterprise-class endurance and improves performance in multi-level cell (MLC) flash media, through advanced signal processing and adaptive flash management algorithms

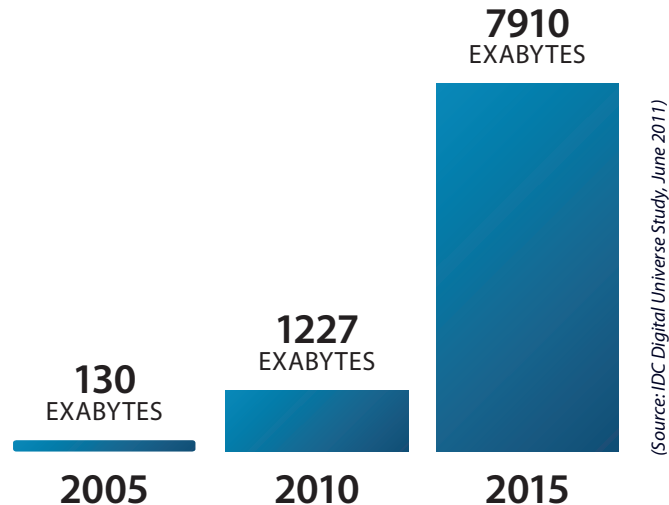
STEC's top-to-bottom solutions include MLC flash-based SSDs, in addition to single-level cell (SLC) flash-based solutions, providing IT professionals with a choice of scalable, cost-effective options unmatched in the industry.

Enterprise-class applications and services deserve enterprise-class SSDs.

Accelerating Access to Data Welcome to the World of Big Data.

//The analysts at IDC estimate that 1.8 zettabytes* of data are now being created or replicated each year. //

(Source: IDC 2011)



* Measured in bytes, that's 18 followed by 23 zeros worth of data: the equivalent of more than 200 billion feature-length HD movies, or every person in the United States (311 million) tweeting three times per minute, nonstop, for 26,976 years.

Enterprises are experiencing an explosive demand for data.

As an IT professional, you face the escalating challenge of storing, managing and accessing an unprecedented avalanche of data. Data is money in today's enterprise — but to maximize your return on investment you need fast access to the right data for your application and service requirements, at just the right time.

STEC is accelerating data access with a top-to-bottom range of tiered SSD solutions that lets you choose the right mix of technology for your enterprise requirements.

Enterprise Storage

Managing the Data Explosion

STEC's comprehensive family of enterprise-class SSDs lets you cost-effectively separate data access performance from storage capacity. By layering SSDs with the right levels of performance and conventional HDDs for bulk storage, you can shrink the size of your SANs while delivering fast access to critical data with the added benefits of scalability and cost savings.

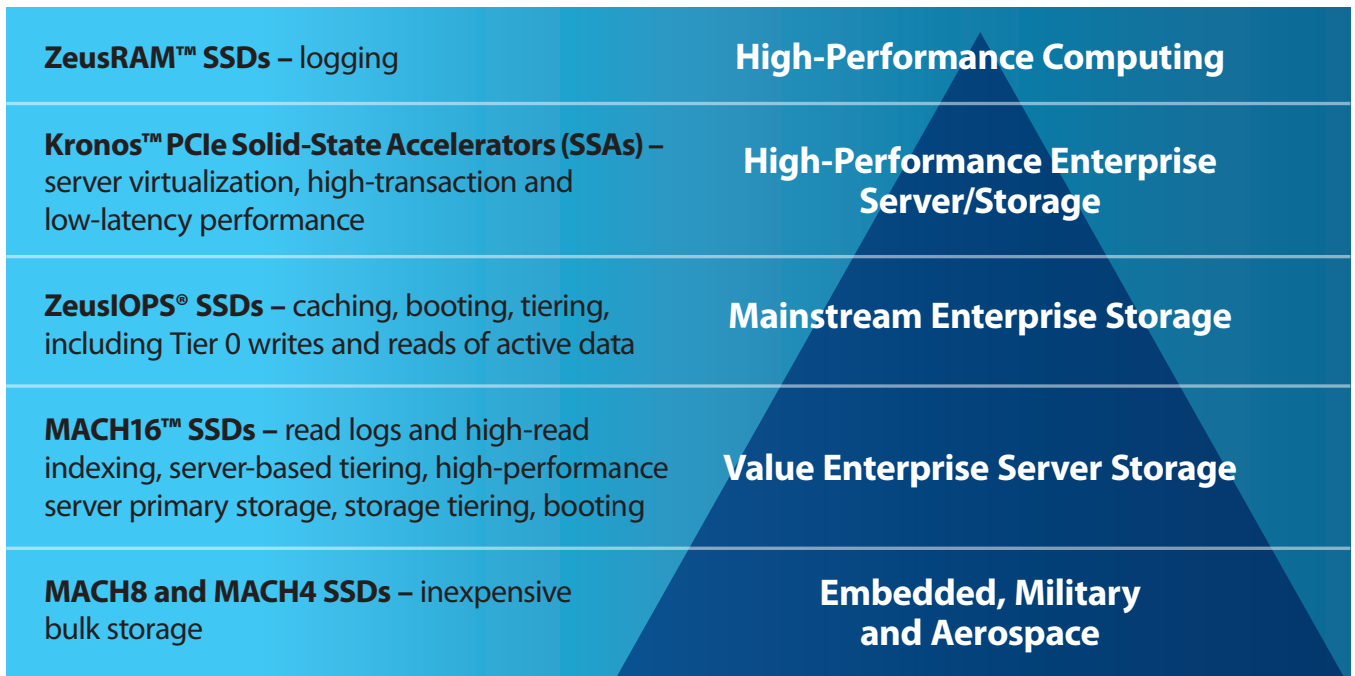
Accelerating Access to Data

Enterprise applications and the latest smart services require fast access to data. When it comes to data handling, shrinking latency is mission-critical. The key issue is not how many records you access, but rather, when a host asks for the record, how fast it comes back.

At STEC we are in the business of helping developers and enterprise IT professionals meet enterprise-specific storage demands and changing workloads. Our engineering teams develop the industry-leading controller technology and firmware that help storage OEMs fine-tune their SSD products, providing IT professionals with a competitive advantage in today's data-driven business environment.

Reducing Cost

Combining SSDs with HDDs can reduce overall costs. In STEC's tiered approach, SSDs are used for the most application-critical and active data, while HDDs are used for archiving large volumes of less time-critical records. STEC SSDs provide the right performance and cost-effectiveness for every level of enterprise data handling.



The STEC tiered storage model: putting the right SSD performance in the right place

Enterprise Servers

Reducing Server Sprawl

Underutilized servers take up valuable space, consume enterprise resources and slow data access. The resulting data distribution inefficiencies can lead to reduced application performance.

STEC's solution to server sprawl is intelligent integration and an SSD-layering model that takes advantage of high-performance SSD applications to fully utilize SAN resources, provide fast access to data and get the most from your server resources.

Improving Server Utilization

Server virtualization is widely used to consolidate server assets by running multiple applications in separate virtual domains. But virtualization also puts pressure on the IO subsystem within the server, which can create a data flow bottleneck. Most enterprises have invested in substantial

CPU resources to process data, but data flow bottlenecks can lead to the underutilization of much of this expensive CPU capacity.

STEC SSDs can help you maximize CPU utilization: moving data to servers more efficiently by bringing a 'fatter data pipe' closer to the CPU. By breaking data flow bottlenecks and enabling more efficient virtual machine caching, the right mix of SSDs helps maximize utilization of high-value servers.

Optimizing Server Utilization

At STEC, we believe that data storage should not needlessly absorb CPU cycles. STEC SSAs avoid robbing CPU cycles in virtualized server environments through storage tiering — matching performance and capacity of SSDs to the requirements of specific applications. The ability to accelerate data access makes STEC SSAs valuable elements within virtualized server environments.



STEC – Accelerating Access to Data Through World-Class Engineering

STEC is in the business of enabling innovation in enterprise server and storage platforms through the integration of solid-state technologies.

We are an industry leader, bringing SSD technology innovation to the enterprise.

- STEC took SSD system performance from 300 IOPS to 50K IOPS, and in the process, enabled a new category of high-performance SSDs for applications such as online transaction processing (OLTP)

- STEC technology enabled the creation of Tier 0 solid-state memory-based storage, capable of unprecedented performance
- By moving data pipes closer to the server's CPU, STEC helped harness the processing power of the server to accelerate data flow, improve server utilization and maximize application performance

Through non-stop innovation in SSD technology, STEC has redefined the storage value equation from the old formula of 'dollars per gigabyte' to 'dollars per IO.'

STEC milestones include:

1st

to market with fully-qualified enterprise SSDs.

1st

supplier to qualify and ship a 3Gb and a 6Gb SAS (Serial Attached SCSI) SSD.

1st

supplier to qualify and ship an enterprise-class MLC flash-based SSD.

Going forward, STEC will play a key role in the evolution of SSD technology for the enterprise and the fast-growing environment of cloud computing applications.

STEC Top-to-Bottom SSD Solutions

ZeusRAM™ Product Family

ZeusRAM enterprise-class, wear-resistant SSDs deliver DRAM-like read and write speeds, with the persistent data storage of flash. ZeusRAM SSDs eliminate the need for conventional, volatile DRAM by providing low-latency performance designed for heavy transaction volumes in data-intensive enterprise environments.

Kronos™ PCIe SSA Product Family

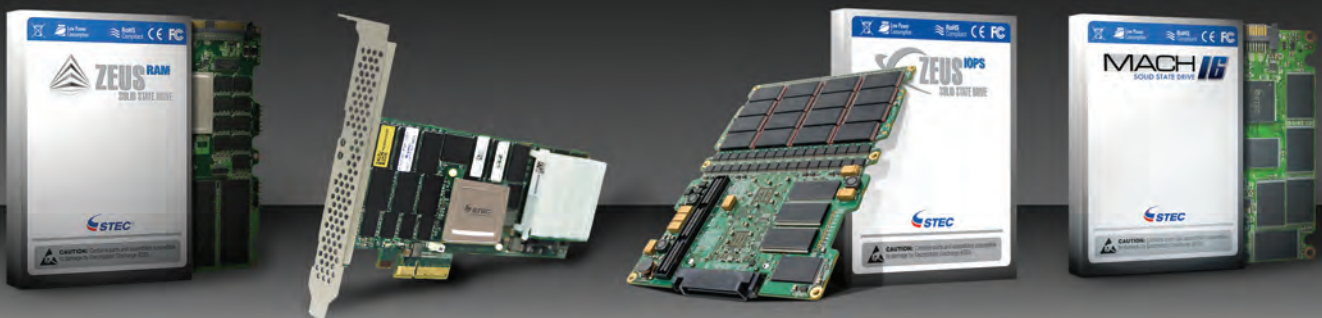
STEC's family of high endurance, enterprise-class solid-state accelerators (SSAs) uniquely integrates PCI Express® (PCIe) and flash technologies onto a compact, power-efficient, on-board ASIC-based solution. This new Kronos PCIe accelerator family avoids taxing the host for flash management (such as host memory and CPU cycles), freeing them to perform more critical application acceleration functions. The SSA architecture combines next-generation driver software with the PCIe ASIC card to achieve unprecedented application-level acceleration that is capable of delivering consistent, fast and reliable access to data, as well as stellar performance and endurance over the lifetime of the accelerator itself.

ZeusIOPS® Product Family

ZeusIOPS SSDs break the bottlenecks associated with rotating media by taking sustainable IOPS performance to new levels. In addition to their world-class performance, ZeusIOPS SSDs are the most reliable, longest lasting solid-state solutions now available.

MACH16™ Product Family

MACH16 SSDs provide users with the perfect solution for mid-range server and storage deployments through advanced levels of data storage reliability and performance, with a choice of enterprise-class MLC or SLC SSD solutions. MACH16 SSDs outperform HDDs, delivering 240MB/s sustainable sequential read and 180MB/s sustainable sequential write speeds, backed by the added data protection of full error correction.





Accelerate access to the data you need

For more information on STEC products, solutions and technology, please visit www.stec-inc.com



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