

MACH16™

Fast and Reliable Enterprise-Class SSDs



MACH16™ solid-state drives (SSDs) from STEC provide users with advanced levels of data storage reliability and performance, with a choice of enterprise-class, multi-level cell (MLC) or single-level cell (SLC) SSD solutions. Unique flash management technologies, including STEC's proprietary flash controller technology, Secure Array of Flash Elements™ (SAFE) Technology and CellCare™ Technology, enable MACH16 SSDs to deliver an unmatched combination of read and write performance, reduced power usage and endurance.

MACH16 SSDs are the ideal drop-in replacements for conventional hard disk drives (HDDs) in embedded systems, data centers, storage arrays and consumer-related environments. When your applications demand fast and reliable access to data, MACH16 SSDs outperform HDDs, delivering 250MB/s sustainable sequential read and 190MB/s sustainable sequential write speeds, backed by STEC's full data path protection.



Features	Benefits
STEC proprietary SSD controller technology	Provides unmatched performance, reliability and endurance in enterprise applications
High-performance	Supports reads up to 250MB/s and writes up to 190MB/s
MLC and SLC support	Flexible high-performance and reliability in a variety of enterprise applications
STEC SAFE Technology	Provides ability to recover from NAND flash page, block, die and chip failures, and maximizes the Mean Time Between Failure (MTBF) and Mean Time To Data Loss (MTTDL)
STEC CellCare Technology	Extends the life of flash media to deliver enterprise-class endurance through advanced signal processing and adaptive flash management algorithms
Full data path protection	Protects data in flash and cache memory and is the industry's first to map data using spare area of flash
Standard form factors	Drop-in replacements for 1.8-inch and 2.5-inch HDDs

The Right Data at the Right Time

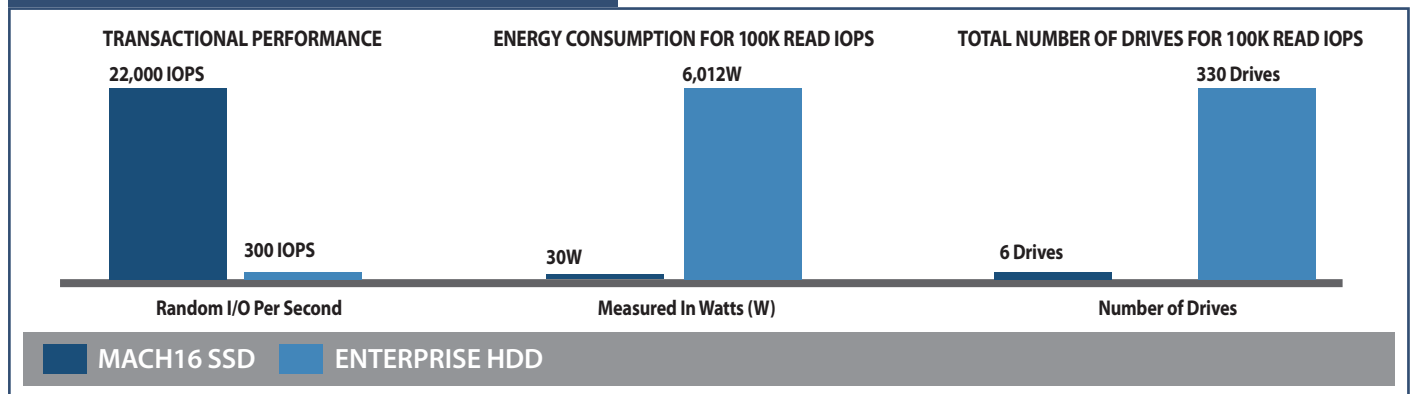
Enterprise applications have growing data storage demands within data centers, using NAS and SAN storage, embedded systems and a growing number of consumer applications. If you need fast access to the right data at the right time, MACH16 SSDs with STEC's proprietary SSD controller technology provide an unmatched combination of performance, reliability, endurance and value.

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Technical Specifications

		MACH16 ^{IOPS} SSD MLC	MACH16 ^{IOPS} SSD SLC	INDUSTRIAL SSD SLC
Interface	Capacity	100GB, 200GB, 400GB	50GB, 100GB, 200GB	50GB, 100GB, 200GB
	Type	3Gb SATA	3Gb SATA	3Gb SATA
	Form Factor	2.5-inch 7mm/9.5mm/1.8-inch 5mm	2.5-inch 7mm/9.5mm/1.8-inch 5mm	2.5-inch 7mm/9.5mm/1.8-inch 5mm
Performance	Sustained Read Throughput	250 MB/s	250 MB/s	250 MB/s
	Sustained Write Throughput	120 MB/s	190 MB/s	190 MB/s
	Max 100% Read IOPS	Up to 37,000 IOPS	Up to 40,000 IOPS	Up to 40,000 IOPS
	Max 100% Write IOPS	Up to 37,000 IOPS	Up to 35,000 IOPS	Up to 35,000 IOPS
	4K Random Read	22,500 IOPS	24,000 IOPS	24,000 IOPS
	4K Random Write	3,100 IOPS	8,800 IOPS	8,800 IOPS
	4K Random 70/30	8,300 IOPS	13,000 IOPS	13,000 IOPS
Physical	MTBF	2M hours with BER 1E-17	2M hours with BER 1E-17	2M hours with BER 1E-17
	Power	6W	6W	6W
Environmental	Power Supply	5V or 3.3V	5V or 3.3V	5V or 3.3V
	Operational Temperature	0° to 60°C (Commercial)	0° to 60°C (Commercial)	-40° to 85°C (Industrial)
	Humidity	Non-condensing 5-95%	Non-condensing 5-95%	Non-condensing 5-95%
	Shock	350G	350G	1,500G
	Altitude	-1,000 to 80,000 ft	-1,000 to 80,000 ft	-1,000 to 80,000 ft
Compliance	Lead Free (RoHS)	Lead Free (RoHS)	Lead Free (RoHS)	

Fast Performance with Low Power Consumption MACH16^{IOPS} vs Enterprise HDD



STEC: The Leader in Enterprise-Class Solid-State Solutions

From storage to server applications, STEC enterprise-class solid-state solutions are designed from the ground up to help you manage unprecedented volumes of data by accelerating access to the data you need, and reducing the cost to access that data. By incorporating STEC SSDs top-to-bottom in your enterprise infrastructure, you can deploy tiered solutions tailored to your exacting requirements, from reducing server sprawl to server utilization and address space.

At STEC, we are maintaining our enterprise storage leadership by investing world-class engineering resources to design and develop advanced solid-state technologies that maximize reliability, availability and serviceability, while reducing total cost of ownership in your storage and server applications.

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



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