

# MACH8 Solid State Drive

## Enterprise-Class Storage Solutions

STEC MACH8 Solid State Drive series is revolutionizing the storage world by delivering to the users the ultimate level of reliability and performance in a fully integrated device.

At the heart of the MACH8 Family of Solid State Drives is STEC's leading edge flash controller able to address multiple flash components simultaneously to achieve 100MB/s sustainable Read/Write speeds. This same controller allows our MACH8 MLC to achieve 90MB/s reads and 60MB/s writes. Providing the world's first cost-effective HDD replacement drive.

The MACH8 product embeds Full Data Path Protection, STEC's proprietary set of algorithms capable of protecting data anywhere within the SSD, from cache to flash.

### MACH8 Features

- Industry leading solid state drive
- IOPS intensive version for transactional heavy applications
- Full Data Path Protection
- Drop-in replacement for traditional 1.8" and 2.5"
- Low power consumption
- Supports Serial ATA and Parallel ATA
- Low heat
- SLC and MLC support to meet the demands of any application
- Optional support of purge and encryption
- Superior data protection through Total Drive Wear Leveling to ensure drive endurance
- Two operating temperature supported:
  - Commercial temperature: 0° to 70°C
  - Industrial temperature: -40°C to 85°C

# Specifications

Product Type	MACH8 <sup>IOPS</sup> SSD	MACH8 SSD	MACH8 <sup>MLC</sup> SSD
<b>Capacity (Unformatted)</b>	32, 64, 128 and 256 Gbytes	32, 64, 128 and 256 Gbytes	up to 512Gbytes
<b>Interfaces</b>	Serial ATA / PATA	Serial ATA / PATA	Serial ATA / PATA
<b>Performance</b>			
External Transfer Rate	1.5 Gb/sec (SATA) 133 MB/sec (PATA)	1.5 Gb/sec (SATA) 133 MB/sec (PATA)	1.5 Gb/sec (SATA) 133 MB/sec (PATA)
Sustained Throughput			
Read	100 Mbytes/sec	100 Mbytes/sec	90 Mbytes/sec
Write	100 Mbytes/sec	100 Mbytes/sec	60 Mbytes/sec
Random Operations			
Read	10,000/sec	5,000/sec	-
Write	800/sec	100/sec	-
Latency	100µs	100µs	100µs
<b>Physical</b>			
Form Factor	2.5-inch	2.5-inch 1.8-inch	2.5-inch 1.8-inch
2.5-inch Dimensions	100.2mm (L) x 69.8mm (W) x 9.5mm (H)		
1.8-inch Dimensions	71.0mm (L) x 54.0mm (W) x 5.0mm (H)		

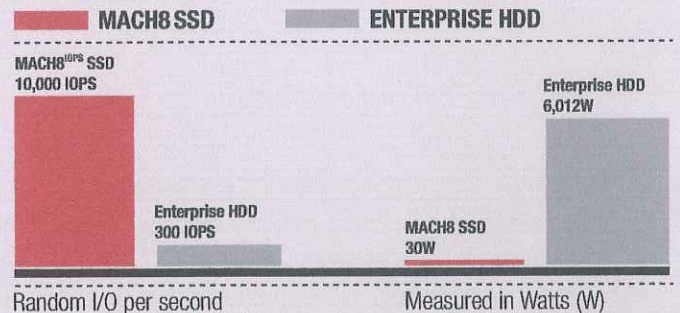
## Related Applications

- Professional Media
- Communications Equipment/Networking
- Enterprise Computing
- Embedded/Industrial
- Military / Aerospace
- Automotive
- Medical Equipment

## Related Technology

- Life Cycle Management
- Flash Management
- TotalDriveProtection
- Power-down Data Protection
- Flash Controller Technology

## Transactional Performance



## Energy Consumption for 100K Read IOPS

## Product Key

**Part #:** M(8)I(I)(IR)FF-(xxx)UTM-(XXX)

M8 = MACH8

i = IOPS SSD (Blank = Standard)

xxx = Capacity

U = RoHS Compliant

M = MLC (blank for SLC)

I = Interface

IR = Interface Revision

FF = Form Factor (Z-height)

T = temp

F: FC

A: 1.0Gb

E: 4.0Gb

1: 1.8-inch (5.0mm)

2C: 2.5-inch (17.5mm)

C: Commercial

Z: SAS

B: 1.5Gb

F: TBD

1A: 1.8-inch (7.0mm)

3: 3.5-inch (9.5mm)

I: Industrial

S: SATA

C: 2.0Gb

G: TBD

2: 2.5-inch (9.5mm)

3A: 3.5-inch (14.5mm)

A: ATA

D: 3.0Gb

2A: 2.5-inch (12.5mm)

3B: 3.5-inch (20.0mm)

XXX = Customer Specific  
(Internal Use Only)

2B: 2.5-inch (14.5mm)