



# SMART RUGGED

## T5E | 2.5" SATA

SMART's RUGGED T5E 2.5" SATA solid state drives (SSDs) deliver high performance, high capacity storage solutions optimized for defense, aerospace and other applications requiring durable, rugged and secure storage. T5E 2.5" SATA SSDs provide sustained read/write performance to meet the needs of high throughput applications, such as flight data recorders and sensor data capture. They are also well suited for high-reliability telemetry, surveillance, and mission-critical applications.

Conforming to SMART's "true" industrial grade standards, T5E 2.5" SATA SSDs are superior to typical SSDs and HDDs in terms of ruggedness, vibration and shock resistance, and environmental resilience. The T5E also supports pSLC mode, providing increased write endurance for those applications that require it.



### Features & Benefits

- AES-XTS 256-Bit Encryption Automatically Protects Data Written to The Drive
- Passes MIL-STD-810G
- True Industrial Grade Storage Solution for "No-Compromise" Applications
- Advanced Flash Management for Enhanced Reliability and Durability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) Support
- 100% 8 Hour Burn-In (I-Temp -40°C to +85°C)
- SafeDATATM Technology Combines Unique Power Loss Detection and Hold-Up Circuitries That Protects Data in Case of Sudden Power Failure
- Secure Data Elimination Technology (SDET) Meets Current Military Data Declassification Standards (Optional)
- TCG OPAL 2.0 Compliant (Optional)

### Applications

- Military
- Defense
- Aerospace
- Telemetry
- Surveillance

### Product Family Overview

Capacity	Sequential Performance	Random Performance
120GB to 3480GB	Up to 550MB/s Read Up to 535MB/s Write	80,000 IOPS Read 50,000 IOPS Write

One gigabyte, or GB, equals one billion bytes when referring to drive capacity. Accessible capacity may vary based on the operating environment and drive formatting

## Specifications

T5E 2.5" SATA	
NAND Type	TLC
<b>Performance</b>	
Host Interface Rate (maximum)	6Gb/s (Backwards compatible to 3Gb/s & 1.5Gb/s)
Capacities	120GB to 3840GB (3D TLC) 40GB to 1280GB (pSLC)
Burst	600MB/S
Sequential Read (maximum)	Up to 530MB/s
Sequential Write (maximum)	Up to 530MB/s
Random Read (maximum)	80,000 IOPS
Random Write (maximum)	50,000 IOPS
<b>Reliability</b>	
MTBF	> 2M hours, Telcordia 25°C <sup>1</sup>
Data Reliability	1 in 10 <sup>17</sup> bits read
Data Retention	> 10 years @ 25°C
Endurance	Up to 2100 Total Drive Writes (3D TLC) Up to 10,000 Total Drive Writes (pSLC)
Warranty	1 Year
<b>Power</b>	
Input Voltage	5 V +/- 5%
Idle (typical)	1 W
Operational (typical)	5 W
<b>Environmental</b>	
Shock	1500G half-sine, 0.5 msec, 1 shock along each axis, X, Y, Z in each direction <sup>2,3</sup>
Vibration	16.4 g rms 10-2000 Hz random, 3-axes
Conformal Coating	Optional
Relative Humidity <sup>4</sup>	5% to 95% non-condensing
Conformal Coating	Optional
Operating Temperature	Commercial: 0°C to +70°C Industrial: -40°C to +85°C
Storage Temperature	-55°C to +95°C
Humidity	5% to 95% non-condensing <sup>2</sup>
Altitude	24,384 m [80,000 ft]
<b>Mechanical</b>	
Length	100.2 mm
Width	69.85 mm
Height	7.0 mm

<sup>1</sup>Based on 120GB Drive

<sup>2</sup>Based on MIL-STD-810G

<sup>3</sup>Tested on 120GB Drive

## Data Security Features

2.5" SATA	
Encryption	AES-XTS 256-bit (FIPS 197 compliant)
Protection	Write-Protect Feature
Elimination (Optional)	TA-8 Security Erase ATA-8 Sanitize Device Feature Set Clear DoD NISPOM 5220.22-M DoD NISPOM 5220.22-M-Sup 1 NSA/CSS Manual 130-2 NSA/CSS Manual 9-12 Army AR 380-19 Navy NAVSO P-5239-26 Air Force AFSSI-5020 Two External Triggers



For more information, please visit: [www.smartm.com](http://www.smartm.com)

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