



2.5" 500GB/1TB  
BLACK Series SSDs

## BLACK Series

# 2.5" SATA II / III Extreme Ruggedization SSD

### Overview

Memkor BLACK Series SSDs are designed for applications that require extreme level of ruggedization.

Memkor Black Series SSDs are built to meet any earth environmental requirements accessible by a man or a machine.

Leveraging Memkor Orange and Blue Series SSD technology and capabilities, and combining with the innovative mechanical design, manufacturing and assembly process, Memkor Black Series SSDs provide exceptional resilience to the most challenging shock and vibration levels well beyond those required by the most stringent cases of the MIL-STD-810F/G standard.

State of the art flash management techniques combined with a strong EDC/ECC/CRC ensure performance stability and consistency, along with the highest reliability and unparalleled user data integrity. SMART includes attributes enabling monitoring end-to-end SSD and data reliability parameters.

Sudden power loss safeguards integrated in software and hardware ensures data at rest protection and integrity.

Loyal to Defense and Industrial Markets, Memkor offers locked Bill-of-Materials utilizing high reliability components, firmware tailoring and is committed to providing excellent customer service throughout product life cycle and Supply Chain component management for long-term deployment applications.

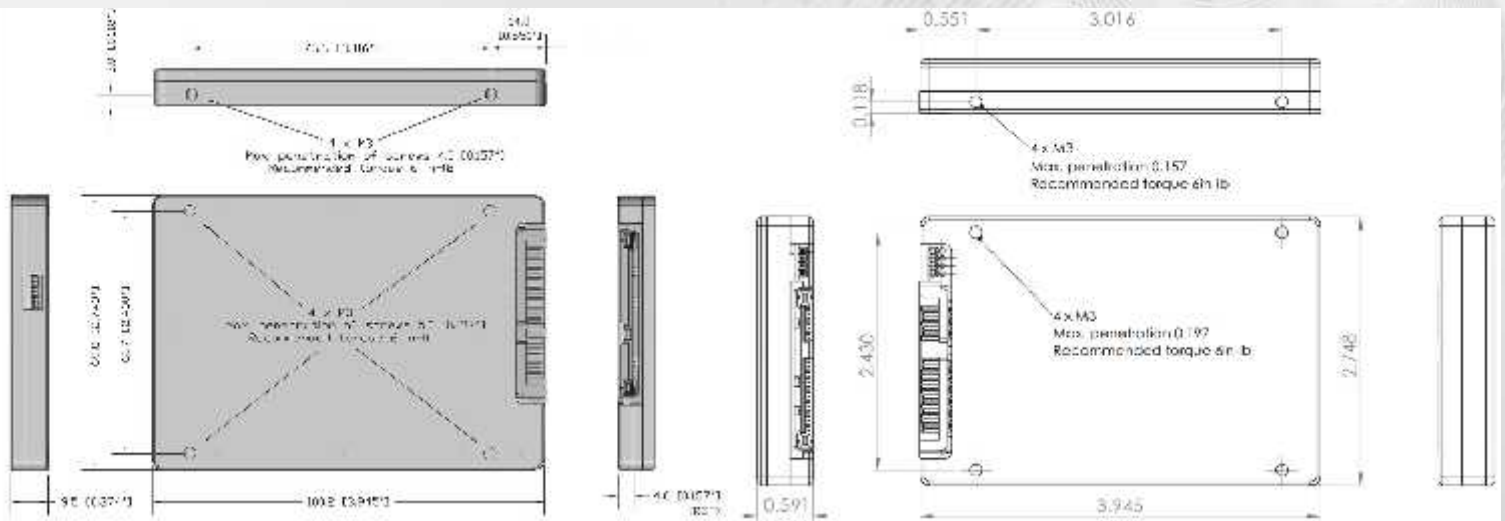
### Features and Values

- High capacity in more compact package than 2.5"
- The most popular SSD form factor
- The most rugged 2.5" in the world
- Available with HiVibe ruggedized SATA
- Tested to 30 G RMS
- Up to 20,000 insertion cycles with HiVibe
- Enterprise or Client versions
- SMART to monitor end-to-end reliability
- Up to 2/1 TB MLC/SLC NAND
- Extensive SMART for health monitoring
- Military grade Data Elimination
- Hardware and/or software triggered Data Elimination
- Hardware or software enabled Write Protect
- AES-256, various SED management schemes
- Sudden Power Loss Safeguard logic and circuit
- All Industrial grade SSDs include conformal coating
- Custom firmware and feature set are available

### Specification

Standard Form Factor	2.5"/9.5 mm and 2.5"/15 mm
Interface	SATA 6Gbps option for maximum performance, or SATA 3Gbps option for minimum power consumption
Data throughput	SATA III: up to 500 MB/s SATA II: up to 250 MB/s
Maximum Capacity	• up to 512 GB SLC or MLC NAND in 9.5 mm • up to 1024 GB SLC or MLC NAND in 15 mm
Temperature Range	• -40°C to 85°C Industrial/Military • 0°C to 70°C Commercial
Vibration/shock	• 30 GRMS/100G
Operating voltage	• 5.0V ±10%
Data Reliability	• Flash managed by static and dynamic wear leveling and powerful ECC/EDC/CRC • Uncorrectable bit error rate (UBER): less than 10 <sup>-16</sup>
Data Retention	• 10 y beginning of SSD life • 1 y at the end of life
Endurance	• up to 768 TB (1024 GB MLC NAND) • up to 6144 TB ( 512 GB SLC NAND)
Data Security	• Optional FIPS 140-2 SED • Enhanced ATA Security/Authentication support • Military grade Data Elimination • HW and/or SW Write Protect
Component reliability	• MTBF: >100,000hrs 128GB MIL-HDBK-217 GM at 25C
Health monitoring	• S.M.A.R.T. to report system health • Thermal performance monitoring and management

# Memkor BLACK Series 2.5" —Mechanical



## Memkor General Application and Product Guide



## Ordering Information

Model: MKD ff ii xxx y N - O1 s n ee ww

Model: MKD ff ii xxx y O					
Memkor SSD	Form Factor ff:	Interface ii:	Capacity xxx:	Operating temp	Series
MKD	25 - 2.5"	ST - SATA	256 - 256 GB 512 - 512 GB 1T0 - 1024 GB	C - 0° to 70°C I - -40° to 85°C	N - BLACK

- O2 s n ee ww				
Technology Code	Secure Erase: s	NAND: n	Encryption: ee	Write Protect: ww
O1 - SATA III L2 - SATA II	0 - no SE (D) Ask us about available options	- SLC (D) M - MLC	- No Encryption (D) Ask us about available options	- no WP (D) Ask us about available options

D - default  
L - Low  
H - High  
E - Enabled  
SE - Secure Erase  
WP - Write Protect