MEMKOR

BLACK series – The MOST RUGGED MILITARY-grade SSDs

RUGGED. HIGH ENDURANCE. SECURE.

MEMKOR BLACK series SSD are engineered for applications demanding the highest levels of ruggedization. Building on the proven technology of our ORANGE and TANGERINE series, the BLACK series combines advanced mechanical design with enhanced durability to deliver exceptional resistance to extreme temperatures, shock, and vibration, exceeding the most stringent requirements of MIL-STD-810F/G.

Ranging from 128GB to 2TB, BLACK series SSDs offer high write endurance, multiple data elimination techniques, and write protection. Optional ruggedized connectors support up to 100,000 insertion/removal cycles and withstand up to 30g RMS vibration. The BLACK Series significantly expands the deployment flexibility of the MEMKOR SSD family, delivering unmatched reliability in the most demanding environments.

Customers have the option for PCBs to be manufactured in accordance with IPC-6012 Class 3, and assemblies to comply with IPC-A-610 Class 3 requirements for high-reliability aerospace and defense applications

VALUES

o Reliability in harsh operating environments
o Security to protect sensitive data and ensure compliance
o Performance enabling rapid access to mission-critical information and real-time data processing
o Longevity and endurance for extended lifecycle for write-intensive applications
o MEMKOR Technical support
o Lower power consumption, reducing dissipated heat
o HW triggered Secure Erase | Write Protect
o Sudden Power Loss Safeguards
o End-to-end Data Protection
o End-to-end operation monitoring and recording
o Designed and built for reliability and longevity
o Locked BOM
o Custom firmware and features available
o 1 year/TBW limited warranty

APPLICATIONS

o Surveillance and Reconnaissance
o High speed data recording | Moving Map
o Command and Control Centers
o Cybersecurity Applications, Data-At-Rest
o Military applications including airborne, ground vehicle, wearable

KEY FEATURES

- **HIGH RUGGEDIZATION**
  - Operates up to 100G 11ms shock
  - Operates up to 30 GRMS vibration

- **HIGH PERFORMANCE**:
  - Up to SATA III data transfer speeds

- **HIGH CAPACITY**:
  - Up to 640GB in 60K PEC NAND (I-temp)
  - Up to 2TB in 3K PEC NAND (I-temp)

- **HIGH WRITE ENDURANCE**:
  - Up to 60K PEC for longer SSD lifespan

- **OPTIONAL RUGGED SATA CONNECTORS**:
  - Amphenol HiVibe
  - Smiths Connector Nebula

- **SECURITY / DATA PROTECTION**:
  - AES 256 + TCG OPAL
  - Optional Hardware Secure Erase (SE)
  - Optional Hardware Write Protect (WP)

- **LOCKED-BOM**
  - Locked Bill-of-Materials available

RUGGED — SECURE — RELIABLE
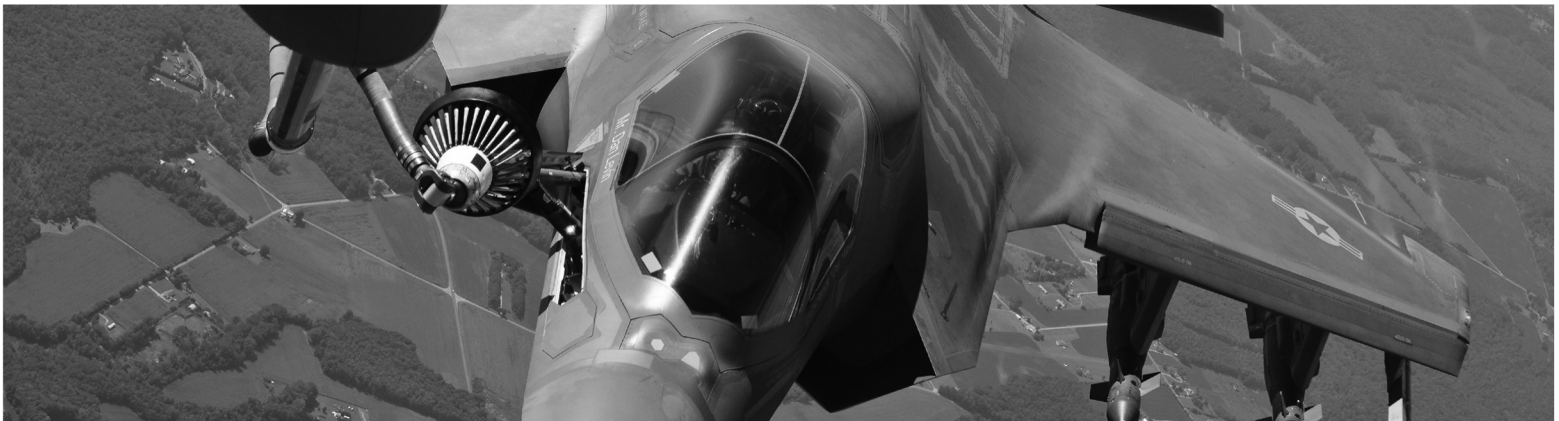
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ABOUT BLACK SERIES

MEMKORs BLACK series SSDs seamlessly integrate advanced security and ruggedization strategies into their design. Engineered for resilience, BLACK series SSDs excel in write-intensive applications, where performance, capacity, and high endurance are required. MEMKOR BLACK series SSDs stand as the epitome of reliability, versatility, and security, redefining military-grade storage solutions with its cutting-edge design and proven performance.

MEMKOR—PART OF YOUR PROJECT

- We will support you throughout the design and product lifecycle
- We offer Locked BOM Management
- We offer Obsolescence Management

MEMKOR BLACK SERIES SSD SPECIFICATION

Form Factors	• 2.5" SATA 9.5mm height • Custom
Supported Interfaces	• SATA III
Data Security	• Hardware Encryption AES 256 | TCG OPAL
Maximum Capacity	• Up to 640GB in 60K PEC • Up to 2TB in 3K PEC (I-temp)
Maximum Data Throughput	• Up to 550 MB/s read | Up to 550 MB/s write
Operating Temperature Range	• I-Temp: -40ºC to 85ºC
Storage Temperature Range	• -40ºC to 85ºC
Vibration/Shock	• Ask MEMKOR
ECC	• LDPC
Data Reliability	• Uncorrectable bit error rate (UBER): less than 10^{-16}
Endurance	• Ask MEMKOR. Up to 60K PEC Write Endurance NAND
Power	• Ask MEMKOR (depends on Form Factor, Interface, Capacity)
Component Reliability	• MTBF 2,000,000 hours
Environmental Protection	• Standard conformal coating and low CTW underfill
Health Monitoring	• S.M.A.R.T. system health reporting • End-to-end system performance monitoring and active management
Warranty	• 1-year limited warranty

DISCLAIMER: MEMKOR, Inc. reserves the right to change products, specifications and information without notice.

MEMKOR® is an American engineering company dedicated to providing flash solid state storage solutions for Defense applications. We create secure, reliable, robust, and innovative solutions with rich feature sets, tailored, as required, to meet your technology investment objectives. We are dedicated to delivering on our promises. We simply believe that your satisfaction enables the continuous success of our company.