

ORANGE series – XMC SSD

XMC Built Rugged, not ruggedized

KEY FEATURES

- Single Slot XMC Self-Encrypting Solid-State Drive
 - All components on XMC PCBA, resulting in unparalleled performance, ruggedness, and reliability
- Up to 4TB using Industrial-grade NAND
- Fully compliant with VITA 42.0 dimension restrictions
- Convection or conduction cooling
- FIPS 197 validated AES-256 XTS mode
- Optional FIPS 140-2, TCG Opal, TCG Enterprise
- Secure Erase and Write Protect
- Device SMART monitoring

NEW ADDITION TO MEMKOR ORANGE SSD FAMILY

Experience the pinnacle of military-grade storage with MEMKOR's ORANGE Series XMC SSD. This rugged PCIe SSD, tailored to the VITA 42.0 XMC form factor, seamlessly combines the reliability of our standard Military-grade PCIe SSDs with a clean architecture. Ideal for harsh operating environments, it ensures top-notch performance without compromise.

Unlike competing XMC storage solutions relying on multiple 3rd-party M.2 or equivalent small-form-factor storage devices, the ORANGE Series avoids compromises in ruggedization, as M.2 vibration resilience is limited (2-4g RMS). Moreover, it eliminates the need for PCIe switches. Our design minimizes components, reduces power consumption and minimized heat management challenges.

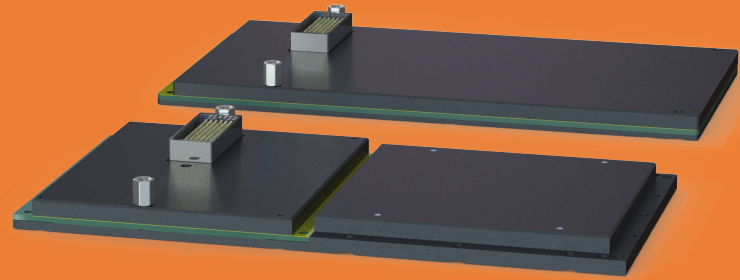
The MEMKOR ORANGE XMC SSD power consumption is limited to one SSD. Heat can be transferred to the VPX chassis either through VITA 20 heat rails and/or through the XMC Side 1 / Side 2 covers, providing higher performance and reliability operating in high temperatures.

Contrary to the packaging challenges faced by XMC competitors with 3rd-party SSDs, the ORANGE Series ensures compliance with VITA 42.0 dimension limitations while exceeding VITA 47 environmental requirements. Our architecture achieves unparalleled ruggedization without sacrificing compliance.

Rest easy with MEMKOR's ORANGE XMC SSD, equipped with Data At Rest (DAR) protection through our FIPS 197 validated encryption engine. Optionally, choose a FIPS 140-2 compliant design, or TCG Opal/TCG Enterprise encryption management.

ORANGE XMC SSD can be optimized for Client operations (default) or Enterprise class operations to maximize performance and reduce latencies.

Harness the power of the highest reliability MLC and SLC NAND, coupled with cutting-edge flash management techniques and end-to-end data protection. MEMKOR's ORANGE Series SSDs set the benchmark for reliability, durability, and endurance in military-grade storage solutions. Elevate your operational capabilities with the ORANGE XMC SSD – where performance meets resilience.



VALUES

- MEMKOR's end-to-end owned architecture
- SSD in XMC form factor
- Does not require slot in the chassis
- No third-party add-on SSDs
- No extra connectors, parts or switches
- Dimensions compliant with VITA 42.0
- Seamless deployment on most existing SBCs with XMC
- Heat management with or without VITA 20 heat rails
- Most rugged XMC storage on the market
- Best sustained performance over full temp range
- All models FIPS 197 validated
- Optional FIPS 140-2 Level-2 compliant architecture
- Minimized number of components for increased reliability and longevity
- Lower power consumption, reducing dissipated heat
- HW or SW triggered Secure Erase | Write Protect
- Sudden Power Loss Safeguards
- End-to-end Data Protection
- End-to-end operation monitoring and recording
- Designed and built for reliability and longevity, using only high reliability components
- Locked BOM
- Custom firmware and features available
- 5 year/TBW limited warranty

APPLICATIONS

- VPX, VME, cPCI or ATCA boards supporting XMC
- Conduction or convection cooled systems
- Ground Vehicle | Airborne
- Moving map | High speed data recording
- Data-At-Rest
- Where no spare chassis slots
- High reliability and longevity are required
 - (SLC or MLC NAND)

ABOUT ORANGE SERIES

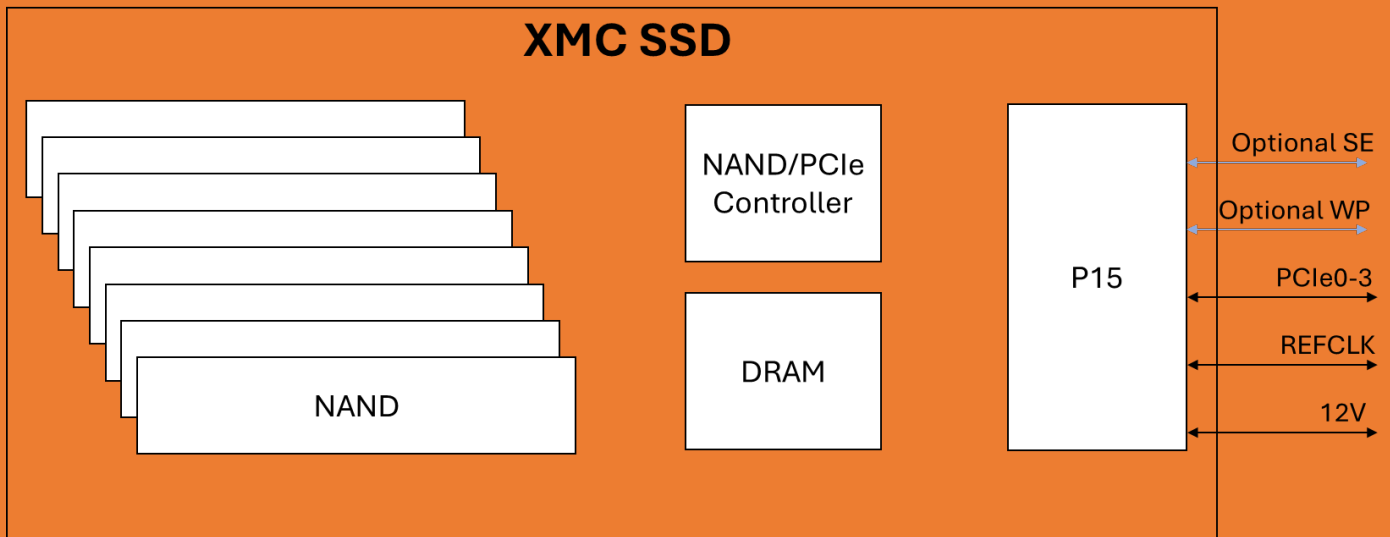
MEMKOR's ORANGE series XMC SSDs seamlessly integrate advanced security and ruggedization strategies into their design, drawing from the proven ORANGE series' architecture and capabilities. Engineered for resilience, ORANGE SSDs excel in applications characterized by intense shock and vibration. The ORANGE series offers versatile deployment options – from standard VITA form factors such as VPX and XMC, to proprietary fixed or removable storage solutions. MEMKOR's ORANGE XMC SSD stands 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 ESS test each SSD before shipment
- We offer Locked BOM Management
- We offer obsolescence management

MEMKOR ORANGE SERIES XMC SSD SPECIFICATION

Form Factor	XMC VITA 42.0 fully compliant
Cooling Options	Conduction or convection Conduction through VITA 20 heat rails And/or conduction through XMC Side 1/2 covers
Supported Interfaces	PCIe Gen2 x4
Storage	Up to 4 TB (2TB VITA 20)
Data throughput	Up 1200 MB/s
Operating Temperature Range	VITA 47.1 Class CC4 -40 to 85°C
Storage Temperature Range	VITA 47.1 Class C4 -55 to 95°C
Vibration/Shock	VITA 47.1 Class V3 0.1g ² /Hz / VITA 47.1 Class OS2 40G 11 ms
Operating Altitude	80,000 ft
Data Reliability	Uncorrectable bit error rate (UBER): less than 10 ⁻¹⁶
Data Retention	1y @ when NAND TBW reached
Endurance	Ask MEMKOR (depends on Capacity)
Power	9W Write, 6W Read, 1.5W Idle (2TB)



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.



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