

MEC3M0R Series

M.2 PCIe Gen4x4 NVMe 2.0



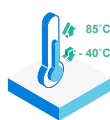
PFP



TCG OPAL 2.0



AES 256



Wide Temperature

Features

- M.2 2280 form factor, M key
- Compliant with PCI Express Base Specification Revision 4 standard with Gen4x4 8GB/s bandwidth
- Compliant with NVMe 2.0 command protocol
- Support power failure protect (PFP)
- Power shielding firmware architecture
- End-to-End data protection
- Garbage collection and TRIM Data Set Management command
- Global wear-leveling algorithm balances program/erase cycles
- Early weak block retirement
- Support SMART Toolbox for Windows and Linux
- Built-in dynamic temperature sensor with Thermal Throttling
- Dynamic SLC architecture
- Supports ASPM, L1.2
- AES256 bit Hardware Self Encryption
- Supports in-field seamless FW update tool to keep the SSD's original data (Optional)
- Conformal Coating - Standard IPC A-610E (Optional)

Ordering Information

Capacity	Temp.	P/N
128GB	-40°C~85°C	SP128GIMEC3M5RW0
256GB	-40°C~85°C	SP256GIMEC3M5RW0
512GB	-40°C~85°C	SP512GIMEC3M5RW0
1TB	-40°C~85°C	SP010TIMEC3M5RW0
2TB	-40°C~85°C	SP020TIMEC3M5RW0

Specifications

Overview	Interface	PCIe Gen4x4, NVMe 2.0
	Flash Technology	3D TLC
	Capacity	128GB~2TB
	Form Factor	M.2 2280 (M key)
	Dimensions	80.0 x 22.0 x 3.5 mm
	External DRAM Buffer	No
Performance	Seq. Performance Read (max.)	4,600 MB/s
	Seq. Performance Write (max.)	4,300 MB/s
	Random 4K Read (IOPS max.)	845,000
	Random 4K Write (IOPS max.)	644,000
	MTBF (est.) @ 25°C	>3,000,000 hrs
	P/E Cycle	3,000
	TBW (max.)	2TB: 5,137 TB / 1TB: 2,569 TB / 512GB: 1,284 TB 256GB: 642 TB / 128GB: 321TB
Operating Environment	Operating Temperature	-40°C~85°C
	Storage Temperature	-55°C~95°C
	Operating Humidity	10%~95% (30°C Max. Wet Bulb Temp)
	Vibration	20G p-p, 10~2000Hz
	Drop	75cm
	Shock	1,500G@0.5ms
Power Consumption	Power Requirement	DC 3.3V
	Power Consumption (max.)	1650 mA
	Power Idle / Standby	220 mA
Key Features	Power Failure Protection (PFP)	●
	Advanced Power Shield	●
	End-to-End Data Protection	●
	TCG Opal 2.0	●
	AES-256	●
	Thermal Throttling	●
	ASPM, L1.2	●
	S.M.A.R.T.	●
	DAP (Debug Access Port)	●
FWxpress	●	
Optional Features	DataGuard-Write Protect	●
	DataGuard-Quick Erase	●
Warranty	Warranty	3 years within TBW
Others	PCB placement	Double-sided