Ferri Embedded Storage

Enabling Intelligent Embedded Storage for the AI Era

SiliconMotion

Table of Contents

About Silicon Motion

Silicon Motion Technology Corporation (NasdaqGS: SIMO) is the global leader in developing NAND flash controllers for SSDs and other solid state storage devices. We have over 20 years of experience developing specialized processor ICs that manage NAND components and deliver market leading, high-performance storage solutions widely used in data centers, PCs, smartphones and commercial and industrial applications. We have one of the broadest portfolios of controller intellectual properties developed from our deep understanding of NAND characteristics, which enables us to design both unique, highly optimized configurable IC plus related firmware controller platforms and complete turnkey controller solutions. More NAND flash components, including current and up-coming generations of 3D flash produced by Kioxia, Micron, Samsung, SK Hynix, Solidigm, SanDisk and YMTC, are supported by Silicon Motion controllers than any other company. Our customers include NAND flash makers, module makers, hyperscalers and OEMs.

We are the world's leading merchant supplier of SSD controllers used in PCs and other client devices, enterprise and data center applications, and embedded eMMC/UFS controllers used in smartphones and IoT devices.

We also leverage our controller expertise to supply high-performance, customized, small single-chip form factor SSDs, eMMC and UFS for industrial, commercial and automotive applications.

We were founded in 1995 in San Jose, California and now operate from corporate offices in Hong Kong, Taiwan and the US.

Ferri Embedded Storage

Silicon Motion's Ferri Embedded Storage family — including FerriSSD®, Ferri-eMMC®, and Ferri-UFS® — is purpose-built for mission-critical storage applications, delivering high performance, exceptional reliability, and advanced security in a compact and easy-to-integrate form factor. As AI-driven applications continue to expand across sectors such as automotive, industrial automation, server, telecom, gaming, surveillance, and medical, Ferri solutions are optimized to meet the growing demand for high-speed data access, low power consumption, and enhanced endurance.

Offering a complete range of solutions — from single-chip SSDs and SSD modules to eMMC and UFS products — Ferri enables seamless integration across diverse embedded and automotive platforms. With proven, scalable, and production-ready setups, Ferri ensures ultra-low DPPM quality screening and long product life cycles, reducing total cost of ownership while maximizing operational uptime.

Ferri products leverage Silicon Motion's proprietary technologies, including IntelligentSeries™, DefendMax™, and NANDXtend®, to deliver robust data integrity, strong security, and superior reliability even in the most demanding environments.

IntelligentSeries™ Technologies for Advanced Data Protection

Ferri Embedded Storge comes with a set of intelligent data protection mechanisms that meet the storage needs of different application systems and can be effectively activated in various environments where data loss may occur.

IntelligentLog™
Automotive/Server Smart Telemetry with Active Warning

IntelligentGuard™
Data Encryption with Authenticated Firmware Protection

IntelligentThermal™
HCTM / DCTM (Thermal Management)

IntelligentFlush™
Power Flush to Improve Stable Fast Write Performance

IntelligentImage™
Content Preload Service for SMT Reflow

IntelligentZones™
Endurance Groups - Multi-Namespace, etc.

IntelligentScan™
Proven Proactive Data Preservation

IntelligentShield™
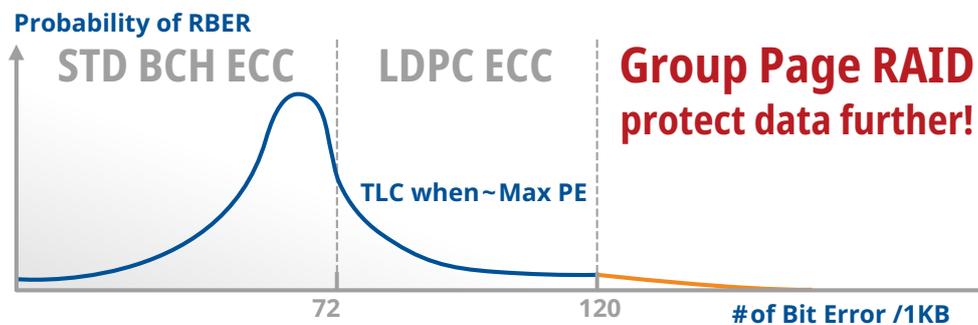Protection against Power Interrupt

Learn More

DefendMax™ for Secure and Reliable Boot Drives in Rugged Applications

FerriSSD® with DefendMax™ delivers robust security and reliability for mission-critical and rugged applications. Featuring IntelligentGuard™ for firmware protection, IntelligentShield™ for power-loss data safety, and IntelligentThermal™ for temperature control, it ensures stable performance in harsh environments. Combined with NANDXtend® ECC and end-to-end data path protection, FerriSSD® provides superior data integrity and dependable operation.

NANDXtend® ECC Technology to Extended SSD Lifespan

NANDXtend® is Silicon Motion's advanced firmware for 3D NAND SSDs, combining LDPC and RAID correction for precise, high-speed error correction. Its three-level algorithm enhances P/E cycle performance, extending SSD lifespan and ensuring data integrity.

Probability of RBER

STD BCH ECC **LDPC ECC** **Group Page RAID**
protect data further!

TLC when~Max PE

72   120   # of Bit Error /1KB

Applications

Automotive

Ferri Embedded Storage delivers high performance, reliability, and endurance for automotive applications, including ADAS, autonomous driving, smart cockpits, and V2X connectivity. With AEC-Q100 qualification, IntelligentSeries™ technologies, and customizable firmware, Ferri ensures fast data processing, secure storage, and long-term stability under demanding automotive environments.

Industrial Automation

Ferri Embedded Storage solutions power AI-driven industrial automation, supporting edge computing, machine vision, predictive maintenance, robotics, and AMRs. With high-speed data throughput, extended endurance, and customizable firmware, Ferri enables real-time analytics, autonomous navigation, and efficient factory operations in next-generation smart manufacturing.

Server

FerriSSD® is designed for server boot applications, offering fast boot-up, exceptional reliability, and superior data protection. With technologies like IntelligentScan™, DataRefresh™, and FastWrite™, FerriSSD® ensures error-free performance, safeguards against power loss, and extends drive endurance. Its compact BGA form factor fits easily into tight server spaces, while ultra-low DPPM screening and remote firmware update support make it a stable, efficient, and cost-effective boot drive solution.

POS / Kiosk / Digital Signage

Ferri Embedded Storage solutions deliver fast boot times, stable performance, and long-term reliability for POS systems, kiosks, and digital signage. With low power consumption, efficient data management, and field-programmable firmware, Ferri ensures uninterrupted operation and easy remote updates in 24/7 environments.

Telecom / Networking

Ferri provides high-speed, secure, and reliable storage for 5G base stations, routers, switches, and network appliances. Designed for low latency and long-term endurance, Ferri ensures efficient data caching, network optimization, and smooth packet processing in telecom and enterprise networking infrastructure.

Surveillance

Ferri Embedded Storage supports high-resolution video recording, analytics, and AI-powered surveillance with high performance, endurance, and security. Ideal for IP cameras, NVRs, and smart surveillance systems, Ferri enables real-time data capture, reliable storage, and long-term retention even in demanding environments.

Gaming

Ferri Embedded Storage delivers secure, reliable, and high-performance solutions for casino and gaming applications, including slot machines, table games, arcade systems, gaming control centers, hospitality kiosks, display screens, surveillance systems, and servers. With AES-256 encryption, firmware protection, and NANDXtend® ECC, Ferri ensures data security, 24/7 reliability, and long product lifecycles for modern gaming environments.

Medical

Ferri Embedded Storage delivers secure, reliable, and high-performance solutions for medical devices such as imaging systems, patient monitors, diagnostic equipment, and portable healthcare devices. With AES-256 encryption, firmware protection, and NANDXtend® ECC, Ferri ensures data security, stability, and long-term reliability in mission-critical healthcare applications.

Ferri-SSD®
Single-Chip SSD

As AI transforms industries such as AIoT, smart cities, smart healthcare, smart retail, industrial automation, and automotive, the demand for high-performance, low-power, and reliable BGA SSDs has become critical. FerriSSD®, powered by Silicon Motion's IntelligentSeries™ technologies, provides a robust storage solution designed for mission-critical AI applications, delivering enhanced data integrity, endurance, and security in even the most demanding environments.

Specifically engineered for industrial and automotive use, FerriSSD® supports PCIe Gen 4 x4 and integrates high-density 3D NAND into a compact 16mm x 20mm BGA package. It offers up to 1TB of storage, with read speeds exceeding 6GB/s and write speeds over 650 MB/s, ensuring reliable, high-performance data processing. These capabilities make FerriSSD® ideal for AI applications where performance, reliability, and security are essential.

With extended temperature support and flexible storage capacities, FerriSSD® is optimized for a wide range of applications. Its easy integration accelerates deployment, while its compact design, combining proven controller technology, NAND flash, and passive components, simplifies system design and reduces time-to-market, while addressing NAND migration challenges.

FerriSSD® also delivers enterprise-grade data integrity and reliability through Silicon Motion's proprietary NANDXtend® ECC technology and end-to-end data protection. It supports secure

remote firmware updates to ensure continuous system security, while its built-in SR-IOV capability provides greater flexibility and scalability, maintaining robust security across applications.

Features

Dual ARM® Cortex® R8 CPU

Digitally signed firmware with eFuse for enhanced security (option)

Data Reliability

- Performance-optimized LDPC engine provides maximum error correction capability
- End-to-end data path protection with CRC parity
- RAID engine provides multi-page protection for NAND flash data

Data Integrity and Security

- Built-in AES-128/256 Encryption
- TCG Opal v2.01 compliant
- Built-in hardware SHA384 and True Random Number Generator (TRNG)

Robust Data Protection

- Advanced system level protection against unstable power supply
- StaticDataRefresh™ and EarlyRetirement™ technologies ensure data integrity and prevent read disturbance
- PowerShield™ and DataPhoenix™ technologies support power-down data protection and recovery

Advanced Global Wear Leveling

- Fully utilizes each cell to even program/erase count across management units/die(s)
- Maximizes product lifespan with minimal wear leveling and write amplification overhead

SSD Status Monitoring

- Supports SMART/Telemetry of Get Log Page command to monitor SSD Status
- Supports proprietary FerriSSD® IntelligentLog™ for efficient event tracing

Power and Thermal Management

- Supports Host Controlled Thermal Management (HCTM) to configure thermal throttling temperatures
- Supports Device Self-Thermal Management
- Supports different power states (PS0, PS1, PS2, PS3, PS4)

Ferri-UFS®
Industrial / Automotive UFS Memory

As AI rapidly expands into sectors such as automotive, smart healthcare, smart cities, industrial automation, smart retail, and AIoT, the demand for high-performance, energy-efficient, and reliable storage solutions has become more critical than ever. AI-powered applications in these industries require fast data access and processing to support real-time decision-making and multitasking, making UFS technology essential for these advanced systems.

Ferri-UFS®, powered by Silicon Motion's IntelligentSeries™ technologies, meets these stringent requirements by delivering exceptional performance, data integrity, endurance, and security, even in the most challenging environments.

Designed for high-performance data throughput, superior power efficiency, and seamless integration, Ferri-UFS® incorporates cutting-edge NAND management and supports UFS 3.1 advanced features such as HS-Gear4 x 2-lane mode and command queuing, enabling fast data processing and multitasking, which are essential for AI-driven applications.

With extended temperature tolerance and multiple storage capacities, Ferri-UFS® is optimized for a wide range of applications, including automotive, industrial systems, embedded devices,

and portable solutions. Its streamlined integration process ensures quick deployment across sectors, making Ferri-UFS® the ideal choice for high-performance, AI-driven embedded systems.

Ferri-UFS® is widely utilized in automotive applications, including ADAS/autonomous, IVI/smart cockpit, and V2X systems, and adheres to stringent automotive standards such as AEC-Q100 Grade 3 certification, IATF 16949 certification for supplier chain compliance, and Automotive Service Packaging (ASP). With low DPPM rates and an extended product lifecycle, Ferri-UFS® is highly suitable for automotive environments. Its customizable firmware provides the flexibility to accommodate a wide range of specific use cases.

Features

High-Efficiency Error Correction
- Advanced Hardware LDPC (ECC) Engine
- StaticDataRefresh™ and EarlyRetirement™ technologies ensure the data reliability

Power Efficiency
- Dynamic power management technology enables multiple power-saving modes

Advanced Global Wear Leveling to Enhance Reliability
- Even distribution of program / erase cycles across all NAND flash chips
- Maximizes the lifespan with low Write Amplification Index (WAI)

Robust Data Protection
- Multiple user data security zones
- PowerShield and DataPhoenix technologies prevent data corruption in case of sudden power lost

Automotive Processes and Certifications
- AEC-Q100 compliance
- IATF 16949 certification for supplier chain compliance
- Automotive Service Packaging (ASP)

Ferri-eMMC®
Industrial / Automotive eMMC Memory

As AI continues to expand across industries such as automotive, smart healthcare, smart cities, smart retail, industrial automation, and AIoT, the demand for reliable and ultra-low-power storage solutions like Ferri-eMMC® has grown significantly, especially in mobile and portable devices such as IVI systems, industrial handheld devices, industrial VR, and industrial wearables. Powered by Silicon Motion's proprietary IntelligentSeries™ technologies, Ferri-eMMC® is designed to meet the growing needs of AI-driven applications, offering advanced features including data integrity, endurance, power efficiency, and security, making it a dependable choice for critical AI applications in challenging environments.

Compared to UFS, eMMC consumes significantly less power. UFS operates at 400mA (UFS 2.2) to 800mA (UFS 3.1), while eMMC operates at a much lower range of 70-100mA. Additionally, many legacy CPUs do not support UFS and rely solely on eMMC, making eMMC the preferred option for such systems. eMMC also provides a higher cost-performance ratio, making it an ideal choice for entry-level embedded products.

Ferri-eMMC®, fully compliant with JEDEC eMMC 5.1 standards, is built for a wide range of embedded applications. It is available in 100-ball and 153-ball BGA packages, offering easy integration and cost-effective manufacturing. Leveraging proven controller technology and high-quality NAND components, Ferri-eMMC® ensures reliable data storage for essential

systems. Advanced NAND management features, including error correction, bad block management, and health monitoring, ensure long-term durability and reliability.

With support for extended temperatures, capacities up to 256GB, ultra-low power consumption, and exceptional reliability, Ferri-eMMC® is optimized for use in demanding environments. It provides a cost-effective, low-power storage solution for AI, industrial automation, and automotive applications where reliability, durability, and energy efficiency are critical.

Ferri-eMMC® is widely used in In-Vehicle Infotainment (IVI) systems and meets stringent automotive standards such as AEC-Q100 Grade 3 certification, IATF 16949 certification for supplier chain compliance, and Automotive Service Packaging (ASP). With low DPPM rates and a long product lifecycle, Ferri-eMMC® is well-suited for automotive applications. Its customizable firmware also provides flexibility for a wide range of use cases.

Features

High-Efficiency Error Correction
- Advanced Hardware LDPC (ECC) Engine
- StaticDataRefresh™ and EarlyRetirement™ technologies ensure the data reliability

Power Efficiency
- Dynamic power management technology enables multiple power-saving modes

Advanced Global Wear Leveling to Enhance Reliability
- Even distribution of program / erase cycles across all NAND flash chips
- Maximizes the lifespan with low Write Amplification Index (WAI)

Robust Data Protection
- Multiple user data security zones
- PowerShield and DataPhoenix technologies prevent data corruption in case of sudden power lost

Automotive Processes and Certifications
- AEC-Q100 compliance
- IATF 16949 certification for supplier chain compliance
- Automotive Service Packaging (ASP)

Selection Guide

FerriSSD
PCIe Gen4 x2/4 NVMe 2.0

Single-Chip SSD

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
SM681GXD C8VP	128GB	120GB	V8 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXE C8VP	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXF C8VP	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXG C8VP	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GED C8VP	128GB	120GB	V8 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEE C8VP	256GB	240GB	V8 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEF C8VP	512GB	480GB	V8 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEG C8VP	1024GB	960GB	V8 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXD C8VO	128GB	40GB	V8 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXE C8VO	256GB	80GB	V8 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXF C8VO	512GB	160GB	V8 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXG C8VO	1024GB	320GB	V8 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GED C8VO	128GB	40GB	V8 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEE C8VO	256GB	80GB	V8 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEF C8VO	512GB	160GB	V8 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEG C8VO	1024GB	320GB	V8 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / DRAM-less

Module

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
MD681GXDBC82P	128GB	120GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXEBC82P	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXFBC82P	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXGBC82P	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEDBC82P	128GB	120GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEEBC82P	256GB	240GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEFBC82P	512GB	480GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEGBC82P	1024GB	960GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXDBC82O	128GB	40GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXEBC82O	256GB	80GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXFBC82O	512GB	160GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXGBC82O	1024GB	320GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEDBC82O	128GB	40GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEEBC82O	256GB	80GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEFBC82O	512GB	160GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEGBC82O	1024GB	320GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXDBC82P	128GB	120GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXEBC82P	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXFBC82P	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXGBC82P	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEDBC82P	128GB	120GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEEBC82P	256GB	240GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEFBC82P	512GB	480GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEGBC82P	1024GB	960GB	V8 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXDBC82O	128GB	40GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXEBC82O	256GB	80GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXFBC82O	512GB	160GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXGBC82O	1024GB	320GB	V8 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEDBC82O	128GB	40GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEEBC82O	256GB	80GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEFBC82O	512GB	160GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEGBC82O	1024GB	320GB	V8 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less

FerriSSD
PCIe Gen3 x2 NVMe 1.3

Single-Chip SSD

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
SM681GXC AGST	64GB	60GB	BiCS5 3D TLC	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXD AGST	128GB	120GB	BiCS5 3D TLC	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXE AGST	256GB	240GB	BiCS5 3D TLC	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXF AGST	512GB	480GB	BiCS5 3D TLC	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEC AGST	64GB	60GB	BiCS5 3D TLC	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GED AGST	128GB	120GB	BiCS5 3D TLC	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEE AGST	256GB	240GB	BiCS5 3D TLC	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEF AGST	512GB	480GB	BiCS5 3D TLC	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXC AGSS	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXD AGSS	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXE AGSS	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GXF AGSS	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0℃ to 70℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEC AGSS	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GED AGST	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEE AGSS	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less
SM681GEF AGSS	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40℃ to 85℃	16x20 mm BGA	Single Chip BGA SSD / DRAM-less

Module

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
MD681GXCKAG3T	64GB	60GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXDKAG3T	128GB	120GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXEKAG3T	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXFKAG3T	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GECKAG3T	64GB	60GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEDKAG3T	128GB	120GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEEKAG3T	256GB	240GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEFKAG3T	512GB	480GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXCKAG3S	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXDKAG3S	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXEKAG3S	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GXFKAG3S	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GECKAG3S	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEDKAG3S	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEEKAG3S	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
MD681GEFKAG3S	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXCKAG3T	64GB	60GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXDKAG3T	128GB	120GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXEKAG3T	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXFKAG3T	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GECKAG3T	64GB	60GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEDKAG3T	128GB	120GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEEKAG3T	256GB	240GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEFKAG3T	512GB	480GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXCKAG3S	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXDKAG3S	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXEKAG3S	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GXFKAG3S	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GECKAG3S	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEDKAG3S	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEEKAG3S	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less
ME681GEFKAG3S	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ M-key	Single Chip BGA SSD on module / DRAM-less

FerriSSD
SATA 6Gb/S

Single-Chip SSD

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
SM619GXC DGST	64GB	64GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXD DGST	128GB	128GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXE EGST	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXF EGST	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GEC DGST	64GB	64GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GED DGST	128GB	128GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GEE EGST	256GB	240GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GEF EGST	512GB	480GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXC DGSS	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXD DGSS	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXE EGSS	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GXF EGSS	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GEC DGSS	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GED DGSS	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GEE EGSS	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM
SM619GEF EGSS	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	16x20 mm BGA	Single Chip BGA SSD / w/ DRAM

Module

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
ME619FXEOFA7	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
ME619DXFOFA7	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/ DRAM
ME619DXGOFA7	1024GB	960GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
ME619DXHOFA7	2048GB	1,920GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
MA619FXEOFA7	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
MA619DXFOFA7	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/ DRAM
MA619DXGOFA7	1024GB	960GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
MA619DXHOFA7	2048GB	1920GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/ DRAM
ME619HXEOFA7	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
ME619HXFOFA7	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
ME619HXGOFA7	1024GB	960GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
MA619HXEOFA7	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
MA619HXFOFA7	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
MA619HXGOFA7	1024GB	960GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
ME619FXEPF87	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
ME619DXFPF87	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
ME619DXGPF87	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
MA619FXEOF87	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
MA619DXFOF87	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
MA619DXGOF87	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=1 / w/DRAM
ME619HXEPF87	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
ME619HXFPF87	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
ME619HXGPF87	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	M.2 2280mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
MA619HXEOF87	256GB	240GB	V8 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
MA619HXFOF87	512GB	480GB	V8 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM
MA619HXGOF87	1024GB	960GB	V8 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm w/ PLP	Discrete controller + NAND DWPD=3 / w/ DRAM

Module

Product	Capacity	User Density	NAND	Temp. Range	Form Factor	Note
MA619GXCLDG3T	64GB	60GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GXDLDG3T	128GB	120GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GXELEG3T	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GXFLEG3T	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GECLEG3T	64GB	60GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GEDLEG3T	128GB	120GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GEELEG3T	256GB	240GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GEFLEG3T	512GB	480GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MD619GXCLDG3T	64GB	60GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GXDLDG3T	128GB	120GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GXELEG3T	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GXFLEG3T	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GECLEG3T	64GB	60GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GEDLEG3T	128GB	120GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GEELEG3T	256GB	240GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GEFLEG3T	512GB	480GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXCLDG3T	64GB	60GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXDLDG3T	128GB	120GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXELEG3T	256GB	240GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXFLEG3T	512GB	480GB	BiCS5 3D TLC	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GECLDG3T	64GB	60GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GEDLDG3T	128GB	120GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GEELEG3T	256GB	240GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GEFLEG3T	512GB	480GB	BiCS5 3D TLC	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MA619GXCLDG3S	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GXDLDG3S	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GXELEG3S	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GXFLEG3S	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GECLDG3S	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GEDLDG3S	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GEELEG3S	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MA619GEFLEG3S	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	2.5" 7mm	Single Chip BGA SSD on module / w/ DRAM
MD619GXCLDG3S	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GXDLDG3S	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GXELEG3S	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GXFLEG3S	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GECLDG3S	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GEDLDG3S	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GEELEG3S	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
MD619GEFLEG3S	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x42 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXCLDG3S	64GB	20GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXDLDG3S	128GB	40GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXELEG3S	256GB	80GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GXFLEG3S	512GB	160GB	BiCS5 3D SLCmode	c-temp: 0°C to 70°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GECLDG3S	64GB	20GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GEDLDG3S	128GB	40GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GEELEG3S	256GB	80GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM
ME619GEFLEG3S	512GB	160GB	BiCS5 3D SLCmode	i-temp: -40°C to 85°C	M.2 22x80 mm w/ B+M-key	Single Chip BGA SSD on module / w/ DRAM

Ferri-UFS

UFS 3.1

Product	Capacity	NAND	Form Factor	Temp. Range
SM671PXC BFS	64GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PXD BFS	128GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PXE BFS	256GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PXF BFS	512GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PEC BFS	64GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PED BFS	128GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PEE BFS	256GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PEF BFS	512GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PAC BFS	64GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PAD BFS	128GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PAE BFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PAF BFS	512GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PBC BFS	64GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃
SM671PBD BFS	128GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃
SM671PBE BFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃
SM671PBF BFS	512GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃

UFS 2.2

Product	Capacity	NAND	Form Factor	Temp. Range
SM671PXCLBFS	64GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PXDLBFS	128GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PXELBFS	256GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PXFLBFS	512GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25℃ to 85℃
SM671PECLBFS	64GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PEDLBFS	128GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PEELBFS	256GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PEFLBFS	512GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40℃ to 85℃
SM671PACLBFS	64GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PADLBFS	128GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PAELBFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PAELBFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PAFLBFS	512GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40℃ to 85℃
SM671PBCLBFS	64GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃
SM671PBDLBFS	128GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃
SM671PBELBFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃
SM671PBFLBFS	512GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40℃ to 105℃

Ferri-eMMC

eMMC 5.1

Product	Capacity	NAND	Form Factor	Temp. Range
SM662GX8 C4V	8GB	2D MLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GXA C4V	16GB	2D MLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GXB C6V	32GB	3D TLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GXC BFS	64GB	3D TLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GXD BFS	128GB	3D TLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GXE BFS	256GB	3D TLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GXF BFS	512GB	3D TLC	100b BGA 14x18mm	C-temp: -25°C to 85°C
SM662GE8 C4V	8GB	2D MLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GEA C4V	16GB	2D MLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GEB C6V	32GB	3D TLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GEC BFS	64GB	3D TLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GED BFS	128GB	3D TLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GEE BFS	256GB	3D TLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GEF BFS	512GB	3D TLC	100b BGA 14x18mm	i-temp: -40°C to 85°C
SM662GA8 C4V	8GB	2D MLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GAA C4V	16GB	2D MLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GAB C6V	32GB	3D TLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GAC BFS	64GB	3D TLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GAD BFS	128GB	3D TLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GAE BFS	256GB	3D TLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GAF BFS	512GB	3D TLC	100b BGA 14x18mm	Auto-grade3: -40°C to 85°C
SM662GB8 C4V	8GB	2D MLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662GBA C4V	16GB	2D MLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662GBB C6V	32GB	3D TLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662GBC BFS	64GB	3D TLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662GBD BFS	128GB	3D TLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662GBE BFS	256GB	3D TLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662GBF BFS	512GB	3D TLC	100b BGA 14x18mm	Auto-grade2: -40°C to 105°C
SM662PX8 C4V	8GB	2D MLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PXA C4V	16GB	2D MLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PXB C6V	32GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PXC BFS	64GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PXD BFS	128GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PXE BFS	256GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PXF-BFS	512GB	3D TLC	153b BGA 11.5x13mm	C-temp: -25°C to 85°C
SM662PE8 C4V	8GB	2D MLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PEA C4V	16GB	2D MLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PEB C6V	32GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PEC BFS	64GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PED BFS	128GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PEE BFS	256GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PEF BFS	512GB	3D TLC	153b BGA 11.5x13mm	i-temp: -40°C to 85°C
SM662PA8 C4V	8GB	2D MLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PAA C4V	16GB	2D MLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PAB C6V	32GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PAC BFS	64GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PAD BFS	128GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PAE BFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PAF BFS	512GB	3D TLC	153b BGA 11.5x13mm	Auto-grade3: -40°C to 85°C
SM662PB8 C4V	8GB	2D MLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C
SM662PBA C4V	16GB	2D MLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C
SM662PBB C6V	32GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C
SM662PBC BFS	64GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C
SM662PBD BFS	128GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C
SM662PBE BFS	256GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C
SM662PBF BFS	512GB	3D TLC	153b BGA 11.5x13mm	Auto-grade2: -40°C to 105°C

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