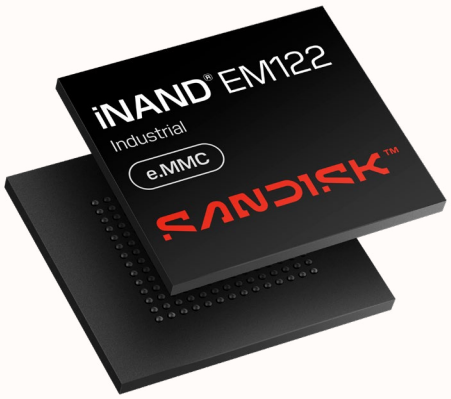

(→) SANDISK® iNAND® IX EM122[2]

Industrial Embedded Flash Devices

Proven Reliability and Endurance for Embedded Platforms

SANDISK® iNAND IX EM122 EFD[2] Industrial embedded flash devices provide high reliability and endurance for industrial applications across a wide range of operational requirements.

Designed and tested to withstand demanding environmental conditions, these industrial-grade flash devices feature advanced flash memory management firmware to provide enhanced power immunity, ECC, wear leveling, and bad block management. Data intensive applications can rely on iNAND® IX EM122 EFD[2] Industrial products to capture every critical moment, log each event, and to ensure quality-of-service to end-users.

The Smart Partitioning feature in the iNAND IX EM122 EFD[2] Industrial flash devices allows Boot partitions, RPMB, multiple General Purpose Partitions, User Data Area and Enhanced User Data Area, providing OEMs the flexibility to choose different attributes on a single device depending on storage requirements.

Product Highlights

- Operating Temp Range: –40°C to 85°C on Industrial Extended- Temperature SKUs; –25°C to 85°C on Commercial and Industrial SKUs
- Broad portfolio: 8GB to 64GB[1] MLC based eMMC
- Extended product life cycle for industrial-grade applications
- Advanced controller built for endurance and reliability
- High endurance: up to 3K P/E cycles in MLC
- Smart Partitioning, Advanced Health Report and Manual Refresh (Industrial Grade)
- Enhanced User Data Area (EUDA)
- Operating voltage: 2.7V to 3.6V

Business Benefits

- Drives faster time to market with quick system integration
- Enables real-time analytics at the edge
- Enables cloud augmentation, reduces network traffic
- Improves connected user experience
- Provides reliable local storage, as primary or backup
- Optimizes system performance

Serving Industrial Applications

- Industrial boards and PCs
- Factory automation
- Medical
- Smart meters/utilities
- Smart buildings/homes
- IoT gateways
- Surveillance
- Drones
- SOM
- Transportation
- Networking

	Commercial	Industrial Wide Temp	Industrial Extended Temp
Product Specifications			
Capacity[1]	8GB to 64GB		
Interface	eMMC 5.1 HS400		
NAND Flash Technology	X2 MLC		
Operating Voltage	Core voltage (VCC): 2.7-3.6V; I/O (VCCQ) voltage: 1.7-1.95V or 2.7-3.6V		
Operating Temp	–25°C to +85°C	–25°C to +85°C	–40°C to + 85°C
Performance			
Sequential Read/Write (MB/s)[3]	Up to 300/170		
Random Read/Write (IOPS)	Up to 25K/15K		
Form Factor (mm)			
8GB - 16GB	11.5×13×0.8mm		
32GB	11.5×13×1.0mm		
64GB	11.5×13×1.2mm		

Ordering Information	CL EM122	IX EM122 Wide Temp	IX EM122 Extended Temp
8GB	SDINBDG4–8G	SDINBDG4–8G-I2	SDINBDG4–8G-XI2
16GB	SDINBDG4–16G	SDINBDG4–16G-I2	SDINBDG4–16G-XI2
32GB	SDINBDG4–32G	SDINBDG4–32G-I2	SDINBDG4–32G-XI2
64GB	SDINBDG4–64G	SDINBDG4–64G-I2	SDINBDG4–64G-XI2

1. 1GB = 1,000,000,000 bytes. Actual user capacity less.
2. Formerly known as iNAND 7250
3. 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon usage conditions, drive capacity and other factors.

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