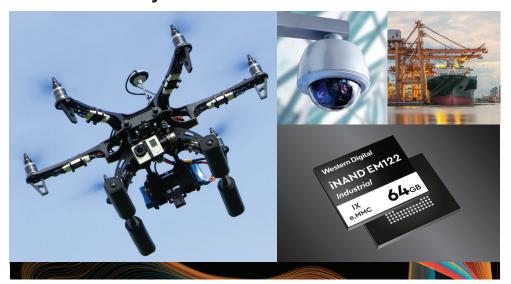# Western Digital® iNAND® IX EM122[a] Industrial Embedded Flash Devices

Proven Reliability and Endurance for Embedded Platforms

Western Digital iNAND IX EM122 EFD[a] 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, this industrial-grade flash devices features 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[a] 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[a] 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.

Key Features and Benefits

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
- Extended product life cycle for industrial grade
- 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) (Commercial Grade)
- 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
- Smart meters/utilities
- Smart buildings/homes
- IoT gateways
- Surveillances
- Drones
- SOM
- Transportation
- Networking
- Medical

iNAND IX EM122 EFD[a] Industrial Embedded Flash Drive			
Specification	Commercial	Industrial Wide Temp	Industrial Extended Temp
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 – 85°C	–25°C – 85°C	–40°C – 85°C
Performance			
Sequential Read/Write (MB/s)	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			
8GB	SDINBDG4–8G	SDINBDG4–8G-I1	SDINBDG4–8G-XI1
16GB	SDINBDG4–16G	SDINBDG4–16G-I1	SDINBDG4–16G-XI1
32GB	SDINBDG4–32G	SDINBDG4–32G-I1	SDINBDG4–32G-XI1
64GB	SDINBDG4–64G	SDINBDG4–64G-I1	SDINBDG4–64G-XI1

[1] 1 GB = 1,000,000,000 bytes. Actual user capacity less.
[a] Formerly known as iNAND 7250

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www.WesternDigital.com