

# Western Digital® iNAND® IX EM122<sup>a</sup> Industrial Embedded Flash Devices

## Proven Reliability and Endurance for Embedded Platforms



Western Digital iNAND IX EM122 EFD<sup>3</sup> 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<sup>3</sup> 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<sup>3</sup> 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.

iNAND IX EM122 EFD <sup>3</sup> Industrial Embedded Flash Drive			
Specification	Commercial	Industrial Wide Temp	Industrial Extended Temp
<b>Capacity<sup>1</sup></b>	8GB to 64GB		
<b>Interface</b>	eMMC 5.1 HS400		
<b>NAND Flash Technology</b>	X2 MLC		
<b>Operating Voltage</b>	Core voltage (VCC): 2.7-3.6V; I/O (VCCQ) voltage: 1.7-1.95V or 2.7-3.6V		
<b>Operating Temp</b>	-25°C - 85°C	-25°C - 85°C	-40°C - 85°C
<b>Performance</b>			
<b>Sequential Read/Write (MB/s)</b>	Up to 300/170		
<b>Random Read/Write (IOPS)</b>	Up to 25K/15K		
<b>Form Factor (mm)</b>			
<b>8GB - 16GB</b>	11.5×13×0.8mm		
<b>32GB</b>	11.5×13×1.0mm		
<b>64GB</b>	11.5×13×1.2mm		
<b>Ordering Information</b>			
<b>8GB</b>	SDINBDG4-8G	SDINBDG4-8G-I1	SDINBDG4-8G-XI1
<b>16GB</b>	SDINBDG4-16G	SDINBDG4-16G-I1	SDINBDG4-16G-XI1
<b>32GB</b>	SDINBDG4-32G	SDINBDG4-32G-I1	SDINBDG4-32G-XI1
<b>64GB</b>	SDINBDG4-64G	SDINBDG4-64G-I1	SDINBDG4-64G-XI1

<sup>1</sup> 1 GB = 1,000,000,000 bytes. Actual user capacity less.

<sup>3</sup> Formerly known as iNAND 7250

### 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

## Western Digital

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