Western Digital® · iNAND® IX EU312 Industrial Embedded Flash Drive

Western Digital's iNAND® IX EU312 EFD Industrial embedded flash devices, with Universal Flash Storage (UFS) Version 2.1 interface and 3D NAND, provide high reliability and endurance for industrial and surveillance applications across a wide range of operational requirements.

The iNAND® IX EU312 Embedded Flash Drive (EFD) is Western Digital's most advanced flash storage solution for industrial and surveillance applications. Built with optimized 3D NAND technology and a fast UFSv2.1 interface, the iNAND IX EU312 EFD offers superior read and write performance, delivering an embedded storage solution for the most data-intensive industrial applications. More than twice the performance of e.MMC products, the iNAND IX EU312 is designed with the higher endurance and the extended temperature ranges needed for the demanding use cases of industrial environments and surveillance.

This industrial product undergoes rigorous qualification and production testing, thereby reducing the complexity and number of qualification cycles for system manufacturers. The device uses a LDPC ECC engine and optimized 3D NAND that results in a highly robust, high endurance and reliable product. In addition, an integrated SLC cache with extended data retention leads to a lower UBER at any given point over the life of the product.

Product Highlights

- Operating Temp Range:
  - −40°C to 85°C for Industrial Extended Temperature SKUs
  - −25°C to 85°C for Industrial SKUs
- Broad portfolio: 16GB to 256GB
- Advanced memory management firmware features, including strong ECC, read refresh, wear-leveling and bad block management
- Up to 768 TBW (256GB)[3]
- 3K P/E cycles
- Advanced industrial feature set, including advanced health status monitor, enhanced power failure protection, fast boot, enhanced SLC LUN, and OEM configurable boot partitioning
- Optimized for a wide variety of read and write intensive use cases

Serving Industrial Applications

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

[1] 1 GB = 1,000,000,000 bytes. Actual user capacity less.

[2] Based on internal testing; performance may be lower depending upon host device interface, usage conditions and other factors. 1MB=1,000,000 bytes.

[3] Calculated with Write Amplification of 1

iNAND® IX EU312 EFD Industrial Embedded Flash Drive

Specification	Industrial Wide Temp	Industrial Extended Temp
Capacity[1]	16GB to 256GB	
Interface	UFS 2.1 Gear 3 2 Lane	
NAND Flash Technology	3D 64 Layer TLC	
Operating Voltage	Core Voltage (VCC): 2.7–3.6V; I/O (VCCQ2) Voltage: 1.7–1.95V	
Operating Temp	−25°C to 85°C	−40°C to 85°C
Performance		
Sequential Read/Write (MB/s)[2]	Up to 800/550	
Random Read/Write (IOPS)[3]	Up to 40K/45K	
Form Factor (mm)		
16GB–256GB	11.5×13×1.2 mm	
Ordering Information		
16GB	SDINDDH6–16G–I	SDINDDH6–16G–XI
32GB	SDINDDH6–32G–I	SDINDDH6–32G–XI
64GB	SDINDDH6–64G–I	SDINDDH6–64G–XI
128GB	SDINDDH6–128G–I	SDINDDH6–128G–XI
256GB	SDINDDH6–256G–I	SDINDDH6–256G–XI

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