SanDisk® Write-Intensive Flash Devices

Product Highlights
- Available in SD™, USB and industry's first microSD™ formats
- Broad portfolio: 8GB to 128GB capacity
- Extreme write durability supporting strong endurance requirements

Business Benefits
- Reduces TCO of system and network architecture
- Reduces costs arising from connectivity limitations by enabling local data caching and processing
- Improves user experience by reducing latencies and allowing upgradability
- Enables local computational analysis in real time, without the need for constant connectivity

Applications:
- IoT / Industrial Gateways
- Surveillance and Camera Systems
- Access Control Systems
- Networking and Communications
- Offline Data Collection Systems

Smart Features:
- Health Status Monitor: Track the health and life of your critical storage
- Host Lock: Storage attaches to a single device and thereafter be used only with that device
- Programmable Identifier String: Program a unique identifier on the card for remote traceability
- Secure Firmware Update: Enables remote maintenance of the storage solution

Reliable Storage at the Edge of a Connected World

The rapid evolution of cloud computing and the Internet of Things (IoT) is creating new opportunities and business models around the world. Technology innovators are imagining everything from smart cities, smart homes, and connected classrooms to energy optimization systems, autonomous cars, personalized medical devices, and more. Millions of new connected devices with their multiple sensors will inevitably unleash a tidal wave of data flowing through the IoT, raising issues such as network congestion, bandwidth prioritization, data resilience, and cost. This is why Edge and Fog computing are gaining momentum. With reliable and always-available local storage, Edge and Fog computing have the unequivocal advantage of being able to analyze data locally, which resolves many of these critical issues. The benefits of Edge and Fog computing include:

Reduce bandwidth and power requirements – Utilizing storage at the edge of the cloud eliminates the need for constant connectivity to the cloud. This reduces network congestion and the need to power always-on connectivity components.

Reduce connectivity expenses – Data flow to and from the cloud can be throttled to occur only when necessary or most economical to do so.

Real-time analytics – The ability to interact with edge storage eliminates the latency that may occur when retrieving data from remote sources, enabling the true real-time analysis and processing that is key to many mission-critical applications.

Enhance operational reliability – Edge storage can be configured for redundancy, ensuring access to critical data even when communication channels to the cloud or IoT are compromised.

The SanDisk® write-intensive flash solutions are proven to deliver a set of distinct benefits:

High endurance – Our write-intensive NAND flash technologies are built for the rigors of interaction at the edge, supporting far higher numbers of write cycles than commodity flash technologies. This level of endurance is crucial to ensuring data integrity and a low cost of ownership over the lifetime of a system.

Future proof – A wide range of dependable storage solutions can be incorporated into a single technical architecture to support diverse use cases; for example, the same IoT gateway, with differing storage configurations, could be deployed in environments ranging from home to factory to a smart city infrastructure.

Cost effective –Vertically-integrated manufacturing process enable us to create flash solutions that are cost effective and optimized for write-intensive applications.

Longevity – Having the peace of mind that your data, whether being recorded on or off-line, will be kept intact until it is retrieved or transmitted to the cloud.

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Specifications	Constant Video Buffering	Data Logging/Repository	Industrial Applications
Capacity[1]	8GB, 16GB	4GB – 32GB	32GB – 128GB	8GB – 64GB
Interface	USB and SD	SD and microSD	SD	SD and microSD
NAND Flash Technology	X2 (MLC)	X1 (SLC)	X2 (MLC)	X2 (MLC)
Operating Temp	0°C to 55°C -25°C to 85°C	-25°C to 85°C		
Operating Voltage	Core: 3.3V; IO: 3.3V, 1.8V			
Terabytes Written[2] (Endurance)	Up to 160TBW	Up to 800TBW	Up to 896TBW	Up to 192TBW
Smart Features Support	Yes	Yes	Yes	Yes
Performance				
Sequential Write/Read (MB/s)[3]	Up to 10/40	Up to 50/50	Up to 30/50	Up to 20/20

Ordering Information

	Constant Video Buffering		Data Logging/Repository	Industrial Applications
USB	SDUFDEC-008G SDUFDEC-016G	N/A	N/A	N/A
SD	SDSDEC-008G SDSDEC-016G	SDSDEC-004G SDSDEC-032G	SDSDEB-032G SDSDEB-064G SDSDEB-128G	SDSDAF2-008G, SDSDAF2-016G, SDSDAF2-032G, SDSDAF2-064G
microSD	N/A	SDSDQEC-004G SDSDQEC-008G	N/A	SDSDQAF-008GB[4] SDSDQAF-016GB[4] SDSDQAF2-032GB SDSDQAF2-064GB

[1] 1GB=1,000,000,000 bytes. Actual user storage less.
[2] Approximations based on SanDisk internal metrics that quantifies how much data can be written to a card in its lifespan expressed in Terabytes Written (TBW), with Write Amplification of 1.
[3] Based on internal testing; performance may be lower depending on host device, usage and other factors. 1MB=1,000,000 bytes.
[4] Smart Features Support is not available.

Contact information

For all inquiries, please email:
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For more information, please visit:
www.SanDisk.com

The SanDisk Advantage

SanDisk, a Western Digital brand, has more than 27 years of expertise in NAND flash development and system design. With a vertically integrated business model, SanDisk products come with world-class technical and design support, as well as BOM control with PCN support.

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