Western Digital.

Industrial Grade microSD™ Card Portfolio

Providing Trusted Endurance, Performance and Reliability

Product Highlights

- Operating temp range: –25˚C to 85˚C and –40˚C to 85˚C
- Extreme high endurance: Up to 1920 TBW
- Broad portfolio: 8GB to 256GB
- Extended product life cycle
- Compact form factor
- Compatible with SD adapters

Advanced Features

- **Health Status:** Helps in preventive maintenance by signaling when the card needs to be replaced
- **Power Immunity:** Helps protecting data during ungraceful shutdowns
- **Read Refresh:** Enhances data retention while powered by relocating data to new blocks
- **Programmable String:** One-time programmable 32-byte string allows OEM/ODMs to program any specific information
- **Host Lock:** Additional level of password security that locks the card to a particular host
- **Secured FFU:** Helps securely upgrade firmware to a device while deployed in the field

Business Benefits

- Delivers lower system TCO
- Enables real-time analytics at the edge
- Reduces network traffic
- Provides reliable local backup
- Maximizes system availability with health status meter, ensuring timely preventative maintenance

Serving Industrial Applications

- Action Cameras
- Dashboard Cameras
- Medical
- Digital signage
- Gateways and servers
- Home security cameras
- Industrial Drones
- Networking
- Point of Sales

Removable Storage Solutions for Industrial and IoT Applications at the Endpoint to the Edge

The Industrial and IoT storage markets are changing rapidly due to applications and devices with increased compute power, edge computing, and advanced capabilities such as Artificial Intelligence (AI) and machine vision. These advancements, along with an increase in the number of connected devices and sensors, are driving a need for higher capacity and higher reliability storage solutions. Western Digital's Edge storage devices like the Industrial grade microSD cards capture data locally as primary or backup storage and can help maximize network efficiency and enable systems to analyze data and act on results in real-time. Western Digital's microSD cards can also be used with an adapter to fit SD form factors, making these cards a flexible and scalable removable storage solution.

Leveraging 30 years of expertise in NAND flash memory and storage systems, Western Digital Industrial grade microSD cards deliver edge storage solutions for Industrial and IoT applications requiring high reliability, durability, and high-intensity recording across a wide range of operational requirements. Designed and tested to withstand the most demanding conditions and featuring an advanced memory management firmware (FW), which includes power immunity, auto/manual read refresh, ECC, and wear leveling, data-intensive applications can rely on Western Digital Industrial products to capture every critical moment, log each event, and to ensure quality of service to end-users. These high endurance solutions offer extended product life cycles which can reduce total cost of ownership (TCO) per system by eliminating costly redesigns and requalifications while minimizing unnecessary maintenance calls.

Western Digital Industrial grade microSD cards are specifically designed to meet the endurance, security, performance needs and environmental requirements for a wide range of Industrial and IoT applications including drones, action cameras, home surveillance, gateways, servers, and more.

Western Digital Industrial microSD™ Card Products[4]				
Product Name	Industrial Wide Temp IX QD342	Industrial Ext Temp IX QD332	Industrial Wide Temp IX QD332	Industrial Ext Temp IX QD334
Interface	SD6.0 UHS-I 104	SD5.1 UHS-I 104	SD5.1 UHS-I 104	SD5.1 UHS-I 104
Capacity[1]	16GB to 256GB	8GB to 128GB	8GB to 128GB	8GB to 64GB
Operating Temp	-25°C to 85°C	-40°C to 85°C	-25°C to 85°C	-40°C to 85°C
NAND Flash Technology	3D TLC	MLC	MLC	SLC
Performance[2]	Speed Class 10, U1/U3, V10/V30	Speed Class 10, U1	Speed Class 10, U1	Speed Class 10, U3
Sequential R/W[2]	Up to 100/50 MB/s	Up to 80/50 MB/s	Up to 80/50 MB/s	Up to 90/50 MB/s
Endurance[3]	Up to 768 TBW	Up to 384 TBW	Up to 384 TBW	Up to 1920 TBW

Western Digital Industrial microSD™ Card Products[4]				
Product Name	Industrial Wide Temp IX QD342	Industrial Ext Temp IX QD332	Industrial Wide Temp IX QD332	Industrial Ext Temp IX QD334
Capacity				
8GB	—	SDSDQAF3-008G-XI	SDSDQAF3-008G-I	SDSDQED-008G-XI
16GB	SDSDQAF4-016G-I	SDSDQAF3-016G-XI	SDSDQAF3-016G-I	SDSDQED-016G-XI
32GB	SDSDQAF4-032G-I	SDSDQAF3-032G-XI	SDSDQAF3-032G-I	SDSDQED-032G-XI
64GB	SDSDQAF4-064G-I	SDSDQAF3-064G-XI	SDSDQAF3-064G-I	SDSDQED-064G-XI
128GB	SDSDQAF4-128G-I	SDSDQAF3-128G-XI	SDSDQAF3-128G-I	—
256GB	SDSDQAF4-256G-I	—	—	—

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

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

[3] Approximation based on Western Digital internal metrics that quantifies how much data can be written to a card in its lifespan expressed in Terabytes Written (TBW), with write application of 1.

[4] Product specifications subject to change without notice. Pictures shown may vary from actual products. Not all products are available in all regions of the world.

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02-01-WW-04-00043 WDC_Indus-microSD_Family_Brochure_041020