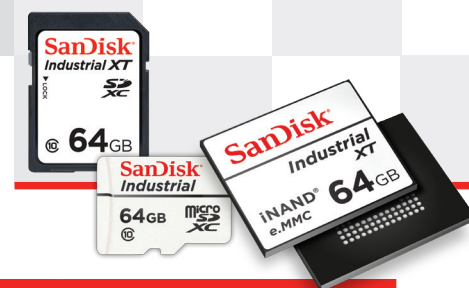


A Global Leader in Flash Memory Storage Solutions

Embedded & Integrated Solutions (EIS)

Industrial



Industrial iNAND® Embedded Flash Drives			
	iNAND® Industrial XT	iNAND® Industrial	iNAND® Industrial w/ EUDA
SanDisk P/N	SDIN8DE#-##G-XI	SDIN8DE#-##G-I	SDIN7DU2-##G-I
Capacity	4GB-64GB*	4GB-64GB*	8GB-64GB*
Interface	e.MMC 4.51+ HS200	e.MMC 4.51+ HS200	e.MMC 4.41+ HS200
NAND flash technology	19nm X2	19nm X2	19nm X2
Flash management	Embedded Firmware		
Operating voltage	Core: 3.3V; IO: 3.3V,1.8V		
Operating temperatures	-40°C - 85°C	-25°C - 85°C	
Performance**			
Sequential W/R	Up to 37/120 MB/s	Up to 37/120 MB/s	Up to 20/90 MB/s
Random W/R	Up to 1.2K/4.5K IOPS	Up to 1.2K/4.5K IOPS	Up to 200/2K IOPS
Package (mm)			
11.5x13x1-1.2mm	4GB-32GB	4GB-64GB	8GB-32GB
12x16x1.2-1.4mm	64GB	—	64GB

Industrial Card Products			
	SD Industrial XT	SD Industrial	microSD Industrial
SanDisk P/N	SDSDAF2-###G-XI	SDSDAF2-###G-I	SDSDQAF2-###G-I ¹
Capacity	8GB-64GB*	8GB-64GB*	8GB-64GB* ¹
Interface	SD High-Speed	SD High-Speed	SD High-Speed
NAND flash technology	1Ynm X2	1Ynm X2	1Ynm X2
Operating temperatures	-40°C - 85°C	-25°C - 85°C	
Performance**	Sequential Write: Up to 20MB/s Sequential Read: Up to 20MB/s	Sequential Write: Up to 20MB/s Sequential Read: Up to 20MB/s	Sequential Write: Up to 20MB/s Sequential Read: Up to 20MB/s
Enhanced features	Health status meter, enhanced power immunity, read refresh, host lock, programmable ID, secure FFU		

¹ Please order SDSDQAF-008G for 8GB, and SDSDQAF-016G for 16GB.

Automotive

Automotive iNAND [®] Embedded Flash Drives		
	iNAND [®] Automotive XT	iNAND [®] Automotive
SanDisk P/N	SDIN8DE#-##G-XA	SDIN8DE#-##G-A
Capacity	4GB-64GB*	4GB-64GB*
Interface	e.MMC 4.51+ HS200	e.MMC 4.51+ HS200
NAND flash technology	19nm X2	19nm X2
Flash management	Embedded Firmware	
Operating voltage	Core: 3.3V; IO: 3.3V,1.8V	
Operating temperatures	-40°C - 85°C	-25°C - 85°C
Performance**		
Sequential W/R	Up to 37/120 MB/s	Up to 37/120 MB/s
Random W/R	Up to 1.2K/4.5K IOPS	Up to 1.2K/4.5K IOPS
Package (mm)		
11.5x13x1mm	4GB-32GB	4GB-32GB
12x16x1.2-1.4mm	64GB	64GB

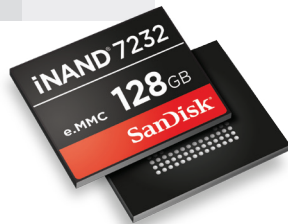


Automotive Card Products	
	SD Automotive XT
SanDisk P/N	SDSDAG2-###G-XA
Capacity	8GB-64GB*
Interface	SD High-Speed
NAND flash technology	1Ynm X2
Operating temperatures	-40°C - 85°C
Performance**	Sequential Write: Up to 20MB/s Sequential Read: Up to 20MB/s
Enhanced features	Health status meter, enhanced power immunity, read refresh, host lock, programmable ID, secure FFU

* 1 GB = 1,000,000,000 (1 billion) bytes. Actual user capacity less.

** Up to stated speed. Based on internal testing; performance and capacity may vary based on host device.
1 megabyte (MB) = 1 million bytes.

SanDisk[®]



* 1 gigabyte (GB) = 1 billion bytes.

** Based on SanDisk internal testing. Performance based on eMMC high speed interface, using an 8-bit bus. Read and write speed may vary depending on read/write conditions. 1 megabyte (MB) = 1 million bytes.

*** Device operation at 3.3V I/O limited to max 1 hour usage (ex: for use during content/image preloading)

iNAND[®] Embedded Flash Drives

	iNAND [®] 7232
SanDisk P/N	SDINADF4-##G
Capacity	16GB-128GB*
Interface	e.MMC 5.1
NAND flash technology	1Znm X3
Flash management	Embedded Firmware
Operating voltage	Core: 3.3V; I/O: 1.8V, 3.3V***
Operating temperatures	-25°C - 85°C
Performance**	
Sequential W/R	Up to 150/280 MB/s
Random W/R	2.8K/3.3K IOPS
Package (mm)	
11.5x13x0.9-1.2mm	16GB-128GB

Commercial microSD[™] Cards

	Speed Class V30	Speed Class 10	Speed Class 4
SanDisk P/N	SDSDQAE-XXXG	SDSDQAD-XXXG	SDSDQAB-XXXG
Capacity	32GB-256GB*	16GB-256GB*	8GB-64GB*
Interface	UHS I 104	UHS I 104	UHS I 50
Performance**	Speed Class 10/U3 Sequential W/R: Up to 50/80 MB/s	Speed Class 10/ U1 Sequential W/R: Up to 10/40MB/s	Speed Class 4 Sequential W/R: Up to 5/20MB/s
Operating Voltage	2.7V - 3.6V		
Operating Temperatures	-25°C - 85°C		



Commercial Full-size SD[™] Cards

	Speed Class 4	Speed Class U1	Speed Class U3
SanDisk P/N	SDSDQAE-XXXG	SDSDQAD-XXXG	SDSDQAB-XXXG
Capacity	32GB-256GB*	16GB-256GB*	8GB-64GB*
Interface	UHS I 104	UHS I 104	UHS I 50
Performance**	Speed Class 10/U3 Sequential W/R: Up to 50/80 MB/s	Speed Class 10/ U1 Sequential W/R: Up to 10/40MB/s	Speed Class 4 Sequential W/R: Up to 5/20MB/s
Operating Voltage	2.7V - 3.6V		
Operating Temperatures	-25°C - 85°C		

Write-Intensive Flash Devices

	microSD Cards SDSDQEC-XXX	SD Cards SDSDEC-XXXG	USB SDUFDEC-XXXG	SD Cards SDSDEB-XXXG
Application		Constant Video Buffering		Datalogging/Repository
SanDisk P/N	SDSDQEC-004G, SDSDQEC-008G	SDSDEC-004G, SDSDEC-008G, SDSDEC-016G, SDSDEC-032G	SDUFDEC-0008G, SDUFDEC-016G	SDSDEB-032G, SDSDEB-064G, SDSDEB-128G
Capacity ²	4GB, 8GB	4GB, 8GB, 16GB and 32GB	8G, 16G	32GB, 64GB, 128GB
Interface ³	microSD	Full-size SD	USB	Full-size SD
NAND Flash Technology	SLC	SLC on 4GB and 32GB & MLC on 8GB and 16GB	MLC	MLC
Performance Sequential Write/Read (Mbps)	Up to 400/400	Up to 400/400	Up to 40/56	Up to 240/400
Operating Voltage	Core: 3.3V; I/O: 3/3V, 1.8V			
Operating Temperatures	-25°C up to 85°C	-25°C up to 85°C	0°C up to 55°C	-25°C up to 85°C
Endurance	Up to 400TBW	Up to 450TBW	Up to 160TBW	Up to 896TBW



¹ SS = Single Sided assembly ; DS = Double Sided assembly

² Capacity support is based on form factor. 1 GB = 1,000,000,000 bytes.

³ SATA interface is backward compatible to SATA 2.0 (3 Gb/s) and SATA 1.0 (1.5 Gb/s)

⁴ Performance is based on the CrystalDiskMark benchmark using a 1000MB LBA range. Based on capacity support

⁵ Power measurements based on MobileMark 2012 testing

⁶ Endurance of the SSD is calculated using JEDEC client workload (JESD219).

TBW = terabytes written

⁷ MTTF = Mean Time To Failure. Based on prediction and Reliability Demonstration Testing

Contact Information

For all inquiries, please email:
oemproducts@sandisk.com

For more information, please visit:
www.sandisk.com

USB Flash Drives

	Low Profile Design	Compact Design	Commercial App
SanDisk P/N	SDUFD33-0##G	SDUFD51-0##G	SDUFD43-016G
Capacity	8-64GB*	8-64GB*	16GB*
Interface	USB 2.0	USB 2.0	USB 3.0



SanDisk[®]

Western Digital Technologies, Inc.

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