



SanDisk®

The SanDisk® iSSD™ integrated storage device

Introducing Serial-ATA (SATA) Performance, Low Power and an Innovative Form Factor, Enabling Demanding Mobile Computing and Consumer Electronics Applications.



SanDisk® iSSD™ Benefits:

- Innovative BGA Form Factor storage solution
- High SATA performance: up to 450/350 MB/s⁴ Read/Write Sequential
- Low slumber mode power consumption: 10mW⁵
- Embedded design creates sleek and small designs with high performance
- Integrated to deliver the low cost - minimizing packaging and electronics
- Wide capacity offering: 8 GB - 128 GB²
- Improves user experience
 - Fast boot and applications launch time
 - Speedy browsing, emailing and social usage capabilities
 - Enhanced multi tasking capabilities
- Based on SATA signaling and JEDEC standard package

Architected for low power and embedded applications, the SanDisk® i100 drive provides SSD capability in an embedded BGA form factor. SanDisk i100 drive enables cutting-edge designs where thin and light merge with state-of-the-art user experience. A breakthrough for SATA-based storage devices, SanDisk i100 drive low power modes align with the varied needs of mobile computing OEMs and deliver an elegant balance of performance, low power, form factor, reliability and cost.

Small in size. Big on performance. Supporting demanding use cases.

SanDisk i100 drive meets rigorous OEM size requirements, while delivering fast sequential performance, outstanding random performance and solid long-term data endurance¹ that is cost effective. It is rugged and reliable; light weight and delivers silent operation.

SanDisk i100 drive unique architecture enables OEMs to manage power consumption while meeting demanding performance requirements evolving in the market. Take advantage of SSD performance while avoiding the power penalty typically associated with SATA performance. Factor in SanDisk i100 drive wide range of capacities (8 GB- 128 GB²), embedded form factor and competitive pricing and it makes an ideal storage choice for demanding mobile computing platforms such as tablets and ultra-thin notebooks.

SanDisk® iSSD™ Supported by Key Innovations and Technology Leadership

Power Classes: Power budgets are paramount in mobile computing applications. SanDisk i100 drive supports Power Classes, which provide the ability to limit SSD performance and in turn, limit power consumption. This provides the ability for optimized flexibility between power and performance and enables OEMs to take advantage of numerous SSD benefits even when maximum performance is not required.

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1. Approximations based on LDE (Long-term Data Endurance) – an industry metric, introduced by SanDisk, that quantifies how much data can be written to a SSD in its lifespan expressed in terabytes written (TBW). Data is written using typical PC transfer size, written at a constant rate over the life of the SSD and data is retained for at least 1 year upon LDE exhaustion. Based on SanDisk internal measurements, a typical client PC user writes 4 GB/day.
2. 1 gigabyte (GB) = 1 billion bytes. 1 terabyte (TB) = 1 trillion bytes. Some capacity not available for data storage.
3. nCache™ acceleration technology is a large Non Volatile Write Cache, a unique feature in SanDisk SSDs that improves random write performance and ensures an improved user experience. Studies show that modern operating systems mostly access the storage device using 4k access blocks. The cache is filled during these small write commands and emptied during idle time when the host is not accessing the drive, with no risk of data loss. For a typical everyday use, the write performance that the users see is the nCache™ (burst) high performance, and not steady state (sustained) SanDisk i100 SSD performance. Based on IOMeter 4K random write test.
4. Based on SanDisk internal testing; performance may be lower depending upon host device. Specifications are preliminary and subject to change.
5. With Slumber (SATA PHY state) power mode and DIPM enabled. Lower power modes can be achieved by implementing advanced low power management techniques. Technical specifications are preliminary and subject to change.
6. MTBF – Mean Time Between Failures based on part stress analysis.

nCache™ Acceleration Technology³: A part of SanDisk's Adaptive Flash Management (AFM), this is a large SLC non-volatile write cache technology that boosts random write performance up to x7 over steady state performance. This enables fast user response, no stuttering, better multi-tasking capabilities and significantly improves the drive's long-term data endurance, ensuring an enhanced user experience.

SanDisk® SSD – A Trusted Partner:

New usage models and innovative mobile computing designs are attracting key players in the ecosystem to SATA and integrated Solid State Drive (iSSD). Ecosystem partners include chipset vendors, OS vendors and box manufacturers (ODMs). This ecosystem enablement leads to OEM adoption. SanDisk is consistently listening to market needs from OEMs, partners, application developers and other relevant ecosystem stakeholders. This ensures that our offerings are optimally aligned to market needs and fast-moving requirements.

Supported by vertical integration and over 20 years of experience in the flash memory business, SanDisk continues to deliver ground breaking solutions that repeatedly revolutionize the world of mobile computing and beyond. SanDisk is a trusted partner that you can always count on to guide you into the future.

SanDisk® iSSD™ product features and specifications

Specifications are preliminary and subject to change

Device	iSSD™
Form Factor	BGA
Characteristics	0.5 mm pitch 156 Ball BGA
Interface	SATA III 6Gb/s
Capacity (GB) ²	8, 16, 24, 32, 64, 128
Performance ⁴	Up to 450 MB/s 350 MB/s Sequential Read/Write
Endurance (LDE: Long-term Data Endurance) ¹	4GB (2.5 TBW), 8GB (5 TBW), 16GB (10 TBW), 24GB (15 TBW), 32GB (20 TBW), 64GB (40 TBW), 128GB (80 TBW)
MTBF ⁶	Up to 4,000,000 hours
Size	16mm x 20mm x 1.2mm: 8GB-16GB 16mm x 20mm x 1.4mm: 24GB-64GB 16mm x 20mm x 1.85mm: 128GB
Weight	0.83g (4GB) 0.9g (8-16GB), 1g (24GB), 1.1g (32GB), 1.3g (64GB) 1.5g (128GB)

Low Power Consumption

DC Supply	+3.3V, +1.8V, +1.2V ±5%
Slumber Power Mode (Typical) ⁵	10mW
Active Power (Typical)	2.7W
Average Power (Typical)	55mW

Environmental Specifications

Operating Temperatures	0°C to +70°C
Storage Temperatures	-55°C to +85°C
Acoustic Noise	0dB

Other

Supporting Features	TRIM support SMART feature supported Advanced Flash Management NCQ support
OS Support	Windows® XP, Windows® 7, Google Chrome™ OS
Warranty	Limited 3 year Warranty 3 year Warranty in regions not recognizing limited

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