

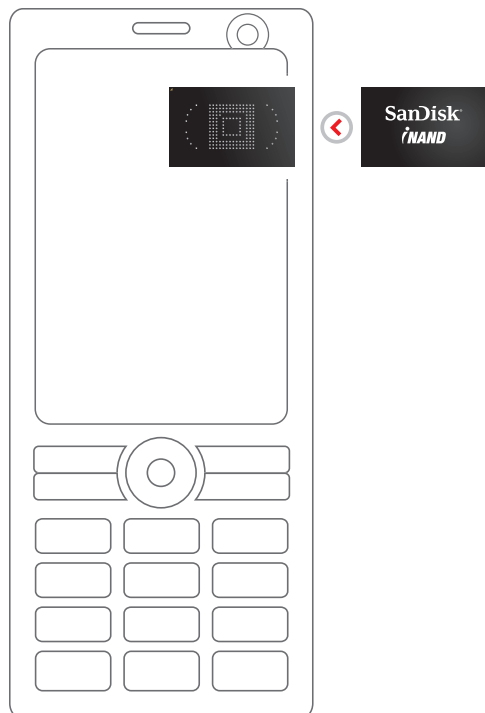
iNAND™ eSD Embedded Flash Drive

Standard SD™ Interface

High-Capacity
Storage and Boot

Optimized for
Multimedia Handsets

Design in More



Today's advanced multimedia handsets benefit from ongoing technologies to offer new, added value features such as higher resolution imaging, larger screens, better video quality, music playback, global positioning systems and other dazzling applications. In recent years, mobile users have been requiring greatly increasing storage each year for immediate access to premium content and an enhanced multimedia experience.

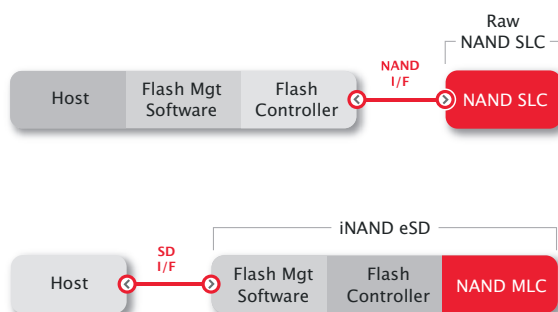
The SanDisk® iNAND eSD family of high-capacity Embedded Flash Drives (EFDs) lets designers give users more memory, up to 16GB*, for more multimedia and handset functionality. iNAND uses a standard SD™ interface and standard ball-out configurations, combined with advanced, cost-effective multi-level cell (MLC) NAND flash technology, an internal controller and dedicated firmware for high performance and reliability.

Designed specifically for advanced multimedia handsets, iNAND offers high performance and reliability for the ultimate user experience.

Main Features and Benefits

Standard SD Interface

The true value behind the iNAND family of embedded SD (eSD) flash drives is its use of the standard, industry-leading SD interface. This makes integration a snap. A high-speed data bus delivers maximum performance, while providing an optimal solution for multimedia handsets that require tight routing due to design constraints and limited space.



- ✓ Boot
- ✗ No MLC NAND support – low capacity
- ✗ Software efforts needed
- ✗ Backward compatibility not guaranteed for every technology transition

- ✓ Boot
- ✓ MLC NAND support – scalable high capacity
- ✓ No software efforts needed
- ✓ Backward compatible for every technology transition

SanDisk®

More Reliable

SanDisk uses advanced flash management that handles MLC NAND transparently to the host, while providing full block device emulation and a disk-like interface. Robust error detection and correction engines, automated bad block management and advanced wear leveling ensure optimal storage and boot functionality.

More Functionality in One Device

iNAND eSD is a reliable code storage and boot device. Dedicated physical partitions, managed by customizable levels of protection, now allow boot code to be safely stored and accessed via the SD interface. Eliminating the need for an additional boot code storage device and a NOR or NAND interface substantially reduces system design complexity and cost.

Ease of Design Redefined

iNAND eSD comes in a wide range of storage capacities and packages with up to 16GB* NAND flash. It is also available as part of an MCP configuration with up to 2Gb of low-power DRAM. All iNAND and iNAND-based MCP products share the same ballout and design requirements, allowing customers to design once for several projects with scaling storage capacities.

Why iNAND?

- **Advanced flash technology** – Access the latest, cost-effective generation of SanDisk advanced MLC NAND flash technology.
- **Standard interface and form factor** – Simplify integration with industry-leading SD interface and standard packaging.
- **High performance** – Enhance the user experience with rates as high as 15MB/s read and 9MB/s write.
- **Powerful flash management** – Depend on SanDisk technology to internally ensure flash reliability and off-load tasks from the host.
- **Boot and storage in one device** – Save space and reduce design complexity by catering to both boot and storage needs.

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SanDisk iNAND eSD Family of Products	
Capacity	4Gb-128Gb (512MB-16GB)
Interface**	SD
NAND flash technology	SanDisk MLC
Package (mm)	Discrete: 11.5x13, 12x16, 12x18 MCP: 11.5x13, 12x16, 12x18
SanDisk flash management	Embedded firmware
Performance	Sustained read: 15MB/sec Sustained write: 9MB/sec
Operating voltage	Core: 3.3V, I/O: 3.3V/1.8V (auto-detect)
Power-save mode	250uA
Active current	Default: 100mA, high speed: 200mA

* 1 gigabyte (GB) = 1 billion bytes; 1 megabyte (MB) = 1 million bytes; speed based on internal testing; performance may be lower depending on host device. Some capacity not available for data storage.

** Also available with MMC interface.

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