SLC NAND: Reliable, High-Performing, Low-Density NAND

KIOXIA delivers flash-based products for next-generation storage applications. Having invented NAND flash over 30 years ago, KIOXIA is now one of the world’s largest flash memory suppliers – and continues to move the technology forward.

What is SLC NAND?
Single-level cell (SLC) NAND flash memory is the original NAND architecture. A 1-bit-per-cell, non-volatile memory, SLC provides the high endurance that makes it ideally suited for a variety of consumer and industrial applications where longevity of supply is important.

KIOXIA’s SLC NAND product family includes two interface options: PARALLEL and SERIAL.

### PARALLEL INTERFACE:
Available as raw SLC NAND or as BENAND™ (Built-in ECC NAND), BENAND is SLC NAND with an internal hardware error correction code (ECC) engine, which removes the burden of ECC from the host processor.

### SERIAL INTERFACE:
KIOXIA’s Serial NAND is SLC NAND with a serial peripheral interface (SPI). SPI is an industry standard inter-chip interface that is used in NOR flash and supported by most microprocessors and microcontrollers.

### ADVANTAGES:
- 24nm Process Technology
- Wide-Ranging Line-Up (1Gb - 256Gb)
- High Performance and Reliability
- Commercial and Industrial Temperature
- Supports both 3V and 1.8V Options
- Small BGA Package (6.5x8mm) Available for 1Gb – 8Gb Densities

### KEY FEATURES:
- SLC’s main advantages over MLC, TLC and QLC include: ability to read and write data at low latency, support high-write/erase cycle endurance, and offer I-temp availability.

### APPLICATIONS
- Digital TVs
- Set-top boxes
- Printers
- POS
- Smart Speaker
- Toys/Games
- Robots
- Smart Meters
- M2M Modules
- GPON Modules
- IoT
- Surveillance Cameras
- Wearables
- Medical

“SLC NAND continues to play an important role in a diverse range of consumer and industrial applications. KIOXIA is one of the world’s largest suppliers of SLC NAND - and one of the few that are committed to continuing to develop and support it long term.”

- Brian Kumagai, Director of Business Development, KIOXIA


BENAND is a trademark of KIOXIA Corporation.

[1] Product density is identified based on the density of memory chip(s) within the Product, not the amount of memory capacity available for data storage by the end user. Consumer-usable capacity will reduce due to overhead data areas, formatting, bad blocks, and other constraints, and may also vary based on the host device and application. For details, please refer to applicable product specifications. The definition of 1GB = 2^30 bytes = 1,073,741,824 bytes. The definition of 1Gb = 2^30 bits = 1,073,741,824 bits.