KIOXIA

Product Brief

SLC NAND

A 1-bit per cell, non-volatile memory, KIOXIA's SLC NAND writes large amounts of data at high speed; provides high write/erase cycle endurance; offers support for a wide range of operating temperatures and provides excellent reliability. Its high endurance makes it ideally suited for a variety of consumer and industrial applications where reliability and longevity of supply is important.

Noted for its high performance, reliability, compact form factor, low power consumption, and ability to work over an extended temperature range, single-level cell (SLC) NAND is a cornerstone NAND flash technology. It offers an excellent balance between cost and performance to store boot and small-to-medium OS code for many applications, including IoT, automotive and emerging embedded applications.

Advantages

- High read/write performance
- High reliability and endurance
- Low power consumption
- Small package options
- Extended temperature range
- Cost-effective solution with low density options

Key Features

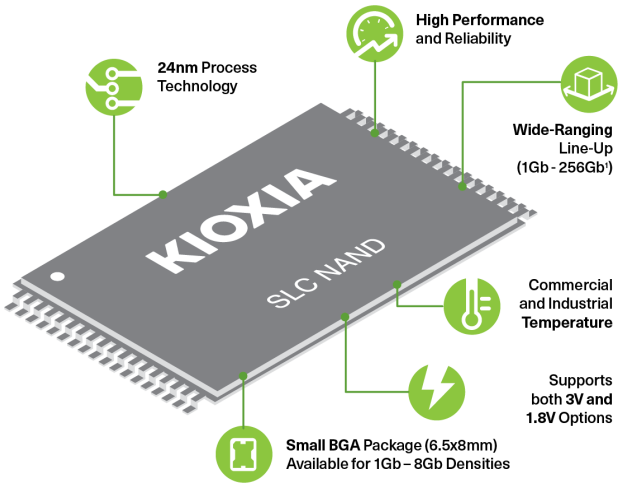
- 24nm process technology
- Wide density range
- Commercial & industrial temperatures
- 3V and 1.8V options
- Broad package line-up: 63 BGA,
- 67 BGA, TSOP, 132 BGA

Applications

- Digital TVs
- Set-top-boxes
- Printers
- Digital cameras
- DVD and Blu-Ray
- Players
- Toys/Games
- Robots
- Smart Meters
- M2M Modules
- GPON Modules
- IoT
- Surveillance
- Cameras
- Wearables
- Medical

Densities

- 1Gb
- 2Gb
- 4Gb
- 8Gb
- 16Gb
- 32Gb
- 64Gb
- 128Gb
- 256Gb



Why KIOXIA SLC NAND?

KIOXIA's SLC NAND memory products provide best-in-class endurance and reliability and are available in a range of densities and multiple package options to meet the diverse requirements of the embedded market. From raw SLC NAND to Serial Interface NAND to BENAND™, designers can choose an SLC NAND device based on the error correction capability and memory interface of the host controller used in their application.

Invented by KIOXIA in 1987, SLC NAND is the original NAND architecture. Today, KIOXIA is one of the world's largest suppliers of SLC NAND and remains committed to support multiple SLC NAND generations to accommodate applications that have long product life cycles. In fact, we have an entire fab dedicated to support the production of SLC NAND.

SLC NAND | Raw NAND

Part Number (24nm)	Capacity (bit)	VCC (V)	Page Size (bit)	Block Size (bit)	Operating Temp (°C)	Package	Number of Pins
TC58NVG0S3HTA00	1G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	0 to 70	TSOP	48
TC58NVG0S3HBAI4	1G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	63
TC58NVG0S3HBAI6	1G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	67
TC58NVG0S3HTAI0	1G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	TSOP	48
TC58NYG0S3HBAI4	1G	1.70 to 1.95	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	63
TC58NYG0S3HBAI6	1G	1.70 to 1.95	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	67
TC58NVG1S3HTA00	2G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	0 to 70	TSOP	48
TC58NVG1S3HBAI4	2G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	63
TC58NVG1S3HBAI6	2G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	67
TC58NVG1S3HTAI0	2G	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	TSOP	48
TC58NYG1S3HBAI4	2G	1.70 to 1.95	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	63
TC58NYG1S3HBAI6	2G	1.70 to 1.95	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	67
TC58NVG2S0HTA00	4G	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	0 to 70	TSOP	48
TC58NVG2S0HBAI4	4G	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	63
TC58NVG2S0HBAI6	4G	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	67
TC58NVG2S0HTAI0	4G	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	TSOP	48
TC58NYG2S0HBAI4	4G	1.70 to 1.95	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	63
TC58NYG2S0HBAI6	4G	1.70 to 1.95	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	67
TH58NVG2S3HTA00	4G (2Gx2)	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	0 to 70	TSOP	48
TH58NVG2S3HTAI0	4G (2G x2)	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	TSOP	48
TH58NYG2S3HBAI4	4G (2Gx2)	1.70 to 1.95	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	63
TH58NVG2S3HBAI4	4G (2Gx2)	2.70 to 3.60	(2048+128)x8	(128K+8K)x8	-40 to 85	FBGA	63
TH58NVG3S0HBAI4	8G (4Gx2)	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	63
TH58NVG3S0HBAI6	8G (4Gx2)	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	67
TH58NVG3S0HTA00	8G (4Gx2)	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	0 to 70	TSOP	48
TH58NVG3S0HTAI0	8G (4Gx2)	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	TSOP	48
TH58NYG3S0HBAI4	8G (4Gx2)	1.70 to 1.95	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	63
TH58NYG3S0HBAI6	8G (4Gx2)	1.70 to 1.95	(4096+256)x8	(256K+16K)x8	-40 to 85	FBGA	67
TH58NVG4S0HTA20	16G (4Gx4)	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	0 to 70	TSOP	48
TH58NVG4S0HTAK0	16G (4G x4)	2.70 to 3.60	(4096+256)x8	(256K+16K)x8	-40 to 85	TSOP	48

* For 32nm and 43nm product information, please contact KIOXIA.

Product image may differ from the actual product.

Read and write speed may vary depending on the host device, read and write conditions, and file size.

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 be less 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