



新一代24nm SLC NAND Flash

兆易创新24nm工艺SLC NAND 产品，核心容量1Gb，2Gb，4Gb，8Gb，提供传统并行接口和新型SPI串行接口两个系列，已经成功量产。面对NAND Flash在操作过程中会遇到的问题，兆易创新通过采用8-bit ECC算法来管理、侦测并纠错，提供高性能和安全特性，致力于为5G、物联网、网通、安防，以及包括可穿戴式设备在内的消费类应用场景，提供大容量、具备成本优势的解决方案。

- ◆ 支持1.8V/3V两种供电电压
- ◆ 支持2K-Byte/4K-Byte Cache空间随机读取
- ◆ 编程/擦除周期达8万次，数据保留时间10年
- ◆ Parallel NAND接口支持x8，兼容ONFI1.0
- ◆ SPI NAND接口支持x1/x2/x4/x4 DTR
- ◆ SPI NAND额外支持Internal ECC，Continuous Read，Deep Power Down等功能
- ◆ 支持工规/车规 -40°C~85°C/-40°C~105°C

SPI NAND

Part No.	Density	Voltage	Frequency	I/O Bus	Page Size	ECC Requirement	Package
GD5F1GM7UE	1Gb	3V	133MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F1GM7RE	1Gb	1.8V	104MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F1GM9UE	1Gb	3V	166MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F1GM9RE	1Gb	1.8V	133MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F2GM7UE	2Gb	3V	133MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F2GM7RE	2Gb	1.8V	104MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F4GM8UE	4Gb	3V	133MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)
GD5F4GM8RE	4Gb	1.8V	104MHz	x1/x2/x4	2KB	Internal 8bit/512B	WS0N8 8x6mm/WS0N8 6x5mm TFBGA24 8x6mm(5x5 ball array)

Parallel NAND

Part No.	Density	Voltage	Sequential Access Time	I/O Bus	Page Size	ECC Requirement	Package
GD9FU1G8F2D	1Gb	3V	12ns	x8	2KB+128B	8bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS1G8F2D	1Gb	1.8V	20ns	x8	2KB+128B	8bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FU4G8F4D	4Gb	3V	12ns	x8	4KB+256B	8bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS4G8F4D	4Gb	1.8V	20ns	x8	4KB+256B	8bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FU8G8E4D	8Gb	3V	12ns	x8	4KB+256B	8bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS8G8E4D	8Gb	1.8V	20ns	x8	4KB+256B	8bit/512B	TSOP48 20x12mm/BGA63 9x11mm

成熟工艺38nm SLC NAND Flash

久经行业验证，具备业界领先性和可靠性

兆易创新成熟工艺38nm SLC NAND Flash 产品，核心容量1Gb, 2Gb, 4Gb, 8Gb, 提供传统并行接口和新型SPI串行接口两个系列，拥有出色的软硬件兼容性，用户可以在兆易创新产品中轻松实现同其他普通标准型SLC NAND 闪存的替换。面对NAND Flash在操作中遇到的问题，兆易创新通过采用4-bit ECC算法来管理、侦测并纠错，可靠性方面可达到10万次擦写和10年的数据保持力，为包括工控、基站、物联网（IoT）、汽车信息娱乐系统、智能电视、可穿戴设备在内的众多应用提供大容量、高性能存储。

- ◆ 支持1.8V/3V两种供电电压
- ◆ 支持2K-Byte Cache空间随机读取
- ◆ 高可靠性，编程/擦除周期达10万次，数据保留时间10年
- ◆ Parallel NAND接口支持x8/x16，兼容ONFI1.0
- ◆ SPI NAND接口支持x1/x2/x4/x4 DTR
- ◆ SPI NAND额外支持Internal ECC
- ◆ 支持工规/车规 -40°C~85°C/-40°C~105°C

SPI NAND

Part No.	Density	Voltage	Frequency	I/O Bus	Page Size	ECC Requirement	Package
GD5F1GQ5U	1Gb	3V	133MHz	x1/x2/x4	2KB	Internal 4bit/512B	WS0N8 8x6mm
GD5F1GQ5R	1Gb	1.8V	104MHz	x1/x2/x4	2KB	Internal 4bit/512B	WS0N8 8x6mm
GD5F2GQ5U	2Gb	3V	104MHz	x1/x2/x4	2KB	Internal 4bit/512B	WS0N8 8x6mm
GD5F2GQ5R	2Gb	1.8V	80MHz	x1/x2/x4	2KB	Internal 4bit/512B	WS0N8 8x6mm
GD5F4GQ6U	4Gb	3V	104MHz	x1/x2/x4	2KB	Internal 4bit/512B	WS0N8 8x6mm
GD5F4GQ6R	4Gb	1.8V	80MHz	x1/x2/x4	2KB	Internal 4bit/512B	WS0N8 8x6mm

Parallel NAND

Part No.	Density	Voltage	Sequential Access Time	I/O Bus	Page Size	ECC Requirement	Package
GD9FU1G8F2/3A	1Gb	3V	25ns	x8	2KB+128B/64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS1G8F2/3A	1Gb	1.8V	45ns	x8	2KB+128B/64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FU2G8F2/3A	2Gb	3V	20ns	x8	2KB+128B/64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS2G8F2/3A	2Gb	1.8V	25ns	x8	2KB+128B/64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FU4G8F3A	4Gb	3V	20ns	x8	2KB+64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS4G8F3A	4Gb	1.8V	25ns	x8	2KB+64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FU8G8E3A	8Gb	3V	20ns	x8	2KB+64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9FS8G8E3A	8Gb	1.8V	25ns	x8	2KB+64B	4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9AU2G8F3A	2Gb	3V	20ns	x8	2KB+64B	Internal 4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9AS2G8F3A	2Gb	1.8V	25ns	x8	2KB+64B	Internal 4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9AU4G8F3A	4Gb	3V	20ns	x8	2KB+64B	Internal 4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9AS4G8F3A	4Gb	1.8V	25ns	x8	2KB+64B	Internal 4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9AU8G8E3A	8Gb	3V	20ns	x8	2KB+64B	Internal 4bit/512B	TSOP48 20x12mm/BGA63 9x11mm
GD9AS8G8E3A	8Gb	1.8V	25ns	x8	2KB+64B	Internal 4bit/512B	TSOP48 20x12mm/BGA63 9x11mm

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