Lexar

ENTERPRISE

SPI NAND Flash Automotive and Industrial Plus
Product Brief

FORESEE®
SPI NAND
Flash

Capacities

512Mb, 1Gb, 2Gb, 4Gb

Advanced Features

- Quad SPI Program/Read Mode capable
- Embedded ECC function for error correction
- Available in 1.8V and 3.3V options
- Compact 5x6mm and 6x8mm WSON8 package
- Auto Grade 2 AEC-Q100 certified
- Operating temperature range:
  Industrial temperature: -40°C to +85°C
  Auto Grade 2: -40°C to +105°C

Applications

- Smart meters, home and industrial IPCs
- Automotive solutions
- IoT devices and wireless modules
- Smart audio devices
- Medical devices and wearables
- Video games, toys, and smart robots
- Wireless router, xPON devices, FTTR

Seamless Performance for Embedded Systems

Serial peripheral interface (SPI) NAND provides a low-cost and low-pin-count solution for high-density, non-volatile storage in embedded systems. Through a simplified board layout, SPI NAND uses only six active pins, ideal for small form factor applications, and ensures seamless communication between devices. Equipped with an Auto Grade 2 AEC-Q100 certification, the SPI NAND is also an excellent solution for automotive applications.

Key Benefits

Standardized High-Speed SPI Interface

SPI NAND Flash leverages a well-defined SPI protocol to ensure seamless communication between the host controller and the memory device. Optimized SPI communication delivers high-speed transfer rates, and makes SPI NAND flash a reliable choice for real-time applications.

Extensive Hardware Compatibility

SPI NAND and SPI NOR flash memory use the same interface pins and communications protocol to provide seamless migration between the two without significant change to the hardware design. Existing SPI drivers and software libraries can be leveraged to reduce development effort and time-to-market.

Lower Bit Cost

Optimizations to cell structure and pin requirements enable a lower cost per bit. Compared to traditional SPI NOR Flash, SPI NAND offers a cost-effective choice for embedded systems.

Extended Retention and High Performance

With SPI NAND, robust data retention ensures stored information remains intact over long durations. Its efficient write-and-erase operations allow frequent updates without compromising reliability, making SPI NAND essential for firmware storage, data logging, and system configuration applications.

Specifications

Product Series	Part Number	Capacity	Nand Flash	Size	Package	Operating Temperature	Protocol/ Interface	Operating Voltage
SPI NAND Flash	F35SQA512M-VWT	512Mb	SLC	6x5mm	8-WSON	-40°C to +85°C	SPI	2.7V~3.6V
SPI NAND Flash	F35SQA512M-WWT	512Mb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	2.7V~3.6V
SPI NAND Flash	F35UQA512M-VWR	512Mb	SLC	6x5mm	8-WSON	-40°C to +85°C	SPI	1.7V~1.95V
SPI NAND Flash	F35UQA512M-WWR	512Mb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	1.7V~1.95V
SPI NAND Flash	F35SQA001G-VWT	1Gb	SLC	6x5mm	8-WSON	-40°C to +85°C	SPI	2.7V~3.6V
SPI NAND Flash	F35SQA001G-WWT	1Gb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	2.7V~3.6V
SPI NAND Flash	F35UQA001G-VWR	1Gb	SLC	6x5mm	8-WSON	-40°C to +85°C	SPI	1.7V~1.95V
SPI NAND Flash	F35UQA001G-WWR	1Gb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	1.7V~1.95V
SPI NAND Flash	F35UQA001G-W2R	1Gb	SLC	8x6mm	8-WSON	-40°C to +105°C Auto Grade 2	SPI	1.7V~1.95V
SPI NAND Flash	F35SQA002G-WWT	2Gb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	2.7V~3.6V
SPI NAND Flash	F35UQA002G-WWR	2Gb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	1.7V~1.95V
SPI NAND Flash	F35SQB004G-WWT	4Gb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	2.7V~3.6V
SPI NAND Flash	F35UQB004G-WWT	4Gb	SLC	8x6mm	8-WSON	-40°C to +85°C	SPI	1.7V~1.95V
SPI NAND Flash	F35UQB004G-W2R	4Gb	SLC	8x6mm	8-WSON	-40°C to +105°C Auto Grade 2	SPI	1.7V~1.95V

*Data based on internal testing. Actual performance may vary due to equipment differences.