



Get More for Less in Your Embedded Designs with Serial NAND Flash

Micron® Serial NAND Flash Memory

“Embedded applications” has become an umbrella term for some of the most compelling devices available, including intelligent or interactive toys, books, and games; Web-enabled printers and computer peripherals; and backward-compatible WiMAX boxes. In the past, these embedded designs relied on serial peripheral interface (SPI) NOR Flash for code shadowing, data storage, or storing BIOS and firmware. But as embedded applications continue to evolve, they’ll require more density from their serial memory solution than NOR can offer.

With four times or more the density of SPI NOR, Serial NAND is a great alternative to NOR for many embedded designs. And since Serial NAND has the lowest cost-per-megabit of any serial Flash solution, it’s also a great way to lower your BOM cost.

The Serial Peripheral Interface

Micron’s Serial NAND Flash memory is compatible with the widely used, 4-signal SPI standard. Because of its compatibility with a well known, de facto standard, Serial NAND can replace more expensive and far less dense SPI NOR—and even parallel NOR—in many applications. The SPI provides serial clock, serial data-in, serial data-out, and chip select pins.

Features

- 1Gb
- On-chip ECC
- –40°C to +85°C operating temperature
- 2.7–3.6V Vcc
- 50 MHz clock frequency

6 Reasons Serial NAND is Right for Embedded Designs

1. Error Correction

On-chip error correction code (ECC) resolves many perceived complications of working with a NAND solution.

2. Lower Power

Requires less power than other solutions.

3. Higher Density

Densities starting at 1Gb make Serial NAND the highest-density serial solution available, allowing for larger BIOS and more embedded features.

4. Easy Integration

Compatible with the popular SPI standard.

5. Performance

Faster write performance than other serial memory solutions.

6. Software Flexibility

Supports parallel NAND drivers for ECC, serial interface, and flash translation layer (FTL) for advanced features.



Applications

As embedded designs evolve, they will demand more density from a serial memory solution. Serial NAND Flash provides that density at a cost-per-megabit that will make it a popular choice for many embedded applications.

- Intelligent toys
- Set-top boxes
- Web-enabled peripherals
- WiMAX
- POS systems
- Data logging
- Industrial applications
- Printers

Technology Benefits

- Standard interface (SPI)
- SLC NAND endurance
- Faster write performance and lower power consumption than other serial solutions
- Lowest cost-per-megabit serial memory
- Third-party software available

Contact Us

For the support you need, choose a supplier that's leading the Flash market into the embedded space. Micron's Serial NAND solutions are sampling now. To find out more about product specifications and availability, visit micron.com/serialnand



Micron's evaluation boards, coupled with third-party software, make it easier to test our Serial NAND solutions.

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