



# Get More for Less in Your Embedded Designs with On-Die ECC NAND

## Micron® On-Die ECC 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 WiMAX boxes. In the past, these embedded designs relied on NOR Flash for code, data storage, or storing BIOS and firmware. But as embedded applications continue to evolve, they’ll require more density from their nonvolatile memory solutions than NOR can offer.

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

### The Interface

Micron’s On-Die ECC NAND Flash memory is compatible with the Open NAND Flash Interface (ONFI) 1.0 standard. This standard interface allows applications to easily enable new on-die ECC features using the standard ONFI Get/Set commands. With our On-Die ECC NAND Flash, processors and controllers with insufficient ECC resources can migrate to and support the latest NAND Flash technology without making any hardware changes.

### Features

- 1Gb, 2Gb, and 4Gb densities
- On-chip, ECC (4 bits)
- -40°C to +85°C operating temperature
- 2.7–3.6V Vcc or 1.65–1.95V Vcc
- Up to 50 MHz clock frequency

## 6 Reasons On-Die ECC 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 On-Die NAND the highest-density nonvolatile solution available, allowing for larger BIOS and more embedded features.

### 4. Easy Integration

Using on-die ECC devices enables processors and controllers with insufficient ECC capabilities to use the latest NAND Flash technology.

### 5. Performance

Offers faster write performance than other non-volatile memory solutions.

### 6. Software Flexibility

Third-party software available.



## Applications

As embedded designs evolve, they will demand more density from a nonvolatile memory solution. On-Die ECC 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

- 4 bits of built-in ECC
- Standard ONFI interface
- SLC NAND endurance
- Faster write performance and lower power consumption than other nonvolatile solutions
- Lowest cost-per-megabit nonvolatile 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 On-Die ECC NAND solutions are sampling now. To find out more about product specifications and availability, visit [micron.com](http://micron.com).

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