Micron® G18 x16 Parallel NOR

*High performance. High density. Low power. Low ball count.*

Our G18 parallel NOR product line is ideal for applications that require fast, reliable code storage and execution when milliseconds matter in boot performance and beyond—a prime example of the purpose-built embedded memory solutions we offer.

G18 NOR delivers read speeds up to 266 MB/s and fast load times that meet 200µs boot requirements; it’s also 3X faster than quad SPI. Its flexible multipartition architecture enables you to execute code and write or erase data simultaneously.

G18 NOR provides low 1.8V core and I/O voltage for better power consumption in a small package. The G18 family also provides A/D MUX and AA/D MUX configurations that reduce I/O ball count by more than 50% over traditional parallel NOR products, providing the best bandwidth per pin.

Built with our advanced 65nm NOR process technology and sixth-generation multilevel cell (MLC) technology, G18 products are also designed for compatibility with our JEDEC industry-standard P30 parallel NOR product line. MLC technology allows storage of two bits in each memory cell, enabling twice the density in the same die footprint, creating smaller NOR solutions and better value for customers.

Ideal Applications
- Automotive
- Avionics
- Industrial POS terminals and automation equipment
- Enterprise servers and networking equipment
- Wearables
- Digital still cameras
- Medical test equipment
- FPGA reference designs

3 Reasons G18 NOR Is Right for Your Computing Designs

1. High Burst Read Speed
At up to 133 MHz and 266 MB/s, G18 NOR delivers burst read speeds that are more than 3X faster than other standard parallel NOR embedded solutions.

2. Fast Write Speed
G18 NOR delivers up to 1 MB/s write speeds, which can improve factory throughput and lower manufacturing costs.

3. Wide Density Range and Low Ball Count in a Small Package
With solutions from 256Mb to 1Gb, the G18 family supports a range of density needs and a more than 50% reduction in ball count in a small 8 x 10mm package size (1.0mm ball pitch).
Micron G18 Parallel NOR Devices

Random Read Access Performance vs. Large Data Size

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Densities of 256Mb, 512Mb, and 1Gb</td>
<td>Full range of densities to deliver high performance with 65nm technology</td>
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<tr>
<td>Synchronous read speeds up to 266 MB/s (133 MHz)</td>
<td>Fast code execution (133 MHz synchronous bus speed with zero WAIT state)</td>
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<td>1.8V low-power operation</td>
<td>Ideal for low-power or battery-backed applications</td>
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<td>Address/data multiplex (A/D MUX) and address address data multiplex (AVAD MUX) configurations</td>
<td>Reduces active ball count by more than 50%; 24 balls (AVAD MUX) and 34 balls (A/D MUX) vs. 50 balls (standard non-MUX), providing the highest bandwidth per ball</td>
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<td>Small 8 x 10mm, 1.0mm ball pitch BGA package size</td>
<td>For applications requiring small, reliable form factors</td>
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<td>Security features (OTP, block lock/lock down, and absolute write protect)</td>
<td>One-time-programmable (OTP) protection register for traceability, license control, and system authentication; block lock and write protect ensures data is secure from corruption and malicious attacks</td>
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<td>Flexible multipartition architecture</td>
<td>Enables read-while-write and erase functionality</td>
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<td>–40°C to 85°C industrial temperature (IT) grade</td>
<td>For applications that require high performance within extreme temperature ranges</td>
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<tr>
<td>–40°C to 105°C automotive temperature (AT) grade available end of 2014</td>
<td>Product availability and support for up to 7+ years to meet long-lifecycle application requirements</td>
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A Full Portfolio of NOR Options

Micron offers a broad portfolio of parallel and serial (SPI) NOR options tested to work with key processors. Select the device that meets your application’s requirements for performance, voltage, and other features from our part catalog in the NOR Flash section at micron.com.

Contact Us

With more than three decades of memory development expertise and a full portfolio of NOR, NAND, and DRAM products, Micron is your best choice for embedded memory solutions.

Contact your Micron sales representative with questions or for samples and support.