Why Buy Micron NOR Flash?

1. Broad Portfolio
Rely on one of the industry’s most comprehensive Parallel and Serial NOR Flash portfolios, with devices offered in a broad range of densities and packages.

2. Competitive Solutions
Get instant power-on with best-in-class 166 MB/s read throughput; improve firmware updates with best-in-class 2 MB/s program throughput; and increase application security with advanced block protection and RPMC.

3. Product Lifecycle Solutions
Design with confidence knowing that Micron’s Product Lifecycle Solutions bring the stability of our long-term memory support in alignment with the lifecycle of your design. Depending on your specific requirements, choose between our standard lifecycle support and the extended support of our Product Longevity Program (PLP), which goes one step further for long-life applications that need support for 7 to 10+ years.

Micron® Serial NOR Flash

Whether you need to simplify your design with industry-standard features or develop a long-term, long-lifecycle solution, Micron’s Serial NOR Flash provides fast data throughputs, secure data storage, architectural flexibility, and long-term product support for your system design requirements.

Manufactured using advanced process lithographies down to 45nm, our Serial NOR Flash products are built to meet the needs of consumer, communications, automotive, and computing applications as well as the next generation of Internet of Things (IoT) applications. Our industry-standard packaging, pinouts, command sets, and chipset support and compatibility makes our Serial NOR Flash easy to design in, saving you valuable development time while ensuring compatibility with existing and future designs.

Key Features and Benefits
• **Density**: Industry’s broadest range (512Kb–2Gb)
• **Performance**: Operation up to 166 MHz, 166 MB/s read throughput, 2 MB/s program throughput; best-in-class frequency in full voltage and extended temperature ranges
• **Interface**: Single SPI, dual I/O, quad I/O, and twin-quad I/O standard interfaces, along with double transfer rate (DTR) mode, to enable a high degree of flexibility, performance, and backward compatibility
• **Operating Voltage**: Low-voltage (1.7–2.0V) solutions, as well as full voltage (2.3–3.6V) range support
• **Package Options**: Industry-standard, Pb-free package options, such as SOIC, TBGA, and DFN, in addition to ultra-small wafer-level chip-scale package (WLCSP) and known good die (KGD) options
• **Temperature Range**: Full industrial (–40°C to 85°C) and automotive AEC-Q100 grade 1 (–40°C to 125°C) temperature support to address a variety of applications
• **Security**: Replay-protected monotonic counter (RPMC); hardware and software block protection
Micron Serial NOR Flash

Full-Spectrum Solutions
With the most comprehensive Serial NOR Flash portfolio in the industry, Micron delivers a broad range of cost-effective devices that add value to both high- and low-end applications. Our product family can help simplify the design process with industry-standard interfaces and packaging, as well as extended voltage and temperature ranges.

If you’re looking for small-footprint, high-performance, low-power, cost-effective NOR Flash solutions that are compatibility-tested to work with key processors, our Serial NOR Flash is the right choice for your next design.

Serial NOR Flash Applications
Micron’s Serial NOR Flash meets the requirements of many segments:

- **Consumer and Computing**: With diverse attributes and features, our Serial NOR Flash family is ideal for a wide array of applications such as printers, graphic cards, gaming consoles, set-top boxes (STBs), PCs/notebooks, servers, tablets, DVD/Blu-ray writers and players, video recorders, routers, Bluetooth devices, Wi-Fi modules, and wearables.

- **Embedded**: Micron’s Serial NOR Flash can address a variety of embedded applications, including smart meters, home automation and control, network infrastructure, broadband connectivity, VoIP access, white goods, and test and measurement equipment. Select Serial NOR Flash solutions are designated as Micron PLP products to provide supply stability and longevity for mission-critical embedded applications that have extensive design-in or requalification requirements.

  - **Automotive**: Using advanced Serial NOR Flash process technology and robust design methodologies, our highly reliable automotive solutions (available in MT25T, N25Q, M25P, M25PX, and M25PE product families) are AEC-Q100 qualified. They support extended and automotive temperature ranges for use in a variety of environmental conditions, and they provide higher-capacity storage for powertrain controls, dashboard applications, in-car infotainment systems, and driver safety equipment.

Contact Us
Visit [micron.com](http://micron.com) for more details on Serial NOR Flash solutions. Contact your Micron sales representative with questions or for samples and support.

Visit [micron.com/lifecycle](http://micron.com/lifecycle) for specific product lifetime dates and product coverage, as not all Serial NOR Flash products are included in Micron’s PLP. Micron’s PLP is not a commitment to a static product, nor is it a guarantee of supply. Micron reserves the right to exclude certain products from the PLP.

Serial NOR Flash Product Family

<table>
<thead>
<tr>
<th>Product Family</th>
<th>Voltage Range</th>
<th>Sector Erase Size</th>
<th>Bus Width</th>
<th>Density Range(^1)</th>
<th>Max Clock/Max Data Transfer Rate</th>
<th>Security</th>
<th>Package(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT25T</td>
<td>1.7–2.0V, 2.7–3.6V</td>
<td>Uniform 4KB, 32KB, 64KB</td>
<td>x1, x2, x4, x8</td>
<td>256Mb–1Gb</td>
<td>166 MHz (166 MB/s)</td>
<td>Adv. write protection/ RPMC</td>
<td>SOIC, BGA</td>
</tr>
<tr>
<td>MT25Q</td>
<td>1.7–2.0V, 2.7–3.6V</td>
<td>Uniform 4KB, 32KB, 64KB</td>
<td>x1, x2, x4</td>
<td>128Mb–2Gb</td>
<td>166 MHz (83 MB/s)</td>
<td>Adv. write protection/ RPMC</td>
<td>SOIC, DFN, BGA, KGD, CSP</td>
</tr>
<tr>
<td>N25Q</td>
<td>1.7–2.0V, 2.7–3.6V</td>
<td>Uniform 4KB, 64KB</td>
<td>x1, x2, x4</td>
<td>16Mb–1Gb</td>
<td>108 MHz (54 MB/s)</td>
<td>Adv. write protection/ RPMC</td>
<td>SOIC, DFN, BGA, KGD, CSP</td>
</tr>
<tr>
<td>M25P</td>
<td>2.3–3.6V</td>
<td>Uniform 32KB, 64KB(^2)</td>
<td>x1</td>
<td>512Kb–16Mb</td>
<td>75 MHz (9 MB/s)</td>
<td>Standard</td>
<td>SOIC, DFN, KGD</td>
</tr>
<tr>
<td>M25PX</td>
<td>2.3–3.6V</td>
<td>Uniform 4KB, 64KB</td>
<td>x1, x2</td>
<td>8Mb–16Mb</td>
<td>75 MHz (9 MB/s)</td>
<td>Standard</td>
<td>SOIC, DFN, BGA, KGD</td>
</tr>
<tr>
<td>M25PE</td>
<td>2.7–3.6V</td>
<td>Uniform 256B, 4KB, 64KB</td>
<td>x1</td>
<td>1Mb–16Mb</td>
<td>75 MHz (19 MB/s)</td>
<td>Standard</td>
<td>SOIC, DFN, KGD</td>
</tr>
<tr>
<td>M45PE</td>
<td>2.7–3.6V</td>
<td>Uniform 256B, 64KB</td>
<td>x1</td>
<td>1Mb–16Mb</td>
<td>75 MHz (19 MB/s)</td>
<td>Standard</td>
<td>SOIC, DFN, KGD</td>
</tr>
</tbody>
</table>

\(^1\)Not all densities available in all package and voltage combinations. \(^2\)M25P05 and M25P10 erase sector = 32KB, M25P20 – M25P16 erase sector = 64KB.

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