

# Need a High-Performance Storage Solution?

## Micron® High-Speed NAND Flash Interface

Are your high-performance NAND Flash designs bogged down by bottlenecks caused by a slow interface? If you've been looking for a pathway to greater read/write performance than traditional NAND Flash can deliver, look at what Micron has to offer. Our high-speed NAND interface delivers the fastest read and write throughputs ever for a NAND Flash device. If we were talking cars, we'd be talking Formula 1 fast—something built to get you to market quickly with a top-notch, high-performance design.

### Features

#### High-Speed Performance

- Up to 200 MB/s read and write speeds (vs. 40 MB/s for a standard NAND interface)

#### Interface Compatibility

- ONFI 2.1 synchronous interface
- Backward compatible to earlier ONFI standards and asynchronous interfaces

The high-speed NAND interface is currently available both on MLC and SLC NAND Flash devices, in multiple configurations, and on several NAND modules. Contact Micron for details.

### Applications

- SSDs
- Hybrid hard drives
- Networking and storage
- Video-on-demand servers
- Memory backup systems
- High-performance flash cards
- Disk caching

## 4 Advantages of Designing with High-Speed NAND

### 1. Breakthrough Performance

The high-speed interface delivers the fastest NAND Flash read and write throughputs.

### 2. Simplified Design

Compatibility with earlier ONFI standards enables both backward-compatible and forward-looking designs.

### 3. Cost Savings

Reduced system complexity provides better performance at a lower cost.

### 4. An Evolution of NAND

Traditional NAND benefits like nonvolatility, reliability, and density still apply, enabling leading-edge applications to store more data.



## Speed is the Thing

We developed the high-speed NAND interface to provide new levels of performance for almost every storage application. Essentially it's a synchronous DDR interface with speed-optimized read and write logic. The result is a measurable competitive advantage—up to five times the performance of traditional NAND Flash devices. The fast read and write throughputs will break through the interface bottleneck you may have experienced with traditional NAND and provide a powerful data storage solution for your design.

## Implementation is Easy

We collaborated with the Open NAND Flash Interface (ONFI) Working Group and designed our High-Speed NAND family to the ONFI 2.1 standard to make it easier to design in to future high-performance applications. And the common footprint, command set, and interface promotes interoperability among NAND densities and process technologies. Our High-Speed NAND is definitely forward-looking and focused on speed, but its backward compatibility with earlier ONFI standards makes for a smooth, scalable transition to higher performance.

## Cost Savings is a Plus

By combining a new high-speed interface with NAND's inherent cost advantages, we've optimized the price/performance model. Our high-speed NAND interface requires fewer interleaved channels compared to

traditional high-performance NAND designs that require sophisticated caching techniques and multi-channel interleaving to achieve high data throughput. Reducing the number of memory channels and overall system complexity is one way High-Speed NAND can deliver equal or greater performance at a lower cost. It also achieves higher performance with lower densities and fewer devices.

## High-Speed NAND is the Road Map for the Future

Micron is satisfying current requirements and paving the way for new applications by being the first to create a new category of High-Speed NAND products based on the ONFI 2.1 interface.

Visit [www.micron.com/highspeed](http://www.micron.com/highspeed) for more details about how our high-speed NAND interface can enhance your next performance-focused mass storage application.

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