

# Micron® SSDs: A Solid Base to Secure Your Data

## Protecting Data With Hardware Encryption and Standards-Based Security

IT managers, Chief Information Officers and Chief Information Security Officers face an ever-increasing threat from attackers attempting to illicitly acquire or vandalize sensitive and valuable data. These threats call for a layered approach to data security — a defense in depth for your data.

Micron solid-state drives (SSDs) help provide a defense for the base layer of your data systems. This is known as data-at-rest protection for all the data stored at various locations throughout your enterprise — from the notebook to the data center and out to the cloud. Micron has secured SSDs for all of these applications, built with advanced security technology, helping protect the data from intrusion and protecting the security and integrity of the SSD and its firmware.<sup>1</sup>

### Threats to Data at Rest

Self-encrypting drives (SEDs) provide advanced protection for data at rest from some of the most prevalent and dangerous threats:

- **Lost or stolen computers or storage devices:** When powered off or in hibernation mode, SEDs automatically lock, requiring a passcode entry before being unlocked and used. Extremely robust 256-bit encryption means that the data is unreadable without that passcode, even when disassembled to the component level.
- **Sophisticated HDD/SSD attacks:** Sophisticated “hackers” have come up with ways to attack hard disk drives (HDDs) and SSDs at their most basic level: the firmware. Micron SSDs, whether encrypted or not, include advanced protection features to ensure the authenticity of the firmware. They also allow firmware updates in the field while reducing the risk of loading a corrupted or counterfeited firmware image.

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Micron SSDs are built with advanced security technology to help keep your data private and protect the integrity of the SSD and its firmware.

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### Benefits of Micron SEDs

#### Encryption That Doesn't Slow You Down

Built-in encryption engines perform at full interface speed, without using CPU bandwidth. Encrypted SSDs run at the same speed as their unencrypted counterparts.<sup>2</sup>

#### Standards-Based Security

Micron's encrypted SSDs meet industry standards for cryptographic security.

#### Compelling TCO

Encrypted SSDs achieve the same total cost of ownership (TCO) advantages as the rest of Micron's SSD family, plus the advantages of hardware encryption:

- **Simplified Key Management:** The SSD generates and securely stores the encryption keys, removing that function from the host computer or data center.
- **Fast and Secure Device Retirement/Redeployment:** Instant scramble erase (ISE) securely sanitizes all user data in seconds, eliminating the need for costly and slow legacy sanitation methods and enabling redeployment instead of wasteful device destruction.

## Feature-Rich Micron Self-Encrypting SSDs

- Micron’s solid, secure firmware that helps protect the storage platform against low-level attack
- Advance encryption standard (AES) 256-bit hardware encryption engine
- Standards-based security (Micron is a contributing member of the Trusted Computing Group, [www.trustedcomputinggroup.org](http://www.trustedcomputinggroup.org))
  - TCG Opal 2.0 compliance for secure client computing
  - TCG Enterprise compliance for SSDs in the data center and enterprise data storage
- Standards-based crypto-sanitize, with commands executable from Micron’s Storage Executive software (GUI or command line, Windows and Linux)
- Some models available with Trade Agreement Act (TAA) compliance, providing assurance that Micron SSDs designated as TAA-compliant are manufactured in TAA-designated countries, easing supply chain management for government accounts

## Micron SSD Portfolio Standards-Based Security<sup>1</sup> Features

Micron SSD		Self-Encrypted (SED)	Crypto-graphic Erase	NAND Block Erase	Digitally Signed Firmware	TCG Enterprise	TCG Opal	TCG Pyrite	TAA-Compliant
Client	2210	✓	✓	✓	✓		✓	✓	
	2300	✓	✓	✓	✓		✓	✓	
Data Center	5210	✓	✓	✓	✓	✓			✓*
	5300	✓	✓	✓	✓	✓	✓		✓*
	7300		✓	✓	✓				✓
	9300				✓				

\*TAA-compliant devices available; contact your sales team for additional information.

[MICRON.COM/SSD](http://MICRON.COM/SSD)

1. No hardware, software or system can provide absolute security under all conditions. Micron assumes no liability for lost, stolen or corrupted data arising from the use of any Micron products, including those products that incorporate any of the mentioned security features.
2. Comparisons based on Micron testing with standard benchmarks on SED and non-SED SSDs (same model number and capacity).