

Micron SSDs: A Solid Base to Secure Your Data

Protecting Data with Hardware Encryption and Standards-Based Security

IT managers, CIOs and CISOs 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 SSDs provide 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, protecting the data from intrusion and protecting the security and integrity of the SSD and its firmware.

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 hibernate mode, SEDs automatically lock, requiring a pass code entry before being unlocked and used. Extremely robust 256-bit encryption means that the data is unreadable without that pass code, even when disassembled to the component level.
- **Sophisticated HDD/SSD attacks:** Sophisticated “hackers” have come up with ways to attack 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, and allow firmware updates in the field while minimizing the risk of loading a corrupted or counterfeited firmware image.



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

Benefits of Micron Self-Encrypting SSDs

Encryption Without Performance Penalty

Built-in encryption engines perform at full interface speed, without using CPU bandwidth. Encrypted SSDs run at the same speed as their non-encrypted counterparts.

Compliance with Security Regulation

Micron encrypted SSDs meet industry standards for cryptographic security, ensuring compliance with government security and privacy regulations.

Improved TCO

Encrypted SSDs achieve all the same 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 only seconds, eliminating the need for costly and slow legacy sanitation methods, enabling the redeployment instead of wasteful device destruction.

Feature-Rich Micron Self-Encrypting SSDs

- Micron’s solid, secure firmware protects 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)
 - TCG Opal 2.0 compliance for secure client computing
 - TCG Enterprise compliance for SSDs in the data center and enterprise data storage
 - IEEE-1667 compliance for compatibility with Windows server and desktop
- Standards-based crypto-sanitize, with commands executable from Micron’s Storage Executive software (GUI or command line, Windows and Linux)
- Available FIPS 140-2 Level 2 Validated SSDs for client and enterprise
- Available compliance with Trade Agreements Act (USA) provides assurance that Micron SSDs designated as TAA compliant are manufactured in TAA-designated countries, easing supply-chain management for government accounts.

Micron SSD Security Features

	Hardware				Software		Compliance	
	Self-Encrypted (SED) AES-256-bit	TCG Opal 2.0 Compliant Firmware	BitLocker (Windows 10 or Windows Server)	TCG Enterprise	Sanitize	Crypto-Sanitize	FIPS	TAA
Client SSD:								
MX300	X	X	X		X	X		
1100/TAA	X	X	X		X	X		X
1100 FIPS	X	X			X	X	X	X
Data Center SSD:								
5100	X		X	X	X	X		X
Enterprise SSD:								
S600DC Series	X			X	X	X	X	
S650DC	X			X	X	X	X	

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