# Crypto M.2 SATA 6Gbps 22x60

# Full Disk Encryption AES 256-bit













# INTRODUCTION

The most secure next generation form factor encrypted SSD available.

If an ultrabook or laptop with an Integral Crypto M.2 SSD installed is lost or stolen, sensitive data is secure and cannot be accessed without the high-strength password. When the system is shut down, 256-bit full disk encryption is instigated.

Crypto M.2 SSD is the no-fuss and highly-secure solid state encryption solution for many industries including; finance, legal, health, education and government.

M.2 SATA SSD storage solutions are designed for Notebooks, Desktops, Ultrabooks and tablets. They address the need for more low powered compact storage without compromising performance and reliability of solid state drives.

#### **FEATURES**

- Military level security with AES 256-bit hardware encryption More secure than a software-only solution.
- FIPS 140-2 Validated Certificate No. 2126
- M.2 2260 form factor with SATA III 6Gbps interface (backwards compatible with SATA 3Gbps and SATA 1.5Gbps)
- Supports 'M' & 'B' Key sockets
- Performance: Faster boot than HDD, Faster access to applications, enhanced productivity and increased efficiency
- Fully compatible with devices and OS that support the SATA standard with M.2 M and B connectors
- Multi-lingual interface in 14 languages\*

# **Security Features**

- Total Drive Encryption All data stored on the Crypto M.2 SSD is encrypted (including the Operating System).
- Dual Password As an option an Administrator can setup a user password and a master override password. If the user forgets their password, the Crypto M.2 SSD can be unlocked by the Administrator and the user password reset.
- Secure Entry Encrypted data cannot be accessed without the correct high-strength 8-16 character alphanumeric password. An optional password hint can be set-up which cannot be the same as the password. Before use a highstrength password must be set.
- Brute-Force Password Attack Protection Encrypted data is automatically erased after the default 6 failed password attempts (password attempts configurable to a maximum of 20). The data and encryption key are securely destroyed and the Crypto M.2 SSD is reset and can then be reused.
- Anti-Clone Crypto M.2 SSD cannot be cloned once encryption is set.
- Tamper-Proof Design The electronics are sealed in tamperproof epoxy resin.
- **High-speed Read/Write** The Crypto M.2 SSD has both high encryption and the main benefit of a performance SSD; a high-speed sustained data transfer rate.
- **Quick Boot** Using a Crypto M.2 SSD in place of a traditional HDD can cut your ultrabook or laptop's boot time in half.
- **No moving parts** greater resistance to shock and vibration
- Noise free no spin or seek time
- Endpoint security software compatible The Integral Crypto M.2 SSD operates comfortably with endpoint security solutions by using the configurable unique ID feature, which is part of the setup program
- Warranty 3 Years

#### **Technical Features**

- MLC-NAND Flash Technology
- Compatible with Windows XP, Vista, 7, 8.1 and 10

Standard  M.2 (previously known as Next Generation Form Factor (NGFF))  *Based on internal testing  RELIABILITY  ECC algorithm  BCH - Can Correct up to 72 bits error in 1K Byte data  MTBF  >1 Million Hours  POWER CONSUMPTION  Supply Voltage  3.3V  Read: 128G = 2530 256G = 2610 512G = 2661  Write: 128G = 3547 256G = 3674 512G = 3790  Idle: 128G = 298 256G = 312 512G = 301  Supports SMART Software  Yes  Supports TRIM  Yes (OS support required)  Compliancy  CE, FCC, RoHS  ENVIRONMENTAL  Operating Temp  0° - +70°C  Non - Operating Temp  -40° - +85°C	PERFORMANCE				
Interface  Interface  SATA III 6Gbps Also Compatible with SATA II 3Gbps and SATA 1.5Gbps  NAND  MLC  Form Factor  M.2 22x60 'M' & 'B' Key connect  Standard  M.2 (previously known as Next Generation Form Factor (NGFF))  *Based on internal testing  RELIABILITY  ECC algorithm  MTBF  POWER CONSUMPTION  Supply Voltage  3.3V  Read: 128G = 2530 256G = 2610 512G = 2661 Write: 128G = 3547 256G = 3614 512G = 3790 Idle: 128G = 298 256G = 31: 512G = 301  Supports SMART Software  Supports TRIM  Compliancy  Ceptor Consumption  Compliancy  Ceptor Revire Rev	256GB	Read	450MB/s (up to)*		
Interface  SATA III 6Gbps Also Compatible with SATA II 3Gbps and SATA 1.5Gbps  NAND  MLC  Form Factor  M.2 22x60 'M' & 'B' Key connect  M.2 (previously known as Next Generation Form Factor (NGFF))  *Based on internal testing  RELIABILITY  ECC algorithm  BCH - Can Correct up to 72 bits error in 1K Byte data  MTBF  >1 Million Hours  POWER CONSUMPTION  Supply Voltage  3.3V  Read: 128G = 2530 256G = 2610 512G = 2661 Write: 128G = 3547 256G = 3674 512G = 3790 Idle: 128G = 298 256G = 31: 512G = 301  Supports SMART Software  Yes  Supports TRIM  Compliancy  CE, FCC, RoHS  ENVIRONMENTAL  Operating Temp  O° - +70°C  Non - Operating Temp  O° - +85°C  Humidity  RH 90% under 40C in operation Vibration  BOHAM DESTINATION  COMMENSIONS  Length  60mm  Width  22mm  Height  3.8mm  Weight  Length (Packed)  125mm  Width (Packed)  125mm		Write	350MB/s (up to)*		
Interface Also Compatible with SATA II 3Gbps and SATA 1.5Gbps  NAND MLC  Form Factor M.2 22x60 'M' & 'B' Key connect Standard M.2 (previously known as Next Generation Form Factor (NGFF))  *Based on internal testing  RELIABILITY  ECC algorithm BCH - Can Correct up to 72 bits error in 1K Byte data  **NTBF**  POWER CONSUMPTION  Supply Voltage 3.3V  Read: 128G = 2530 256G = 2610 512G = 2661 Write: 128G = 3547 256G = 3674 512G = 3790 Idle: 128G = 298 256G = 31: 512G = 301  Supports SMART Software Yes  Supports TRIM Yes (OS support required)  Compliancy CE, FCC, RoHS  ENVIRONMENTAL  Operating Temp 0° - +70°C  Non - Operating Temp 40° - +85°C Humidity RH 90% under 40C in operation Vibration 80Hz~2000Hz / 20G  DIMENSIONS  Length 60mm  Width 22mm  Height 3.8mm  Weight Bg  Length (Packed) 195mm  Width (Packed) 125mm	INTERFACE				
NAND  MLC  Form Factor  M.2 22x60 'M' & 'B' Key connect M.2 (previously known as Next Generation Form Factor (NGFF))  *Based on internal testing  RELIABILITY  ECC algorithm  BCH - Can Correct up to 72 bits error in 1K Byte data  MTBF  >1 Million Hours  POWER CONSUMPTION  Supply Voltage  3.3V  Read: 128G = 2530 256G = 2610			Also Compatible with SATA II		
Standard  M.2 (previously known as Next Generation Form Factor (NGFF))  *Based on internal testing  RELIABILITY  ECC algorithm  MTBF  POWER CONSUMPTION  Supply Voltage  3.3V  Read: 128G = 2530 256G = 2610	NAND				
Startloard   Generation Form Factor (NGFF)    *Based on internal testing     RELIABILITY     ECC algorithm   BCH - Can Correct up to 72 bits error in 1K Byte data     MTBF   >1 Million Hours     POWER CONSUMPTION     Supply Voltage   3.3V     Read : 128G = 2530     256G = 2610   512G = 2661     Write : 128G = 3547     256G = 3674   512G = 3790     Idle : 128G = 298   256G = 311     512G = 301     Supports SMART Software   Yes     Supports TRIM   Yes (OS support required)     Compliancy   CE, FCC, RoHS     ENVIRONMENTAL     Operating Temp   0° - +70°C     Humidity   RH 90% under 40C in operation     Vibration   80Hz~2000Hz / 20G     DIMENSIONS     Length   60mm     Width   22mm     Height   3.8mm     Weight   8g     Length (Packed)   195mm     Width (Packed)   125mm     Width (Packed)   125mm     Vibration   125mm     Vibration   125mm     Vibration   125mm     Vidth (Packed)   125mm     Vidth (Pac	Form Factor		M.2 22x60 'M' & 'B' Key connector		
RELIABILITY           ECC algorithm         BCH - Can Correct up to 72 bits error in 1K Byte data           MTBF         >1 Million Hours           POWER CONSUMPTION           Supply Voltage         3.3V           Read : 128G = 2530	Standard		M.2 (previously known as Next Generation Form Factor (NGFF))		
ECC algorithm  BCH - Can Correct up to 72 bits error in 1K Byte data  MTBF  >1 Million Hours  POWER CONSUMPTION  Supply Voltage  3.3V  Read: 128G = 2530 256G = 2610 512G = 2661 Write: 128G = 3547 256G = 3674 512G = 3790 Idle: 128G = 298 256G = 313 512G = 301  Supports SMART Software Yes  Supports TRIM  Compliancy  CE, FCC, RoHS  ENVIRONMENTAL  Operating Temp  O° - +70°C  Non - Operating Temp  -40° - +85°C Humidity RH 90% under 40C in operation Vibration  0° - +70°C  Humidity RH 90% under 40C in operation Sollar-2000Hz / 20G  DIMENSIONS  Length  60mm  Width  42mm  Height  3.8mm  Weight  8g  Length (Packed)  195mm  Width (Packed)  125mm	*Based on internal tes	ting			
POWER CONSUMPTION   Supply Voltage   3.3V   Read : 128G = 2530   256G = 2610   512G = 2661   Write : 128G = 3547   256G = 3674   512G = 3790   Idle : 128G = 298   256G = 311   512G = 301   Supports SMART Software   Yes   Yes (OS support required)   Ce, FCC, RoHS   ENVIRONMENTAL   Operating Temp   0° - +70°C   Non - Operating Temp   -40° - +85°C   Humidity   RH 90% under 40C in operation   Vibration   80Hz~2000Hz / 20G   DIMENSIONS   Length   60mm   Width   42mm   Height   8g   Length (Packed)   195mm   Width (Packed)   125mm   Width (Packed)   125mm   Width (Packed)   125mm   Width (Packed)   125mm   Power of the properties   128G = 2530   256G = 2610   512G = 2661   Million Hours   North Stage = 256G = 3674   512G = 3790   Idle : 128G = 298   256G = 311   255mm   256G = 3674   512G = 3790   Idle : 128G = 298   256G = 311   256G = 3674   512G = 3790   Idle : 128G = 298   256G = 311   256G = 3674   512G = 3790   Idle : 128G = 2530   256G = 311   256G = 3674   512G = 3790   Idle : 128G = 2530   256G = 311   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 2661   Million Hours   North Stage = 2530   256G = 3674   512G = 3690   256G = 312   256G   256G   256G   256G   256G	RELIABILITY				
POWER CONSUMPTION   Supply Voltage   3.3V     Read : 128G = 2530   256G = 2610   512G = 2661   Write : 128G = 3547   256G = 3674   512G = 3790   Idle : 128G = 298   256G = 311   512G = 301   Supports SMART Software   Yes   Yes   Supports TRIM   Yes (OS support required)   Compliancy   CE, FCC, RoHS	ECC algorithm		BCH - Can Correct up to 72 bits error in 1K Byte data		
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Power Consumption (mW)	Supply Voltage		3.3V		
256G = 3674    512G = 3790			256G = 2610 512G = 2661		
Supports TRIM  Compliancy  CE, FCC, RoHS  ENVIRONMENTAL  Operating Temp  O° - +70°C  Non - Operating Temp  Humidity  RH 90% under 40C in operation 80Hz~2000Hz / 20G  DIMENSIONS  Length  Width  22mm  Height  3.8mm  Weight  By  Length (Packed)  125mm			Idle: 128G = 298 256G = 312		
Compliancy  ENVIRONMENTAL  Operating Temp  O° - +70°C  Non - Operating Temp  -40° - +85°C  Humidity  RH 90% under 40C in operation  Vibration  80Hz~2000Hz / 20G  DIMENSIONS  Length  60mm  Width  22mm  Height  3.8mm  Weight  8g  Length (Packed)  125mm	Supports SMART Software		Yes		
ENVIRONMENTAL  Operating Temp  0° - +70°C  Non - Operating Temp  -40° - +85°C  Humidity  RH 90% under 40C in operation  80Hz~2000Hz / 20G  DIMENSIONS  Length  60mm  Width  22mm  Height  3.8mm  Weight  8g  Length (Packed)  125mm			Yes (OS support required)		
Operating Temp  Operating Temp  -40° - +85°C  Humidity  RH 90% under 40C in operation 80Hz~2000Hz / 20G  DIMENSIONS  Length  60mm  Width  22mm  Height  3.8mm  Weight  8g  Length (Packed)  125mm	Compliancy		CE, FCC, RoHS		
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Vibration 80Hz~2000Hz / 20G  DIMENSIONS  Length 60mm  Width 22mm  Height 3.8mm  Weight 8g  Length (Packed) 195mm  Width (Packed) 125mm	Non - Operating	Temp	-40° - +85°C		
DIMENSIONS  Length 60mm  Width 22mm  Height 3.8mm  Weight 8g  Length (Packed) 195mm  Width (Packed) 125mm	Humidity		RH 90% under 40C in operation		
Length       60mm         Width       22mm         Height       3.8mm         Weight       8g         Length (Packed)       195mm         Width (Packed)       125mm	Vibration		80Hz~2000Hz / 20G		
Width22mmHeight3.8mmWeight8gLength (Packed)195mmWidth (Packed)125mm	DIMENSIONS				
Height 3.8mm  Weight 8g  Length (Packed) 195mm  Width (Packed) 125mm	Length		60mm		
Weight 8g Length (Packed) 195mm Width (Packed) 125mm	Width		22mm		
Length (Packed) 195mm Width (Packed) 125mm	Height		3.8mm		
Width (Packed) 125mm	Weight		8g		
	Length (Packed)		195mm		
Height (Packed) 16mm	Width (Packed)		125mm		
	Height (Packed)		16mm		
Weight (Packed) 69g	Weight (Packed)		69g		
WARRANTY	WARRANTY				
3 years	3 years				

APPROVED SECURITY FUNCTION	CERTIFICATE
AES (H/W implementation) • CBC (enc/dec; 256)	2175
XTS 128, XTS 256	2175
HMAC 512 HMAC 256	1335
DRBG	254
SHA 512 SHA 256	1887

### \*14 languages supported by the software GUI -

- Arabic	– Italian
- Chinese	<ul> <li>Norwegian</li> </ul>
- Dutch	- Polish
- English	<ul> <li>Portuguese</li> </ul>
- French	– Russian
– German	<ul><li>Spanish</li></ul>
- Hindi	- Swedish

CAPACITY	PART CODE	BARCODE (EAN)
128GB	INSSD128GM2M2260C140	5055288428270
256GB	INSSD256GM2M2260C140	5055288428287
512GB	INSSD512GM2M2260C140	5055288428294

1GB = 1,000,000,000 bytes. Formatted capacity is less.

Please Note: No security software can be guaranteed 100% secure.

This device should not be used as your sole backup.

Product design and specification subject to change or modification without notice. E&OE.

All trademarks acknowledged.

For products with security software or hardware; the product cannot be guaranteed to be fully

secure. No security system can be considered absolute.

For warranty information please visit www.integralmemory.com/warranty

