Crypto M.2 SATA 6Gbps NGFF 22x80

Full Disk Encryption
AES 256-bit

Epoxy Resin

2015
Computing
Security
Awards
WINNER
Encryption Solution of the Year

FIPS
VALIDATED
140-2

128 GB   256 GB   512 GB

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 2280 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 high-strength 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 tamper-proof 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

PERFORMANCE		
128GB	Read	420MB/s (up to)*
	Write	315MB/s (up to)*
256GB, 512GB	Read	450MB/s (up to)*
	Write	330MB/s (up to)*
INTERFACE		
Interface		SATA III 6Gbps Also Compatible with SATA II 3Gbps and SATA 1.5Gbps
NAND		MLC
Form Factor		M.2 22x80 'M' & 'B' Key connector
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
Power Consumption (mW)		Read : 128G = 2530 256G = 2610 512G = 2661
		Write : 128G = 3547 256G = 3647 512G = 3790
		Idle : 128G = 298 256G = 312 512G = 310
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		80mm
Width		22mm
Height		3.8mm
Weight		9g
Length (Packed)		195mm
Width (Packed)		125mm
Height (Packed)		16mm
Weight (Packed)		69g
WARRANTY		
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
- Chinese
- Dutch
- English
- French
- German
- Hindi
- Italian
- Norwegian
- Polish
- Portuguese
- Russian
- Spanish
- Swedish

CAPACITY	PART CODE	BARCODE (EAN)
128GB	INSSD128GM2M2280C140	5055288428225
256GB	INSSD256GM2M2280C140	5055288428232
512GB	INSSD512GM2M2280C140	5055288431348

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

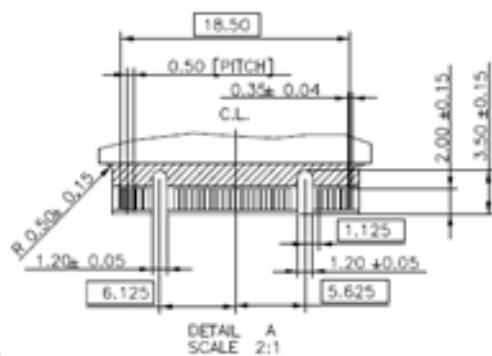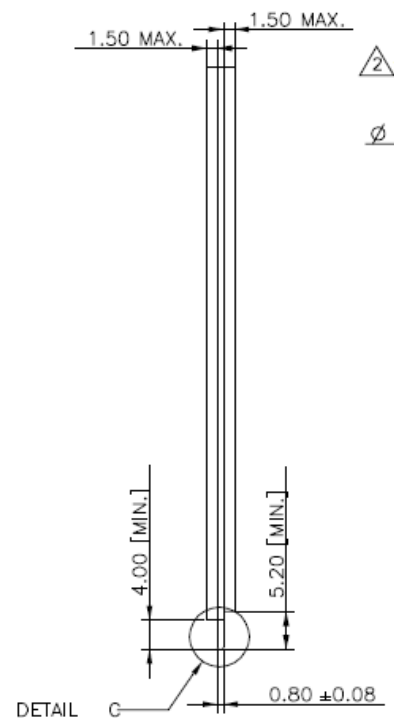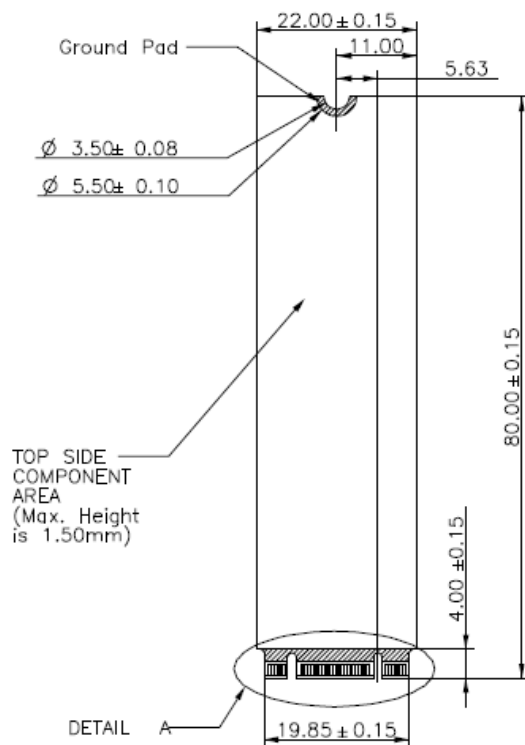Please Note: No security software can be guaranteed 100% secure.

This device should not be used as your sole backup.

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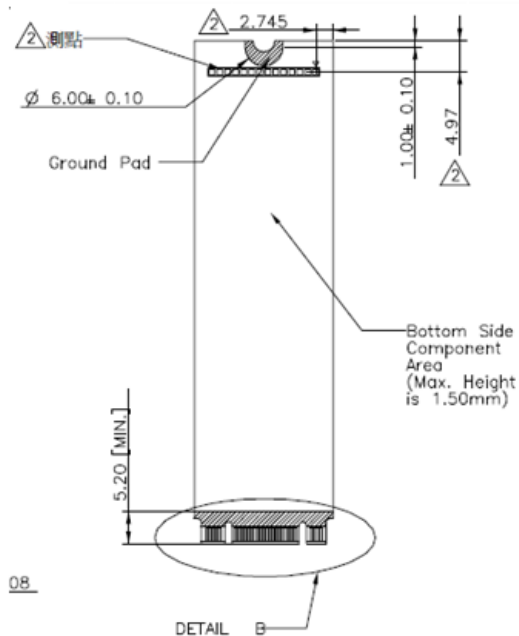
All trademarks acknowledged.

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

integral™

Ground Pad

22.00 ± 0.15
11.00
5.63

Ø 3.50± 0.08
Ø 5.50± 0.10

80.00 ±0.15

TOP SIDE
COMPONENT
AREA
(Max. Height
is 1.50mm)

4.00 ±0.15

DETAIL A
19.85 ± 0.15

1.50 MAX.
1.50 MAX.

Ø

4.00 [MIN.]
5.20 [MIN.]

DETAIL C
0.80 ±0.08

18.50
0.50 [PITCH]
0.35± 0.04
C.L.
R 0.50± 0.15
1.20± 0.05
6.125
1.125
1.20 +0.05
5.625
2.00 ±0.15
3.50 ±0.15

DETAIL A
SCALE 2:1

Notes :
1. = Max Component Height is
2. = No Component
3. = No Component / Signal Vias / Signal Copper/Print
4. General Tolerance : ±0.15mm

測點
2.745
Ø 6.00± 0.10

Ground Pad

Bottom Side
Component
Area
(Max. Height
is 1.50mm)

1.00± 0.10
4.97

5.20 [MIN.]

08

DETAIL B

integral™