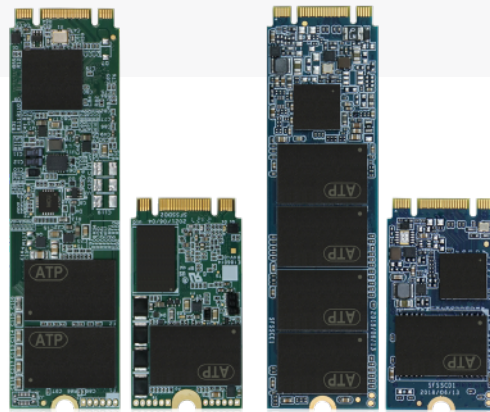




SATA III M.2 2280 / 2242 SSD

The Global Leader in Specialized Storage and Memory Solutions



KEY FEATURES

- MCU-based Power Loss Protection Design with Level 4 (data-in-flight) protection*
- LDPC & RAID Data Recovery
- End-to-End Data Path Protection
- TRIM / Global Wear Leveling support

* May vary by product and project support

ATP's Industrial M.2 Serial ATA (SATA) solid state modules are available in types 2242 and 2280. These lean modules provide higher performance and capacity while minimizing the overall module footprint, making them perfect choices for small systems installed in limited spaces.















Available in both double- and single-sided configurations, M.2 SATA SSDs are packed with high densities and can withstand severe temperature shifts common in industrial environments, thanks to wide operating temperature ratings of -40°C to 85°C.

ATP M.2 modules are suitable for networking and thin storage systems, point-of-sale systems (POS), and industrial computer applications. Select M.2 SATA SSDs feature a microcontroller unit (MCU) design for enhanced power loss protection (PLP) in various temperatures, power glitches and charge states, thus safeguarding data and storage device for higher levels of integrity and reliability.

Specifications

SATA III M.2 2280 SSD							
Product Line	Premium		Superior				Value
	A750Pi	A700Pi	A650Si	A650Sc	A600Si	A600Sc	A600Vc
Interface	SATA III 6 Gb/s						
Flash Type	3D TLC (pSLC mode)		3D TLC				3D TLC
Form Factor	2280 D2-B-M		2280 D1-B-M		2280 D2-B-M		2280 S2-B-M
Operating Temperature	-40°C to 85°C		-40°C to 85°C	0°C to 70°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C
Power Loss Protection Options	Hardware + Firmware Based						Firmware Based
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0						-
Capacity	80 GB to 320 GB		240 GB to 960 GB		120 GB to 960 GB		32 GB to 1 TB
Performance							
Sequential Read (MB/s) up to	560		560		560		560
Sequential Write (MB/s) up to	520		520		510		525
Random Reads IOPS up to	90,000		103,000		100,000		72,000
Random Writes IOPS up to	88,000		86,000		88,000		85,000
Endurance and Reliability							
Endurance (TBW) ¹ up to	19,200 TB	12,800 TB	4,655 TB		2,792 TB		2,792 TB
Reliability MTBF @ 25°C	>2,000,000 hours						
Others							
Dimensions (mm)	80 x 22 x 3.35						80 x 22 x 2.2
Certifications	CE, FCC, BSMI, UKCA, RoHS, REACH						
Warranty	5 years			2 years			

SATA III M.2 2242 SSD								
Product Line	Premium			Superior				Value
	A800Pi	A750Pi	A700Pi	A650Si	A650Sc	A600Si	A600Sc	A600Vc
Interface	SATA III 6 Gb/s							
Flash Type	SLC	3D TLC (pSLC mode)		3D TLC				3D TLC
Form Factor	2242 D2-B-M			2242 D6-B-M		2242 D2-B-M		
Operating Temperature	-40°C to 85°C			-40°C to 85°C	0°C to 70°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C
Power Loss Protection Options	Hardware + Firmware Based						Firmware Based	
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0						-	
Capacity	8 GB to 64 GB	40 GB to 160 GB		240 GB to 960 GB		120 GB to 480 GB		32 GB to 1 TB
Performance								
Sequential Read (MB/s) up to	530	560		560		560		560
Sequential Write (MB/s) up to	400	520		525		510		525
Random Reads IOPS up to	76,000	68,000		104,000		100,000		70,500
Random Writes IOPS up to	76,000	88,000		92,000		88,000		81,000
Endurance and Reliability								
Endurance (TBW) ¹ up to	5,333 TB	9,600 TB	6,400 TB	4,655 TB		1,396 TB		2,792 TB
Reliability MTBF @ 25°C	>2,000,000 hours							
Others								
Dimensions (mm)	42 x 22 x 3.5							
Certifications	CE, FCC, UKCA, RoHS, REACH	CE, FCC, BSMI, UKCA, RoHS, REACH						
Warranty	5 years			2 years				

Technologies & Add-On Services	 S.M.A.R.T.	 Firmware-based Power Loss Protection	 Hardware-based Power Loss Protection	 AutoRefresh	 Advanced Wear Leveling	 Dynamic Data Refresh	 End-to-End Data Path Protection	 Auto-Read Calibration	 Secure Erase	 TCG Opal 2.0	 Industrial Temperature	 Anti-Sulfur Resistors	 Conformal Coating	 Joint Validation
Premium	○	○	○	○	○	○	○	○	▲	○	○	▲	▲	▲
Superior	○	○	○	○	○	○	○	○	▲	○	▲	▲	▲	▲
Value	○	○	—	○	○	○	—	○	—	—	—	—	—	—

¹ Under highest Sequential write value. May vary by density, configuration and applications.

▲: Customization option available on a project basis.

Hot Items Ordering Information

Product Line	Capacity ₁	Operating Temperature ₂	Power Loss Protection ₃	SED ₄	P/N
A650Si (M.2 2280)	240GB	-40°C to 85°C	Hardware + Firmware Based	-	FT240GM28APQBPI
A650Si (M.2 2280)	480GB	-40°C to 85°C	Hardware + Firmware Based	-	FT480GM28APQBPI
A650Si (M.2 2280)	960GB	-40°C to 85°C	Hardware + Firmware Based	-	FT960GM28APQBPI
A650Si (M.2 2280)	240GB	-40°C to 85°C	Hardware + Firmware Based	√	FT240GM28APQBSI
A650Si (M.2 2280)	480GB	-40°C to 85°C	Hardware + Firmware Based	√	FT480GM28APQBSI
A650Si (M.2 2280)	960GB	-40°C to 85°C	Hardware + Firmware Based	√	FT960GM28APQBSI
A650Sc (M.2 2280)	240GB	0°C to 70°C	Hardware + Firmware Based	-	FT240GM28APQBPC
A650Sc (M.2 2280)	480GB	0°C to 70°C	Hardware + Firmware Based	-	FT480GM28APQBPC
A650Sc (M.2 2280)	960GB	0°C to 70°C	Hardware + Firmware Based	-	FT960GM28APQBPC
A650Sc (M.2 2280)	240GB	0°C to 70°C	Hardware + Firmware Based	√	FT240GM28APQBSC
A650Sc (M.2 2280)	480GB	0°C to 70°C	Hardware + Firmware Based	√	FT480GM28APQBSC
A650Sc (M.2 2280)	960GB	0°C to 70°C	Hardware + Firmware Based	√	FT960GM28APQBSC
A650Si (M.2 2242)	240GB	-40°C to 85°C	Hardware + Firmware Based	-	FT240GM24APQBPI
A650Si (M.2 2242)	480GB	-40°C to 85°C	Hardware + Firmware Based	-	FT480GM24APQBPI
A650Si (M.2 2242)	960GB	-40°C to 85°C	Hardware + Firmware Based	-	FT960GM24APQBPI
A650Si (M.2 2242)	240GB	-40°C to 85°C	Hardware + Firmware Based	√	FT240GM24APQBSI
A650Si (M.2 2242)	480GB	-40°C to 85°C	Hardware + Firmware Based	√	FT480GM24APQBSI
A650Si (M.2 2242)	960GB	-40°C to 85°C	Hardware + Firmware Based	√	FT960GM24APQBSI
A650Sc (M.2 2242)	240GB	0°C to 70°C	Hardware + Firmware Based	-	FT240GM24APQBPC
A650Sc (M.2 2242)	480GB	0°C to 70°C	Hardware + Firmware Based	-	FT480GM24APQBPC
A650Sc (M.2 2242)	960GB	0°C to 70°C	Hardware + Firmware Based	-	FT960GM24APQBPC
A650Sc (M.2 2242)	240GB	0°C to 70°C	Hardware + Firmware Based	√	FT240GM24APQBSC
A650Sc (M.2 2242)	480GB	0°C to 70°C	Hardware + Firmware Based	√	FT480GM24APQBSC
A650Sc (M.2 2242)	960GB	0°C to 70°C	Hardware + Firmware Based	√	FT960GM24APQBSC
A600Vc (M.2 2280)	32GB	0°C to 70°C	Firmware Based	-	FT32G0M28AH2BFC
A600Vc (M.2 2280)	64GB	0°C to 70°C	Firmware Based	-	FT64G0M28AH2BFC
A600Vc (M.2 2280)	128GB	0°C to 70°C	Firmware Based	-	FT128GM28AH2BFC
A600Vc (M.2 2280)	256GB	0°C to 70°C	Firmware Based	-	FT256GM28AH2BFC
A600Vc (M.2 2280)	512GB	0°C to 70°C	Firmware Based	-	FT512GM28AH2BFC
A600Vc (M.2 2280)	128GB	0°C to 70°C	Firmware Based	-	FT128GM28AN2BFC
A600Vc (M.2 2280)	256GB	0°C to 70°C	Firmware Based	-	FT256GM28AN2BFC
A600Vc (M.2 2280)	512GB	0°C to 70°C	Firmware Based	-	FT512GM28AN2BFC
A600Vc (M.2 2280)	1TB	0°C to 70°C	Firmware Based	-	FT1T00M28AN2BFC
A600Vc (M.2 2242)	128GB	0°C to 70°C	Firmware Based	-	FT128GM24AN2BFC
A600Vc (M.2 2242)	256GB	0°C to 70°C	Firmware Based	-	FT256GM24AN2BFC
A600Vc (M.2 2242)	512GB	0°C to 70°C	Firmware Based	-	FT512GM24AN2BFC
A600Vc (M.2 2242)	1TB	0°C to 70°C	Firmware Based	-	FT1T00M24AN2BFC

1 Amount of actual usable storage that can be utilized.
 2 Refers to Case Temperature range during device operation, as indicated by SMART temperature attributes.
 3 Hardware + Firmware-based power loss protection design with Level 4 (data-in-flight) protection; Firmware-based power loss protection design with Level 1 (data-at-rest) protection.
 4 Allows data written to and read from the SSD to be constantly and automatically encrypted and decrypted. Conforms to TCG Opal 2.0 and uses AES 256-bit HW encryption.



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Product spec and its related information are subject to change without advance notice. Please refer to www.atpinc.com for latest information

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