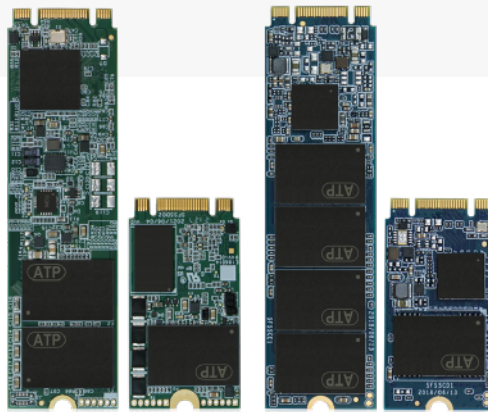




SATA III M.2 SSD

The Global Leader in Specialized Storage and Memory Solutions



KEY FEATURES

- Power Loss Protection: MCU-based* with data-at-rest and in-flight protection
- PLP Diag* (Self-Diagnosing Capacitor Check)
- EcoFlush* (Flush Cache Optimization Technology)
- Data Retention: Up to 10 years at 55 °C (pSLC)*
- Security: Self-Encrypting Drive (SED) with AES 256-bit encryption, TCG Opal 2.0*
- LDPC & RAID Data Recovery
- End-to-End Data Path Protection

* 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

Product Line	Premium	Superior	Value	Momentum
	A750Pi	A650Si / A650Sc	A600Vc	A400Mw
Interface	SATA III 6 Gb/s			
Flash Type	3D TLC (pSLC mode)	3D TLC		
Form Factor	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	0°C to 70°C	-20°C to 75°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	32 GB to 512 GB	128 GB to 1 TB
Performance				
Sequential Read (MB/s) up to	560			550
Sequential Write (MB/s) up to	510	520	400	500
Random Reads IOPS up to	92,000	103,000	72,000	72,000
Random Writes IOPS up to	83,000	86,000	85,000	86,000
Endurance and Reliability				
Endurance (TBW) ¹ up to	29,620 TB	10,240 TB	590 TB	765 TB
Reliability MTBF @ 25°C	>3,000,000 hours		>2,000,000 hours	>3,000,000 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	3 years		2 years

Product Line	Premium		Superior	Value
	A800Pi	A750Pi	A650Si / A650Sc	A600Vi / A600Vc
Interface	SATA III 6 Gb/s			
Flash Type	SLC	3D TLC (pSLC mode)	3D TLC	
Form Factor	2242 D6-B-M			2242 D2-B-M
Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°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	80 GB to 320 GB	240 GB to 960 GB	128 GB to 1 TB
Performance				
Sequential Read (MB/s) up to	535	560		
Sequential Write (MB/s) up to	400	515	525	525
Random Reads IOPS up to	76,000	92,000	104,000	70,500
Random Writes IOPS up to	76,000	86,000	92,000	92,500
Endurance and Reliability				
Endurance (TBW) ¹ up to	5,333 TB	29,620 TB	10,240 TB	1,530 TB
Reliability MTBF @ 25°C	>2,000,000 hours	>3,000,000 hours		>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		3 years	

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

Technologies	S.M.A.R.T/ Life Monitor	PLP Diag	AcuCurrent	EcoFlush	Industrial Temperature	Firmware-Based Power Loss Protection	Hardware-Based Power Loss Protection	Advanced Wear Leveling	AutoRefresh	Dynamic Data Refresh	Auto-Read Calibration	ETEDP	SED	Software Secure Erase	Hardware Secure Erase	Hardware Write Protect
Premium	A800Pi	○			○	○	○	○	○	○			○	○		
Premium	A750Pi	○	○	▲	○	○	○	○	○	○	○	○	○	○	▲	▲
Superior	A650Si / A650Sc	○	○	▲	○	○	○	○	○	○	○	○	○	○	▲	▲
Value	A600Vi / A600Vc	○			○	○		○	○	○	○					
Momentum	A400Mw	○			▲	○		○	○	○	○					

▲: 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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