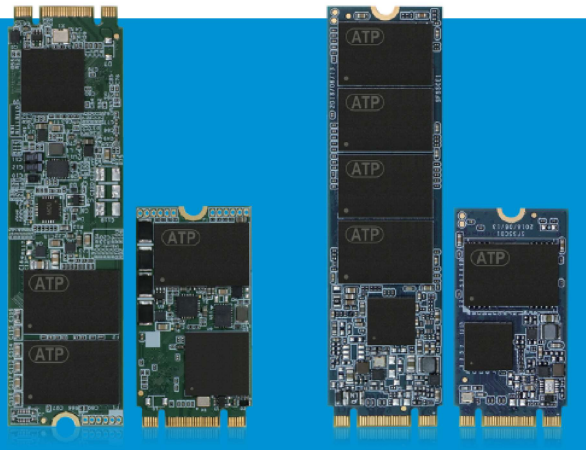
M.2 SATA

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications



Key Features

- MCU-based Power Loss Protection Design*
- LDPC & RAID Data Recovery
- End-to-End Data Protection
- TRIM / Global Wear Leveling support

* Customization available on a project basis

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.

Technologies & Add-On Services	S.M.A.R.T.	Hardware-based Power Loss Protection	AutoRefresh	Advanced Wear Leveling	Dynamic Data Refresh	End-to-End Data Protection	Secure Erase	TCG Opal 2.0	Industrial Temperature	Anti-Sulfur Resistors	Conformal Coating
Premium	O	O	O	O	O	O	▲	O	O	▲	▲
Superior	O	O	O	O	O	O	▲	O	▲	▲	▲
Value	O	–	O	O	O	–	–	–	–	–	–

▲: Customization option available on a project basis.

Specifications

M.2 SATA								
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				
Form Factor	2242 D2-B-M							
Operating Temperature (Tcase)[1]	-40°C to 85°C	-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		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		480		510		525
Random Reads IOPS (4K, QD32) up to	76,000	68,000		100,000		100,000		70,500
Random Writes IOPS (4K, QD32) up to	76,000	88,000		90,000		88,000		81,000
Endurance and Reliability								
Endurance (TBW)[2] up to	5,333 TB	9,600 TB	6,400 TB	2,327 TB		1,396 TB		2,792 TB
Reliability MTBF @ 25°C	>2,000,000 hours							
Others								
Dimensions: L x W x H (mm)	42 x 22 x 3.5							
Certifications	CE, FCC	CE, FCC, BSMI, UKCA, RoHS, REACH						
Warranty	5 years			2 years				

M.2 SATA							
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				
Form Factor	2280 D2-B-M						2280 S2-B-M
Operating Temperature (Tcase)[1]	-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		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		480		510		525
Random Reads IOPS (4K, QD32) up to	90,000		100,000		100,000		72,000
Random Writes IOPS (4K, QD32) up to	88,000		90,000		88,000		85,000
Endurance and Reliability							
Endurance (TBW)[2] 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: L x W x H (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				

1 Case Temperature, the composite temperature as indicated by SMART temperature attributes.
2 Under highest Sequential write value. May vary by density, configuration and applications.

Hot Items Ordering Information					
Product Line	Capacity[1]	Operating Temperature[2]	Power Loss Protection[3]	SED[4]	P/N
A650Si (M.2 2280)	120GB	-40°C to 85°C	Hardware + Firmware Based	-	AF120GSTIC-7BCIP
A650Si (M.2 2280)	240GB	-40°C to 85°C	Hardware + Firmware Based	-	AF240GSTIC-7BCIP
A650Si (M.2 2280)	480GB	-40°C to 85°C	Hardware + Firmware Based	-	AF480GSTIC-7BCIP
A650Si (M.2 2280)	960GB	-40°C to 85°C	Hardware + Firmware Based	-	AF960GSTIC-7BCIP
A650Sc (M.2 2280)	120GB	0°C to 70°C	Hardware + Firmware Based	-	AF120GSTIC-7BCXP
A650Sc (M.2 2280)	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTIC-7BCXP
A650Sc (M.2 2280)	480GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTIC-7BCXP
A650Sc (M.2 2280)	960GB	0°C to 70°C	Hardware + Firmware Based	-	AF960GSTIC-7BCXP
A600Vc (M.2 2280)	32GB	0°C to 70°C	Firmware Based	-	AF32GSTIC-2BAXX
A600Vc (M.2 2280)	64GB	0°C to 70°C	Firmware Based	-	AF64GSTIC-2BAXX
A600Vc (M.2 2280)	128GB	0°C to 70°C	Firmware Based	-	AF128GSTIC-2BAXX
A600Vc (M.2 2280)	256GB	0°C to 70°C	Firmware Based	-	AF256GSTIC-2BAXX
A600Vc (M.2 2280)	512GB	0°C to 70°C	Firmware Based	-	AF512GSTIC-2BAXX
A600Vc (M.2 2280)	128GB	0°C to 70°C	Firmware Based	-	AF128GSTIC-2BBXX
A600Vc (M.2 2280)	256GB	0°C to 70°C	Firmware Based	-	AF256GSTIC-2BBXX
A600Vc (M.2 2280)	512GB	0°C to 70°C	Firmware Based	-	AF512GSTIC-2BBXX
A600Vc (M.2 2280)	1TB	0°C to 70°C	Firmware Based	-	AF1TSTIC-2BBXX
A600Vc (M.2 2242)	128GB	0°C to 70°C	Firmware Based	-	AF128GSTIA-2BBXX
A600Vc (M.2 2242)	256GB	0°C to 70°C	Firmware Based	-	AF256GSTIA-2BBXX
A600Vc (M.2 2242)	512GB	0°C to 70°C	Firmware Based	-	AF512GSTIA-2BBXX
A600Vc (M.2 2242)	1TB	0°C to 70°C	Firmware Based	-	AF1TSTIA-2BBXX

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.

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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WE BUILD WITH YOU

ATP TAIWAN (HQ)
TEL: +886-2-2659-6368
sales-apac@atpinc.com

ATP USA
TEL: +1-408-732-5000
sales@atpinc.com

ATP EUROPE
TEL: +49-89-374-9999-0
sales-europe@atpinc.com

ATP JAPAN
TEL: +81-3-6260-0797
sales-japan@atpinc.com

ATP CHINA
TEL: +86-21-5080-2220
sales@cn.atpinc.com