



2.5" SSD

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications



Key Features

- MCU-based Power Loss Protection Design with Level 4 (data-in-flight) protection*
- Self Encryption Drive SED with AES 256-bit Encryption, TCG OPAL 2.0*
- NSA-compliant Secure Erase*
- MIL-STD-810G standards*

* May vary by product and project support

ATP's shock/vibration-resistant industrial 2.5" SSDs are encased in durable enclosures for outstanding performance in challenging environments. The convenient 2.5" form factor and SATA III interface allow easy integration into SATA-based systems, while unique ATP technologies ensure extended endurance for long years of dependable use.

Power Loss Protection Design technology options combines hardware and/or firmware solutions to ensure that data is preserved and protected during a sudden power failure. The MCU design also protects the storage device from damage by allowing the power loss protection (PLP) to intelligently manage power challenges such as inrush current, input overvoltage, incorrect cache flushing and more.

ATP's 2.5" SSDs comply with US National Security Agency (NSA) and MIL-STD-810G standards. They support the S.M.A.R.T. ATA feature set and Advanced Wear Leveling algorithm for enhanced endurance.

Technologies & Add-On Services	S.M.A.R.T.	Hardware-based Power Loss Protection	Advanced Wear Leveling	AutoRefresh	Dynamic Data Refresh	Secure Erase	Industrial Temperature	Anti-Sulfur Resistors	Conformal Coating
Premium	•	•	•	•	•	•	•	Δ	Δ
Superior	•	•	•	•	•	•	Δ	Δ	Δ
Value	•		•	•	•				

Δ: Customization option available on a project basis.

Specifications

2.5" SSD					
Product Line	A800Pi	A750Pi	A700Pi	A650Si	A650Sc
Interface	SATA III 6 Gb/s				
Flash Type	SLC	3D TLC (pSLC mode)	Pseudo SLC	3D TLC	
Form Factor	2.5"				
Operating Temperature (Tcase) ¹	-40°C to 85°C			-40°C to 85°C	0°C to 70°C
Power Loss Protection Options	Hardware + Firmware Based or Firmware Based				
Optional SED Features	-			AES 256-bit Encryption, TCG Opal 2.0	
Capacity	8 GB to 256 GB	80 GB to 640 GB		120 GB to 1920 GB	
Performance					
Performance	Sequential Read (MB/s) up to	520	560		560
	Sequential Write (MB/s) up to	420	520		500
	Random Read IOPS (4K, QD32) up to	76,000	95,000		100,000
	Random Writes IOPS (4K, QD32) up to	74,000	86,000		91,000
Endurance and Reliability					
Endurance (TBW) ² up to	21,333 TB	38,400 TB	25,600 TB	9,310 TB	
Reliability MTBF @ 25°C	>2,000,000 hours				
Data Retention @ 30°C ³	10 years (with 10% P/E cycle)	5 years (with 10% P/E cycle)			
Reliability Number of Insertions	10,000 minimum				
Others					
Power Consumption	5V Input Power				
Dimensions: L x W x H (mm)	100 x 69.9 x 9.2	100 x 69.9 x 7/9.2			
Certifications	CE, FCC	CE, FCC, BSMI, UKCA, RoHS, REACH	CE, FCC, BSMI, RoHS, REACH	CE, FCC, BSMI, UKCA, RoHS, REACH	
Warranty	5 years			2 years	

2.5" SSD					
Product Line	A600Si	A600Sc	A600Si	A600Sc	A600Vc
Interface	SATA III 6 Gb/s				
Flash Type	3D TLC		MLC		3D TLC
Form Factor	2.5"				
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 or Firmware Based				
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0				-
Capacity	120 GB to 1920 GB		64GB		32 GB to 512 GB
Performance					
Performance	Sequential Read (MB/s) up to	560	440		560
	Sequential Write (MB/s) up to	500	80		440
	Random Read IOPS (4K, QD32) up to	100,000	38,400		72,000
	Random Writes IOPS (4K, QD32) up to	91,000	19,900		85,000
Endurance and Reliability					
Endurance (TBW) ² up to	5,585 TB		145.5 TB	174.6 TB	590.8 TB
Reliability MTBF @ 25°C	>2,000,000 hours				
Data Retention @ 30°C ³	5 years (with 10% P/E cycle)				
Reliability Number of Insertions	10,000 minimum				
Others					
Power Consumption	5V Input Power				
Dimensions: L x W x H (mm)	100 x 69.9 x 7/9.2		100 x 69.9 x 9.2		100 x 69.9 x 7
Certifications	CE, FCC, BSMI, RoHS, REACH		CE, FCC		CE, FCC
Warranty	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.

³ Data retention value may vary across different temperature ranges. It is based on experimental results and should be used only for reference.

Hot Items Ordering Information

Product Line	Capacity ¹	Operating Temperature ²	Power Loss Protection ³	SED ⁴	P/N
A800Pi	8GB	-40°C to 85°C	Hardware + Firmware Based	-	AF8GSSCJ-VACXP
A800Pi	16GB	-40°C to 85°C	Hardware + Firmware Based	-	AF16GSSCJ-VACXP
A800Pi	32GB	-40°C to 85°C	Hardware + Firmware Based	-	AF32GSSCJ-VACXP
A800Pi	64GB	-40°C to 85°C	Hardware + Firmware Based	-	AF64GSSCJ-VACXP
A800Pi	128GB	-40°C to 85°C	Hardware + Firmware Based	-	AF128GSSCJ-VACXP
A800Pi	256GB	-40°C to 85°C	Hardware + Firmware Based	-	AF256GSSCJ-VACXP
A650Si	120GB	-40°C to 85°C	Hardware + Firmware Based	-	AF120GSTCJ-7BCIP
A650Si	240GB	-40°C to 85°C	Hardware + Firmware Based	-	AF240GSTCJ-7BCIP
A650Si	480GB	-40°C to 85°C	Hardware + Firmware Based	-	AF480GSTCJ-7BCIP
A650Si	960GB	-40°C to 85°C	Hardware + Firmware Based	-	AF960GSTCJ-7BCIP
A650Si	1.92TB	-40°C to 85°C	Hardware + Firmware Based	-	AF1T92STCJ-7BCIP
A650Sc	120GB	0°C to 70°C	Hardware + Firmware Based	-	AF120GSTCJ-7BCXP
A650Sc	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTCJ-7BCXP
A650Sc	480GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTCJ-7BCXP
A650Sc	960GB	0°C to 70°C	Hardware + Firmware Based	-	AF960GSTCJ-7BCXP
A650Sc	1.92TB	0°C to 70°C	Hardware + Firmware Based	-	AF1T92STCJ-7BCXP
A600Vc	32GB	0°C to 70°C	Firmware Based	-	AF32GSTCJ-2BAXX
A600Vc	64GB	0°C to 70°C	Firmware Based	-	AF64GSTCJ-2BAXX
A600Vc	128GB	0°C to 70°C	Firmware Based	-	AF128GSTCJ-2BAXX
A600Vc	256GB	0°C to 70°C	Firmware Based	-	AF256GSTCJ-2BAXX
A600Vc	512GB	0°C to 70°C	Firmware Based	-	AF512GSTCJ-2BAXX

¹ Amount of actual usable storage that can be utilize.

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

v1.0 202109

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