



mSATA

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*
- LDPC & RAID Data Recovery
- End-to-End Data Protection
- TRIM / Global Wear Leveling support

* May vary by product and project support

Just roughly the size of a business card, ATP's mSATA SSDs offer up to 512 GB capacity and the same speed and efficiency of SATA. They are designed to fit in systems with space constraints and high-performance requirements such as embedded and networking applications.

Two mounting holes keep the mSATA module securely installed, protecting it from shock and vibration. ATP mSATA SSDs are available in industrial temperature ratings for trustworthy performance in sub-freezing or extremely hot settings. Available on select mSATA SSDs, ATP's advanced power loss protection (PLP) technology, which combines hardware and/or software solutions to prevent data corruption and storage device damage when power glitches, losses and failures occur.

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

		mSATA				
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		MO-300A				
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 128/256-bit Encryption	-	AES 256-bit Encryption, TCG Opal 2.0	AES 256-bit Encryption, TCG Opal 2.0	
Capacity		8 GB to 128 GB	80 GB to 160 GB		120 GB to 480 GB	
Performance						
Performance	Sequential Read (MB/s) up to	530	560		560	
	Sequential Write (MB/s) up to	430	520		440	
	Random Read IOPS (4K, QD32) up to	76,000	94,000		100,000	
	Random Writes IOPS (4K, QD32) up to	-	85,000		88,000	
Endurance and Reliability						
Endurance (TBW) ² up to		10,667 TB	9,600 TB	6,400 TB	2,327 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)		5 years (with 10% P/E cycle)	
Others						
Power Consumption		3.3V Input Power				
Dimensions: L x W x H (mm)		50.8 x 29.85 x 3.5				
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	

		mSATA				
Product Line		A600Si	A600Sc	A600Si	A600Sc	A600Vc
Interface		SATA III 6 Gb/s				
Flash Type		3D TLC		MLC		3D TLC
Form Factor		MO-300A				
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 480 GB		16 GB to 64 GB		32 GB to 512 GB
Performance						
Performance	Sequential Read (MB/s) up to	560		440		560
	Sequential Write (MB/s) up to	440		80		440
	Random Read IOPS (4K, QD32) up to	100,000		38,400		72,000
	Random Writes IOPS (4K, QD32) up to	88,000		-		85,000
Endurance and Reliability						
Endurance (TBW) ² up to		1,396 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)				
Others						
Power Consumption		3.3V Input Power				
Dimensions: L x W x H (mm)		50.8 x 29.85 x 3.5				
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	-	AF8GSSHI-VACXP
A800Pi	16GB	-40°C to 85°C	Hardware + Firmware Based	-	AF16GSSHI-VACXP
A800Pi	32GB	-40°C to 85°C	Hardware + Firmware Based	-	AF32GSSHI-VACXP
A800Pi	64GB	-40°C to 85°C	Hardware + Firmware Based	-	AF64GSSHI-VACXP
A800Pi	128GB	-40°C to 85°C	Hardware + Firmware Based	-	AF128GSSHI-VAAXP
A650Sc	120GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTHI-7BCXP
A650Sc	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTHI-7BCXP
A650Sc	480GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTHI-7BCXP
A600Vc	32GB	0°C to 70°C	Firmware Based	-	AF32GSTHI-2BAXX
A600Vc	64GB	0°C to 70°C	Firmware Based	-	AF64GSTHI-2BAXX
A600Vc	128GB	0°C to 70°C	Firmware Based	-	AF128GSTHI-2BAXX
A600Vc	256GB	0°C to 70°C	Firmware Based	-	AF256GSTHI-2BAXX
A600Vc	512GB	0°C to 70°C	Firmware Based	-	AF512GSTHI-2BAXX

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 range and is experimental result to be used for reference.

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