

## **mSATA**

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications





## **Key Features**

- MCU-based Power Loss Protection Design\*
- Self Encrytion 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 1 TB 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.



▲: Customization option available on a project basis.

## Specifications

mSATA									
Product Line	Premium			Superior					
	A800Pi	A750Pi	A700Pi	A650Si	A650Sc				
Interface	SATA III 6 Gb/s								
Flash Type	SLC	3D TLC (pSLC mode) 3D TLC			TLC				
Form Factor	MO-300A								
Operating Temperature (Tcase)¹	-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								
Optional SED Features	AES 128/256-bit Encryption	-	AES 256-b	256-bit Encryption, TCG Opal 2.0					
Capacity	8 GB to 128 GB	40 GB to	160 GB	120 GB to 480 GB					
Performance									
Sequential Read (MB/s) up to	530	560		560					
Sequential Write (MB/s) up to	430	520		480					
Random Reads IOPS (4K, QD32) up to	76,000	90,000	94,000	100,000					
Random Writes IOPS (4K, QD32) up to	-	88,000	85,000	90,000					
		Endurance an	d Reliability						
Endurance (TBW) <sup>2</sup> up to	10,667 TB	9,600 TB	6,400 TB	2,327 TB					
Reliability MTBF @ 25°C	>2,000,000 hours								
Others									
Dimensions: L x W x H (mm)	50.8 x 29.85 x 3.5								
Certifications	CE, FCC CE, FCC, BSMI, UKCA, RoHS, REACH								
Warranty	5 years			2 years					

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mSATA								
		Value						
Product Line	A600Si	A600Sc						
Interface	SATA III 6 Gb/s							
Flash Type	3D TLC							
Form Factor	MO-300A							
Operating Temperature _ (Tcase)¹	-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	120 GB to 480 GB		32 GB to 1 TB					
	Performance							
Sequential Read (MB/s) up to	560		560					
Sequential Write (MB/s) up to	510		525					
Random Reads IOPS (4K, QD32) up to	100,000		72,000					
Random Writes IOPS (4K, QD32) up to	88,000		85,000					
	Endurance and Reliability							
Endurance (TBW) <sup>2</sup> up to	1,396 TB		2,792 TB					
Reliability MTBF @ 25°C	>2,000,000 hours							
	Oth	ners						
Dimensions: L x W x H (mm)	50.8 x 29.85 x 3.5							
Certifications	CE, FCC, BSMI, UKCA, RoHS, REACH							
Warranty	2 years							

<sup>1</sup> Case Temperature, the composite temperature as indicated by SMART temperature attributes.

<sup>2</sup> Under highest Sequential write value. May vary by density, configuration and applications.

Hot Items Ordering Information								
Product Line	Capacity <sub>1</sub>	Operating Temperature <sub>2</sub>	Power Loss Protection <sub>3</sub>	SED <sub>4</sub>	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	-	AF120GSTHI-7BCXP			
A650Sc	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTHI-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			
A600Vc	128GB	0°C to 70°C	Firmware Based	-	AF128GSTHI-2BBXX			
A600Vc	256GB	0°C to 70°C	Firmware Based	-	AF256GSTHI-2BBXX			
A600Vc	512GB	0°C to 70°C	Firmware Based	-	AF512GSTHI-2BBXX			
A600Vc	1TB	0°C to 70°C	Firmware Based	-	AF1TSTHI-2BBXX			

<sup>1</sup> Amount of actual usable storage that can be utilized.

Product spec and its related information are subject to change without advance notice. Please refer to  $\underline{www.atpinc.com}\,$  for latest information

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<sup>2</sup> 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.

<sup>4</sup> 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.