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.

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

▲: 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	
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-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 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				
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	

	mSATA		
Product Line	Superior		Value
	A600Si	A600Sc	A600Vc
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)[2] up to	1,396 TB		2,792 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, BSMI, UKCA, RoHS, REACH		
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.

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	-	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

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

v1.1 202205

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