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 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 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	A700Pi	A600Si	A600Sc
Interface	SATA III 6 Gb/s			
Flash Type	SLC	Pseudo SLC	MLC	
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	-	
Capacity	8 GB to 128 GB	80 GB to 160 GB	16 GB to 64 GB	
Performance				
Performance — Sequential Read (MB/s) up to	530	560	440	
Sequential Write (MB/s) up to	430	520	80	
Random Read IOPS (4K, QD32) up to	76,000	94,000	38,400	
Random Writes IOPS (4K, QD32) up to	-	85,000	-	
Endurance and Reliability				
Endurance (TBW)[2] up to	10,667 TB	6,400 TB	145.5 TB	174.6 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,RoHS, REACH	CE, FCC	
Warranty	5 years		2 years	

mSATA			
Product Line	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 or Firmware Based		
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0		-
Capacity	120 GB to 480 GB		32 GB to 512 GB
Performance			
Performance — Sequential Read (MB/s) up to	560		560
Sequential Write (MB/s) up to	440		440
Random Read 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		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
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	Capacity₁	Operating Temperature₂	Power Loss Protection₃	SED₄	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
A600Sc	120GB	0°C to 70°C	Hardware + Firmware Based	-	AF120GSTHI-7BAXP
A600Sc	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTHI-7BAXP
A600Sc	480GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTHI-7BAXP
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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