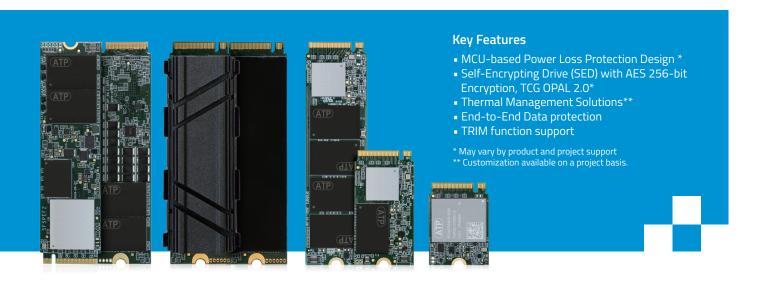


M.2 NVMe

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications



M.2 solid state modules based on the NVMe™protocol leverage the blazing-fast PCI Express® (PCIe®) interface to deliver dramatic improvements in speed and performance to fulfill the increasing demand for responsiveness in enterprise storage systems and to support the growing data-hungry needs of today's enterprise. Delivering 32 Gb/s bandwidth on a PCIe 3.1 x4 slot (8 Gb/s per lane), ATP NVMe SSDs outperform Serial ATA 6 Gb/s SSDs with 4-6X faster access, over 3X lower latency, and higher Input/Output per Second (IOPS). ATP NVMe SSDs with industrial operating temperature rating deliver stable performance even in extreme temperatures ranging from -40°C to 85°C, while Dynamic Thermal Throttling automatically adjusts the speed to maintain cooler operation under intense and heavy workloads.

Adopting NVMe 1.3 specifications and integrating 3D NAND TLC technology, ATP's M.2 2280 NVMe modules offer up to 1.92TB of storage capacity and deliver boosted performance with sequential read up to 3,420 MB/s, sequential write up to 3,050 MB/s, and random read/write IOPS up to 225,200/179,200.

Designed to move past the limitations of mechanical drives, NVMe was specifically built from the ground up for faster, more efficient access to storage devices with non-volatile memory such as current NAND flash solutions and future non-volatile memory technologies. These SSDs can deliver fast, reliable and durable performance for any demanding application.

Specifications

			M.2 NVMe						
	Premium Superior								
Product Line	N750Pi N700Pi		N700Si N700Sc		N650Si	 N650Sc			
Interface	167 561 1	117 001 1	PCIe G3 x4	Woose	1103031	1105050			
Flash Type	3D TLC (pS	LC mode)	3D TLC (pSI	LC mode)	3D TLC				
Form Factor	M.2 228	0-D2-M	M.2 2230)-S4-M	M.2 2280-D2-M				
Operating Temperature (Tcase) ¹	-40°C to 85°C		-40°C to 85°C	0°C to 70°C	-40°C to 85°C	0°C to 70°C			
Power Loss Protection Options	Hardware + I	Firmware Based	Firmware	Based	Hardware + Firmware Based or Firmware Base				
Optional SED Features		AES 256	6-bit Encryption, TCG Opa	12.0					
Capacity	40 GB to 320 GB 40 GB to 640 GB 40 GB / 80 GB / 160 GB				120 GB to 960 GB				
			Performance						
Sequential Read (MB/s) up to	3,150		2,000	0	3,420				
Sequential Write (MB/s) up to	2,670	2,820	,	1,600		3,050			
Random Reads IOPS up to	147,789 (4K, QD32)		135,600 (4K, QD32)	222,700 (4K, QD32)				
Random Writes IOPS up to	114,227 (114,227 (4K, QD32) 112,000 (4K, QD32)				176,600 (4K, QD32)			
		E	ndurance and Reliability						
Endurance (TBW) ² up to	16,000 TB	21,300 TB	4,280 TB		4,640 TB				
Reliability MTBF @ 25°C	>2,000,0	00 hours	>1,500,000 hours		>2,000,000 hours				
			Others						
Dimensions: L x W x H (mm)	80.0 x 22.0 x 3.5 (M 80.0 x 24.4 x 12.5 (M.2 2		30.0 x 22.0	0 x 2.5	80.0 x 22.0 x 3.5 (M.2 2280 Bare PCBA) 80.0 x 24.4 x 12.5 (M.2 2280 with 8 mm heatsink)				
Certifications	CE, FCC, BSMI, UKCA, RoHS, REACH								
Warranty	5 yea	ars	2 y	years					
			M.2 NVMe						
Product Line	Superior				alue				
	N600Si	N600Sc	N600Vc	N600Vc	N600Vi	N600Vc			
Interface			PCIe G3 x4						
Flash Type	3D.	TLC	3D TLC		3D TLC (TLC Mode)				
Form Factor	M.2 228	0-D2-M	M.2 2280 S2-M	M.2 2242 D5-M	M.2 223	0-S4-M			
Operating Temperature (Tcase) ¹	-40°C to 85°C		0°C to	70°C	-40°C to 85°C 0°C to 70°C				
Power Loss Protection Options	Hardware + Firmware Ba		Firmware Based						
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0				-				
Capacity	120 GB to 1,920 GB		120 GB to 960 GB		120GB / 240GB / 480GB				
			Performance						
Sequential Read (MB/s) up to	3,420		2,600		2,000				
Sequential Write (MB/s) up to		050	1,87		1,570				
Random Reads IOPS up to	225,200 (4K, QD32)		184,300 (4K, QD32)		135,600 (4K, QD32)				
Random Writes IOPS up to	179,20	O (4K, QD32)	145,900 (4	K, QD32)	112,000 (4K, QD32)				
		Er	ndurance and Reliability						
Endurance (TBW) ² up to	5,585 TB		1,536 TB		768 TB				
Reliability MTBF @ 25°C	>2,000,000 hours		>2,000,000 hours		>1,500,000 hours				
, -					30.0 x 22.0 x 2.5				
Dimensions: L x W x H (mm) Certifications	80.0 x 22.0 x 3.5 (M 80.0 x 24.4 x 12.5 (M.2 2	280 with 8 mm heatsink)	Others 80.0 x 22.0 x 2.2 C, BSMI, UKCA, RoHS, REAC	42.0 x 22.0 x 3.6	30.0 x 2	22.0 x 2.5			

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.

Technologies & Add-On Services	S.M.A.R.T.	Hardware-based Power Loss Protection	AutoRefresh	Advanced Wear Leveling	Dynamic Data Refresh	End-to End Data Protection	Secure Erase	P TCG Opal 2.0	Industrial Temperature	Anti-Sulfur Resistors	Conformal Coating
Premium	0	0	0	0	0	0	A	0	0	A	A
Superior	0	0	0	0	0	0	A	0	A	A	A
Value	0	0	0	0	0	0	-	-	-	A	A

2 years

Warranty

 $[\]blacktriangle$: Customization option available on a project basis.

Hot Items Ordering Information								
Product Line	Capacity₁	Operating Temperature ₂	Power Loss Protection ₃	SED ₄	P/N			
N650Si	120GB	-40°C to 85°C	Hardware + Firmware Based	-	AF120GSTJA-8BCIP			
N650Si	240GB	-40°C to 85°C	Hardware + Firmware Based	-	AF240GSTJA-8BCIP			
N650Si	480GB	-40°C to 85°C	Hardware + Firmware Based	-	AF480GSTJA-8BCIP			
N650Si	960GB	-40°C to 85°C	Hardware + Firmware Based	-	AF960GSTJA-8BCIP			
N650Sc	120GB	0°C to 70°C	Hardware + Firmware Based	-	AF120GSTJA-8BCXP			
N650Sc	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTJA-8BCXP			
N650Sc	480GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTJA-8BCXP			
N650Sc	960GB	0°C to 70°C	Hardware + Firmware Based	-	AF960GSTJA-8BCXP			
N600Sc	120GB	0°C to 70°C	Hardware + Firmware Based	-	AF120GSTJA-8BAXP			
N600Sc	240GB	0°C to 70°C	Hardware + Firmware Based	-	AF240GSTJA-8BAXP			
N600Sc	480GB	0°C to 70°C	Hardware + Firmware Based	-	AF480GSTJA-8BAXP			
N600Sc	960GB	0°C to 70°C	Hardware + Firmware Based	-	AF960GSTJA-8BAXP			
N600Sc	1920GB	0°C to 70°C	Hardware + Firmware Based	-	AF1T92STJA-8BAXP			
N600Sc	120GB	0°C to 70°C	Firmware Based	-	AF120GSTJA-8BAXX			
N600Sc	240GB	0°C to 70°C	Firmware Based	-	AF240GSTJA-8BAXX			
N600Sc	480GB	0°C to 70°C	Firmware Based	-	AF480GSTJA-8BAXX			
N600Sc	960GB	0°C to 70°C	Firmware Based	-	AF960GSTJA-8BAXX			
N600Sc	1920GB	0°C to 70°C	Firmware Based	-	AF1T92STJA-8BAXX			
N600Vc (M.2 NVMe 2280)	120GB	0°C to 70°C	Firmware Based	-	AF120GSTJA-DBCXX			
N600Vc (M.2 NVMe 2280)	240GB	0°C to 70°C	Firmware Based	-	AF240GSTJA-DBCXX			
N600Vc (M.2 NVMe 2280)	480GB	0°C to 70°C	Firmware Based	-	AF480GSTJA-DBCXX			
N600Vc (M.2 NVMe 2242)	120GB	0°C to 70°C	Firmware Based	-	AF120GSTJC-DBBXX			
N600Vc (M.2 NVMe 2242)	240GB	0°C to 70°C	Firmware Based	-	AF240GSTJC-DBBXX			
N600Vc (M.2 NVMe 2242)	480GB	0°C to 70°C	Firmware Based	-	AF480GSTJC-DBBXX			
N600Vc (M.2 NVMe 2242)	960GB	0°C to 70°C	Firmware Based	-	AF960GSTJC-DBBXX			

¹ 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 <u>www.atpinc.com</u> for latest information

v2 202207

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The Global Leader in Specialized Storage and Memory Solutions

 $^{{\}tt 2~Refers~to~Case~Temperature~range~during~device~operation,~as~indicated~by~SMART~temperature~attributes.}\\$

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.