PCIe® Gen4 NVMe U.2 SSD

The Global Leader in Specialized Storage and Memory Solutions

Key Features

- 15 mm Fin-Type Heatsink Design
- MCU-based Power Loss Protection Design with Level 4 (data-in-flight) protection*
- Self-Encrypting Drive (SED) with AES 256-bit Encryption, TCG Opal 2.0*

- End-to-End Data Path Protection
- Hot-swappable
- pSLC mode support*
- Anti-sulfuric resistor support*

* May vary by product and project support

ATP U.2 SSDs support the NVMe™ protocol on the high-speed PCI Express® (PCIe®) Gen4 x4 interface. Capacities range from 960 GB to 7.68 TB and can either be I-Temp (40°C to 85°C: N651Si) or C-Temp (0°C to 70°C: N601Sc) operable to meet the varied usage requirements of embedded/ industrial PCs, networking systems, and other function-critical segments.

The high-speed PCIe Gen 4 x4 interface offers twice the bandwidth of the previous generation, enabling the N651Si/N601Sc U.2 SSDs to transfer data faster. ATP's PCIe Gen 4 SSDs use x4 lanes for a maximum bandwidth of 8 GB/s.

The 15 mm fin-type heatsink design offers effective heat dissipation to ensure optimal sustained performance.

Technologies & Add-On Services	S.M.A.R.T.	Firmware-based Power Loss Protection	Hardware-based Power Loss Protection	AutoRefresh	Advanced Wear Leveling	Dynamic Data Refresh	End-to-End Data Path Protection	Auto-Read Calibration	Secure Erase	TCG Opal 2.0	Industrial Temperature	Anti-Sulfur Resistors	Conformal Coating	Joint Validation
Superior	○	○	○	○	○	○	○	○	▲	▲	○	▲	▲	▲

▲: Customization option available on a project basis.

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Specifications

PCIe® Gen4 NVMe U.2 SSD		
Product Line	Superior	
	N651Si	N601Sc
Interface	PCIe G4 x4	
Flash Type	3D TLC	
Form Factor	2.5"	
Operating Temperature	-40°C to 85°C	0°C to 70°C
Power Loss Protection Options	Hardware + Firmware Based	
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0	
Capacity	960 GB to 7.68 TB	
Performance		
Sequential Read (MB/s) up to	6,000	
Sequential Write (MB/s) up to	5,500	
Random Reads IOPS up to	819,000	
Random Writes IOPS up to	1,177,000	
Endurance and Reliability		
Endurance (TBW)[1] up to	12,300 TB	
Reliability MTBF @ 25°C	>2,000,000 hours	
Others		
Dimensions (mm)	100 x 69.85 x 15	
Certifications	RoHS/VCCI/CE/FCC/UKCA	
Warranty	2 years	

1 The actual lifetime of the product will depend on the JESD219A enterprise workload.

Hot Items Ordering Information					
Product Line	Capacity[1]	Operating Temperature[2]	Power Loss Protection[3]	SED[4]	P/N
N601Sc	960GB	-0°C to 70°C	Hardware + Firmware Based	-	AF960GSTKA-HBAXP
N601Sc	1920GB	-0°C to 70°C	Hardware + Firmware Based	-	AF1T92STKA-HBAXP
N601Sc	3840GB	-0°C to 70°C	Hardware + Firmware Based	-	AF3T84STKA-HBAXP
N601Sc	7680GB	-0°C to 70°C	Hardware + Firmware Based	-	AF7T68STKA-HBAXP
N651Si	960GB	-40°C to 85°C	Hardware + Firmware Based	-	AF960GSTKA-HBCIP
N651Si	1920GB	-40°C to 85°C	Hardware + Firmware Based	-	AF1T92STKA-HBCIP
N651Si	3840GB	-40°C to 85°C	Hardware + Firmware Based	-	AF3T84STKA-HBCIP
N651Si	7680GB	-40°C to 85°C	Hardware + Firmware Based	-	AF7T68STKA-HBCIP
N651Si	960GB	-40°C to 85°C	Hardware + Firmware Based	√	AF960GSTKA-HBDIP
N651Si	1920GB	-40°C to 85°C	Hardware + Firmware Based	√	AF1T92STKA-HBDIP
N651Si	3840GB	-40°C to 85°C	Hardware + Firmware Based	√	AF3T84STKA-HBDIP
N651Si	7680GB	-40°C to 85°C	Hardware + Firmware Based	√	AF7T68STKA-HBDIP

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

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