



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 320 GB to 7.68 TB and can either be I-Temp (-40°C to 85°C: N751Pi/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 N751Pi/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
Premium	○	○	○	○	○	○	○	○	▲	▲	○	▲	▲	▲
Superior	○	○	○	○	○	○	○	○	▲	▲	○	—	▲	▲

▲: Customization option available on a project basis.

Specifications

PCIe® Gen4 NVMe U.2 SSD			
Product Line	Premium	Superior	
	N751Pi	N651Si	N601Sc
Interface	PCIe G4 x4		
Flash Type	3D TLC (pSLC mode)	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	320 GB to 2.56 TB	960 GB to 7.68 TB	
Performance			
Sequential Read (MB/s) up to	6,100	6,000	
Sequential Write (MB/s) up to	6,000	5,500	
Random Reads IOPS up to	870,000	819,000	
Random Writes IOPS up to	1,250,000	1,177,000	
Endurance and Reliability			
Endurance (TBW) ¹ up to	157,000 TB	10,280 TB	10,370 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	5 years	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	-	FT960GU24ANHBPC
N601Sc	1920GB	0°C to 70°C	Hardware + Firmware Based	-	FT1T92U24ANHBPC
N601Sc	3840GB	0°C to 70°C	Hardware + Firmware Based	-	FT3T84U24ANHBPC
N601Sc	7680GB	0°C to 70°C	Hardware + Firmware Based	-	FT7T68U24ANHBPC
N651Si	960GB	-40°C to 85°C	Hardware + Firmware Based	-	FT960GU24APHBPI
N651Si	1920GB	-40°C to 85°C	Hardware + Firmware Based	-	FT1T92U24APHBPI
N651Si	3840GB	-40°C to 85°C	Hardware + Firmware Based	-	FT3T84U24APHBPI
N651Si	7680GB	-40°C to 85°C	Hardware + Firmware Based	-	FT7T68U24APHBPI
N651Si	960GB	-40°C to 85°C	Hardware + Firmware Based	✓	FT960GU24APHBSI
N651Si	1920GB	-40°C to 85°C	Hardware + Firmware Based	✓	FT1T92U24APHBSI
N651Si	3840GB	-40°C to 85°C	Hardware + Firmware Based	✓	FT3T84U24APHBSI
N651Si	7680GB	-40°C to 85°C	Hardware + Firmware Based	✓	FT7T68U24APHBSI
N751Si	320GB	-40°C to 85°C	Hardware + Firmware Based	-	FA320GU24APHBPI
N751Si	640GB	-40°C to 85°C	Hardware + Firmware Based	-	FA640GU24APHBPI
N751Si	1280GB	-40°C to 85°C	Hardware + Firmware Based	-	FA1T28U24APHBPI
N751Si	2560GB	-40°C to 85°C	Hardware + Firmware Based	-	FA2T56U24APHBPI
N751Si	320GB	-40°C to 85°C	Hardware + Firmware Based	✓	FA320GU24APHBSI
N751Si	640GB	-40°C to 85°C	Hardware + Firmware Based	✓	FA640GU24APHBSI
N751Si	1280GB	-40°C to 85°C	Hardware + Firmware Based	✓	FA1T28U24APHBSI
N751Si	2560GB	-40°C to 85°C	Hardware + Firmware Based	✓	FA2T56U24APHBSI

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.



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Product spec and its related information are subject to change without advance notice. Please refer to www.atpinc.com for latest information

v1 022024

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