



# PCIe® Gen4 NVMe E1.S SSD

The Global Leader in Specialized Storage and Memory Solutions



## KEY FEATURES

- Endurance: 1 DWPD (5 years Enterprise workload)
- Sustained Write Performance: Up to 3,000 MB/s
- Power Loss Protection: MCU-based\* with data-at-rest and in-flight protection
- PLP Diag\*(Self-Diagnosing Capacitor Check)
- AcuCurrent (Signal Optimization Technology)
- Security: Self-Encrypting Drive (SED) with AES 256-bit Encryption, TCG Opal 2.0\*
- End-to-End Data Path Protection
- 9.5 mm symmetric enclosure

\* May vary by product and project support

Built with 176-layer NAND and boasting an impressive 11,000+ program/erase (P/E) cycle endurance, ATP's E1.S SSDs are designed for optimal performance leveraging cutting-edge PCIe® interface and NVMe protocol technologies.

Engineered for 1U Edge servers, ATP's E1.S SSDs are designed for vertical placement in small-footprint systems, allowing up to 6 to 12 drives in a 1U chassis. They support hot swapping/hot plugging for easy serviceability and replacement of drives while the system is on.

High cross-temperature reliability translates to low bit errors and better transmission accuracy for higher data integrity.

Housed in a 9.5 mm symmetric enclosure, ATP's E1.S SSDs are a result of thermal management solutions.

The enclosure features customized hardware and sustained performance firmware tuning, making it an ideal solution to meet the demanding requirements of hyperscale architecture.

Specifications

Product Line	Superior
	N651Si
Interface	PCIe G4 x4
Flash Type	3D TLC
Form Factor	E1.S
Operating Temperature	-40°C to 85°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	6,400
Sequential Write (MB/s) up to	6,100
Random Reads IOPS up to	1,000,000
Random Writes IOPS up to	1,200,000
Endurance and Reliability	
Endurance (TBW) <sup>1</sup> up to	79,000 TB
Reliability MTBF @ 25°C	>3,000,000 hours
Others	
Dimensions (mm)	118.75 x 33.75 x 9.5
Certifications	RoHS/VCCI/CE/FCC/UKCA
Warranty	5 years

1. Under highest Sequential write value. May vary by density, configuration and applications.

Technologies		S.M.A.R.T/ Life Monitor	PLP Diag	AcuCurrent	Industrial Temperature	Firmware-Based Power Loss Protection	Hardware-Based Power Loss Protection	Advanced Wear Leveling	AutoRefresh	Dynamic Data Refresh	Auto-Read Calibration	ETEDP SED	Software Secure Erase	Hardware Secure Erase	Hardware Write Protect
Superior	N651Si	○	○	○	○	○	○	○	○	○	○	○	○	▲	▲

▲: Customization option available on a project basis.



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Product spec and its related information are subject to change without advance notice.  
Please refer to [www.atpinc.com](http://www.atpinc.com) for latest information

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