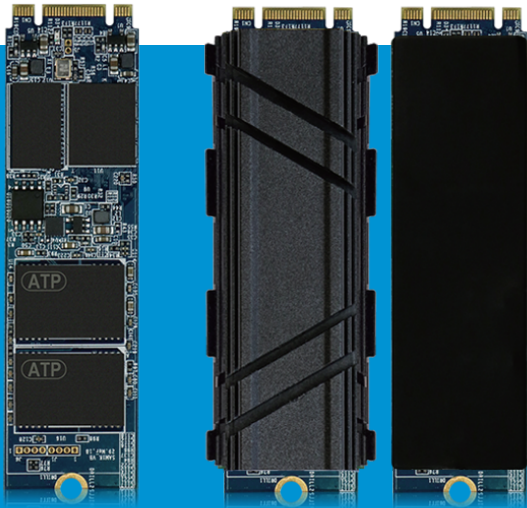




# High-Capacity M.2 NVMe

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications



## Key Features

- Superior Read/Write performance
- LDPC & RAID Data Recovery for error correction
- Thermal Management Solutions\*
- Global wear leveling
- TRIM function support
- End-to End Data Protection

\* Customization available on a project basis

Its compact form factor and ultra-fast performance are among the key reasons why the M.2 2280 NVMe solid state module is gaining increasing adoption in embedded and industrial applications. Supporting the NVMe™ protocol on the high-speed PCI Express® (PCIe®) Gen3 x4 interface, these modules deliver up to 2,700/1,500 MB/s sequential read/write and extra-long service life of up to 10,600 TB.\*

When installed in enclosures with little or no airflow and constantly subjected to intense workloads under harsh conditions, these modules face overheating challenges. Multiple die stacking per integrated circuit (IC) and intensive components in the limited printed circuit board (PCB) space, especially for double-sided designs, also contribute to the overheating issue.

ATP M.2 2280 NVMe modules adopt a Customizable Thermal Management Solution. This includes firmware and hardware options, such as copper foil and fin-type heatsink, to effectively dissipate heat and ensure optimal levels of sustained performance.

With a maximum density of 3.84 TB, these high-capacity modules offer huge storage space to accommodate vast amounts of data and handle simultaneous queues of storage requests from multiple servers. ATP NVMe SSDs outperform Serial ATA 6 Gb/s SSDs with 4-6X faster access and over 3X lower latency, making them ideal for applications where microseconds count, such as those involving real-time customer interactions, time-critical data analytics, and more.

\* Terabytes Written (TBW). Under highest Sequential write value. May vary by density, configuration and applications.













## Specifications

High-Capacity M.2 NVMe		
Product Line	Superior	
	N600Si <sup>3</sup>	N600Sc
Interface	PCIe G3 x4	
Flash Type	TLC	
Form Factor	M.2 2280-D2-M	
Operating Temperature (Tcase) <sup>1</sup>	-40°C to 85°C	0°C to 70°C
Power Loss Protection Options	Firmware Based	
Optional SED Features	-	
Capacity	3.84 TB	
Performance		
Sequential Read (MB/s) up to	2,200	2,700
Sequential Write (MB/s) up to	1,250	1,500
Random Reads IOPS (4K, QD128) up to	195,000	195,000
Random Writes IOPS (4K, QD128) up to	170,000	170,000
Endurance and Reliability		
Endurance (TBW) <sup>2</sup> up to	10,600 TB	
Reliability MTBF @ 25°C	>2,000,000 hours	
Others		
Dimensions: L x W x H (mm)	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)	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	RoHS, VCCI, CE, FCC	
Warranty	2 years	

<sup>1</sup> Case Temperature, the composite temperature as indicated by SMART temperature attributes.

<sup>2</sup> Under highest Sequential write value. May vary by density, configuration and applications.

<sup>3</sup> Data subject to change

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	 TCG Opal 2.0	 Dynamic Thermal Throttling	 Industrial Temperature	 Conformal Coating	 Joint Validation
Superior	○	○	○	○	○	○	▲	▲	○	○	▲	▲

▲: Customization option available on a project basis.

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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