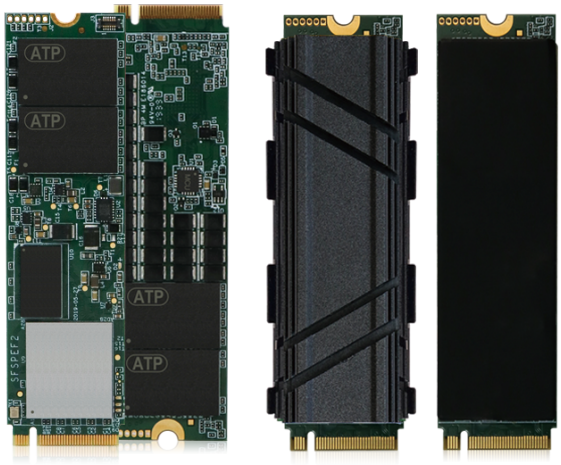
ATP M.2 NVMe Embedded SSD

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 3.0 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 memory capacity and deliver boosted performance with sequential read up to 3,280 MB/s, sequential write up to 3,050 MB/s, and random IOPS up to 211,200.

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.

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
- MCU-based Power Loss Protection Design (May vary by product and project support.)

* Customization available on a project basis

Applications

- Networking
- Thin Clients
- Enterprise Storage Systems

Specifications

Product Name		M.2 NVMe 2280-D2-M	
Product Line		Superior	
Naming		N600Si	N600Sc
Flash Type		TLC	
Density		120 GB to 1920 GB	
Performance	Sequential Read up to (MB/s)	3,420	
	Sequential Write up to (MB/s)	3,050	
	Random Read IOPS (4K, QD32)	225,200	
Interface		PCIe Gen3 Interface, x4 Lanes	
Operating Temperature (Tcase)*		-40°C to 85°C	0°C to 70°C
Endurance TBW** (max.)		5,585 TB	
Reliability MTBF @ 25°C		>2,000,000 hours	
Dimensions: L x W x H (mm)		80.0 x 22.0 x 3.5	

* Case Temperature, the composite temperature as indicated by SMART temperature attributes.
** Under highest Sequential write value. May vary by density, configuration and applications.

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

Δ: Customization option available on a project basis.

To learn more about this product, contact your ATP Representative.

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