

[ATP Electronics, Inc.](#) combines the speed and performance of PCIe NVMe with the reliability and endurance features of 3D NAND flash, a TLC, 8-channel controllers, end-to-end data protection, power management and power loss protection (PLP) technology to deliver its next-gen M.2 2280 NVMe N600Si/N600Sc solid state modules.



“NVMe and 3D NAND are among the most disruptive technologies we have seen in recent years. ATP leverages these along with our superior hardware, firmware and testing capabilities to offer blazing-fast SSDs that deliver new levels of performance, reliability and endurance,” said Marco Mezger, VP, global marketing, ATP. *“As the first to introduce I-Temp M.2 NVMe SSDs two years ago, ATP continues to meet the rigid storage requirements of industrial applications with uncompromising reliability and long service life to make sure that our customers get the most value out of their TCO.”*

Overview:

- Available capacities: 120/240/480/960/1,920GB
- Sequential R/W performance: 3,420/3,050MB/s max.
- Endurance: Up to 5,120TB
- Available in I-Temp (N600Si) and C-Temp (N600Sc) ratings
- End-to-end data protection and RAID support



8-channel NAND performance

The N600Si/N600Sc M.2 NVMe 2280 SSDs feature 8Gb PCIe Gen3 x4 lanes of simultaneous data flow with 8 NAND channels. This design optimizes both hardware and software to take advantage of PCIe 3.1 and NVMe 1.3 SSD specs, addressing diverse industries' need for fast and reliable storage.

Data protection

End-to-end data path protection and SRAM ECC provide error control throughout the entire data transfer path from the host system to the SSD and vice versa, thus ensuring data integrity and reliable data transfers.

MCU-based PLP design

Providing an extra layer of reliability is a power management and power loss protection (PLP) mechanism based on a microcontroller (MCU) design. Integrated into the company's 4th gen PLP, PowerProtector 4, the MCU design improves device protection and data integrity when power failures, glitches and power current challenges occur.

PowerProtector 4 combines hardware and firmware solutions to protect both data and storage device, such as power-up inrush current suppression and input over-voltage protection. For better data integrity, the input power noise de-glitch prevents incorrect cache flushing caused by false triggers such as noisy or unstable host input voltage. With customization options available, the MCU-based design allows PLP capabilities to be tailor-fitted according to customer requirements, application-specific needs, or use cases.

LDPC+RAID engine support

N600Si/N600Sc NVMe SSDs leverage a proprietary 2 KB codeword Low-Density Parity-Check ECC with an embedded programmable RAID engine that enhances the endurance and data retention of 3D TLC NAND. RAID support ensures redundancy and fault tolerance to prevent data loss in the event of a drive failure.