

## ATP I-Temp NVMe SSDs Combine High Performance 8-Channel PCIe Gen 3 x4, End-to-End Data Protection, MCU-Based Power Management



Taipei, Taiwan (February, 2020) – ATP Electronics, the leading manufacturer of industrial-only memory and storage solutions, combines the speed and performance of PCIe NVMe with the reliability and endurance features of 3D NAND flash, the high capacity of triple level flash (TLC), high-performance 8-channel controllers, end-to-end data protection, breakthrough power management and power loss protection (PLP) technology to deliver its next-generation 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, ATP Vice President of Global Marketing. “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 total cost of ownership (TCO).”

### Overview

- Available capacities: 120/240/480/960/1920 GB
- Sequential read/write performance: 3,420/3,050 MB/s max.
- Endurance: Up to 5,120 TB
- Available in I-Temp (N600Si) and C-Temp (N600Sc) ratings
- End-to-end data protection and RAID support

### 8-channel NAND Performance

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

### Comprehensive Data Protection

End-to-end data path protection and SRAM error correcting code (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 unique power management and power loss protection (PLP) mechanism based on a microcontroller (MCU) design. Integrated into ATP's 4<sup>th</sup> Generation PLP, PowerProtector 4, the MCU design improves device protection and data integrity when power failures, glitches and power current challenges occur.

ATP 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 new MCU-based design allows PLP capabilities to be tailor-fitted according to unique customer requirements, application-specific needs, or use cases.

### **LDPC+RAID Engine Support**

ATP N600Si/N600Sc NVMe SSDs leverage a proprietary 2 KB codeword Low-Density Parity-Check (LDPC) 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.

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### **About ATP**

ATP Electronics is the leading provider of "Industrial Only" NAND flash products and DRAM modules for demanding industrial/automotive applications requiring the highest levels of performance, reliability and endurance. A true manufacturer for over 25 years, ATP manages every stage of the manufacturing process to ensure quality and product longevity, offering in-house design, testing, and tuning from component to product level. For more information on ATP Electronics, please visit [www.atpinc.com](http://www.atpinc.com) or contact us at [info@atpinc.com](mailto:info@atpinc.com).