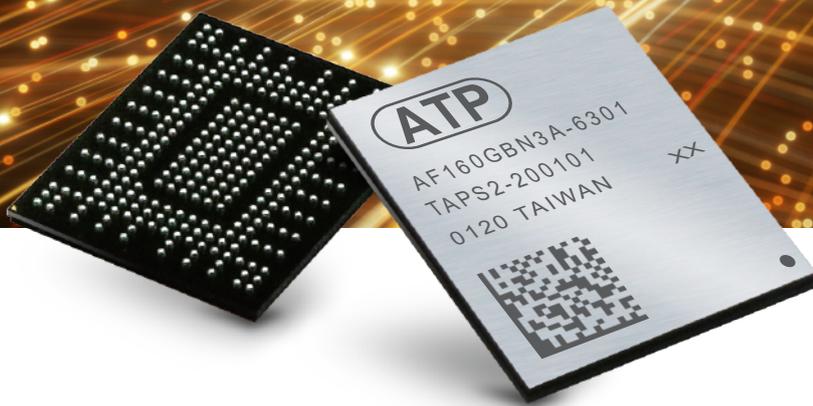




N700 Series PCIe® Gen3 x4 NVMe™ Type 1620 HSBGA SSDs: Tiniest NVMe Storage Solutions with Impressive Performance and Endurance



Despite their ultra-small form factor, ATP's N700 Series NVMe Heat Sink Ball Grid Array (HSBGA) solid state drives (SSDs) surprisingly pack a mean punch. With dimensions of just 16 (L) x 20 (W) x 1.6 (H) mm, these SSDs are the tiniest in ATP's range of Specialized NVMe Storage solutions. The high-speed PCIe 3.0 interface x4 lanes and NVMe protocol deliver up to 32 Gb/s bandwidth at 8 Gb/s per lane, while the M.2 Type 1620 form factor and 291-ball packaging take up minimal space within tightly confined systems.

N700 Series SSDs are configured with pseudo single-level cell (pSLC) NAND flash. By storing only one bit per cell, they increase the reliability and lifetime of the NAND flash memory, while benefiting from the lower cost compared with native SLC, due to the higher cell density.

These diminutive powerhouses store hefty capacities of 40/80/160 GB and are packed with advanced features to meet the ultra-portability and reliability requirements of ultra-compact Internet of Things (IoT) devices and embedded systems. They provide high-speed reliable storage in harsh environments such as in transportation, aerospace, smart factories, mining operations, steel fabrication and more.



Key Features

- **pSLC Mode.** Configured to store only one bit per cell to increase endurance and reliability, offering 2X-3X sustainable performance.
- **Stable Performance.** The ATP Optimized Thermal Throttling firmware (FW) will maintain the “Steady State” condition to avoid huge performance drops that will adversely impact the system, thus optimizing best performance for application requests and enhancing overall sustained performance.
- **Optimized Power Consumption.** Consuming low power at only 5 mW during Power State 4 (Sleep Mode), the ATP NVMe HSBGA SSDs deliver huge power savings.
- **DRAM-Less Configuration.** Host Memory Buffer (HMB) support helps these DRAM-less SSDs to improve performance by obtaining DRAM resources as cache, thus overcoming the limited memory capacity within the storage and optimizing I/O performance without requiring the SSD to bring up its own DRAM.
- **Vibration-Resistant Storage.** ATP N700 Series SSDs are soldered down, making them vibration-resistant and able to withstand rigorous shaking.
- **Better Thermal Dissipation.** The heat sink effectively transfers heat to cool the device and keep the performance at optimal levels.
- **Optional Security Features**
 - HW Write Protect
 - HW Quick Erase
 - HW Secure Erase (Data Sanitization) (AFSSI-5020)
 - AES-256 Encryption
 - TCG Opal 2.0

Specifications

Product Name		HBGA M.2, Type 1620	
Product Line		Premium	
Naming		N700Pi	N700Pc
IC Package		291-Ball, HSBGA	
Flash Type		Pseudo SLC	
Density*		40 GB, 80 GB, 160 GB	
Performance**	Sequential Read up to (MB/s)	2,000	
	Sequential Write up to (MB/s)	1,700	
	Random Read IOPS (4K, QD32)	95,000	
Interface/Protocol		PCIe Gen3 Interface, x4 Lanes NVMe 1.3	
Operating Temperature		-40°C to 85°C (Industrial)	0°C to 70°C (Commercial)
Endurance TBW** (max.)		4280 TB	
Reliability MTBF @ 25°C		>2,000,000 hours	
Dimensions: L x W x H (mm)		16 x 20 x 1.6	

* Full user capacity SLC Mode

**All performance is collected or measured using ATP proprietary test environment, without file system overhead.