



# PCIe® Gen 3 NVMe M.2 Type 1620 HSBGA SSD

The Global Leader in Specialized Storage and Memory Solutions



## Key Features

- PCIe Gen3 x4, NVMe 1.3, M.2 Type 1620
- pSLC mode with 2X-3X of Sustainable Performance\*
- High/Stable performance with Optimized Thermal Throttling Firmware/Heatsink (HSBGA)
- Optimized Power Consumption: 5 mW during Power State 4
- DRAM-less configuration supporting Host Memory Buffer (HMB)\*
- Optional Security features available\*\*

\* Under highest Sequential write value. May vary by density, configuration, and applications.

\*\* Customization available on a project basis

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. These SSDs with 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 dimensions of just 16 (L) x 20 (W) x 1.6 (H) mm, 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.

# Specifications

PCIe® Gen 3 NVMe M.2 Type 1620 HSBGA SSD				
Product Line	Premium		Value	
	N700Pi	N700Pc	N600Vi	N600Vc
Interface	PCIe G3 x4			
Flash Type	3D TLC (pSLC mode)		3D TLC	
Form Factor	291-Ball, HSBGA			
Operating Temperature (Tcase) <sup>1</sup>	-40°C to 85°C	0°C to 70°C	-40°C to 85°C	0°C to 70°C
Power Loss Protection Options	Firmware Based			
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0		-	
Capacity	40 GB to 160 GB		120 GB to 480 GB	
Performance				
Sequential Read (MB/s) up to	2,000		2,050	
Sequential Write (MB/s) up to	1,600		1,550	
Random Reads IOPS up to	135,600		138,000	
Random Writes IOPS up to	112,000		112,600	
Endurance and Reliability				
Endurance (TBW) <sup>2</sup> up to	4,280 TB		768 TB	
Reliability MTBF @ 25°C	>2,000,000 hours			
Others				
Dimensions (mm)	16.0 x 20.0 x 1.6			
Certifications	RoHS, REACH			
Warranty	1 year			

Technologies & Add-On Services	S.M.A.R.T.	Firmware-based Power Loss Protection	AutoRefresh	Advanced Wear Leveling	Dynamic Data Refresh	End-to-End Data Path Protection	Auto-Read Calibration	Secure Erase	TCG Opal 2.0	Industrial Temperature	SiP	Vibration-Proof BGA Package	Joint Validation
Premium	○	○	○	○	○	○	○	▲	▲	▲	○	○	▲
Value	○	○	○	○	○	○	—	—	—	○	○	○	—

1 Case Temperature, the composite temperature as indicated by SMART temperature attributes.

2 Under highest Sequential write value. May vary by density, configuration and applications.

▲: 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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