



# PCIe® Gen4 NVMe CFexpress Card

The Global Leader in Specialized Storage and Memory Solutions



## KEY FEATURES

- High endurance
- High Read/Write performance
- Self-Encrypting Drive (SED)  
with AES 256-bit Encryption, TCG Opal 2.0\*
- DRAM-less configuration supporting Host Memory Buffer (HMB)\*
- Hardware Write Protect\*
- Anti-sulfur resistor support\*

\* May vary by product and project support

ATP CFexpress Type B memory cards support the NVMe™ protocol and utilize the PCIe 4.0 x2 interface. With two PCIe 4.0 lanes, the ATP CFexpress surpasses standard configurations of other cards using the PCIe 3.0 x2 interface. It delivers impressive high-speed sequential read/write speeds of up to 3500/3200 MB/s. Built with 3D TLC flash (available with pSLC by project support), ATP CFexpress Type B memory cards offer big storage for IPC/embedded, automation, networking, test and measurement, and transportation systems as well as other applications that require excellent reliability, endurance, and performance.

The CFexpress features Host Memory Buffer (HMB) support to improve random read performance, optional TCG Opal 2.0 and hardware write-protect security, and software RAID 0, 1 compatibility. To ensure optimal sustained performance, the CFexpress cards continuously monitor device temperature and enable firmware-based throttling that adjusts performance without drastic drops.

Specifications

Product Line	Premium	Superior
	N751Pi	N651Si
Interface	PCIe G4 x2	
Flash Type	3D TLC (pSLC mode)	3D TLC
Form Factor	CFexpress Type B	
Operating Temperature	-40°C to 85°C	
Power Loss Protection Options	Firmware Based	
Optional SED Features	AES 256-bit Encryption, TCG Opal 2.0	
Capacity	40 GB to 320 GB	128 GB to 1,024 GB
Performance		
Sequential Read (MB/s) up to	3,500	
Sequential Write (MB/s) up to	3,100	3,200
Random Reads IOPS up to	770,000	632,000
Random Writes IOPS up to	735,000	768,000
Endurance and Reliability		
Endurance (TBW) <sup>1</sup> up to	19,010 TB	10,830 TB
Reliability MTBF @ 25°C	>3,000,000 hours	
Reliability Number of Insertions	10,000 minimum	
Others		
Dimensions (mm)	29.6 x 38.5 x 3.8	
Certifications	CE, FCC, RoHS, UKCA	
Warranty	5 years	3 years

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

Technologies		S.M.A.R.T/ Life Monitor	Industrial Temperature	Firmware-Based Data-At-Rest Power Loss Protection	Advanced Wear Leveling	AutoRefresh	Dynamic Data Refresh	Auto-Read Calibration	ETEDP	SED	Software Secure Erase	Hardware Write Protect
Premium	N751Pi	○	○	○	○	○	○	○	○	○	○	▲
Superior	N651Si	○	○	○	○	○	○	○	○	○	○	▲

▲: Customization option available on a project basis.



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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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