



PCIe® Gen4 NVMe CFexpress Card

The Global Leader in Specialized Storage and Memory Solutions



Key Features

- Superior 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-sulfuric resistor support*

* May vary by product and project support















ATP N651Si / N601Sc CFexpress Type B memory cards support the NVMe™ protocol and utilize the PCIe 3.0 x2* interface. The N651Si/ N601Sc surpasses standard configurations and 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 N651Si / N601Sc 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 N651Si / N601Sc Series CFexpress cards continuously monitor device temperature and enable firmware-based throttling that adjusts performance without drastic drops.

*CFexpress spec 4.0 for PCIe Gen. 4 is under IP review and will be released Aug. 24, 2023.

Specifications

PCIe® Gen4 NVMe CFexpress Card		
Product Line	Superior	
	N651Si	N601Sc
Interface	PCIe Gen4 x 2	
Flash Type	3D TLC	
Form Factor	CFexpress Type B	
Operating Temperature	-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	128 GB to 1 TB	
Performance		
Sequential Read (MB/s) up to	3,500	
Sequential Write (MB/s) up to	3,200	
Random Reads IOPS up to	770,000	
Random Writes IOPS up to	750,000	
Endurance and Reliability		
Endurance (TBW) ¹ up to	1,000 TB	
Reliability MTBF @ 25°C	>2,000,000 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	2 years	

Technologies & Add-On Services														
Superior	○	○	○	○	○	○	○	▲	▲	○	▲	▲	○	▲

1 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 for latest information

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