

## Bringing persistent memory to financial technology (FinTech)

Reducing latency and increasing throughput - while still protecting data for synchronous logging applications

### FinTech Demands Performance

Time is money – reducing latency and increasing transaction rates helps grow the bottom line.

### Persistence is Needed for Accountability

The needs of shareholders, government regulators and customers also demand accountability. Transactions need to be logged synchronously before the next transaction can be started, creating a significant bottleneck that slows transaction velocity.

### High Speed and Non-volatile, Together

The nvNITRO Storage Accelerator enables high-speed transactions to be logged as completed before they are written to the final media location. This high-performance, non-volatile memory enables the system to begin the next transaction with the confidence that the previous transaction is logged to a secure location without any risk of data being lost.

### Accelerated Storage Buffers

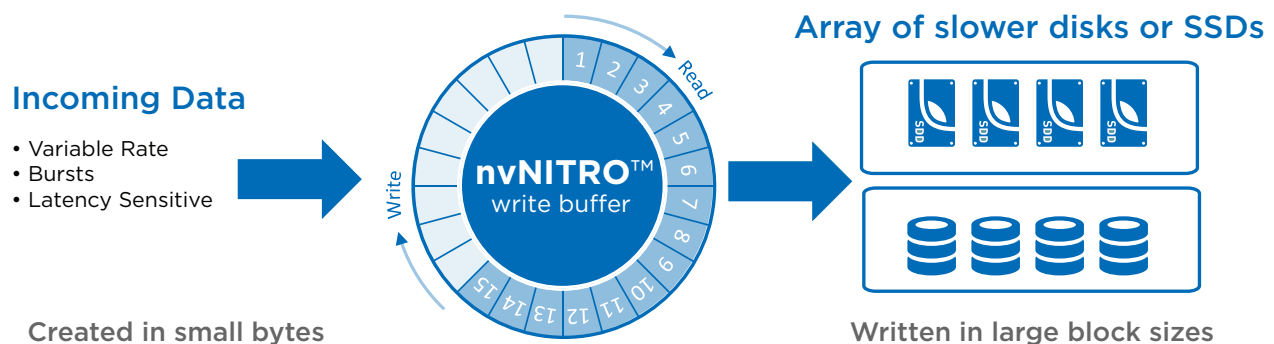
These storage accelerators can also be used to accelerate reads and writes of data from high performance computing (HPC) applications. Simulations can be sped up optimizing the time to recommendation for financial analysts.

### Advanced NVMe Over Fabrics (NVMeOF) Support

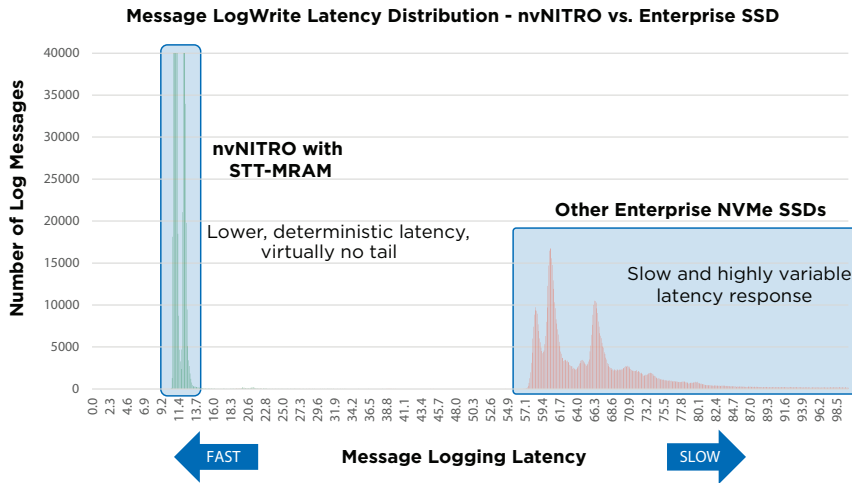
The SMART Storage Accelerator can act as a high performance remote direct memory access (RDMA) storage location, pooling critical data as a shared central pool.

### Persistence Helps Manage Risk

Persistence means that transactional data is never at risk from loss due to power interruptions. This reduces the risk of failure typically associated with batteries or supercapacitors but also reduces potential servicing issues that bring downtime and lost productivity.



## Performance Example



## nvNITRO Technology Advantages:

- Delivers up to 90% lower latency than enterprise SSDs
- Enables up to 9X more work in the same amount of time as enterprise SSDs

The high throughput, low latency, and short tail enable applications to log quickly and then return to processing, boosting overall business velocity.

## Key Specifications

Category	Parameter	Specification
	Available Capacity	1GB
	Persistent Memory Modules	256Mb Perpendicular STT-MRAM
Performance	Sequential Read/Write	Up to 6,000 MB/sec
	Random 4KB Read	Up to 1,460,000 MB/sec
	Random 4KB Write or Sustained 4KB Write	Up to 1,500,000 IOPS
	Random 70/30 Read/Write	Up to 1,460,000 IOPS
	Average Latency Read/Write (QD1)	6 µsec (read), 7 µsec (write)
	Worst Case Latency Read/Write (QD8)	10 µsec (read), 11 µsec (write)
Endurance	Drive Writes per Day	Unlimited uniform access
	Data Retention	Power on - infinite; Power off - 3 months at 50°C
Interface	Host Interface	PCIe Gen3 x8 (8GT/s), Non-volatile Memory Express (NVMe)
	Access Modes	Block mode (NVMe)
	PCIe Card Form Factor	Half Height, Half Length (HHHL)
Environment	Power Consumption 70/30 Read/Write	<25W
	Operating Temperature	0 to 55°C ambient with suggested airflow
	Non-operating Temperature	-40°C to +70°C
OS	Linux, Windows	
Management	Self Monitoring Analysis and Reporting Technology (SMART ) commands	

## nvNITRO Ordering Information

nvNITRO Storage Accelerator		
SMART Part Number	Form Factor	Density
SSPE8NILXLAM36BEV	PCIe	1GB
STPE4U22XLAM36BEV	U.2	1GB



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