Netlist N1551 NVMe™ SSD

Netlist SSD low power and high-performance family of NVMe™ drives based on 3D NAND

Advantages & Benefits

- NVM Express v1.3 Compliant
- Low Power (10W typical power and 4W idle power)
- High Transfer Speeds up to 3.2GB/s and Read IOPs up to 510K
- NVM Express Compliant Form Factor U.2 2.5 inch and AIC HHHL
- AES256 Encryption to ensure data security
- Thermal management Temperature setting
- Virtualization that relies on multi namespaces to divide the capacity of the SSD
- Dual port capability

Applications Best Suited

- Database
- Searching, Indexing, CDN
- Cloud and Hyper-scale Computing
- High Performance Software-defined Storage System
- Deep Learning and Big Data Analytics
- High Performance Storage System
- High Frequency Trading
- Online Payment

Netlist NVMe SSD excels in the demanding workloads of Data Center applications. The N1551 family of SSDs are NVM Express v1.3 compliant with up to 3 DWPDs (Drive Writes Per Day) for five years, low power and high performance up to 3.2GB/s read throughput. Netlist N1551 NVMe drives are optimized to surpass the needs of Data Center users.

High Performance Transfer Speeds

Maximum performance of up to 3.2GB/s read throughput and 510K read IOPS.

Significant Low Power

The low power N1551 series NVMe SSD, Typical power is lower to 10W and only 4W when idle.

Data Security & Protection

AES 256 Data Encryption, Full Data Path Protection and Enhanced Power Failure protection to protect critical enterprise applications.

Ultra-low Write Latency

N1551 series ensures low and consistent write latency, especially has notable optimization in non-aligned write latency with Tiered Caching mechanism. Compares to backend buffer, the frontend cache is closer to core processing unit of the controller with higher transfer rate.

Flexible and Accurate Power Management

Enterprise users are extremely demanding on power consumption and ambient temperature, N1551 series supports the setting of different power modes ranging from 5W to 12W

High-availability Dual Port

Dual-port function solves the single-path failure problem. The two ports can be accessed simultaneously allowing for data access while providing Quality of Service in the Enterprise Storage space.

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Key Specifications

	Netlist Low Power NVMe SSD N1551			
	D2-Series	E2-Series	D3-Series	E3-Series
From Factor	2.5-inch U.2 7mm		AIC HHHL	
Interface	PCIe Gen 3.0, x 4 Lane			
User Capacity	1.92 TB, 3.84 TB	1.6TB, 3.2 TB	1.92 TB	1.6TB
Endurance for 5 years	1 DWPD	3 DWPD	1 DWPD	3 DWPD
Sequential Read (128KB)	Up to 3.2 GB/s			
Sequential Write (128KB)	Up to 1.7 GB/s			
Sustained Random Read (4KB)	Up to 510K IOPS			
Latency Read/Write [3]	95 / 15µs			
Power Consumption	Active Max: 12 W / Typical: 10W, Idle: 4W			
UBER / MTBF	1 sector per 10^{17} read / 2 million hours			
NAND Flash Memory	3D eTLC NAND			
Basic Feature Support	Power Loss Protection, Hot Pluggable,			
Advanced Feature Support	TRIM, AES 256 Data Encryption, Fast Reboot, Crypto Erase, Dual Port			
Spec Compliance	PCI Express Gen3 Rev 3.0, NVME Express spec rev. 1.3, Enterprise SSD form factor Version 1.0a			
Certification	America: FCC, China: CNAS, Europe: CE, RoHS, WEEE			

[1]. Performance may vary due to different system configurations and firmware version. [3]. Average latency measured with 4KB random I/O pattern.
[2]. Measurement is performed at Steady State follow SNIA SSS-PTS-E test specification.

Ordering Information

Family	Endurance	Form Factor	Capacity	Part Number
N1551 D2	1DWPD	2.5”, U.2 7mm	1.92TB	NS1551U711T9-5T1A000
			3.84TB	NS1551U713T8-5T1A000
N1551 D3	1DWPD	AIC HHHL	1.92TB	NS1551AU11T9-5T1A000
N1551 E2	3DWPD	2.5”, U.2 7mm	1.6TB	NS1551U731T6-5T1A000
			3.2TB	NS1551U733T2-5T1A000
N1551 E3	3DWPD	AIC HHHL	1.6TB	NS1551AU31T6-5T1A000

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