



Netlist N1552 NVMe™ M.2 SSD

High-performance family of NVMe™ drives up to 4TB based on 96 Layer 3D NAND

Advantages & Benefits

- NVM Express v 1.3 Compliant
- High Transfer Speeds:
 - 3.0/1.5 GB/s sequential R/W
 - 440K IOPS random read
- Form Factors:
 - M.2 2280
 - M.2 22110
- T10 PI End-to-End Data Protection (DIF/DIX)
- Enhanced viable sector size (512B, 4KB, 512+8B, 4KB+8B, 4KB+64B)
- Power Loss Protection for increased data reliability and business continuity
- AES-256 encryption ensures data security and recovery
- Thermal & Power Management enhances environment optimization

Applications

- Boot Drive & Application Running
- Write Tier Caching
- File Logging
- Content Delivery Networks (CDN)
- Edge Computing
- Deep Learning and Big Data Analytics

Netlist NVMe M.2 SSDs excel to support the most demanding Enterprise applications workloads. The N1552 family of M.2 SSDs are NVM Express v1.3 compliant with DWPD (Drive Writes Per Day) customization capability up to nine DWPD guaranteed for five years. Netlist's NVMe M.2 SSDs deliver the right combination of performance and power to handle the various transactional workloads expected in enterprise environments.

High Performance Transfer Speeds

Maximum performance up to 3.0 GB/s throughput and 440K IOPS.

Low Power SSD Solution

Typical active and idle power consumption of 6W and 2W, respectively.

Data Security & Data Loss Protection (AES-256 encryption and PLP)

AES-256 data encryption provides the added security for data that is stored on the drive based on the controller's randomized encryption key it generates. Additionally, the Power Loss Protection (PLP) feature protects critical data from being lost during power outages or brown-outs, making Netlist NVMe family of drives suitable for secure, high-availability enterprise applications.

Flexible Power Management

User configurable power throttling (ranging from 4.25 W to 8.25 W) enables efficient power consumption for dynamic workloads.

Customized Over-Provisioning & Endurance Available

Over-provisioning (up to nine DWPD) for longer endurance specifications are available upon request and such changes are warranted over a 5-year period.

Responsive Customer Support & Longer Product Supply

Netlist prides itself on handling any technical, business, or logistical need in a very short time frame (minutes/days, not weeks).

Additionally, Netlist's longer drive support alleviates any early EOL concerns and reduces requalification dollar spend.





Key Specifications

Netlist Enterprise (High Performance) NVMe M.2 SSD		
	D4-Series	E4-Series
Form Factor	M.2 (2280 ^[4] / 22110)	
Interface	PCIe Gen3 x4 Lane	
User Capacity	480GB ^[4] , 960 GB ^[4] , 1.92 TB, 3.84 TB	400GB ^[4] , 800 GB ^[4] , 1.6 TB, 3.2 TB
Endurance for 5 years	1 DWPD	3 DWPD
Sequential Read (128KB) ^[1]	Up to 3.0 GB/s	
Sequential Write (128KB) ^[1]	Up to 1.5 GB/s	
Sustained Random Read (4KB) ^{[1],[2]}	Up to 440K IOPS	
Latency Read/Write ^[3]	90 µs / 15 µs	
Power Consumption	Average: 6 W, Idle: 2 W	
Temperature	Operating: 0-35°C, Non-Operating : -40~85°C	
UBER / MTBF	1 sector per 10 ¹⁷ read / 2 million hours	
NAND Flash Memory	3D 96 Layer TLC NAND	
Feature Support	Power Loss Protection, Power Throttling, TRIM, AES-256 Data Encryption, Enhanced viable sector size (512B, 4KB, 512+8B, 4KB+8B, 4KB+64B), T10 PI End-to-End Data Protection (DIF/DIX), Crypto Erase	
Customization Support	Over-provisioning & Longer Endurance, Extended Product Lifecycle Support	
Spec Compliance	PCI Express Gen3 Rev. 3.0, NVMe Express Rev. 1.3	

[1]. Performance may vary due to different system configurations and firmware version

[2]. Measurement is performed at Steady State per the SNIA SSS-PTS-E test specification

[3]. Average latency measured with 4KB random I/O pattern

[4]. M.2 2280 is available only for 400GB, 480GB, 800GB, and 960GB

Ordering Information

Family	Endurance	Form Factor	Capacity	Part Number
N1552 D4	1 DWPD	M.2, 2280 (22 mm x 80 mm)	480 GB	NS1552M8148G-5M1A000
			960 GB	NS1552M810T9-5M1A000
		M.2, 22110 (22 mm x 110 mm)	1.92 TB	NS1552M111T9-5M1A000
			3.84 TB	NS1552M113T8-5M1A000
N1552 E4	3 DWPD	M.2, 2280 (22 mm x 80 mm)	400 GB	NS1552M8340G-5M1A000
			800 GB	NS1552M830T8-5M1A000
		M.2, 22110 (22 mm x 110 mm)	1.6 TB	NS1552M131T6-5M1A000
			3.2 TB	NS1552M133T2-5M1A000