

Server Solutions

# Highest Performance and Data Security for Enterprise and Data Center Applications



In the high-stakes realm of Enterprise and Datacenter operations, the bar for storage solutions is set remarkably high, far beyond what standard consumer-grade products can reach, demanding a mix of specialized form factors, superior endurance, top-tier performance, minimal power consumption, robust security, and unmatched serviceability. Leading the charge, U.2 and EDSFF form factors stand out, offering the flexibility of hot-swappable modules essential for continuous operation. With storage media facing a steady flood of data, endurance beyond 1 DWPD over a five-year lifespan becomes essential. In an ecosystem where power efficiency directly influences operational costs, the metric of IOPS-per-watt emerges as a new standard for evaluating performance. Ensuring high sustained IOPS and low latency throughout the lifespan of the product not only boosts efficiency but also circumvents the financial and logistical burdens of early replacements. Furthermore, the integration of Secure Boot, hardware-based security features, and out-of-band management provide protection and ease of maintenance, setting new standards for what businesses and data centers can expect from their storage infrastructure.



## Key Benefits

- Consistent steady state performance over the entire SSD lifetime
- Minimum of 1.5 drive write per day endurance over 5 years operation
- Consistent low latency for reliable and predictable service levels
- Low power consumption and best in class Watt/IOPs ratio
- Remote management through NVMe Management Interface

## D2200 Product Series

The Gen5 PCIe SSD family D2200 is designed for enterprise servers and edge data centers and offers outstanding performance with minimal latency. The D2200 also excels in energy efficiency, delivering a sequential read performance of up to 970 MB/s per watt. This efficiency also impacts thermal management, with the D2200's optimized hardware design and firmware enhancements reducing server heat generation by up to 20°C. As a PCI Gen5 SSD that is backward compatible with PCIe Gen4, the series supports NVMe 2.0 and OCP 2.0, making it future-proof. Backed by our commitment to exceptional customer service, we ensure seamless integration and direct support for your business needs.

## N5200 Product Series

The new Swissbit Enterprise SSD N5200 is a particularly efficient storage solution that consumes up to 30 percent less power than other PCIe Gen4 SSDs while delivering highest performance. This makes the N5200 the industry's best performing SSD in terms of IOPS-per-watt ratio. In addition, the product series offers a wide range of features essential for operation in modern enterprise environments, including hardware-based security features, advanced telemetry, OCP Cloud Specification 1.0, and Power Loss Protection (PLP).



**Big Data**



**Content Streaming**



**Machine Learning**



**Artificial Intelligence**

### D2200 U.2



### D2200 E1.S



### N5200 U.2



### N5200 E1.S



### Information

Type	U.2 PCIe / NVMe SSD	E1.S PCIe / NVMe SSD	U.2 PCIe / NVMe SSD	E1.S PCIe / NVMe SSD
Standard & Interface	PCIe Gen 5.0, x4 lanes / NVMe 2.0b		PCIe Gen 4.0, x4 lanes / NVMe 1.4	
Form Factor	U.2	E1.S	U.2	E1.S
Outline Dimensions	100.4mm x 69.9mm x 14.8mm	111.25 x 33.7 x 9.5 mm	100.4mm x 69.9mm x 14.8mm	111.25 x 33.7 x 5.9, 9.5, 15 mm
Density Range	7.68 TB – 30.7 TB	7.68 TB – 15.4 TB	1.92 TB – 7.68 TB	
NAND Flash	Latest generation eTLC (enterprise grade) 3D NAND			
Endurance [DWPD] Enterprise WL	1.5 DWPD for 5 years			

### Temperature

Operating / Storage Temperature	Commercial: 0°C to +70°C / -40°C to +85°C
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### Performance

Sequential Read (MB/s)	up to 14,000	up to 7,100
Sequential Write (MB/s)	up to 10,000	up to 4,200
Random 4KB Read (IOPS)	up to 2,700k	up to 1,150k
Random 4KB Write (IOPS)	up to 510k	up to 950k

### Robustness

MTBF	≥ 2,000,000 hours	≥ 2,500,000 hours
Data Reliability	< 1 sector per 10 <sup>17</sup> bits	

### Feature List

Features & Tools	<p>powersafe™ functionality</p> <p>Full Data Path Protection</p> <p>S.M.A.R.T</p> <p>Flexible power management</p> <p>Hot pluggable</p> <p>TRIM</p> <p>Multi-namespace support up to 128</p> <p>EUI64/NGUID</p> <p>Support NVMe-MI 1.2b, support MCTP over SMBus</p> <p>Firmware upgrade without reset</p> <p>Timestamp</p> <p>Telemetry</p> <p>Weighted Round Robin (WRR)</p> <p>Persistent event log</p> <p>AES-XTS 256 data encryption</p> <p>TCG OPAL 2.0</p> <p>Secure boot</p> <p>Crypto erase</p>	<p>OCP NVMe Cloud SSD Specification 1.0 compliant</p> <p>Dynamic Internal RAID</p> <p>Health log</p> <p>Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T., Telemetry)</p> <p>Vital Product Data (VPD) over SMBus supported</p> <p>AES256 encryption / TCG OPAL 2.01</p> <p>Secure Boot</p> <ul style="list-style-type: none"> <li>ECDSA-256 FW Image Authentication Supported</li> <li>SHA3-512 Hash Algorithm Supported</li> </ul> <p>End to end path protection</p> <p>Crypto Erase</p> <p>NVMe Management Interface Basic Management Command</p> <p>Multi-namespace support up to 128</p> <p>powersafe™ functionality</p>
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