

powersafe™

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Product Fact Sheet

Enterprise
E1.S PCIe SSD

N5200 Series
PCIe 4.0, 3D TLC

Commercial Temperature Grade

Date: February 16, 2024
Revision: 1.02



Made in Germany

Product Summary

- **Capacities:** 1.92 TBytes, 3.84 TBytes, 7.68 TBytes
- **Form Factor:** PCI Express® E1.S (5.9mm, 9.5mm, 15mm)
- **Compliance:**
 - PCI Express (PCIe) Specification Revision 4.0
 - NVMe Express Specification 1.4
 - OCP NVMe Cloud SSD Specification 1.0
- **Interface:** Gen4 x 4 Lanes
- **Command Sets:** Supports NVMe 1.4
- **Target Performance:**
 - Sequential Read up to 7,100 MB/s, Random Read 4K up to 1,150k IOPS (sustained)
 - Sequential Write up to 4,200 MB/s, Random Write 4K up to 950k IOPS (sustained)
- **Operating Temperature Range:** Commercial 0°C to 70°C
- **Storage Temperature Range:** -40 °C to 85 °C
- **Data Retention¹:** 3 month @ 40°C (Life End)
- **High-Performance Processor with Integrated, Parallel Flash Interface Engines:**
 - Triple-Level Cell (TLC) 3D NAND Flash
- **High Reliability:**
 - Mean Time Between Failure (MTBF): > 2,500,000 hours
 - Data Reliability UBER: 1 Sector per 10¹⁷ Read
- **Endurance DWPD (5years EP WL):** 1.5
- **Endurance in TeraBytes Written (TBW) @ Max Capacity:**
 - 1.92 TBytes 5,200 TBW
 - 3.84 TBytes 10,500 TBW
 - 7.68 TBytes 21,000 TBW

Product Features

- OCP NVMe Cloud SSD Specification 1.0 compliant
- Dynamic Internal RAID
- Health log
- Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T., Telemetry)
- Vital Product Data (VPD) over SMBus supported
- AES256 encryption / TCG OPAL 2.01
- Secure Boot
 - ECDSA-256 FW Image Authentication Supported
 - SHA3-512 Hash Algorithm Supported
- End to end path protection
- Crypto Erase
- NVMe Management Interface Basic Management Command
- Multi-namespace support up to 128
- powersafe™ Functionality

Why Swissbit?

Swissbit is focused on the design, development, manufacture, and support of leading edge memory and storage solutions for the worldwide OEM/ODM marketplace. As a global supplier, Swissbit recognizes and addresses the higher level of application requirements of today's industrial, Netcom, and automotive customers by providing best-in-class products and services, with uncompromised attention to driving overall value and quality.

¹ NAND Flash suppliers refer to JEDEC JESD47 and JESD22 for Data Retention testing. Based on the information provided by the NAND Flash suppliers, Data Retention is targeted as shown