

# swissbit®

## Product Fact Sheet

### Enterprise E1.S PCIe SSD

### N5200 Series PCIe 4.0, 3D TLC

### Commercial Temperature Grade

Date: November 16, 2023  
Revision: 1.01

# powersafe™



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 Retention<sup>1</sup>:** 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 10<sup>17</sup> Read
- **Endurance DDPD (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.

<sup>1</sup> 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