swissbit®

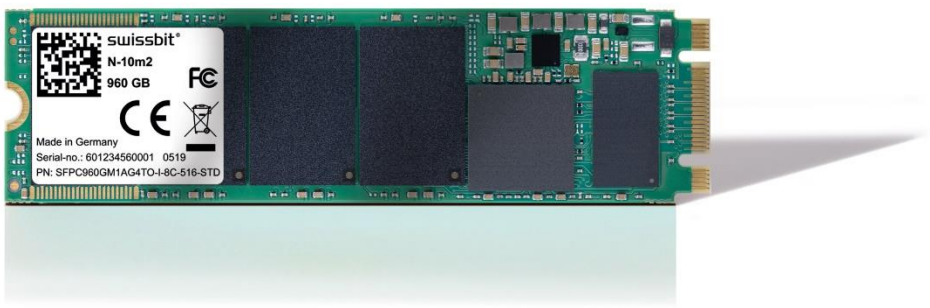
PRELIMINARY
Product Fact Sheet

Industrial M.2 PCIe SSD (2280)

N-10m2 Series
PCIe 3.1

Commercial and Industrial Temperature Grade

Date: February 2nd, 2019
Revision: 0.90



made in germany

Product Fact Sheet
N-10m2 Series

Product Summary

- **Capacities:** 120 GBytes, 240 GBytes, 480 GBytes, 960 GBytes
- **Form Factor:** PCI Express® M.2 2280 (80 mm x 22 mm x 3.6 mm)
- **Compliance:** PCI Express Specification Revision 3.1
- **Interface:** Gen3 x 2 Lanes
  - Drive operates in x1 mode in x1 M.2 PCIe slots
  - Drive operates in x2 mode in x2 or x4 M.2 PCIe slots
- **Command Sets:** Supports NVMe 1.2
- **Performance:**
  - Read Performance: Sequential Read up to 1,650 MBytes/s, Random Read IOPs up to 195,700
  - Write Performance: Sequential Write up to 1,070 MBytes/s, Random Write IOPs up to 194,500
- **Operating Temperature Range*:**
  - Commercial: 0 °C to 70 °C
  - Industrial: -40 °C to 85 °C
- **Storage Temperature Range:** -40 °C to 85 °C
- **Operating Voltage:** 3.3 V ± 5%
- **Low Power Consumption**
- **Data Retention:** 10 Years @ Life Begin; 1 Year @ Life End
- **Endurance in TeraBytes Written (TBW) Max Capacity†:** Client > TBD; Enterprise > TBD
- **Shock/Vibration:** 1,500 *g* / 50 *g*
- **LDPC ECC** with up to 120 bit correction per 1 KByte page
- **Mean Time Between Failure:** > 2,000,000 hours
- **Data Reliability:** < 1 non-recoverable error per 10^{16} bits read

Product Features

- 3D NAND Flash Technology
- Dynamic and Static Wear Leveling
- Active and Passive Data Care Management
- Lifetime Enhancements: Dynamic Bad Block Remapping and Write Amplification Reduction
- On-Board Power Fail Protection
- Active State Power Management (ASPM) Support
- NVMe Security Command Support
- In-Field Firmware Update
- Enterprise-Grade Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- 30 µinch Gold-Plated Connector (IPC-6012B Class 2 Compliant)
- AES256 Encryption
- TCG Opal 2.0 compliant (on request)
- Swissbit Life Time Monitoring (SBLTM) Tool and SDK for SBLTM (on request)

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 addressees 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.

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* Adequate airflow is required to ensure the drive temperature, as reported in the S.M.A.R.T. data, does not exceed the specified maximum operating temperature.

† According to JEDEC (JESD47I), the time to write the full TBW is a minimum of 18 months. Higher average daily data volume reduces the specified TBW. The values listed are estimates and are subject to change without notice.