## powersafe™

# swissbit®

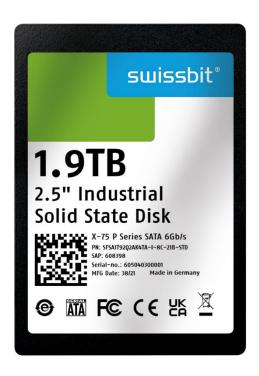
Product Fact Sheet

Industrial 2.5" SATA SSD

X-75 P Series SATA Gen3 - 6.0 Gbit/s, 3D TLC

Commercial and Industrial Temperature Grade

Date: Revision: June 14, 2022 1.01



Made in Germany

### Product Fact Sheet X-75 P Series



### **Product Summary**

- Capacities: 120 GBytes, 240 GBytes, 480 GBytes, 960 GBytes, 1920 GBytes
- Form Factor': 2.5" SATA Solid State Drive (70 mm x 100 mm x 7 mm)
- Compliance: SATA Gen3 6 Gbit/s (Gen2 3 Gbit/s and Gen1 1.5 Gbit/s backward compatible)
- **Command Sets:** Supports ATA/ATAPI-8 and ACS-2
- Performance:
  - Read Performance: Sequential Read up to 560 MBytes/s, Random Read 4K up to 77,700 IOPS
  - $\circ$  Write Performance: Sequential Write up to 500 MBytes/s, Random Write 4K up to 71,400 IOPS
- Operating Temperature Range<sup>2</sup>:
  - Commercial: 0 °C to 70 °C / Industrial: -40 °C to 85 °C
- Storage Temperature Range: -40 °C to 85 °C
- **Operating Voltage:** 5 V ± 10%
- Power (Max): Read (Active): 1.9 W; Write (Active): 2.5 W; Idle: 425 mW; Partial: 175 mW
- Data Retention: 10 Years @ Life Begin; 1 Year @ Life End
- Endurance in TeraBytes Written (TBW) @ Max Capacity<sup>3</sup>: Sequential WL ≥ 6,485; Client WL ≥ 730; Enterprise WL ≥ 1,200
- Shock/Vibration: 1,500 g / 50 g
- LDPC ECC with up to 165 bit correction per 1 KByte page
- NAND Flash Technology: Triple-Level Cell (TLC) 3D NAND Flash
- Mean Time Between Failure: > 2,000,000 hours
- Data Reliability: < 1 non-recoverable error per 10<sup>16</sup> bits read

#### **Product Features**

- Dynamic and Static Wear Leveling
- Active and Passive Data Care Management
- Lifetime Enhancements
  - o Dynamic Bad Block Remapping
  - Write Amplification Reduction
- On-Board Power Fail Protection
- TRIM and NCQ Support
- ATA Security Feature Set Support
- DEVSLP Compatible
- In-Field Firmware Update
- Enterprise-Grade Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- 15 µinch Gold-Plated Connector
- End-to-End (E2E) Data Protection
- powersafe™ Functionality
- AES256 Encryption and 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 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>&</sup>lt;sup>1</sup> The verification of the host system and storage device compatibility is the customer's responsibility. Swissbit can provide guidance and support upon request.

<sup>&</sup>lt;sup>2</sup> Adequate airflow is required to ensure the temperature, as reported in the S.M.A.R.T. data, does not exceed 110°C (industrial temperature drive) and 95°C (commercial temperature drive) respectively.

<sup>&</sup>lt;sup>3</sup> According to JEDEC (JESD471), 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.
Swissbit AG