swissbit®

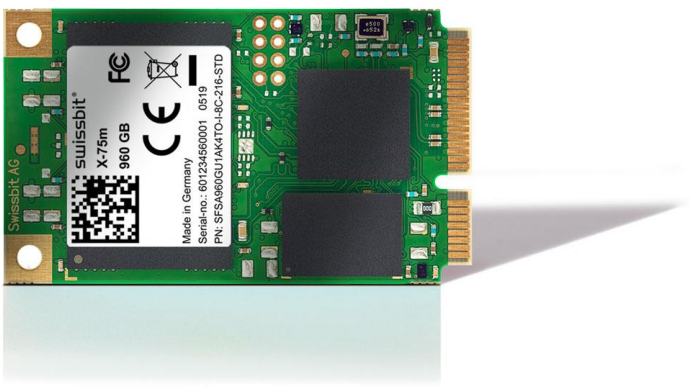
PRELIMINARY
Product Fact Sheet

# Industrial
# mSATA SSD (MO-300 Full Size)

## X-75m Series
SATA III – 6.0 Gbit/s, 3D TLC

Commercial and Industrial
Temperature Grade

Date: February 26, 2019
Revision: 0.90




made in germany

# Product Fact Sheet
# X-75m Series

## Product Summary

- **Capacities:** 30 GBytes, 60 GBytes, 120 GBytes, 240 GBytes, 480 GBytes, 960 GBytes
- **Form Factor:** JEDEC MO-300 Full Size mSATA SSD (50.8 mm x 29.85 mm x 3.5 mm)
- **Compliance:** SATA Revision 3.1 – 6 Gbit/s (3 Gbit/s and 1.5 Gbit/s backward compatible)
- **Command Sets:** Supports ATA/ATAPI-8 and ACS-2
- **Performance:**
  - Read Performance: Sequential Read up to 520 MBytes/s, Random Read IOPS up to 75,100
  - Write Performance: Sequential Write up to 400 MBytes/s, Random Write IOPS up to 71,600
- **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%
- **Power (Max Capacity):** Read (Active): TBD W; Write (Active): TBD W; Idle: TBD mW; Slumber: TBD mW
- **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 165 bit correction per 1 KByte page
- **NAND Flash Technology:** 3D Triple-Level Cell (TLC)
- **Mean Time Between Failure:** > 2,000,000 hours
- **Data Reliability:** < 1 non-recoverable error per $10^{16}$ bits read

## Product Features

- Dynamic and Static Wear Leveling
- Active and Passive Data Care Management
- Lifetime Enhancements
  - 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.)
- 30 µinch Gold-Plated Connector (IPC-6012B Class 2 Compliant)
- End to end data protection
- AES256 Encryption (on request)
- 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.