# swissbit®

## Industrial
## M.2 SATA SSD (2242)

## X-60m2 Series
SATA III – 6.0 Gbit/s

## durabit™
## "the better MLC"

made in germany

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# X-60m2 Series – Industrial m.2 SATA Solid State Drive

## Product Summary

- **Capacities**: 30 GBytes, 60 GBytes, 120 GBytes, 240 GBytes
- **Form Factor:** PCI Express™ M.2 (2242) (42 mm x 22 mm x 3.3 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 72,000
  - Write Performance: Sequential Write up to 340 MBytes/s, Random Write IOPs up to 78,000
- **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): 1.3 W; Write (Active): 1.6 W; Idle: 363 mW; Slumber: 115 mW
- **Data Retention:** 10 Years @ Life Begin; 1 Year @ Life End
- **Endurance in TeraBytes Written (TBW) Max Capacity[†]:** Client > 485; Embedded > 140; Enterprise > 115
- **Shock/Vibration:** 1,500 $g$/50 $g$ (IEC 60068-2-27 and JESD22-B110/MIL-STD-883)
- **Hardware BCH Code ECC:** up to 66 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

- Best-in-Class Performance and Endurance with durabit™ Technology
- 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
- AHCI, 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)
- AES256 Encryption (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 18 months. Higher average daily data volume reduces the specified TBW.

Swissbit AG                                                                                                    Revision: 1.08
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