swissbit®

Product Fact Sheet

Industrial 2.5" SATA SSD

X-60 Series

SATA III - 6.0 Gbit/s

durabit™

"the better MLC"



made in germany

X-60 Series – Industrial 2.5" SATA Solid State Drive

Product Summary

- **Capacities:** 30 GBytes, 60 GBytes, 120 GBytes, 240 GBytes, 480 GBytes, 960 GBytes
- **Form Factor:** 2.5" SATA Solid State Drive (70 mm x 100 mm x 7 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 525 MBytes/s, Random Read IOPs up to 74,300
  - Write Performance: Sequential Write up to 460 MBytes/s, Random Write IOPs up to 77,900
- **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:** 5 V ± 10% (3.3 V available upon request)
- **Power (Max Capacity):** Read (Active): 2.1 W; Write (Active): 4.0 W; Idle: 525 mW; Slumber: 125 mW
- **Data Retention:** 10 Years @ Life Begin; 1 Year @ Life End
- **Endurance in TeraBytes Written (TBW) Max Capacity†:** Client > 2,165; Embedded > 595; Enterprise > 555
- **Shock/Vibration:** 1,500 *g*/50 *g* (MIL-STD810)
- **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
- 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.

---

* 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.