# swissbit®

**Product Fact Sheet** 

**Industrial mSATA SSD** (MO-300 Full size)

**X-600m Series** SATA Gen3 – 6.0 Gbits/s, SLC

**Commercial and Industrial** Temperature Grade

Date:November 09, 2021Revision:1.09



### Product Fact Sheet X–600m Series



### **Product Summary**

- Capacities: 4 GBytes, 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes, 128GBytes
- Form Factor: JEDEC MO-300 Full Size mSATA SSD (50.8 mm x 29.85 mm x 3.5 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 (2011/06/22)
- Performance:
  - Read Performance: Sequential Read up to 520 MBytes/s, Random Read 4K up to 76,000 IOPS
  - o Write Performance: Sequential Write up to 405 MBytes/s, Random Write 4K up to 73,000 IOPS
- Operating Temperature Range<sup>2</sup>:
  - Commercial: o °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): 1.7 W; Write (Active): 2.5 W; Idle: 380 mW; Slumber: 115 mW
- Data Retention: 10 Years @ Life Begin; 1 Year @ Life End
- Endurance in TeraBytes Written (TBW) Max Capacity<sup>3</sup>: Client ≥ 7,715; Embedded ≥ 2,500; Enterprise > 1,115
- Shock/Vibration: 1,500 g / 50 g
- Hardware BCH Code ECC: up to 66 bit correction per 1 KByte page
- Mean Time Between Failure (MTBF): > 2,000,000 hours
- Data Reliability: < 1 non-recoverable error per 10<sup>16</sup> bits read

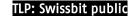
#### **Product Features**

- Dynamic and Static Wear Leveling
- Subpage Mode Flash Translation Layer (FTL)
- Active and Passive Data Care Management
- Lifetime Enhancements
  - o 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<sup>4</sup>
- 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.

<sup>4</sup> The support of In-Field FW update capabilities on host systems is recommended. Swissbit AG



www.swissbit.com/contact

<sup>&</sup>lt;sup>1</sup> The verification of host system and storage device compatibility is in customer's responsibility. Swissbit can provide guidance and support on 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 115°C (industrial temperature drive) and 100°C (commercial temperature drive) respectively.

<sup>&</sup>lt;sup>3</sup> 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.

## **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Swissbit:

SFSA008GU3AA1TO-C-DB-226-STDSFSA008GU3AA1TO-I-DB-226-STDSFSA016GU3AA2TO-C-DB-226-STDSFSA016GU3AA2TO-I-DB-226-STDSFSA032GU3AA4TO-C-DB-226-STDSFSA032GU3AA4TO-I-DB-226-STDSFSA064GU3AA4TO-C-QC-226-STDSFSA064GU3AA4TO-I-QC-226-STDSFSA128GU3AA4TO-C-NC-226-STDSFSA128GU3AA4TO-I-NC-226-STDSFSA064GU3AA4TO-I-QC-226-STDSFSA128GU3AA4TO-C-NC-226-STD