

swissbit®

Product Fact Sheet

**Industrial  
mSATA SSD  
(M0-300 Full Size)**

**X-600m Series**

SATA III – 6.0 Gbit/s



# X-600m Series – Industrial mSATA Solid State Drive

## Product Summary

- **Capacities:** 8 GBytes, 16 GBytes, 32 GBytes, 64 GBytes, 128 GBytes
- **Form Factor:** JEDEC MO-300A mSATA SSD (50.8mm x 29.85mm x 3.5mm)
- **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 76,000
  - Write Performance: Sequential Write up to 405 MBytes/s, Random Write IOPs up to 73,000
- **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): 1.7 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:** Client > 6240; Embedded > 1920; Enterprise > 965
- **Shock/Vibration:** 2,000 *g*/20 *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<sup>16</sup> bits read

## Product Features

- Dynamic and Static Wear Leveling
- Data Care Management
  - Active: Adaptive Read Refresh
  - Passive: Background Media Scan
- 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 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.

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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.

## **Part number options**

<b>Product Type</b>	<b>Product Series</b>	<b>Density</b>	<b>Swissbit Part Number</b>	<b>Mat. #</b>	<b>Temp Range</b>
mSATA SSD	X-600m	8 GB	SFSA008GU1AA1TO-C-DB-216-STD	605618	C-temp
mSATA SSD	X-600m	8 GB	SFSA008GU1AA1TO-I-DB-216-STD	605617	I-temp
mSATA SSD	X-600m	32 GB	SFSA032GU1AA4TO-C-DB-216-STD	605380	C-temp
mSATA SSD	X-600m	32 GB	SFSA032GU1AA4TO-I-DB-216-STD	605262	I-temp
mSATA SSD	X-600m	64 GB	SFSA064GU1AA4TO-C-QC-216-STD	605381	C-temp
mSATA SSD	X-600m	64 GB	SFSA064GU1AA4TO-I-QC-216-STD	605263	I-temp
mSATA SSD	X-600m	128 GB	SFSA128GU1AA4TO-C-NC-216-STD	605382	C-temp
mSATA SSD	X-600m	128 GB	SFSA128GU1AA4TO-I-NC-216-STD	605264	I-temp