

swissbit®

Product Fact Sheet

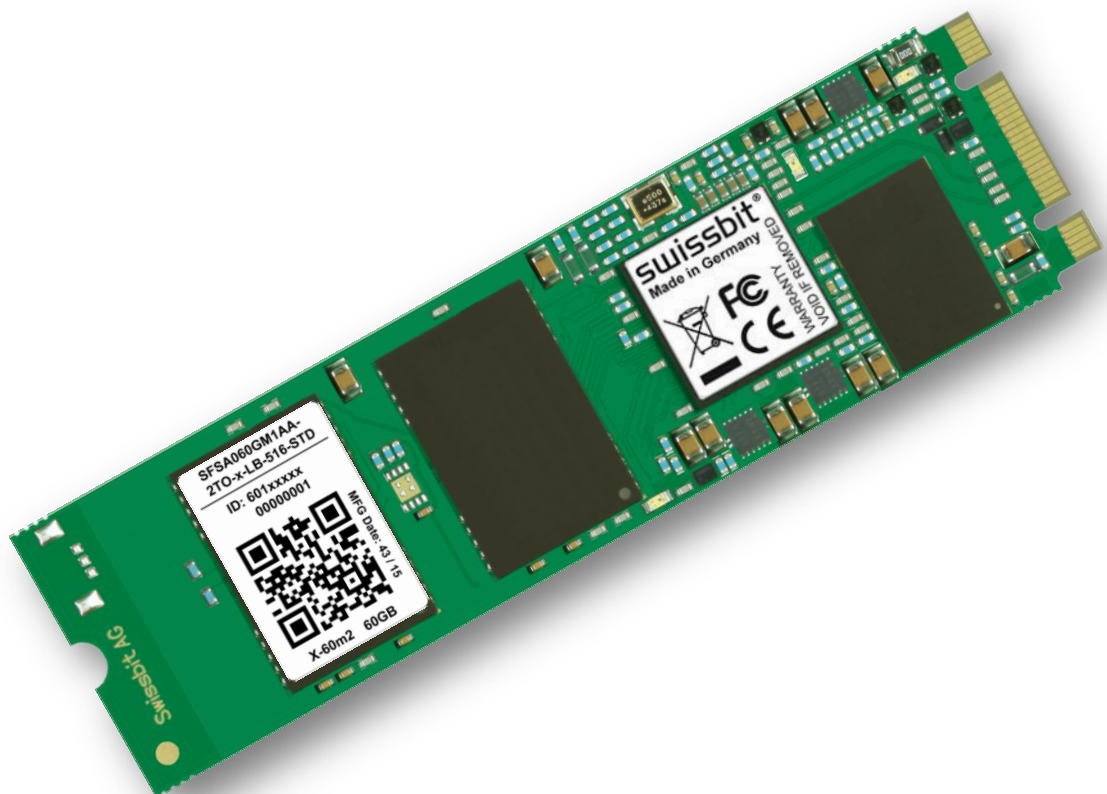
**Industrial
M.2 SATA SSD (2280)**

X-60m2 Series

SATA III – 6.0 Gbit/s

durabit™

"the better MLC"



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

Product Summary

- **Capacities:** 30 GBytes, 60 GBytes, 120 GBytes, 240 GBytes, 480 GBytes
- **Form Factor:** PCI Express™ M.2 (2280) (80 mm x 22 mm x 3.6 mm)
- **Compliance:** SATA Revision 3.1 – 6Gbit/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 75,000
 - Write Performance: Sequential Write up to 450 MBytes/s, Random Write IOPs up to 75,000
- **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): 1.5 W; Write (Active): 3.2 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 > 910; Embedded > 280; Enterprise > 140
- **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 10¹⁶ 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.)
- 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.

* 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

Product Type	Product Series	Density	Swissbit Part Number	Mat. #	Temp Range
M.2 SATA SSD	X-60m2 2280	30 GB	SFSA030GM1AA1TO-C-LB-516-STD	605407	C-temp
M.2 SATA SSD	X-60m2 2280	30 GB	SFSA030GM1AA1TO-I-LB-516-STD	605329	I-temp
M.2 SATA SSD	X-60m2 2280	60 GB	SFSA060GM1AA2TO-C-LB-516-STD	605408	C-temp
M.2 SATA SSD	X-60m2 2280	60 GB	SFSA060GM1AA2TO-I-LB-516-STD	605330	I-temp
M.2 SATA SSD	X-60m2 2280	120 GB	SFSA120GM1AA4TO-C-LB-616-STD	605409	C-temp
M.2 SATA SSD	X-60m2 2280	120 GB	SFSA120GM1AA4TO-I-LB-616-STD	605331	I-temp
M.2 SATA SSD	X-60m2 2280	240 GB	SFSA240GM1AA4TO-C-HC-616-STD	605410	C-temp
M.2 SATA SSD	X-60m2 2280	240 GB	SFSA240GM1AA4TO-I-HC-616-STD	605332	I-temp
M.2 SATA SSD	X-60m2 2280	480 GB	SFSA480GM1AA4TO-C-OC-616-STD	605411	C-temp
M.2 SATA SSD	X-60m2 2280	480 GB	SFSA480GM1AA4TO-I-OC-616-STD	605333	I-temp