

## INDUSTRIAL SATA SOLID STATE DRIVE 2.5" X-500 / X-55 SERIES

### FEATURES

- Power Fail Protection
- High random IOPS & sequential performance
- NAND Flash for best reliability & durability
- Ruggedized for "no-compromise" design
- Self Monitoring Analysis and Reporting Technology (S.M.A.R.T.)
- Life Time Monitoring Application & Software Development Kit (SDK/API)
- Controlled BOM & PCN Process



## PRODUCT DESCRIPTION

The Swissbit X-500 Industrial SATA II SSD 2.5" storage solution is designed for demanding applications. The Solid State Drive is a rugged, high performance and extremely reliable storage solution. The data rate reaches up to 240 MB/sec and an impressive 14'500 IOPS with 4 KB random accesses. The high end architecture utilizes up to 8 channels with the most reliable SLC NAND Flash on the market. Special features such as ATA-8, NCQ and TRIM support enable higher IOPS (input/output per second) and sequential performance providing the best

combination of performance and reliability for industrial applications. Additionally, the S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) protocol with extended lifetime monitoring tools and software development kit enables the application or designer to have the full control of mission critical data all the time. The BCH-ECC (error correction code) ensures data reliability with the power fail protected X-500 and X-55 Series. Additionally, it includes features such as ATA Security Set and Enhanced Secure Erase methods via software, as well as hardware control.

### SATA SSD 2.5" SOLID STATE DRIVE

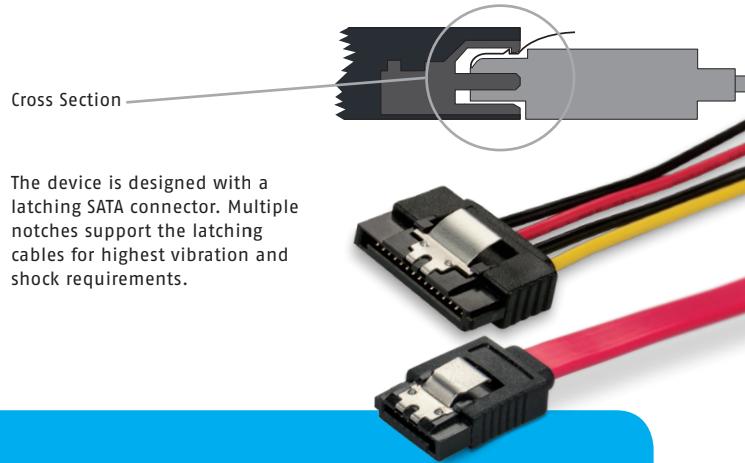
Series	X-500	X-55
Interface Compliance	SATA II (3Gb/sec) – ATA8	
Connector	15 + 7 pin serial ATA with latch protection	
Physical Form	100.2 x 69.85 x 9.4 mm	
Flash Type	SLC	EM* – MLC
Density	16-512 GB	30-480 GB
Write Endurance @ 64 GB ref.	~2700 TBW**	~420 TBW**
Data Retention	10 years @ life begin	5 years @ life begin
FLASH Shrink Frequency	~36 months	~18 months
Performance		
Sequential Read	up to 240 MB/sec	up to 240 MB/sec
Sequential Write	up to 200 MB/sec	up to 160 MB/sec
IOPS 4 KB Read	up to 14'500	up to 14'500
IOPS 4 KB Write	up to 7'000	up to 3'100
Operating Temperature	Commercial: 0°C to +70°C Industrial: -40°C to +85°C	
Storage Temperature	-55°C to +95°C	
Shock	MIL-STD810; 2'000 G, 0.4 ms; 50 G, 11 ms	
Vibration	MIL-STD810; 20 G, 10-2'000 Hz random	
Access Time	~ 0.2ms	
MTBF	≥ 2'000'000 hours	
Voltage	5 V ±10% (optional 3.3 V Type)	
Power Consumption	Slumber 0.7 W / Idle 1 W / Max 3.5 W	
Special Features	NCQ, TRIM, S.M.A.R.T., ATA Security feature set, Enhanced Secure Erase (SW/HW)	
Tools	Windows / Linux Application & SDK for extended S.M.A.R.T. option, Formatting and Trim	

\* Endurance Managed    \*\* Terabytes Written, depends on application workload

### PRODUCT PROPERTIES

 Wide Temperature Support	 Enhanced Secure Erase (sanitize / purge)
 ESD and EMI safe	 Life Time Monitoring (LTM SDK)
 Shock and Vibration safe	 Temperature Sensor
 Conformal Coating (on request)	

### LOCKING/LATCHING SATA CONNECTOR



The device is designed with a latching SATA connector. Multiple notches support the latching cables for highest vibration and shock requirements.

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