

X10B Industrial-grade SATA3 SSD

X10B Industrial SATAIII 3D TLC SSD combines robust NAND controller hardware error correction capabilities with advanced wear-leveling algorithms, and bad block management to improve data reliability and significantly extend the life of the SSD product. Renice X10B industrial SATAIII SSD is an ideal storage solution for industrial computers, navigation systems, test and measurement instrumentation, security and surveillance equipment, digital signage and networking systems.

Specifications

Capacity

- X10B SATAIII Standard Series
 - 2.5-inch: 240–7680 GB
 - mSATA: 120–960 GB
 - M.2 2242: 120–960 GB
 - M.2 2260: 120–960 GB
 - M.2 2280: 120–3840 GB
- X10B SATAIII Extend Series
 - 2.5-inch: 480–3840 GB

Components

- Controller: Marvell 88SS1074//88SS1079/88SS1080
- Flash: 3D TLC
- DRAM: DDR3

Compliance

- SATA 3.2 compatible with 6/3/1.5 Gb/s rates
- ATA/ATAPI ACS3 command set compliant
- NCQ: Up to 32 Queue Depth
- Enhance SMART ATA feature set
- Data set management TRIM command
- OS aware host hot plug / removal

Performance (up to)¹

- Sequential read: 550 MB/s
- Sequential write: 535 MB/s
- Random 4K read: 98,000 IOPS
- Random 4K write: 90,000 IOPS

Power management

- DIPM / HIPM
- Auto idle
- SATA link power management
- Temperature monitoring and proprietary thermal management algorithm

Security (Optional)

- AES-256 encryption
- Full disk encryption (FDE) as self-encrypting drive (SED) with TCG Opal 2.0
- Security erase
- Cryptographic firmware image signing

Latency (QD1)

- Read: 100 μ s
- Write: 40 μ s

Reliability

- Advanced LDPC error correction
- Global static and dynamic wear leveling
- Hardware power-off protection
- UBER: <1 sector per 10^{17} bits read
- MTBF: 2.0 million hours

Endurance (JESD219 enterprise, client)²

- X10B Standard: 0.6 DWPD, 2 DWPD @ 3 years

Data retention

- JESD218A-compliant

Compatibility

- Windows 10/8.1/7
- Windows Server 2016/2012 R2/2012
- CentOS, Fedora, FreeBSD, openSUSE, Red Hat, Ubuntu, VMware ESXi, Citrix, KVM

Mechanical form factor

- 2.5-inch: 100.5 mm x 69.85 mm x 7 mm
- mSATA: 50.8mm x 29.85mm x 3.4mm
- M.2 2242: 42 mm x 22 mm x 3.6 mm
- M.2 2260: 60 mm x 22 mm x 3.6 mm
- M.2 2280: 80 mm x 22 mm x 3.6 mm

Power consumption (TYP)

- Active: <4 W
- Idle: <0.5 W

Environment

- Operating temperature: -40–85 °C
- Storage temperature: -55–95°C

Shock & vibration

- Operating: 50 G
(11 ms duration, half sine wave)
- Non-operating: 1500 G
(0.5 ms duration, half sine wave)
- Vibration: 10 G
(peak, 10–2000 Hz)

Warranty

- 3-year limited warranty³

X10B Industrial-grade SATA3 SSD Order Information:

PART NUMBER	Interface	CAPACITY*	FLASH TYPE	FORM FACTOR
RIT240-SX10B2	SATAIII	240GB	Industrial 3D TLC	2.5"
RIT480-SX10B2	SATAIII	480GB	Industrial 3D TLC	2.5"
RIT960-SX10B2	SATAIII	960GB	Industrial 3D TLC	2.5"
RI1920-SX10B2	SATAIII	1920GB	Industrial 3D TLC	2.5"
RIT3840-SX10B2	SATAIII	3840GB	Industrial 3D TLC	2.5"
RIT7680-SX10B2	SATAIII	7680GB	Industrial 3D TLC	2.5"
RIT480-SX10B2RS	SATAIII Extend	480GB	Industrial 3D TLC	2.5"
RIT960-SX10B2RS	SATAIII Extend	960GB	Industrial 3D TLC	2.5"
RI1920-SX10B2RS	SATAIII Extend	1920GB	Industrial 3D TLC	2.5"
RIT3840-SX10B2RS	SATAIII Extend	3840GB	Industrial 3D TLC	2.5"
RIT120-SX10BM	SATAIII	120GB	Industrial 3D TLC	mSATA
RIT240-SX10BM	SATAIII	240GB	Industrial 3D TLC	mSATA
RIT480-SX10BM	SATAIII	480GB	Industrial 3D TLC	mSATA
RIT960-SX10BM	SATAIII	960GB	Industrial 3D TLC	mSATA
RIT120-SX10BN4	SATAIII	120GB	Industrial 3D TLC	M.2 2242
RIT240-SX10BN4	SATAIII	240GB	Industrial 3D TLC	M.2 2242
RIT480-SX10BN4	SATAIII	480GB	Industrial 3D TLC	M.2 2242
RIT960-SX10BN4	SATAIII	960GB	Industrial 3D TLC	M.2 2242
RIT120-SX10BN6	SATAIII	120GB	Industrial 3D TLC	M.2 2260
RIT240-SX10BN6	SATAIII	240GB	Industrial 3D TLC	M.2 2260
RIT480-SX10BN6	SATAIII	480GB	Industrial 3D TLC	M.2 2260
RIT960-SX10BN6	SATAIII	960GB	Industrial 3D TLC	M.2 2260
RIT240-SX10BN8	SATAIII	240GB	Industrial 3D TLC	M.2 2280
RIT480-SX10BN8	SATAIII	480GB	Industrial 3D TLC	M.2 2280
RIT960-SX10BN8	SATAIII	960GB	Industrial 3D TLC	M.2 2280
RIT1920-SX10BN8	SATAIII	1920GB	Industrial 3D TLC	M.2 2280
RIT3840-SX10BN8	SATAIII	3840GB	Industrial 3D TLC	M.2 2280