PHISON

Unleash Precision in Every Frame

Built for mission-critical surveillance use cases, Phison SSDs prevent frame loss issues with in-house firmware, ensuring the preservation of every detail in your irreplaceable video footage. Delivering sequential read/write speeds exceeding 500 MB/s, Phison surveillance SSDs offer sustained performance for multi-channel video recorders. Furthermore, the active power consumption of Phison surveillance SSDs remain below 4W, making them more energy-efficient than the majority of surveillance HDDs in the market. With up to 8TB capacity, Phison surveillance SSDs address the storage requirements of most surveillance systems.

Product Features

Reliability and Endurance

For uninterrupted recording, Phison surveillance SSDs boast a warranty of over 3 years, even when handling high-resolution video. Moreover, our solutions offer an MTBF of up to 2,000,000 hours, guaranteeing exceptional product reliability.

Shock Resistance

Phison surveillance SSDs are designed to withstand harsh environments, including shock and vibration. Additionally, we rigorously implement comprehensive testing to make sure the unwavering quality of our products.

Data Integrity and Security

With our in-house firmware, we offer several features, including AES-256 encryption, to enhance data security. To address the issue of abnormal data loss, in addition to our surveillance SSD solutions, Phison also provides the "Smart Rescue Tool," a self-developed software for data recovery in specific non-physical damage cases.

Mobile Surveillance Suitability

Equipped with tantalum capacitors that serve as emergency power supply, Phison surveillance SSDs can fully record video footage, even in the event of an expected accident. Combined with a wide operating temperature range from -40°C to 85°C, this makes Phison surveillance SSD solutions ideal for mobile surveillance applications.

SOLUTIONS
S17T Series

Capacity	1TB	2TB	4TB
Interface	SATA III (6 Gb/s), Backward Compatible with SATA II & I		
Form Factor	2.5 inch x 7mm		
Raw Capacity[1]	1024GB	2048GB	4096GB
User Capacity[1]	960GB	1920GB	3840GB
Performance [2,3]			
128K Sequential Read (Max)	550 MB/s		
128K Sequential Write (Max)	510 MB/s		
4K Random Read (Max)	97K IOPS		
4K Random Write (Max)	86K IOPS		
Endurance / Reliability / Limited Warranty			
Terabytes Written (TBW)[4]	400TB	800TB	1600TB
Limited Warranty Period [5]	3 Years		
Mean Time Between Failures (MTBF)	2 million hours		
Uncorrectable Bit Error Rate (UBER)	$<10^{-15}$ bits		
Power Consumption [6]			
Operating Voltage	5V ±5%		
Active Power (Max)	1.3 W	1.35 W	1.4 W
Idle Power (Max)	250 mW		
DEVSLP[7]	4.9 mW		
Environmental			
Operating Temperature	0°C - 70°C		
Non-Operating Temperature	-40°C - 85°C		
Vibration Test	$1.52mm@20Hz\sim80Hz, 20G_{P-P}@80Hz\sim2000Hz$		
Shock Test	$1500\ G_{0-P}/0.5ms$		
Drop Test	80 cm Height		
Physical			
Dimension (L x W x H)	100 mm x 69.85 mm x 7 mm		
Weight	35 gram[8]		
Advanced Features			

Advanced Features

- S.M.A.R.T.
- TRIM
- Smart Rescue™
- Smart Refresh™
- Media Scan
- SmartZIP™
- Over Provision

- Dynamic Wear Levelling
- Garbage Collection
- Bad Block Management
- Firmware Upgrade
- Thermal Sensor & Monitoring
- Thermal Throttling

Application

Video Surveillance, CCTV

(1) 1GB = 1,000,000,000 bytes
(2) Sequential Performance is based on CrystalDiskMark 6.0.0, 1 GB range, QD=32, Thread=1
(3) Random Performance is based on IOMeter v1.1.0, 1GB range, 4K data size, QD=32
(4) TBW is Terabytes written and the results are obtained in compliance with JEDEC SSD endurance workload JESD219A
(5) A warranty period that is the earlier of a) the stated period from the purchase date or b) the usage exceeds the endurance rating in TBW
(6) Power consumption is measured during the sequential read and write operations performed by CrystalDiskMark 6.0.0(1GB range, QD=32T1)
(7) The value of DEVSLP mode is measured while entering device sleep mode for 5 minutes. DEVSLP Mode is the optional function for device
(8) The weight of this measurement is based on the 4TB version with plastic case
(9) All the value may differ according to flash configuration and platform

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Find more information and resources at: **phisonblog.com** and **phison.com**

Solutions
S12DI Series

Capacity	1TB	2TB	4TB	8TB
Interface	SATA III (6 Gb/s), Backward Compatible with SATA II & I			
Form Factor	2.5 inch x 7mm			
Raw Capacity[1]	1024GB	2048GB	4096GB	8192GB
User Capacity[1]	960GB	1920GB	3840GB	7680GB
Performance [2,3]				
128K Sequential Read (Max)	550 MB/s			
128K Sequential Write (Max)	520 MB/s			
4K Random Read (Max)	98K IOPS			
4K Random Write (Max)	90K IOPS			
Endurance / Reliability / Limited Warranty				
Terabytes Written (TBW)[4]	1500TB	3800TB	7600TB	16000TB
Limited Warranty Period [5]	3 Years			
Mean Time Between Failures (MTBF)	1.5 million hours			
Uncorrectable Bit Error Rate (UBER)	$<10^{-15}$ bits			
Power Consumption [6]				
Power Loss Data Protection (PLP)	Tantalum Capacitor			
Operating Voltage	5V ±5%			
Active Power (Max)	3.2 W	3.4 W	3.65 W	3.9 W
Idle Power (Max)	1.3 W	1.4 W	1.5 W	1.6 W
Environmental				
Operating Temperature	-40°C - 85°C			
Non-Operating Temperature	-40°C - 85°C			
Vibration Test	$1.52mm@20Hz\sim80Hz$, $20G_{P-P}@80Hz\sim2000Hz$			
Shock Test	$1500\ G_{0-P}/0.5ms$			
Drop Test	80 cm Height			
Physical				
Dimension (L x W x H)	100 mm x 69.85 mm x 7 mm			
Weight	71 gram[7]			

Advanced Features
- S.M.A.R.T.
- TRIM
- Smart Rescue™
- Smart Refresh™
- Media Scan
- SmartZIP™
- Over Provision
- Hardware Power Loss Protection
- Dynamic Wear Levelling
- Garbage Collection
- Bad Block Management
- Firmware Upgrade
- Thermal Sensor & Monitoring
- Thermal Throttling
- External DRAM
- AES256 / TCG OPAL 2.0 (Optional)

Application
Enterprise, Vehicle, Video Security, Outdoor, Public, Edge

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(4) TBW is Terabytes written and the results are obtained in compliance with JEDEC SSD endurance workload JESD219A
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(7) The weight of this measurement is based on the 8TB version with plastic case
(8) All the value may differ according to flash configuration and platform

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