PASCARI

ENTERPRISE S-SERIES

High Endurance SATA SSD for Your Enterprise

PASCARI SA50

Sequential Read

Up to 530 MB/s

Sequential Write

Up to 500 MB/s

Random Read

Up to 98K IOPS

Random Write

Up to 77K IOPS

Interface

SATA III

Capacity

Up to 15.36TB

Form Factor

2.5"

DWPD

0.4, 1, 3

Product Features

- Power Loss Protection (PLP)
- TCG Opal 2.0 Support
- AES-XTS 256-bit Encryption
- End-to-End Data Path Protection

PHISON

Solutions – SA50E

Form Factor 2.5”				
Capacity[1]	480GB	960GB	1920GB	3840GB
Interface	SATA III	SATA III	SATA III	SATA III
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC
Performance[2,3,4]				
Sequential Read (MB/s)	500	530	530	530
Sequential Write (MB/s)	440	500	500	500
4K Random Read (IOPS)	95K	98K	98K	98K
4K Random Write (IOPS)	40K	67K	77K	68K
Read Latency (Typ., µs)	130	125	130	125
Write Latency (Typ., µs)	30	30	30	30
Power Consumption [5]				
Active (W)	2.8	3.0	3.1	3.5
Idle (W)	1.3	1.4	1.5	1.7
Endurance/Reliability				
DWPD[6]	3	3	3	3
UBER	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read
MTBF (million hours)	2.0	2.0	2.0	2.0
Limited Warranty (years)	5	5	5	5
Temperature				
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension				
Length (mm)	100.00	100.00	100.00	100.00
Width (mm)	69.85	69.85	69.85	69.85
Height (mm)	7.00	7.00	7.00	7.00
Weight (g)	59	60	62	64
Part Number				
Non-SED FW	S1201K00480GE026 40G00	S1201K00960GE021 T2800	S1201K001T92E022 T5600	S1201K003T84E025 T1200
SED FW	S1201K00480GE226 40G00	S1201K00960GE221 T2800	S1201K001T92E222 T5600	S1201K003T84E225 T1200

(1) 1 GB = 10^9 bytes.
(2) Sequential Performance is based on FIO on Linux, 128KB data size, with QD=32, 1 job.
(3) Random Performance is based on FIO on Linux, 4KB data size, QD=32, 1 job.
(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.
(5) Power consumption (average RMS) is measured during the sequential read/write and random read/write operations performed by iometer.
(6) The results of DWPD are obtained in compliance with JESD219A standards.

PHISON

The data within this specification is subject to change by Phison without notice. Performance numbers may vary based on system configuration and testing conditions. Copyright © 2025 Phison Electronics. All rights reserved.

Solutions – SA50P

Form Factor 2.5”					
Capacity[1]	480GB	960GB	1920GB	3840GB	7680GB
Interface	SATA III	SATA III	SATA III	SATA III	SATA III
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Performance[2,3,4]					
Sequential Read (MB/s)	530	530	530	530	530
Sequential Write (MB/s)	360	500	500	500	500
4K Random Read (IOPS)	92K	98K	98K	98K	97K
4K Random Write (IOPS)	20K	33K	40K	30K	23K
Read Latency (Typ., µs)	140	120	120	130	160
Write Latency (Typ., µs)	50	40	30	35	45
Power Consumption [5]					
Active (W)	2.6	3.0	3.1	3.3	3.7
Idle (W)	1.3	1.3	1.4	1.5	1.7
Endurance/Reliability					
DWPD[6]	1	1	1	1	1
UBER	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read
MTBF (million hours)	2.0	2.0	2.0	2.0	2.0
Limited Warranty (years)	5	5	5	5	5
Temperature					
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension					
Length (mm)	100.00	100.00	100.00	100.00	100.00
Width (mm)	69.85	69.85	69.85	69.85	69.85
Height (mm)	7.00	7.00	7.00	7.00	7.00
Weight (g)	59	61	62	63	63
Part Number					
Non-SED FW	S1201K00480GP0 2576G00	S1201K00960GP0 21T1500	S1201K001T92P0 22T3000	S1201K003T84P0 24T6000	S1201K007T68P0 29T2100
SED FW	S1201K00480GP2 2576G00	S1201K00960GP2 21T1500	S1201K001T92P2 22T3000	S1201K003T84P2 24T6000	S1201K007T68P2 29T2100

(1) 1 GB = 10^9 bytes.
(2) Sequential Performance is based on FIO on Linux, 128KB data size, with QD=32, 1 job.
(3) Random Performance is based on FIO on Linux, 4KB data size, QD=32, 1 job.
(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.
(5) Power consumption (average RMS) is measured during the sequential read/write and random read/write operations performed by iometer.
(6) The results of DWPD are obtained in compliance with JESD219A standards.

PHISON

The data within this specification is subject to change by Phison without notice. Performance numbers may vary based on system configuration and testing conditions. Copyright © 2025 Phison Electronics. All rights reserved.

Solutions – SA50V

Form Factor 2.5”				
Capacity[1]	1920GB	3840GB	7680GB	15360GB
Interface	SATA III	SATA III	SATA III	SATA III
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC
Performance[2,3,4]				
Sequential Read (MB/s)	530	530	530	530
Sequential Write (MB/s)	500	500	500	500
4K Random Read (IOPS)	94K	97K	97K	94K
4K Random Write (IOPS)	13K	20K	14K	10K
Read Latency (Typ., µs)	135	130	140	165
Write Latency (Typ., µs)	55	40	55	65
Power Consumption [5]				
Active (W)	3.3	3.6	3.9	4.2
Idle (W)	1.4	1.5	1.9	1.9
Endurance/Reliability				
DWPD[6]	0.5	0.5	0.4	0.4
UBER	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read	< 1 sector per 10^{17} bits read
MTBF (million hours)	2.0	2.0	2.0	2.0
Limited Warranty (years)	5	5	5	5
Temperature				
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension				
Length (mm)	100.00	100.00	100.00	100.00
Width (mm)	69.85	69.85	69.85	69.85
Height (mm)	7.00	7.00	7.00	7.00
Weight (g)	59	66	71	73
Part Number				
Non-SED FW	S1201K001T92V022 T0400	S1201K001T92V022 T0400	S1201K007T68V018 T1900	S1201K0015T3V0116 T300
SED FW	S1201K001T92V222 T0400	S1201K001T92V222 T0400	S1201K007T68V218 T1900	S1201K0015T3V2116 T300

(1) 1 GB = 10^9 bytes.
(2) Sequential Performance is based on FIO on Linux, 128KB data size, with QD=32, 1 job.
(3) Random Performance is based on FIO on Linux, 4KB data size, QD=32, 1 job.
(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.
(5) Power consumption (average RMS) is measured during the sequential read/write and random read/write operations performed by iometer.
(6) The results of DWPD are obtained in compliance with JESD219A standards.

PHISON

The data within this specification is subject to change by Phison without notice. Performance numbers may vary based on system configuration and testing conditions. Copyright © 2025 Phison Electronics. All rights reserved.