

ENTERPRISE S-SERIES

Efficient SATA Storage Solution for Data Center

PASCARI SA53P

Sequential Read**Up to 530 MB/s****Sequential Write****Up to 500 MB/s****Random Read****Up to 98K IOPS****Random Write****Up to 39K IOPS****Interface****SATA III****Capacity****Up to 3840GB****Form Factor****2.5"****DWPD****1****Product Features**

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

Solutions – SA53P

Form Factor 2.5"						
Capacity ¹	240GB	480GB	960GB	1920GB	3840GB	7680GB
Interface	SATA III	SATA III	SATA III	SATA III	SATA III	SATA III
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Performance ²³⁴						
Sequential Read (MB/s)	530	530	530	530	530	530
Sequential Write (MB/s)	350	500	500	500	500	500
4K Random Read (IOPS)	90K	98K	98K	98K	98K	98K
4K Random Write (IOPS)	12K	28K	32K	39K	35K	31K
Read Latency (Typ., µs)	110	100	110	110	100	115
Write Latency (Typ., µs)	80	40	40	30	30	30
Power Consumption ⁵						
Active (W)	2.3	2.9	3.2	3.3	2.9	3.1
Idle (W)	1.3	1.3	1.4	1.4	1.7	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	< 1 sector per 10 ¹⁷ bits read
MTBF (million hours)	2.0	2.0	2.0	2.0	2.0	2.0
Limited Warranty (years)	5	5	5	5	5	5
Temperature						
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension						
Length (mm)	100.00	100.00	100.00	100.00	100.00	100.00
Width (mm)	69.85	69.85	69.85	69.85	69.85	69.85
Height (mm)	7.00	7.00	7.00	7.00	7.00	7.00
Weight (g)	56	57	59	60	62	63
Part Number						
Non-SED FW	S1201Y03240GP 02256G00	S1201Y03480GP 02512G00	S1201Y03960GP 021T0200	S1201Y031T92P 022T0400	S1201Y033T84P 024T0900	S1201Y037T68P 028T1900
SED FW	S1201Y03240GP 22256G00	S1201Y03480GP 22512G00	S1201Y03960GP 221T0200	S1201Y031T92P 222T0400	S1201Y033T84P 224T0900	S1201Y037T68P 228T1900

(1) 1 GB = 10⁹ 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.



The data within this specification is subject to change by MiPhi without notice. Performance numbers may vary based on system configuration and testing conditions. Copyright © 2026 MiPhi Semiconductors Pvt Ltd. All rights reserved.

Find more information and resources at: miphi.in