

High-Endurance SATA SSD for your Enterprise

ENTERPRISE S-SERIES

NEUBE 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

Solutions - SA50E

Form Factor 2.5"					
	Capacity ⁽¹⁾	480GB	960GB	1920GB	3840GB
Performance ^(2,3) (Est.)	Sequential Read	500 MB/s	530 MB/s	530 MB/s	530 MB/s
	Sequential Write	440 MB/s	500 MB/s	500 MB/s	500 MB/s
	4K Random Read	95K IOPS	98K IOPS	98K IOPS	98K IOPS
	4K Random Write	40K IOPS	67K IOPS	77K IOPS	68K IOPS
Power ⁽⁵⁾ Consumption (Est.)	Active	2.8 W	3.0 W	3.1 W	3.5 W
	Idle	1.3W	1.4W	1.5 W	1.7 W
Latency (Est.) ⁽⁴⁾	4K Random Read	130 us	125 us	130 us	125 us
	4K Random Write	30 us	30 us	30 us	30 us
Features					
Interface			SATA III		
NAND Flash			3D TLC		
DWPD ⁽⁶⁾			3		
UBER			< 1 sector per 10 ¹⁷ bits read		
MTBF (million hours)			2.0		
Limited Warranty (years)			5		
Operating Temperature			0°C - 70°C		
Non-Operating Temperature			-40°C - 85°C		
Physical Dimension					
Length (mm)		100	100	100	100
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

(1) 1 GB = 1,000,000,000 bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job, and test drive set as secondary.

(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.



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Solutions - SA50P

Form Factor 2.5"						
	Capacity ⁽¹⁾	480GB	960GB	1920GB	3840GB	7680GB
Performance ^(2,3)	Sequential Read	530 MB/s	530 MB/s	530 MB/s	530 MB/s	530 MB/s
	Sequential Write	360 MB/s	500 MB/s	500 MB/s	500 MB/s	500 MB/s
	4K Random Read	92K IOPS	98K IOPS	98K IOPS	98K IOPS	97K IOPS
	4K Random Write	20K IOPS	33K IOPS	40K IOPS	30K IOPS	23K IOPS
Power ⁽⁵⁾ Consumption	Active	2.6 W	3.0 W	3.1 W	3.3 W	3.7 W
	Idle	1.3 W	1.3 W	1.4 W	1.5 W	1.7 W
Latency ⁽⁴⁾	4K Random Read	140 us	120 us	120 us	130 us	160 us
	4K Random Write	50 us	40 us	30 us	35 us	45 us
Features						
Interface			SATA III			
NAND Flash			3D TLC			
DWPD ⁽⁶⁾			1			
UBER			< 1 sector per 10 ¹⁷ bits read			
MTBF (million hours)			2.0			
Limited Warranty(years)			5			
Operating Temperature			0°C - 70°C			
Non-Operating Temperature			-40°C - 85°C			
Physical Dimension						
Length (mm)		100	100	100	100	100
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

(1) 1 GB = 1,000,000,000 bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job, and test drive set as secondary.

(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.



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Solutions - SA50V

Form Factor 2.5"					
	Capacity ⁽¹⁾	1920GB	3840GB	7680GB	15360GB
Performance ^(2,3) (Est.)	Sequential Read	530 MB/s	530 MB/s	530 MB/s	530 MB/s
	Sequential Write	500 MB/s	500 MB/s	500 MB/s	500 MB/s
	4K Random Read	94K IOPS	97K IOPS	97K IOPS	94K IOPS
	4K Random Write	13K IOPS	20K IOPS	14K IOPS	10K IOPS
Power ⁽⁵⁾ Consumption (Est.)	Active	3.3 W	3.6 W	3.9 W	4.2 W
	Idle	1.4 W	1.5 W	1.9 W	1.9 W
Latency (Est.) ⁽⁴⁾	4K Random Read	135 us	130 us	140 us	165 us
	4K Random Write	55 us	40 us	55 us	65 us
Features					
	Interface	SATA III	SATA III	SATA III	SATA III
	NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC
	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
	Operating Temperature	0°C - 70°C	0°C - 70°C	0°C - 70°C	0°C - 70°C
	Non-Operating Temperature	-40°C - 85°C	-40°C - 85°C	-40°C - 85°C	-40°C - 85°C
Physical Dimension					
	Length (mm)	100	100	100	100
	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

(1) 1 GB = 1,000,000,000 bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job, and test drive set as secondary.

(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.

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