

# High-Quality SATA Boot Drive for Legacy Systems

## ENTERPRISE B-SERIES

### NEUBE BA50P

#### Sequential Read

Up to 530 MB/s

#### Sequential Write

Up to 500 MB/s

#### Random Read

Up to 98K IOPS

#### Random Write

Up to 30K IOPS

#### Interface

SATA III

#### Capacity

Up to 960GB

#### Form Factor

2.5", M.2 2280

#### DWPD

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## Product Features

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

## Solutions - BA50P

Form Factor M.2 2280				
	Capacity <sup>(1)</sup>	240GB	480GB	960GB
Performance <sup>(2,3)</sup> (Est.)	Sequential Read	530 MB/s	530 MB/s	530 MB/s
	Sequential Write	290 MB/s	480 MB/s	500 MB/s
	4K Random Read	60K IOPS	90K IOPS	98K IOPS
	4K Random Write	10K IOPS	15K IOPS	30K IOPS
Power <sup>(5)</sup> Consumption (Est.)	Active	2.2W	2.8 W	2.8 W
	Idle	1.2 W	1.2 W	1.3W
Latency (Est.) <sup>(4)</sup>	4K Random Read	120 us	120 us	120 us
	4K Random Write	80 us	50 us	30 us
Features				
	Interface	SATA III	SATA III	SATA III
	NAND Flash	3D TLC	3D TLC	3D TLC
	DWPD <sup>(6)</sup>	1	1	1
	UBER	< 1 sector per 10 <sup>17</sup> bits read	< 1 sector per 10 <sup>17</sup> bits read	< 1 sector per 10 <sup>17</sup> bits read
	MTBF (million hours)	2.0	2.0	2.0
	Limited Warranty (years)	5	5	5
	Operating Temperature	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
Physical Dimension				
	Length (mm)	80	80	80
	Width (mm)	22.00	22.00	22.00
	Height (mm)	3.50	3.50	3.50
	Weight (g)	8	9	9

(1) 1 GB = 10<sup>(9)</sup>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, 8 jobs.

(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.

## Solutions - BA50P

Form Factor 2.5				
	Capacity <sup>(1)</sup>	240GB	480GB	960GB
Performance <sup>(2,3)</sup> (Est.)	Sequential Read	530 MB/s	530 MB/s	530 MB/s
	Sequential Write	290 MB/s	480 MB/s	500 MB/s
	4K Random Read	60K IOPS	90K IOPS	98K IOPS
	4K Random Write	10K IOPS	15K IOPS	30K IOPS
Power <sup>(5)</sup> Consumption (Est.)	Active	2.3W	2.8 W	3.3 W
	Idle	1.2 W	1.3 W	1.3W
Latency (Est.) <sup>(4)</sup>	4K Random Read	120 us	120 us	120 us
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Features				
	Interface	SATA III	SATA III	SATA III
	NAND Flash	3D TLC	3D TLC	3D TLC
	DWPD <sup>(6)</sup>	1	1	1
	UBER	< 1 sector per 10 <sup>17</sup> bits read	< 1 sector per 10 <sup>17</sup> bits read	< 1 sector per 10 <sup>17</sup> bits read
	MTBF (million hours)	2.0	2.0	2.0
	Limited Warranty (years)	5	5	5
	Operating Temperature	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
Physical Dimension				
	Length (mm)	100	100	100
	Width (mm)	69.85	69.5	69.85
	Height (mm)	7.00	7.00	7.00
	Weight (g)	57	58	59

(1) 1 GB = 10<sup>(9)</sup> 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, 8 jobs.

(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 Neube without notice. Performance numbers may vary based on system configuration and testing conditions.  
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