

## Osmium Drive™ 3.5" SAS SSD

OSMIUM 3.5" SAS SSD

SMART Modular Technologies has developed, the Osmium Drive, a 3.5 inch form-factor MLC-based solid state drive that meets ANSI-SPC-3 and SBC3 SCSI standards. With SMART's Osmium Drive, organizations can rapidly scale their storage capacity while slashing data center power, space, and cooling costs by up to 80%. With up to 50 TB of flash in a single SSD, the 3.5" SAS SSD offers over 3x the capacity of the next largest SSD on the market while consuming as little as 1/8th the power per terabyte.

### Performance

The Osmium Drive provides full duplex operation at 6 Gbps rates on each SAS port. In addition, it has up to 60,000/15,000 IOPs (4KB) random reads/writes and up to 500/300 MBps (256KB) sequential read/writes.

### Power

With capacity of 25TB and 50TB and <0.4W per TB, the Osmium combines capacity and efficiency.

### Reliable & Durable

The Osmium Drive is extremely reliable with a < 1 sector per 10<sup>17</sup> bits read UBER and an MTBF of 1.5 million hours. It contains power loss protection, endurance is unlimited for five years, and data retention is 12 months. It is also durable with operating and non-operation shock of 1000G (0.5ms, 50G (2ms) and operating and non-operating vibration of 21.6grams (5-700Hz), 3 axis.

### Features & Benefits

- Market-leading capacity: 25TB and 50TB
- Market leading energy efficiency: <0.4W per TB
- 5x more capacity than the largest HDD
- 500x higher read IOPs than nearline HDDs
- SAS-2 connectivity
- Native dual-port SAS 6/3/1.5 Gbps

### Product Family Overview

	Capacity	Performance
<b>Osmium Drive</b>		
MLC, NAND	25TB to 50TB	472MB/s Read (max) 325MS/s Write (max)



### Applications

- Cloud storage
- Big data
- Digital imaging/media
- Artificial intelligence
- Technical computing
- Analytics and log repositories

## Specifications

Osmium Drive	
<b>Performance</b>	
Host Interface Rate (max)	6.0Gbps
Number of Flash Channels	8
Capacities	25TB and 50TB
Sequential Read (max)	472MB/s
Sequential Write (max)	325MB/s
Random Read (max)	>58K IOPS
Random Write (max)	>15K IOPS
<b>Reliability</b>	
Data Reliability	< 1 sector per 10 <sup>17</sup> bits read
MTBF	1.5 million hours
Endurance	Unlimited for 5 years
Data Retention	12 months
Power Loss Protection	Yes
<b>Environmental</b>	
Shock - Operating	1000G (0.5ms), 50G (2ms), X, Y, Z in each direction
Non-Operating	1000G (0.5ms), 50G (2ms), X, Y, Z in each direction
Vibration - Operating	2.16 grams, 5-700Hz, 3 axis
Operating Temperature	C-temp: 0°C to 50°C
Storage Temperature	0°C to 80°C
Humidity	10% to 80%, non-condensing, relative humidity
<b>Physical</b>	
Length	147.00 mm [5.07 in]
Width	101.60 mm [4.1 in]
Height	26.10 mm [1.03 in]

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