

3.2 Tbyte, 2.5-inch, Read Intensive Solid State Drive Specification, 12Gbps SAS-3 Interface

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This document provides the specification for the 3.2 Tbyte, 2.5-inch, Read Intensive Solid State Drive with a 12 Gigabits per second (Gbps) SAS-3 interface.

Disk Drive Installation

To install a disk drive, refer to the product documentation located in the [Oracle Help Center \(http://docs.oracle.com/en/engineered-systems/\)](http://docs.oracle.com/en/engineered-systems/).

The Disk Drive Bracket Assembly consists of the disk drive attached to a bracket, and must not be disassembled.

Drive Specification

TABLE 1 Power Requirements

Condition	+5VDC (-5%, +10%)	+12VDC (-5%, +10%)
Startup current peak	0.762A	1.017A
Read/Write peak	0.942A	0.940A
Read/Write typical (rms)	0.497A	0.729A
Maximum power (Max power is measured as the average power in a 1ms interval)	3.775W	14.496W

TABLE 2 Physical Characteristics

Height (max)	Width (max)	Depth (max)	Weight
0.591 in.	2.75 in.	3.955 in.	4.9 oz
15 mm	69.85 mm	100.45 mm	0.14 kg

Note - The physical characteristics do not include the bracket.

TABLE 3 Usage Information

Usage	Description
Useful life	Minimum 5 years
Expected annualized failure rate (AFR) for normal 24/7 operating conditions	0.4335%
Operating temperature (Case)	0 to 65 degrees Celsius Note - Derating of AFR applies above 40 degrees Celsius.
Maximum temperature (SMART trip)	70 degrees Celsius (Drive voids warranty above 85 degC) Note - Drive may be rendered unusable above 85 degrees Celsius.
Other environmental factors	Conforms to IEC standards

TABLE 4 Drive Performance

Attribute	Value
Capacity, formatted	3,200,631,791,616 bytes (512 bytes per sector)
Random 4KB read per sec	440K IOPS
Random 4KB write per sec	115K IOPS

Attribute	Value
Sustained sequential read	2200 MB/sec
Sustained sequential write	1200 MB/sec
Interface data transfer rate	12Gbps/6Gbps/3Gbps/1.5Gbps (auto negotiation, dual port, full duplex)
Power-on to ready (no rebuild)	< 10 sec
Power-on to ready (full rebuild)	30 sec
End-to-end	T10DIF Type 1 no performance impact

TABLE 5 SSD Characteristics

Attribute	Value
NAND geometry	Intel Gen1 3D MLC, 64Gbps/chip
Number of NAND channels	24
NAND Transfer rate per channel	667 MT/sec
Rated PE cycles	20,000
Over provisioning	44.00%
Page size	16,384 bytes
Erase block size	16,777,216 bytes

Product Documentation

You can find a broad selection of documentation at the [Oracle Help Center \(http://docs.oracle.com/en/\)](http://docs.oracle.com/en/).

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