

800 Gbyte, 2.5-inch, General Purpose Solid State Drive Specification, 12Gbps SAS-3 Interface

March 2017

This document provides the specification for the 800 Gbyte, 2.5-inch, General Purpose 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	0.705A	0.890A
Read/Write peak	0.745A	0.965A
Read/Write typical (rms)	0.411A	0.751A
Maximum power (Max power is measured as the average power in a 1ms interval)	3.35W	10.2W

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	800,166,076,416 bytes (512 bytes per sector)
Random 4KB read per sec	440K IOPS
Random 4KB write per sec	155K IOPS

Attribute	Value
Sustained sequential read	2200 MB/sec
Sustained sequential write	1300 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, 32Gbps/die
Number of NAND channels	12
NAND Transfer rate per channel	667 MT/sec
Rated PE cycles	20,000
Over provisioning	60.00%
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/).

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit [My Oracle Support \(http://www.oracle.com/us/support/contact/index.html\)](http://www.oracle.com/us/support/contact/index.html) or visit [Global Customer Support Accessibility \(http://www.oracle.com/us/corporate/accessibility/support/index.html\)](http://www.oracle.com/us/corporate/accessibility/support/index.html) if you are hearing impaired.

800 Gbyte, 2.5-inch, General Purpose Solid State Drive Specification, 12Gbps SAS-3 Interface

Part No: E85539-01

Copyright © 2017, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Référence: E85539-01

Copyright © 2017, Oracle et/ou ses affiliés. Tous droits réservés.

Ce logiciel et la documentation qui l'accompagne sont protégés par les lois sur la propriété intellectuelle. Ils sont concédés sous licence et soumis à des restrictions d'utilisation et de divulgation. Sauf stipulation expresse de votre contrat de licence ou de la loi, vous ne pouvez pas copier, reproduire, traduire, diffuser, modifier, accorder de licence, transmettre, distribuer, exposer, exécuter, publier ou afficher le logiciel, même partiellement, sous quelque forme et par quelque procédé que ce soit. Par ailleurs, il est interdit de procéder à toute ingénierie inverse du logiciel, de le désassembler ou de le décompiler, excepté à des fins d'interopérabilité avec des logiciels tiers ou tel que prescrit par la loi.

Les informations fournies dans ce document sont susceptibles de modification sans préavis. Par ailleurs, Oracle Corporation ne garantit pas qu'elles soient exemptes d'erreurs et vous invite, le cas échéant, à lui en faire part par écrit.

Si ce logiciel, ou la documentation qui l'accompagne, est livré sous licence au Gouvernement des Etats-Unis, ou à quiconque qui aurait souscrit la licence de ce logiciel pour le compte du Gouvernement des Etats-Unis, la notice suivante s'applique:

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

Ce logiciel ou matériel a été développé pour un usage général dans le cadre d'applications de gestion des informations. Ce logiciel ou matériel n'est pas conçu ni n'est destiné à être utilisé dans des applications à risque, notamment dans des applications pouvant causer des dommages corporels. Si vous utilisez ce logiciel ou matériel dans le cadre d'applications dangereuses, il est de votre responsabilité de prendre toutes les mesures de secours, de sauvegarde, de redondance et autres mesures nécessaires à son utilisation dans des conditions optimales de sécurité. Oracle Corporation et ses affiliés déclinent toute responsabilité quant aux dommages causés par l'utilisation de ce logiciel ou matériel pour ce type d'applications.

Oracle et Java sont des marques déposées d'Oracle Corporation et/ou de ses affiliés. Tout autre nom mentionné peut correspondre à des marques appartenant à d'autres propriétaires qu'Oracle.

Intel et Intel Xeon sont des marques ou des marques déposées d'Intel Corporation. Toutes les marques SPARC sont utilisées sous licence et sont des marques ou des marques déposées de SPARC International, Inc. AMD, Opteron, le logo AMD et le logo AMD Opteron sont des marques ou des marques déposées d'Advanced Micro Devices. UNIX est une marque déposée d'The Open Group.

Ce logiciel ou matériel et la documentation qui l'accompagne peuvent fournir des informations ou des liens donnant accès à des contenus, des produits et des services émanant de tiers. Oracle Corporation et ses affiliés déclinent toute responsabilité ou garantie expresse quant aux contenus, produits ou services émanant de tiers, sauf mention contraire stipulée dans un contrat entre vous et Oracle. En aucun cas, Oracle Corporation et ses affiliés ne sauraient être tenus pour responsables des pertes subies, des coûts occasionnés ou des dommages causés par l'accès à des contenus, produits ou services tiers, ou à leur utilisation, sauf mention contraire stipulée dans un contrat entre vous et Oracle.

Accessibilité de la documentation

Pour plus d'informations sur l'engagement d'Oracle pour l'accessibilité à la documentation, visitez le site Web Oracle Accessibility Program, à l'adresse <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=dacc>.

Accès aux services de support Oracle

Les clients Oracle qui ont souscrit un contrat de support ont accès au support électronique via My Oracle Support. Pour plus d'informations, visitez le site <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> ou le site <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> si vous êtes malentendant.