

# Oracle 1 Gb, 10 Gb, and 40 Gb Ethernet Adapters Security Guide

**ORACLE**

Part No: E69825-01  
April 2016



**Part No: E69825-01**

Copyright © 2016, 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: E69825-01**

Copyright © 2016, 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=docacc>.

**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.

# Contents

---

<b>Using This Documentation</b> .....	7
Product Documentation Library .....	7
Feedback .....	7
<b>Oracle 1 Gb, 10 Gb, and 40 Gb Ethernet Adapters</b> .....	9
Product Overview .....	9
Security Principles .....	10



## Using This Documentation

---

- **Overview** – Provides security guidelines for Oracle's 1 Gb, 10 Gb, and 40 Gb Ethernet Adapters.
- **Audience** – Technicians, system administrators, and authorized service providers.
- **Required knowledge** – Advanced experience troubleshooting and replacing hardware.

## Product Documentation Library

Documentation and resources for this product and related products are available at <http://www.oracle.com/goto/quad10gb-dual40gb-ethernet-adapter/docs>.

## Feedback

Provide feedback about this documentation at <http://www.oracle.com/goto/docfeedback>.





# Oracle 1 Gb, 10 Gb, and 40 Gb Ethernet Adapters

---

- [“Product Overview” on page 9](#)
- [“Security Principles” on page 10](#)
- [“User Authentication” on page 10](#)
- [“Security Considerations for Developers” on page 10](#)

## Product Overview

The security guidelines in this document apply to Oracle's 1 Gb, 10 Gb, and 40 Gb Ethernet adapters listed in the following table:

Adapter	Number of Ports	Form Factor	Transfer Rate	Network Interconnect
Oracle Dual 40Gb Ethernet Adapter	2 QSFP ports	Low profile	40GbE/10GbE	40GBase-SR4, 40GBase-LR4, and QSFP+ CR4 Copper Direct Attached physical media
Oracle Quad 10Gb Ethernet Adapter	2 QSFP ports <sup>†</sup>	Low profile	10GbE	CR4-DAC copper, SR4/LR4 Fiber Module
Sun Dual Port GbE PCIe 2.0 LPA, MMF	2	Low profile	1GbE	Multimode fiber
Sun Quad Port GbE PCIe 2.0 LPA, UTP	4	Low profile	1GbE	Unshielded twisted-pair
Sun Quad Port GbE PCIe 2.0 EM, MMF	4	ExpressModule	1GbE	Multimode fiber
Sun Quad Port GbE PCIe 2.0 EM, UTP	4	ExpressModule	1GbE	Unshielded twisted-pair  (Shielded twisted-pair for NEBS Compliance)
Sun Dual Port 10GBASE-T Adapter <sup>‡</sup>	2	Low profile	10GbE	Unshielded twisted-pair
Sun Dual Port 10GBASE-T ExpressModule*	2	ExpressModule	10GbE	Unshielded twisted-pair  (Shielded twisted-pair for NEBS compliance)
Sun Dual Port 10GbE SFP+ PCIe 2.0 LPA	2	Low profile	10GbE	Fiber long reach and short reach

Adapter	Number of Ports	Form Factor	Transfer Rate	Network Interconnect
Sun Dual Port 10GbE SFP+ PCIe 2.0 EM	2	ExpressModule	10GbE	Fiber long reach and short reach
Sun Dual 10GbE Fiber Expansion Module	2	Expansion module	10GbE	Fiber long reach and short reach

<sup>†</sup>There are two QSFP connector ports, port 0 and port 1. Only the top port, port 0, can be configured as a 4x10GbE port. By using a splitter cable, customers can get four 10GbE ports.

<sup>‡</sup>Formerly called the Sun Dual Port 10 GbE PCIe 2.0 Low Profile Adapter, BASE-T.

<sup>\*</sup>Formerly called the Sun Dual Port 10 GbE PCIe 2.0 ExpressModule, BASE-T.

## Security Principles

The principles described in this section are fundamental to using any Ethernet network adapter securely.

## Software Updates

These adapters ship with all of the firmware installed. Installation is not required in the field.

Software updates for Oracle Solaris drivers are available through Oracle Solaris patches and updates. Software Updates for Oracle Linux and Oracle VM (OVM) drivers are available from <http://www.oracle.com>. If firmware updates are ever needed, contact Oracle support to arrange for support or check <https://support.oracle.com> for the latest updates and procedures for this particular product.

Refer to the product notes provided with your adapter for late-breaking news or information about firmware update requirements or other security information.

## User Authentication

All operating systems in general, and Oracle Solaris in particular, require you to log in with root credentials to administer the cards and to upgrade the drivers or firmware.

## Security Considerations for Developers

All software and firmware running on the adapters are provided by Oracle. Customers cannot develop their own software to run on these adapters.