

Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter M2

Product Notes



Part No.: E23924-03
April 2013

Copyright © 2010, 2013, 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 software documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS. Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

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 which 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 on 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. 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.

Copyright © 2010, 2013, 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 disposition de votre contrat de licence ou de la loi, vous ne pouvez pas copier, reproduire, traduire, diffuser, modifier, breveter, 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 concédé sous licence au Gouvernement des Etats-Unis, ou à toute entité qui délivre la licence de ce logiciel ou l'utilise pour le compte du Gouvernement des Etats-Unis, la notice suivante s'applique :

U.S. GOVERNMENT RIGHTS. Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

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. 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.



Product Notes

This document provides news and issues about the installation and use of Oracle's Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter M2.

- "Supported Platforms and Operating Systems" on page 1
- "Download Firmware" on page 2
- "Known Issues" on page 2
- "Related Documentation" on page 4
- "Feedback" on page 4

Note – Currently, the radiated emissions will pass if the rack door is closed.

Supported Platforms and Operating Systems

Before installing an adapter, ensure that your platform and OS are supported. Go to:

<http://www.oracle.com/us/products/servers-storage/networking/infiniband/index.html>

Note – OFED software version 1.5.1 or higher must be used with any Linux distribution. For the latest BXOFED software, go to:

<https://support.oracle.com/CSP/ui/flash.html>

The preceding information is up-to-date at the time this document was written. For the latest information, go to:

<http://docs.oracle.com/cd/E19157-01/>

Subsequent versions of this document have a higher number following the final dash. That is, E23924-02 becomes E23924-03.

Download Firmware

1. Go to the My Oracle Support web site for the most recent firmware for this InfiniBand ExpressModule (part number 375-3697-01):

<https://support.oracle.com/CSP/ui/flash.html>

Note – The latest firmware version is currently 2.11.2010.

2. Select the software and documentation downloads in the row of the table with this product description:

“Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule HCA M2”

To install the firmware, refer to the *Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter M2 User’s Guide*.

Known Issues

g5 Experiences CATERR After Updating CX2 EM FW to 2.11.2000 (Bug 15826772)

This CX-2 firmware is SR-IOV enabled by default and the Server BIOS must have both SR-IOV support and PCI MMIO 64 bits support enabled, even if the Linux driver is not SR-IOV enabled. Failing to correctly configure BIOS can cause the server to hard hang during reboot.

Oracle Enterprise Linux Issues

SR-IOV Enabled Linux IB Driver (Bug 16309590)

g5plus MMIO issue with three or more CX2 IB HCAs with FW 2.11.2010. In such situations, do not use all HCAs because the driver fails to load on top of one or more HCAs.

Hot-Plug Procedure Fails on Intel x86 Platforms (Bug 6969481)

The hot-plug procedure is not currently supported with Oracle Enterprise Linux 5.5 and OFED 1.5.1 software on Intel Westmere based platforms. Performing the hot-plug procedure could cause the Sun Fire X4800 server and Sun Blade X6270 M2 server module to panic.

Oracle Solaris 10 Issues

Third-Party HCA Firmware Issue (Bug 15614160)

This issue applies to third-party HCAs (QDR HCAs) that are equivalent to the Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter M2.

In some cases, running with less than the most current firmware on a QDR HCA could result in a panic, because the firmware incorrectly reports an error. If the error occurs, you see a message similar to the following:

```
panic[cpu3]/thread=fffffe80000d1c60: Hermon Fatal Internal Error.  
Hermon state=0xffffffff800e2000
```

In the message log a message similar to the following is displayed:

```
NOTICE: hermon0: Device Error: EQE hca internal error
```

Workaround: This issue is unlikely to occur with legacy Sun HCAs or new HCAs from Oracle, because these HCAs ship with the current firmware. If this error does occur, reboot the system and use the `firmwareflash` command to display the current firmware version. The minimum firmware version must be 2.7.8130.

If the firmware is not at Version 2.7.8130 or higher, refer to the HCA user's guide and product notes for obtaining and updating the firmware on all HCAs in the system. Once updated, reboot the system to enable the new firmware.

If this problem occurs on a system in which all HCAs are at this minimum firmware revision, inform your authorized Oracle service representative of the failure and provide the available details.

Older Firmware Issue

Boot Over InfiniBand Component of the Firmware Could Exceed the Option ROM Capacity (Bug 6800225)

On some platforms, certain option cards might not get initialized due to the host channel adapter (HCA) taking most of the available Option ROM space in the BIOS.

Workaround: Check for and install later versions of the HCA firmware at:
<https://support.oracle.com/CSP/ui/flash.html>

Related Documentation

Documentation	Links
All Oracle products	http://docs.oracle.com
Sun InfiniBand Dual Port 4x QDR PCIe ExpressModule Host Channel Adapter M2	http://docs.oracle.com/cd/E19157-01/
Sun InfiniBand Dual Port 4x QDR PCIe Low Profile Host Channel Adapter M2	http://docs.oracle.com/cd/E19241-01/
Oracle Integrated Lights Out Manager (ILOM)	http://www.oracle.com/goto/ILOM/docs
Oracle Solaris 11 OS	http://www.oracle.com/goto/Solaris11/docs
Oracle Solaris 10 OS	http://www.oracle.com/goto/Solaris10/docs
Oracle VM Server for SPARC	http://www.oracle.com/goto/VM-SPARC/docs
Oracle VTS	http://www.oracle.com/goto/VTS/docs

Feedback

Provide feedback about this documentation at:

<http://www.oracle.com/goto/docfeedback>