

## Oracle Quad 10 Gb or Dual 40 Gb Ethernet Adapter Product Notes

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## Using This Documentation

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- **Overview** – Provides late-breaking information on the Oracle Quad 10 Gb or Dual 40 Gb Ethernet Adapter.
- **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>.





## Late-Breaking Information

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This document contains important and late-breaking information about Oracle's Quad 10 Gb or Dual 40 Gb Ethernet Adapter.

- [“Known Issues” on page 9](#)
- [“Hardware and Software Requirements” on page 10](#)
- [“OS Patches and Updates” on page 14](#)

### Known Issues

These are the known issues for the adapter.

- [“QCU Tool Does Not Recognize the Adapter After a Hot-Plugging Operation \(22869085\)” on page 9](#)
- [“SR-IOV NICs Must Be Created With Unique MAC Addresses \(22809029\)” on page 10](#)
- [“Certain Commands Such as hot-plug and dladm Might Intermittently Hang When Executed in an I/O Domain \(22918373\)” on page 10](#)

### QCU Tool Does Not Recognize the Adapter After a Hot-Plugging Operation (22869085)

After an adapter is hot-plugged in, the server might fail to recognize the adapter.

**Workaround:** Reboot the server to recognize the adapter. If you do not intend to reboot the server, change the mode in another server before hot-plugging the adapter. Monitor MOS for the updated FW package with a fix.

## SR-IOV NICs Must Be Created With Unique MAC Addresses (22809029)

No warning shows up if SR-IOV NICs are created with the same MAC address. MAC addresses assigned to SR-IOV NICs must be unique.

**Workaround:** Avoid creating SR-IOV NICs with the same MAC addresses. If the same MAC address have already been created, use the `dladm delete-vnic` to delete all the VNICs with same MAC address, then recreate `srio vnics` with unique MAC addresses using `dladm create-vnic`. Monitor MOS for the updated FW package with a fix.

## Certain Commands Such as `hot-plug` and `dladm` Might Intermittently Hang When Executed in an I/O Domain (22918373)

You might experience an intermittent hang when using the `dladm` and `hot-plug` commands in I/O domains that have been configured to use VFs from both NPRD and primary domains.

**Workaround:** Subsequent reboot of the I/O domain might be needed to resume the normal operation. Monitor MOS for the updated firmware package with a fix.

## Hardware and Software Requirements

Before using the adapter, ensure that your server meets the hardware and software requirements. For additional information, check the product web page at:

<http://www.oracle.com/goto/10gb-or-40gb-ethernet-adapter>

Supported Hardware and Operating Systems	Supported Products
Hardware, Oracle servers	<ul style="list-style-type: none"><li>■ Netra X5-2 server</li><li>■ SPARC M7-8 server</li><li>■ SPARC M7-16 server</li><li>■ SPARC T7-1 server</li><li>■ SPARC T7-2 server</li></ul>

Supported Hardware and Operating Systems	Supported Products
	<ul style="list-style-type: none"> <li>■ SPARC T7-4 server</li> </ul> <p>For the most up-to-date supported platforms, check the product web page for the specific server and its I/O options.</p>
Operating systems	<ul style="list-style-type: none"> <li>■ Oracle Solaris 11.3 SRU8</li> <li>■ Oracle Linux 6.7</li> </ul> <p>Linux:</p> <ul style="list-style-type: none"> <li>■ SUSE Linux Enterprise Server (SLES) 11 SP3 (x64)</li> <li>■ Red Hat Enterprise Linux (RHEL) 6.4, RHEL 6.5 (x64)</li> </ul> <p>Windows/Hyper-V (MS Virtualization):</p> <ul style="list-style-type: none"> <li>■ Windows Server 2012 (x64)</li> <li>■ Windows Server 2012R2 (x64)</li> <li>■ Microsoft Windows Server 2008R2 SP1 (x64)</li> </ul> <p>Hypervisors:</p> <ul style="list-style-type: none"> <li>■ VMware ESXi 5.1 (in 10 GbE mode) and 5.5 (x64)</li> <li>■ Oracle VM 3.4.1</li> <li>■ UEFI 2.1, 2.3 (x64)</li> <li>■ FreeBSD 9 (x64)</li> </ul> <p>For the most up-to-date supported OS, check the product web page for the specific server.</p>

## Where to Access the QCU Tool

The QCU tool is a command-line utility for dynamically switching the ports between various modes supported by the adapter.

To switch port modes, refer to the QCU tool instructions, which can be downloaded from: <http://www.oracle.com/goto/10gb-or-40gb-ethernet-adapter>, under Related Products.

## Cable and Transceiver Descriptions

4x10GbE Mode	Description/Part Number
Transceiver options (One transceiver required.)	<ul style="list-style-type: none"> <li>■ QSFP parallel fiber optics short range transceiver               <ul style="list-style-type: none"> <li>■ 2124A, Factory installed</li> </ul> </li> </ul>

Cable and Transceiver Descriptions

4x10GbE Mode	Description/Part Number
	<ul style="list-style-type: none"> <li>■ X2124A-N, Xoption</li> <li>■ QSFP+ parallel fiber optics long range transceiver               <ul style="list-style-type: none"> <li>■ 7110598, Factory installed</li> <li>■ 7114094, Xoption</li> </ul> </li> </ul>
<p>Copper cable (direct attach) options (One cable required. No transceiver required.)</p>	<ul style="list-style-type: none"> <li>■ QSFP to 4 SFP+ copper splitter cable: 1 meter               <ul style="list-style-type: none"> <li>■ 7110600, factory installation</li> <li>■ X2125A-1M-N, Xoption</li> </ul> </li> <li>■ QSFP to 4 SFP+ copper splitter cable: 3 meters               <ul style="list-style-type: none"> <li>■ 7110601, factory installation</li> <li>■ X2125A-3M-N, Xoption</li> </ul> </li> <li>■ QSFP to 4 SFP+ copper splitter cable: 5 meters               <ul style="list-style-type: none"> <li>■ 7110602, factory installation</li> <li>■ X2125A-5M-N, Xoption</li> </ul> </li> </ul>
<p>Optical splitter cable length options (One cable required.)</p>	<ul style="list-style-type: none"> <li>■ MPO to 4 LC optical splitter cable: 10 meters               <ul style="list-style-type: none"> <li>■ 7110603, factory installation</li> <li>■ X2127A-10M, Multimode, Xoption</li> </ul> </li> <li>■ MPO to 4 LC optical splitter cable: 20 meters               <ul style="list-style-type: none"> <li>■ 7110604, factory installation</li> <li>■ X2127A-20M, Multimode, Xoption</li> </ul> </li> <li>■ MPO to 4 LC optical splitter cable: 50 meters               <ul style="list-style-type: none"> <li>■ 7110605, factory installation</li> <li>■ X2127A-50M, Multimode, Xoption</li> </ul> </li> </ul>
2x40GbE Mode	Description/Part Number
<p>Transceiver options (Two transceivers required.)</p>	<ul style="list-style-type: none"> <li>■ QSFP parallel fiber optics short range transceiver               <ul style="list-style-type: none"> <li>■ 2124A, Factory installed</li> <li>■ X2124A-N, Xoption</li> </ul> </li> <li>■ QSFP+ parallel fiber optics long range transceiver               <ul style="list-style-type: none"> <li>■ 7110598, Factory installed</li> <li>■ 7114094, Xoption</li> </ul> </li> </ul>
<p>Copper cable (direct attach) options (No transceiver required. Two cables required.)</p>	<ul style="list-style-type: none"> <li>■ QSFP to QSFP passive copper cable: 1 meter               <ul style="list-style-type: none"> <li>■ 7105169, Factory installation</li> <li>■ X2121A-1M-N, Xoption</li> </ul> </li> <li>■ QSFP to QSFP copper cable, 2 meter               <ul style="list-style-type: none"> <li>■ 7105172, Factory installation</li> <li>■ X2121A-2M, Xoption</li> </ul> </li> <li>■ QSFP to QSFP copper cable, 3 meter               <ul style="list-style-type: none"> <li>■ 7105174, Factory installation</li> <li>■ X2121A-3M-N, Xoption</li> </ul> </li> </ul>

2x40GbE Mode	Description/Part Number
	<ul style="list-style-type: none"> <li>■ QSFP to QSFP copper cable, 5 meter               <ul style="list-style-type: none"> <li>■ 7105177, Factory installation</li> <li>■ X2121A-5M-N, Xoption</li> </ul> </li> </ul>
Optical splitter cable length options (Two cables required.)	<ul style="list-style-type: none"> <li>■ High bandwidth QSFP optical cable: 5 meters, MPO to MPO               <ul style="list-style-type: none"> <li>■ 7105181, Factory installation</li> <li>■ 7105199, Xoption</li> </ul> </li> <li>■ High bandwidth QSFP optical cable: 10 meters, MPO to MPO               <ul style="list-style-type: none"> <li>■ 7105182, Factory installation</li> <li>■ 7102869, Xoption</li> </ul> </li> <li>■ High bandwidth QSFP optical cable: 20 meters, MPO to MPO               <ul style="list-style-type: none"> <li>■ 7105186, Factory installation</li> <li>■ 7102870, Xoption</li> </ul> </li> <li>■ High bandwidth QSFP optical cable: 50 meters, MPO to MPO (for factory installation)/               <ul style="list-style-type: none"> <li>■ 7105191, Factory installation</li> <li>■ 7102871, Xoption</li> </ul> </li> <li>■ High bandwidth QSFP optical cable: 100 meters, MPO to MPO               <ul style="list-style-type: none"> <li>■ 7105193, Factory installation</li> <li>■ 7105206, Xoption</li> </ul> </li> </ul>
<b>2x2x10GbE Mode (SPARC only)</b>	<b>Description/Part Number</b>
Transceiver options (Two transceivers required.)	<ul style="list-style-type: none"> <li>■ QSFP parallel fiber optics short range transceiver               <ul style="list-style-type: none"> <li>■ 2124A, Factory installed</li> <li>■ X2124A-N, Xoption</li> </ul> </li> <li>■ QSFP+ parallel fiber optics long range transceiver               <ul style="list-style-type: none"> <li>■ 7110598, Factory installed</li> <li>■ 7114094, Xoption</li> </ul> </li> </ul>
Cable length options (Two cables required.)	<ul style="list-style-type: none"> <li>■ Optical cable splitter: 10 meters, MPO/MTP to 2 LC on ports 3 and 4 OM3               <ul style="list-style-type: none"> <li>■ 7114366, Factory installed</li> <li>■ 7114369, Xoption</li> </ul> </li> <li>■ Optical cable splitter: 20 meters, MPO/MTP to 2 LC on ports 3 and 4 OM3               <ul style="list-style-type: none"> <li>■ 7114367, Factory installed</li> <li>■ 7114370, Xoption</li> </ul> </li> <li>■ Optical cable splitter: 50 meters, MPO/MTP to 2 LC on ports 3 and 4 OM3               <ul style="list-style-type: none"> <li>■ 7114368, Factory installed</li> <li>■ 7114371, Xoption</li> </ul> </li> </ul>

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**Note** - If using QSFP to QSFP cables to connect the adapter (configured in 4x10Gb mode) to a 40GbE switch, ensure that the QSFP ports on the switch are configured appropriately or support that configuration. Refer to the switch documentation for any special configurations for the QSFP port to work in the 10GbE mode.

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**TABLE 1** Connector and Cable Support For the Different Modes

Connector	Optical/Fibre Cable Support		Direct-Attach Copper Cable Support
	Dual 40GbE mode	2x2x10GbE mode	
Port 0 (A)	2x40GbE	2x10GbE	4x10GbE
Port 1 (B)	2x40GbE	2x10GbE	

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**Note** - In the 2x2x10GbE mode, direct-attach copper cables are not supported.

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**Note** - For the 2x2x10GbE mode, use a Custom 2-way splitter cable which utilizes port C and D of the MPO/MTP connector. For all other modes, standard industry cables are supported.

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## OS Patches and Updates

Before you patch the current OS due to version differences, update the entire OS image, if possible, on the client system.

If you cannot update the entire OS image, download the latest patch that contains the software driver at:

<https://support.oracle.com>

For additional information, check the product web page at:

<http://www.oracle.com/goto/10gb-or-40gb-ethernet-adapter>