



# Sun™ Dual 10GbE Fabric Expansion Module Release Notes

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Sun Microsystems, Inc.  
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# Sun Dual 10GbE Fabric Expansion Module Release Notes

These release notes contain late breaking information for the Sun Dual 10GbE Fabric Expansion Module.

## Hardware and Software Requirements

Before installing the FEM, ensure that your system meets the hardware and software requirements listed in the following table:

**TABLE 1** Hardware and Software Requirements for Sun x64 Servers

Requirements	Hardware or Software
Operating system	<ul style="list-style-type: none"><li>• Solaris™ 10 8/07 Operating System</li><li>• Red Hat Enterprise Linux (RHEL) AS4.5 (32- and 64-bit)</li><li>• RHEL AS4.6 (64-bit)</li><li>• SuSE Linux Enterprise Server (SLES) 10 SP1 (64-bit)</li><li>• Windows Server 2008 Enterprise Edition (32-bit and 64-bit miniport driver)</li></ul>
10 Gb network express module (NEM)	Sun Blade™ 6000 10GbE Multi-fabric Network Express Module
Sun Blade Server Modules	<ul style="list-style-type: none"><li>• Sun Blade X6250 Server Module (375-3501-06 or newer). This part number is printed on the motherboard, and can be read from the ELOM.</li><li>• Sun Blade X6450 Server Module</li></ul>

# Sun Dual 10GbE Fabric Expansion Module Support on Sun Blade X6250 Server Module

The Sun Dual 10GbE Fabric Expansion Module (FEM) is supported only on the Sun Blade X6250 server motherboard with part number **375-3501-06 or newer**. The Sun Dual 10 GbE FEM also requires CPLD version 231.

To find the part number, either use the ELOM, or look for the number printed on the motherboard itself.

## Check Hardware Release Before Installing CPLD Update

Before installing CPLD version 231, check the part number on the motherboard. It must be 375-3501-06 or newer. If you have a motherboard with a different part number, *do not* install CPLD version 231.

To find the part number, either use the ELOM, or look for the number printed on the motherboard itself.

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## Required Patches

This section lists the latest required patches.

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**Note** – Always check for the latest revision of the patch, -01, -02, and so on.

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Patch ID	Description
119255-53	Prerequisite patch for Kernel Patch 127128-11
126424-03	Prerequisite patch for Kernel Patch 127128-11
127756-01	Prerequisite patch for Kernel Patch 127128-11
127128-11	Kernel patch for Solaris 10 8/07 OS
138049-02	x86 hot swap support for the Sun Blade 6000 10GbE Multi-fabric Network Express Module

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## Known Issues

This section describes the known issues and workarounds at the time of this release.

### Very Heavy Traffic Between Solaris 10 8/07 and Red Hat Enterprise Linux (RHEL 4.6) Clients (CR 6685402)

With heavy traffic from Sun Blade X6250 Server Modules with RHEL4.6 (64-bit) to Sun Blade X6250 Server Modules with Solaris 10 8/07 (64-bit), the blade with Solaris 10 OS could experience high CPU usage rendering the blade unusable.

Workaround:

1. Increase the number of CPUs or the speed of the CPUs.
2. Add tunables to `/etc/system` file.

The following is an example:

**CODE EXAMPLE 1** Heavy Traffic Tunables for the `/etc/system` File

```
set ddi_msix_alloc_limit=8
set pcplusmp:apic_multi_msi_max=8
set pcplusmp:apic_msix_max=8
set pcplusmp:apic_intr_policy=1
set nxge:nxge_msi_enable=2
set ip_squeue_soft_ring=1
set ip:ip_soft_rings_cnt=8
set pcplusmp:apic_enable_dynamic_migration=0
set pcplusmp:apic_intr_policy=1
```

The values may be changed according to your blade's configuration.

## Removing a nxge VLAN With the vconfig Command Causes System to Hang on Linux Platforms (CR 6509980)

There are three possible workarounds:

1. If the main interface is not active and if no other VLANs or trunking is configured, do not do anything. After some time, the `tx_reclaim` will activate after the threshold has been reached (that is, for the current configuration, 64 packets have been transmitted) and the `vconfig rem` command is returned.
2. If the main interface is not active, enter the `ping` command. After the threshold number of packets have been transmitted, `vconfig rem` command can be run successfully.
3. If the main interface is not active and if there is no other VLANs or trunking configured on the main interface, bring the main interface down and then execute the `vconfig rem` command.

## Unable to Remove nxge Driver in a Linux Environment (CR 6715147)

On clients running SUSE Linux 10 SP1 and SUSE 10, the `nxge` driver might not get completely removed when using the `rpm -e` command. If driver package removal is attempted when the driver is not loaded, the removal could fail. For example:

```
# rpm -e nxge-2.6.16.46-0.12-smp-2.1-1.x86_64
ERROR: Removing ?nxge?: No such file or directory
error: %postun(nxge-2.6.16.46-0.12-smp-2.1-1.x86_64) scriptlet
failed, exit status 255
```

Workaround: In the case of such failure, use the `--noscripts` option as follows:

```
# rpm -e --noscripts nxge-2.6.16.46-0.12-smp-2.1-1.x86_64
```



## nxge Driver Fails to Attach If 10GbE NEM PHY is Not Present

If the nxge driver is loaded on the Sun Blade X6250 Server Module with the Sun Blade 6000 10GbE Multi-fabric Network Express Module (10GbE NEM) missing from either port, that port fails to attach. The driver should attach, but the link should be reported as down.

Once the 10GbE NEM PHY is present, the driver attaches and any further removal or insertion of the 10GbE NEM is handled correctly.

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## Downloading and Installing the Windows OS Drivers

The Sun Dual 10GbE Fabric Expansion Module supports the Windows Server 2008 Enterprise Edition miniport driver. For additional Windows driver release information, refer to the *Sun Multithreaded 10GbE and QGC Networking Cards Specification for Windows xxx Drivers* document.

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**Note** – Installing the Windows OS driver changes the hot-swapping procedure for the Sun Blade 6000 10 GbE Multi-Fabric Network Expansion Module. See [“Hot-Swapping a Sun Blade 6000 10GbE Multi-Fabric NEM With Windows OS Driver Installed”](#) on page 6.

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The Sun Dual 10GbE Fabric Expansion Module must be installed before you install the Windows Server 2008 Enterprise Edition miniport driver. Without the Sun Dual 10GbE Fabric Expansion Module installed, the Windows OS driver will not install correctly.

To download the Windows OS driver and documentation, go to:  
[https://cds.sun.com/is-bin/INTERSHOP.enfinity/WFS/CDS-CDS\\_SMI-Site/en\\_US/-/USD/ViewProductDetail-Start?ProductRef=Sunx8Exp-EAD-1.0-G-F@CDS-CDS\\_SMI](https://cds.sun.com/is-bin/INTERSHOP.enfinity/WFS/CDS-CDS_SMI-Site/en_US/-/USD/ViewProductDetail-Start?ProductRef=Sunx8Exp-EAD-1.0-G-F@CDS-CDS_SMI)

The zip file looks similar to the following:

sun_10_Gigabit_Ethernet_driver_update_xx.zip
--

After unzipping this file, go to Windows directory, which contains the documents and driver:

Readme.txt	User Manual.pdf
Release Notes.txt	windows_2008_Releasepackage.zip
Sun Multithreaded 10GbE and QGC Installer.msi	

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**Note** – Multiple VLANs are not currently supported with the Windows OS driver.

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## Hot-Swapping a Sun Blade 6000 10GbE Multi-Fabric NEM With Windows OS Driver Installed

This section explains how to remove an existing 10GbE Multi-Fabric NEM and install another in its place.



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**Caution** – Damage to the NEM can occur as the result of careless handling or electrostatic discharge (ESD). Always handle the NEM with care to avoid damage to ESD-sensitive components. To minimize the risk of electrostatic damage, Sun strongly recommends that you use both a workstation antistatic mat and an antistatic wrist strap.

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# Replacing a 10GbE Multi-Fabric NEM

If an Multi-Fabric NEM fails, you will need to replace it.



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**Caution** – The NEM should be replaced immediately after it fails.

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The Multi-Fabric NEM is a Customer Replaceable Unit (CRU). You replace the entire module. There are no subcomponents that you can replace.

You can remove and replace a 10GbE Multi-Fabric NEM from a powered-on chassis using a hot-swap operation, as well as from a powered-off chassis.



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**Caution** – Before you remove the NEM from the chassis, you should pause or shut down any active I/O that passes through the NEM.

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**Note** – The blue Ready to Remove LED on the NEM is not operational. To help identify a NEM that you plan to remove, you can illuminate the white Locate LED using the proxy CLI. For more information, refer to the *Sun Blade 6000 10GbE Multi-Fabric Network Express Module User's Guide*.

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## ▼ To Replace a 10GbE Multi-Fabric NEM



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**Caution** – If you are replacing the NEM while power is applied to the chassis, be sure to have a NEM filler panel ready for use before you remove the NEM. The NEM slot must not be left uncovered for more than a minute while power is active in the chassis.

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1. Double-click the **Safely Remove Hardware** icon located at the bottom right of the GUI.
2. Select the device **Sun Multithreaded 10GbE & QGE Networking Cards #**.
3. Click **STOP**.
4. Confirm it is the correct device click **OK**.
5. When the GUI reports that it is safe to remove the hardware, click **OK**.
6. Label all the cables so you can reconnect them in the same location.
7. Disconnect all cables from the NEM.

8. Press together and hold the ejector buttons on both the right and left ejector levers.
9. Open the ejector levers by extending them outward until they stop.
10. Hold the opened ejector levers and pull the NEM out.
11. Insert the new Multi-Fabric NEM into the chassis.
12. Reconnect all the cables in their original locations.