OSS-CPCIe3-3U-10GbE-x4-QUAD Ethernet Adapter Installation Guide

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INSTALLATION GUIDE
OSS-CPCIe3-3U-10GbE-x4-QUAD
www.onestopsystems.com

Getting Started

This installation guide tells you step by step how to install the module. You will find instructions for the following procedures:

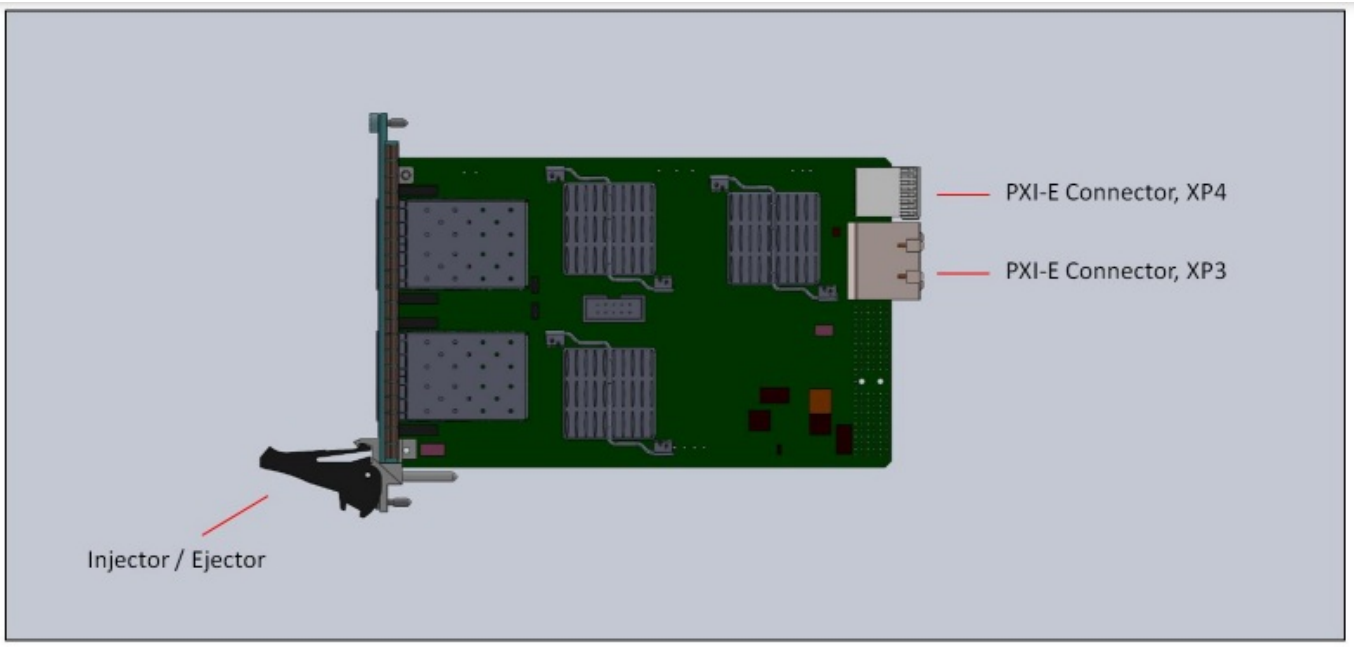
- Unpacking
- Description of Parts
- Module Installation
- SFP module and Cable Installation
- Turning ON the Device
- SFP module and Cable Installation
- LED Panel Indicator
- Verify Device Installation

Unpacking

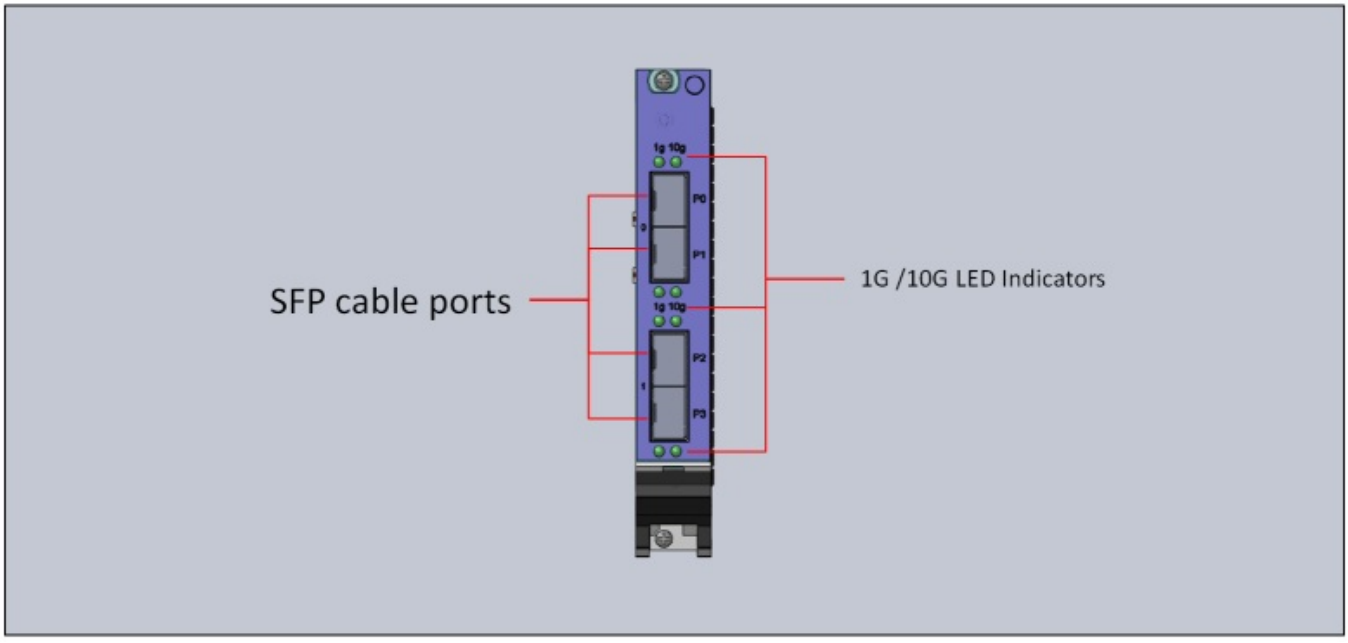
Check and identify the standard supplied item. Inspect the card / module to make sure it is free from physical defects / damages.

Description of Parts

Side

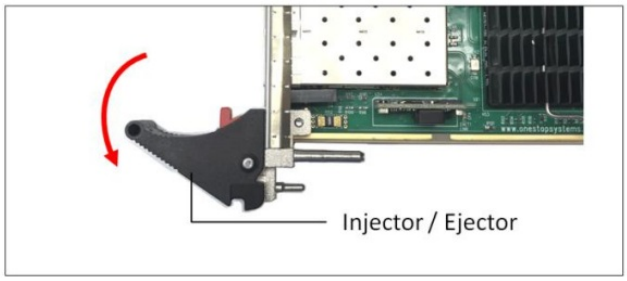


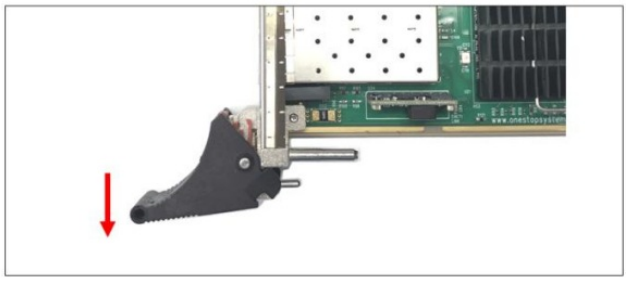
Front



Module Installation

1. Turn the chassis off and unplug the chassis from AC power.
2. Before inserting the module, inspect the chassis slot to ensure there aren't any bent pins in the slot connectors.
3. Set the injector /ejector handle in down position.

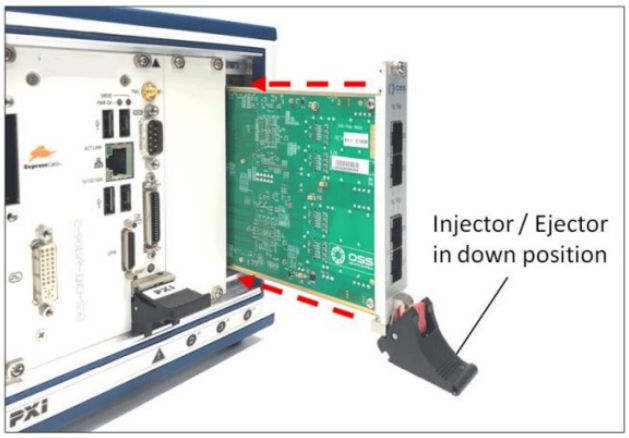




Caution:

To avoid damaging the module, do not touch exposed board end connectors or components on the printed circuit board when installing the module.

4. Slowly insert the module in the chassis slot by placing the module card edges into the top and bottom card guides. With the injector/ejector handle in the down position, carefully slide the module to the rear of the chassis.

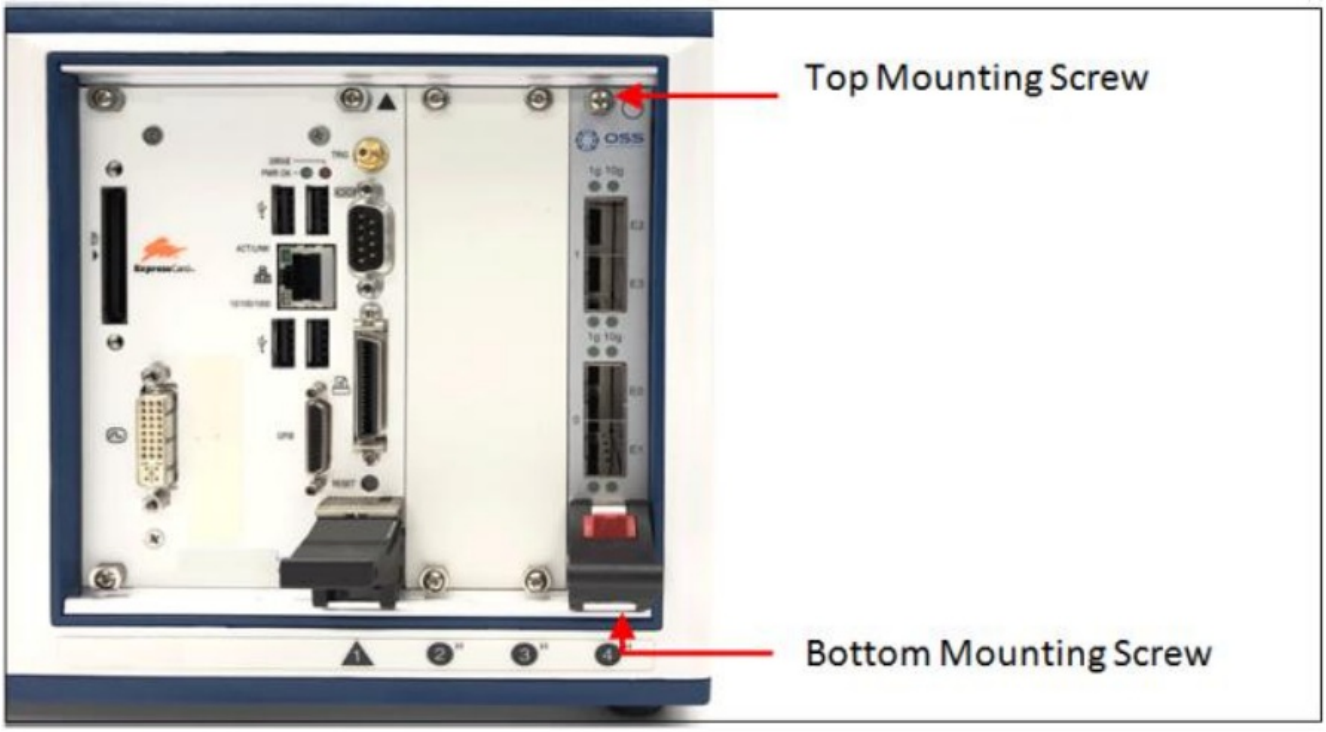


Caution:

Ensure that the module is aligned perpendicularly to the chassis as you begin sliding it in. Otherwise, it's possible for components on the module (or on adjacent modules) to be damaged by contact between modules.

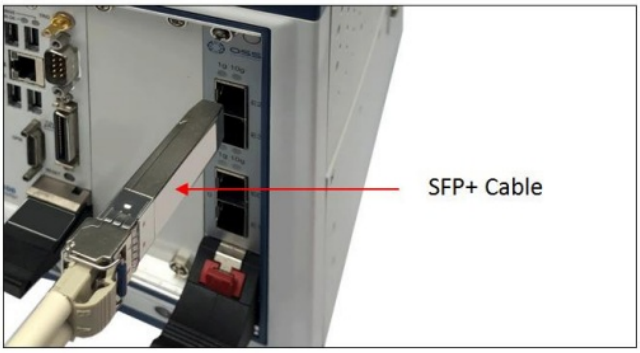
5. When you begin to feel resistance from the backplane connectors, push up on the injector/ejector handle to complete insertion of the module and latch it into place.

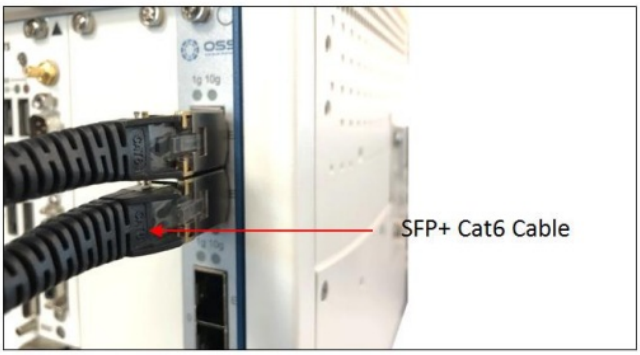
6. Secure the module front panel to the chassis using the captive front panel mounting screws. The module has two captive mounting screws.
   a. 1st mounting screw on top
   b. 2nd mounting screw (bottom) beneath the injector/ejector



SFP module and Cable Installation

Carefully insert SFP+ Cable (Fiber or Cat6) to any available port on the module.





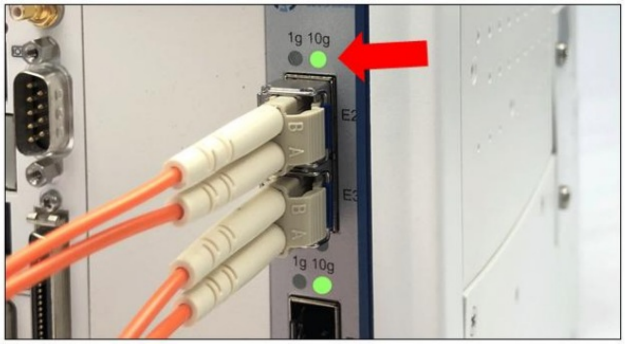
5.1 Supported SFP and SFP module
What are the SFP+ and SFP module requirements for the Intel® Ethernet Converged Network Adapter X520 Series?
Check Intel website for further information on the supported SFP and SFP modules.
https://www.intel.com/content/www/us/en/support/articles/000005528/network-and-i-o/ethernet-products.html

Turning ON the Device

Once the SFP modules are inserted correctly, you can turn ON the expansion unit.
After the expansion unit is powered UP, the LED located on the front module will illuminate depending on the link connection (either 1G or 10G).

LED Panel Indicator

- 10g: Indicates 10G link
- 1g: Indicates 1G link



Verify Device Installation

8.1 Linux

On Linux operating system, to verify or check if the device is detected or not, type the command below on the terminal window
$ lspci –tv | grep 82599
See output below, four Intel 82599ES are detected.

```
@localhost /]# lspci -tv | grep 82599
      |                                 +-08.0-[09]--+-00.0  Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection
      |                                 |           \-00.1  Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection
      |                                 \-09.0-[0a]--+-00.0  Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection
      |                                              \-00.1  Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection
```

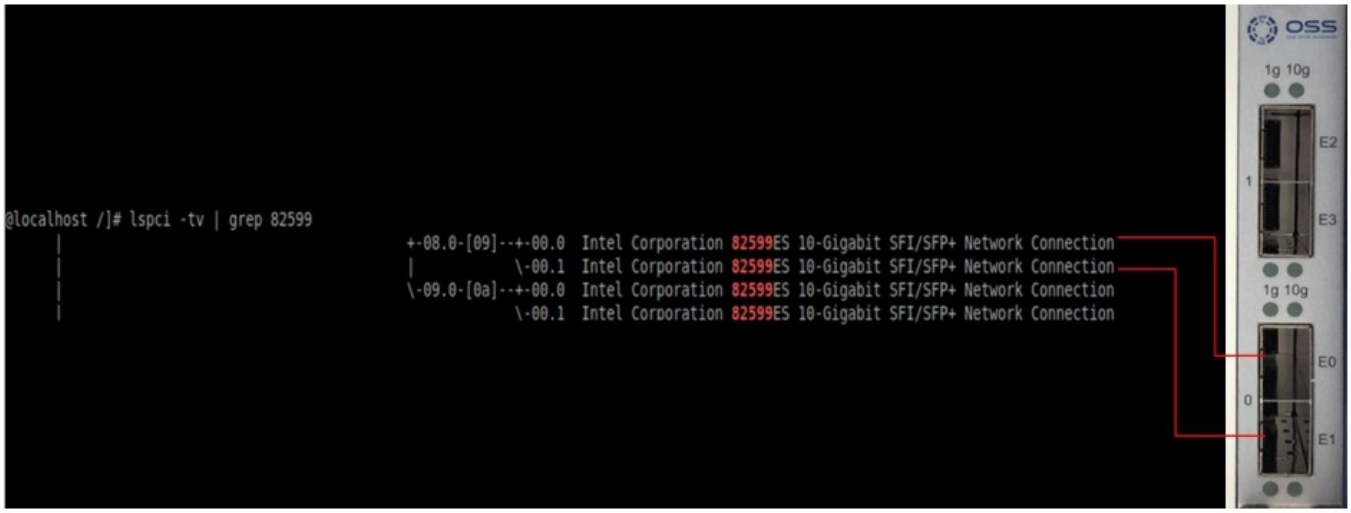
$ lspci –D | grep ‘Network\|Ethernet’
See output below, four Intel 82399ES are detected

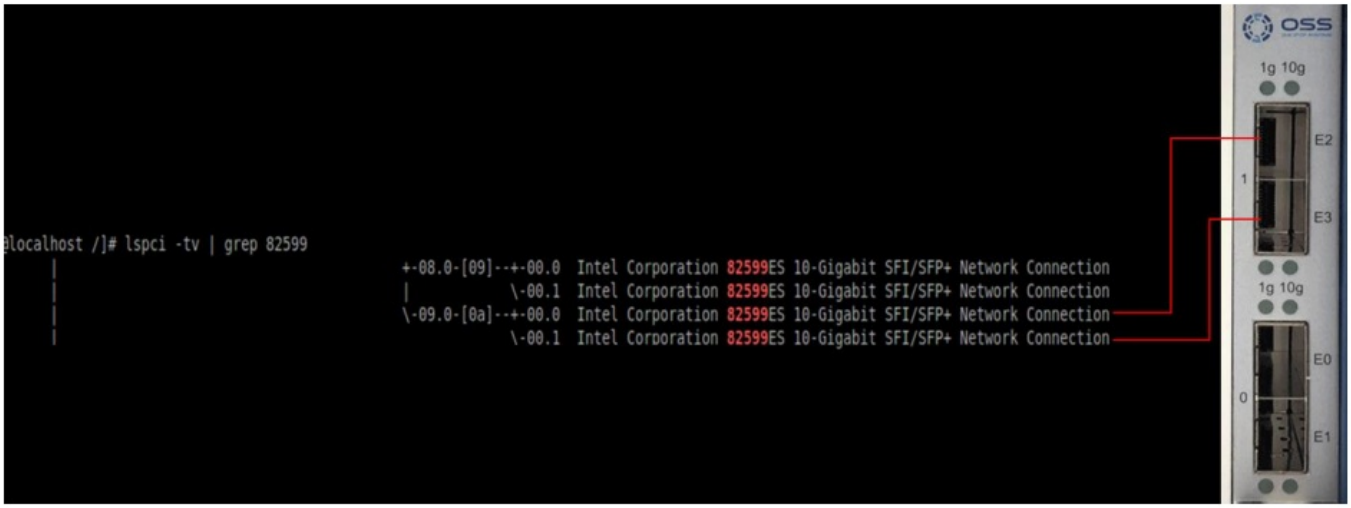
```
[root@localhost /]# lspci -D | grep 'Network\|Ethernet'
0000:01:00.0 Ethernet controller: Intel Corporation 82573E Gigabit Ethernet Controller (Copper) (rev 03)
0000:09:00.0 Ethernet controller: Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection (rev 01)
0000:09:00.1 Ethernet controller: Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection (rev 01)
0000:0a:00.0 Ethernet controller: Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection (rev 01)
0000:0a:00.1 Ethernet controller: Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection (rev 01)
```

To find out the device assigned name, type the command below on the terminal window.
$ lspci – c network –businfo
See output below, four 82599ES are detected and each has their corresponding device name (i.e. enp9s0f0)

```
[root@localhost /]# lshw -c network -businfo
Bus info          Device     Class          Description
========================================================
pci@0000:01:00.0  enp1s0     network        82573E Gigabit Ethernet Controller (Copper)
pci@0000:09:00.0  enp9s0f0   network        82599ES 10-Gigabit SFI/SFP+ Network Connection
pci@0000:09:00.1  enp9s0f1   network        82599ES 10-Gigabit SFI/SFP+ Network Connection
pci@0000:0a:00.0  enp10s0f0  network        82599ES 10-Gigabit SFI/SFP+ Network Connection
pci@0000:0a:00.1  enp10s0f1  network        82599ES 10-Gigabit SFI/SFP+ Network Connection
```

The following two photos below represent the device slot address /B/D/F (Bus#, Device#, Function#) and its corresponding physical SFP port on the card.





The OSS-PXIE-10GBe-QUAD uses a PLX PEX 8732. You can check or query the PEX 8732 by using the command below on the terminal window
$ lspci –v | grep –I ‘PEX 8732’. See output below

```
[root@localhost oss]# lspci -v | grep -i 'PEX 8732'
06:00.0 PCI bridge: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch (rev ca) (prog-if 00 [Normal decode])
07:01.0 PCI bridge: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch (rev ca) (prog-if 00 [Normal decode])
        Capabilities: [a4] Subsystem: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch
07:08.0 PCI bridge: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch (rev ca) (prog-if 00 [Normal decode])
        Capabilities: [a4] Subsystem: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch
07:09.0 PCI bridge: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch (rev ca) (prog-if 00 [Normal decode])
        Capabilities: [a4] Subsystem: PLX Technology, Inc. PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch
```

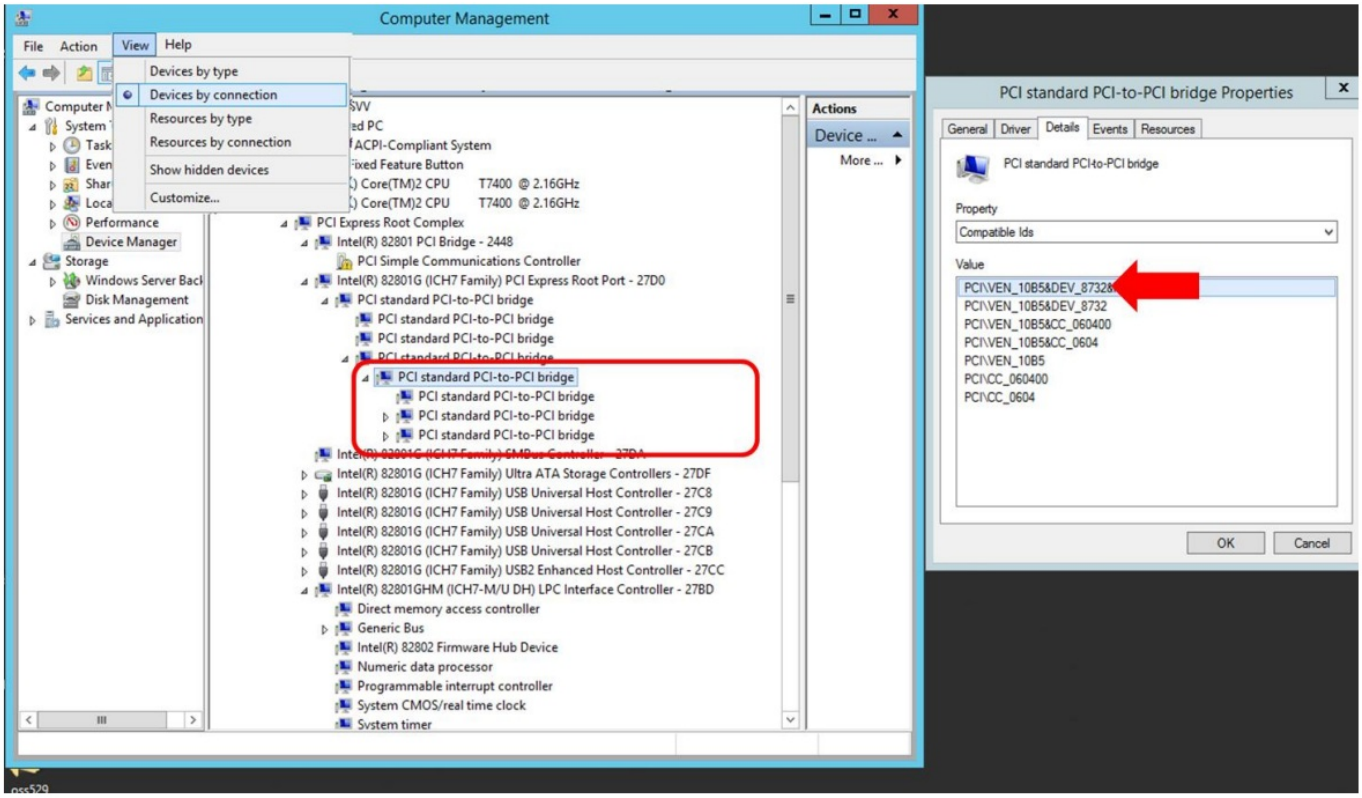
8.1 Windows
Verify hardware device in Windows Operating System. As your Windows computer starts up, you will see a small message box pop-up in the lower-right corner of the screen to alert you that Windows has found new hardware. Find the ‘My Computer’ icon and “right-click” on it. Then select ‘Manage’ from the pop-up menu.

- Next, click on ‘Device Manager’ in the left most Computer Management window.
- Finally, click on the View Menu and select View Devices by Connection
- Open ACPI (BIOS) → Open PCI Bus→ Click the ‘+’ or ‘>” sign several times until you reach a PCI Express Root Port Complex.
- Then click or collapse all the ‘+’ or ‘>’ until you see multiple subsets of PCI standard PCI-to-PCI bridge. See screenshot below.

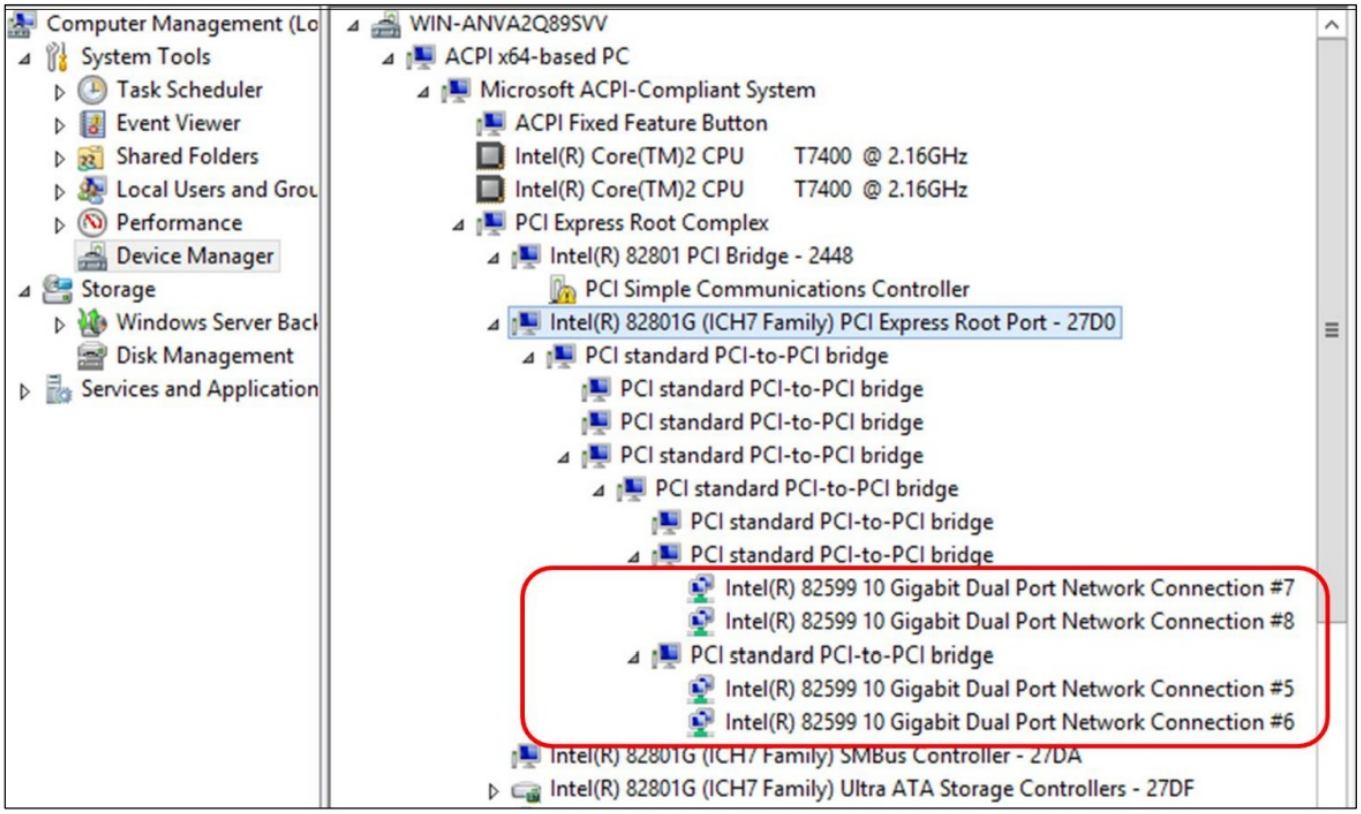
Right click the PCI standard PCI-to-PCI bridge with your mouse, then select properties. Select the “Details” tab,

below the “Property”, select “Compatible Ids”, it will show the Vendor Device of 8732. This is the PEX 8732 chip on the card.

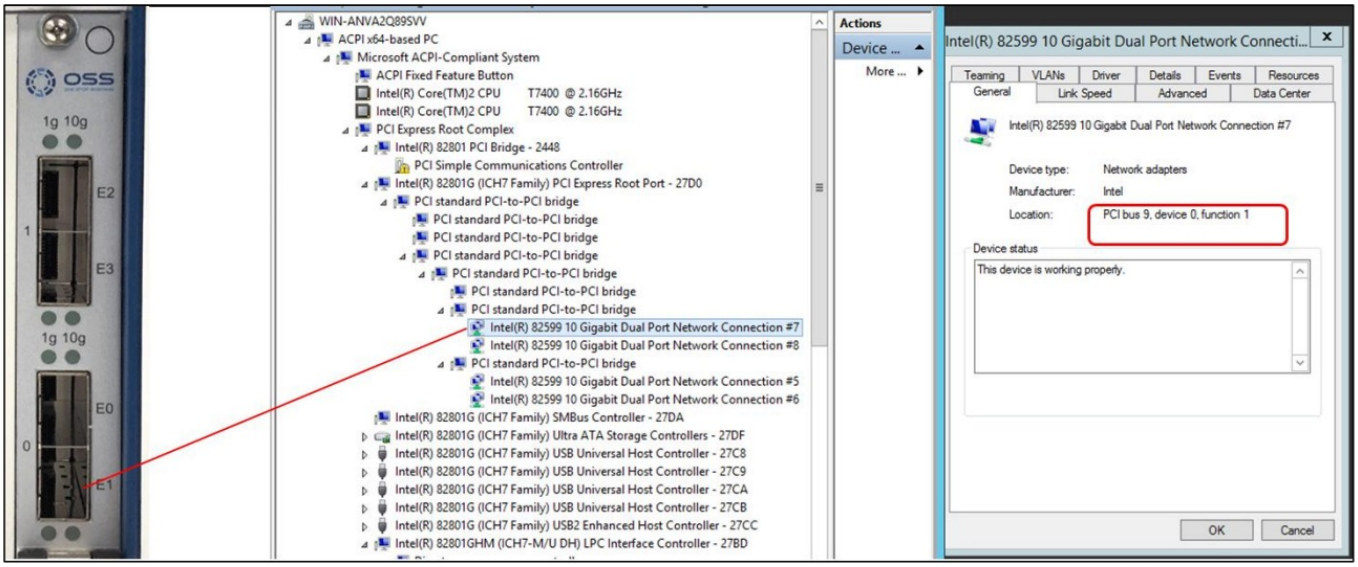
- All four “PCI standard PCI-to-PCI bridge” devices will have the same PCI\VEN DEV 8732

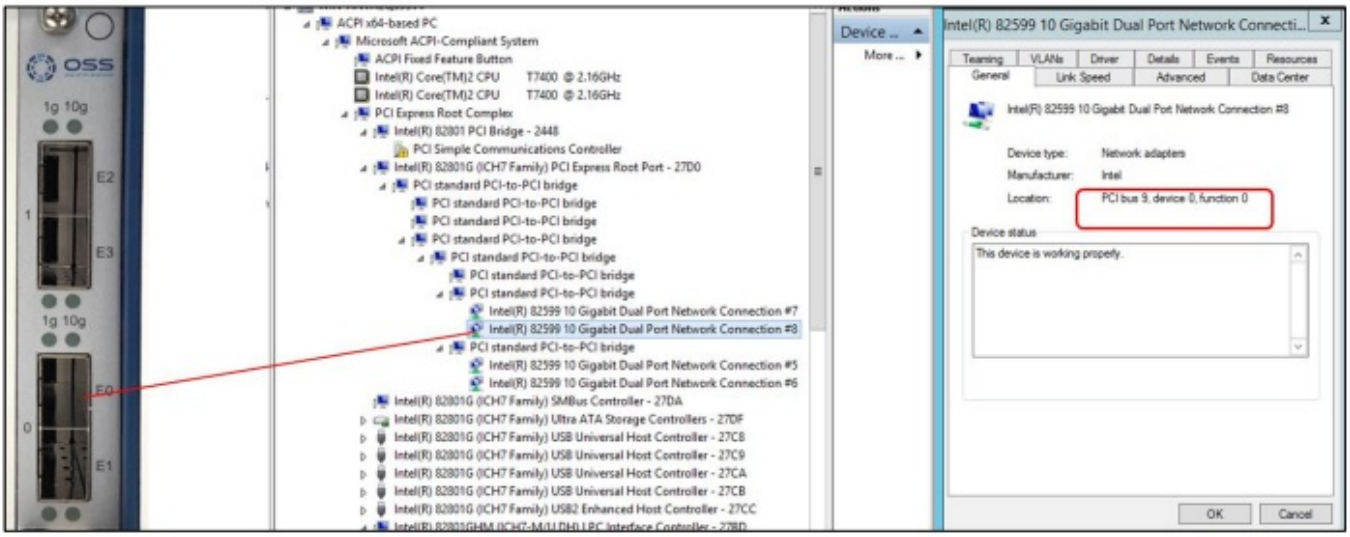


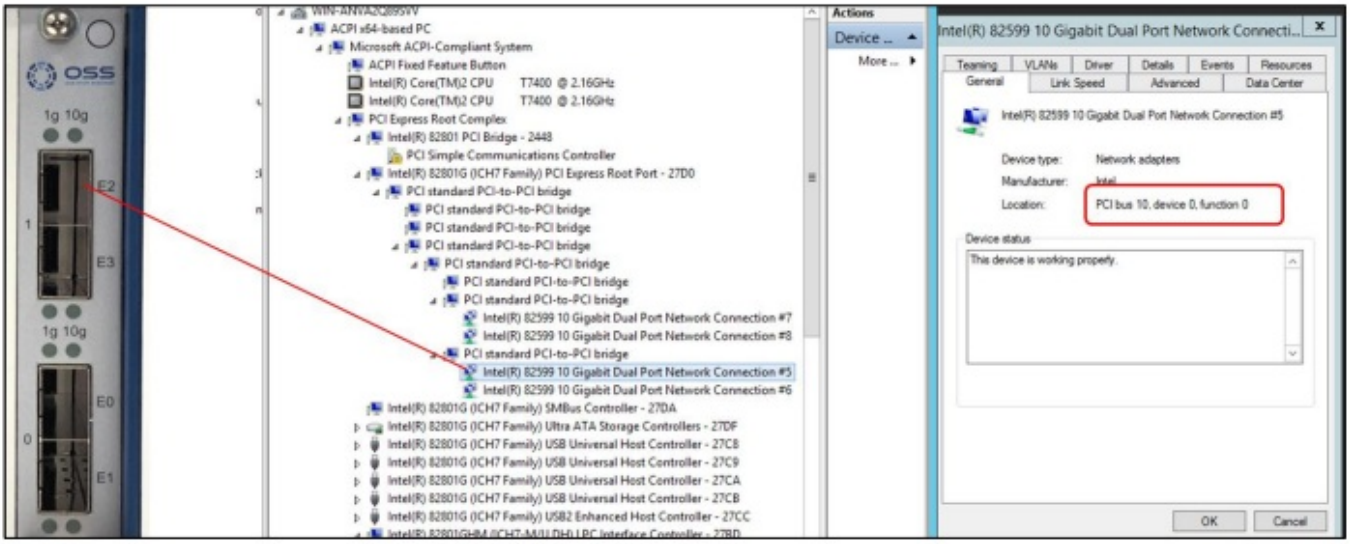
Collapse or click the ‘+’ or ‘>’ sign next to PCI standard PCI-to-PCI bridge and you will find four instances of Intel 82599 10 Gigabit Dual Port Network Connection devices, see screenshot below.

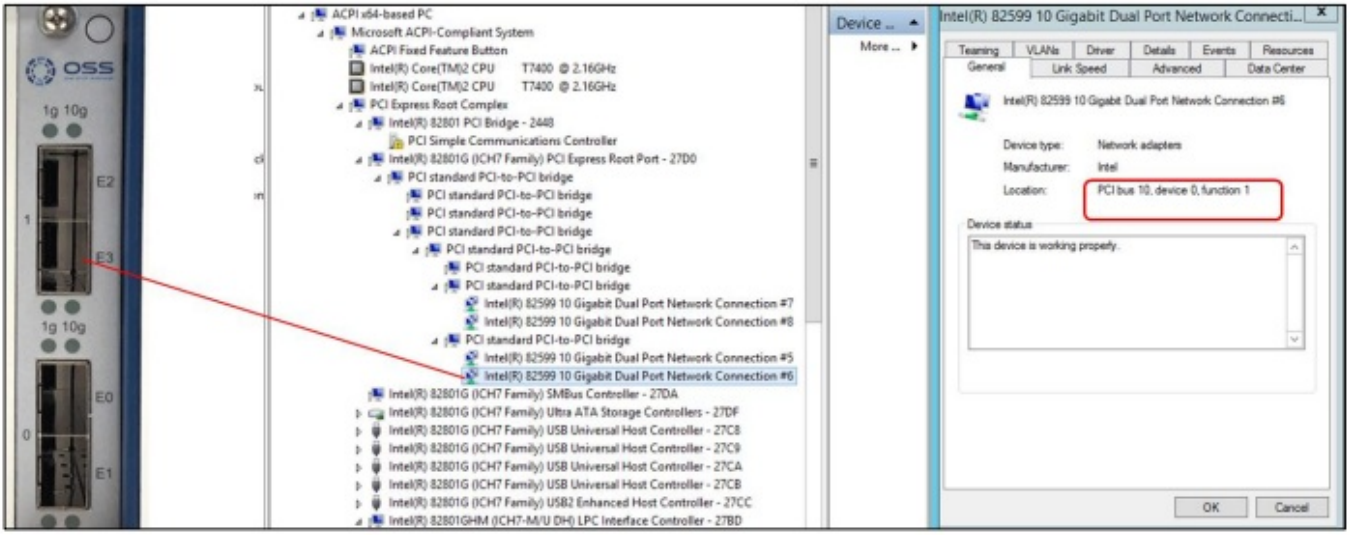


The following four screenshots represent the “Bus#, Device#, Function#” and its corresponding physical SFP port on the card.


1g 10g
E2
E3
1g 10g
E0
E1
WIN-ANVA2Q89SVV
ACPI x64-based PC
Microsoft ACPI-Compliant System
ACPI Fixed Feature Button
Intel(R) Core(TM)2 CPU T7400 @ 2.16GHz
Intel(R) Core(TM)2 CPU T7400 @ 2.16GHz
PCI Express Root Complex
Intel(R) 82801 PCI Bridge - 2448
PCI Simple Communications Controller
Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D0
PCI standard PCI-to-PCI bridge
PCI standard PCI-to-PCI bridge
PCI standard PCI-to-PCI bridge
PCI standard PCI-to-PCI bridge
PCI standard PCI-to-PCI bridge
PCI standard PCI-to-PCI bridge
Intel(R) 82599 10 Gigabit Dual Port Network Connection #7
Intel(R) 82599 10 Gigabit Dual Port Network Connection #8
PCI standard PCI-to-PCI bridge
Intel(R) 82599 10 Gigabit Dual Port Network Connection #5
Intel(R) 82599 10 Gigabit Dual Port Network Connection #6
Intel(R) 82801G (ICH7 Family) SMBus Controller - 27DA
Intel(R) 82801G (ICH7 Family) Ultra ATA Storage Controllers - 27DF
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C8
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C9
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CA
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CB
Intel(R) 82801G (ICH7 Family) USB2 Enhanced Host Controller - 27CC
Intel(R) 82801GHM (ICH7-M/U DH) LPC Interface Controller - 27BD
Actions
Device ...
More ...
Intel(R) 82599 10 Gigabit Dual Port Network Connecti...
Teaming
VLANs
Driver
Details
Events
Resources
General
Link Speed
Advanced
Data Center
Intel(R) 82599 10 Gigabit Dual Port Network Connection #7
Device type: Network adapters
Manufacturer: Intel
Location: PCI bus 9, device 0, function 1
Device status
This device is working properly.
OK
Cancel







Troubleshooting

9.1 Device is not detected or recognized

1. Shutdown the system
2. Disconnect the SFP module and cables
3. Disconnect the power from the unit
4. Remove the OSS-529 module from the unit
5. Check the slot inside the unit for damaged pins
6. Re-insert the OSS-529 module
7. Secure the OSS-520 module
8. Reconnect the SFP module and cables
9. Turn ON the unit

9.2 Device is recognized but the front LED indicator is not coming ON

1. Re-seat the SFP module and cables
2. Make sure you are using a compatible SFP modules and cables. Go to Chapter 5 section 1 (Supported SFP modules)
3. Replace or swap the SFP module and cables
4. Re-install the driver for the Intel82599
5. Replace the OSS-520 card with a known good card

9.3 Intel82599 devices are showing UP with a Yellow Exclamation mark

1. Install or re-install the Intel82599 driver
2. Reboot the system after installing the driver
3. Re-install OS
4. Install Operating System updates.

9.4 Broken OSS-529 board

1. If you received a brand new DOA (Dead on Arrival) board, please contact OSS to RMA board and request for a replacement.
2. If you have an out of warranty board, please contact OSS Sales team and buy a new replacement board.
   • Standard warranty is 1 year, unless you have an SLA or extended warranty coverage.
3. If you purchased a second-hand / used board and it is broken, please contact OSS Sales team to buy a replacement.
   • **Note:** Purchasing a second-hand / used product is not covered under warranty.

Contacting Technical Support

Our support department can be by phone at 1 (760) 745-9883. Support is available Monday through Friday, 8:00 AM to 5:00 PM PT. When contacting One Stop Systems Technical Support, please be sure to include the following information:

1) Name 2) Company Name 3) Phone Number 4) Fax Number 5) Email Address 6) Model Number	7) Serial Number 8) Computer Make 9) Computer Model 10) Operating System and Version 11) Make/Model of accessories attached to the tablet 12) Detailed description of the problem

- You can also visit our web site at: **www.onestopsystems/support/**
- OSS Sales Contact: **sales@onestopsystems.com**
- OSS Support Contact: **support@onestopsystems.com**

For a quick response, use the Technical Support and RMA Request Form available in the Support Section of the website. Simply complete the form with all required information. Please make sure that your problem description is sufficiently detailed to help us understand your problem.
For example: Don't say "Won't boot up." Do say "Tried all the steps in the Troubleshooting Section and it still won't boot up."
For faster diagnosis of your problem, please run the two utility programs described in the following sections and include the diagnostic files they generate with your email.

10.1 Returning Merchandise to One Stop Systems

If factory service is required, you must contact OSS Service Representative to obtain a Return Merchandise Authorization (RMA) number. Put this number and your return address on the shipping label when you return the item(s) for service. One Stop Systems will return any product that is not accompanied by an RMA number. Please note that One Stop Systems WILL NOT accept COD packages, so be sure to return the product freight and duties-paid.
Ship the well-packaged product to the address below:
RMA # _____
One Stop Systems
2235 Enterprise Street, Suite#110 92029
USA

It is not required, though highly recommended, that you keep the packaging from the original shipment of your One Stop Systems product. However, if you return a product to One Stop Systems for warranty repair/ replacement or take advantage of the 30-day money back guarantee, you will need to package the product in a manner similar to the manner in which it was received from our plant. One Stop Systems cannot be responsible for any physical damage to the product or component pieces of the product (such as the host or expansion interfaces for the PCIe expansion chassis) that are damaged due to inadequate packing. Physical damage sustained in such a situation will be repaired at the owner's expense in accordance with Out of Warranty Procedures. Please, protect your investment, a bit more padding in a good box will go a long way to insuring the device is returned to use in the same condition you shipped it in. Please call for an RMA number first.

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Documents / Resources

	**OSS OSS-CPCIe3-3U-10GbE-x4-QUAD Ethernet Adapter** [pdf] Installation Guide OSS-CPCIe3-3U-10GbE-x4-QUAD Ethernet Adapter, OSS-CPCIe3-3U-10GbE-x4-QUAD, Ethernet Adapter, Adapter