

PE51EX

PCI Express to ExpressCard External Adapter

User's Manual

Rev.1.1



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Advisories

Three types of advisories are used throughout this manual to provide helpful information, or to alert you to the potential for hardware damage or personal injury. They are Note, Caution and Warning. The followings is an example of each type of advisory.



Used to amplify or explain a comment related to procedural steps or text.



Used to indicate and prevent the following step from causing injury.



Used to indicate and prevent the following procedure or step from causing damage to the equipment.

1 Introduction

Thank you for purchasing the RATOC PCI Express to ExpressCard Adapter. This device allows to use ExpressCard on a desktop computer. Normally ExpressCard is need to inserted into the ExpressCard slot before system boot and never allow to exchange ExpressCard after system boot both Windows PC and MAC pro. This product provide ExpressCard Hot-plug capable driver for Windows PC and MAC Pro. To install ExpressCard Hot-plug driver you can exchange ExpressCard at any time.

1-1.Feature

- To assure PCI Express signal quality signal repeater is located on the PCI Express board.
- To enable ExpressCard Hot-Plug capability Hot-Plug driver is provided for Windows PC and MAC Pro.
- Recommended as a SxS Pro compliant product on the web site below.


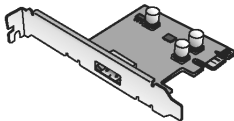
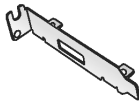
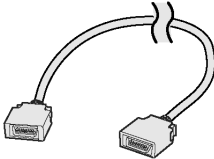
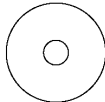
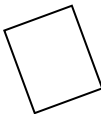

<https://www.oss-formats.org/en/sxs/outline/index.html>

1-2.Pre-Installation Information

Before using ExpressCard adapter you should perform the following steps:

1. Inventory the shipping carton contents for all of the required parts
2. Read this manual

1-3.Package Contents

			
ExpressCard Adapter	PCI Express add-in card	Low Profile bracket	PCI Express extension Cable
		<div data-bbox="836 1384 1091 1464" style="border: 1px solid black; padding: 5px; display: inline-block;">  NOTE </div> <p>If any of these items are missing, contact the supplier immediately.</p>	
CD-ROM	Manual		

1-4.System Requirements

- Supported Operating System
 - Windows 7 / Windows Vista / Windows XP(x32/x64, Latest Service Pack should be installed)
 - Mac OSX 10.4.11 or later / 10.5.6 or later / 10.6 or later
- Supported Computer
 - Windows PC PCI Express slot equipped.
 - Intel Mac Pro

1-5.Supported ExpressCard

ExpressCard/34 (ExpressCard/54 is not supported.)

➤ Sony SxS Card

SxS Pro SBP-8/SBP-16, SxS-1 SBS-32G1

➤ Sony MemoryStick DUO Adapter MSAC-EX1

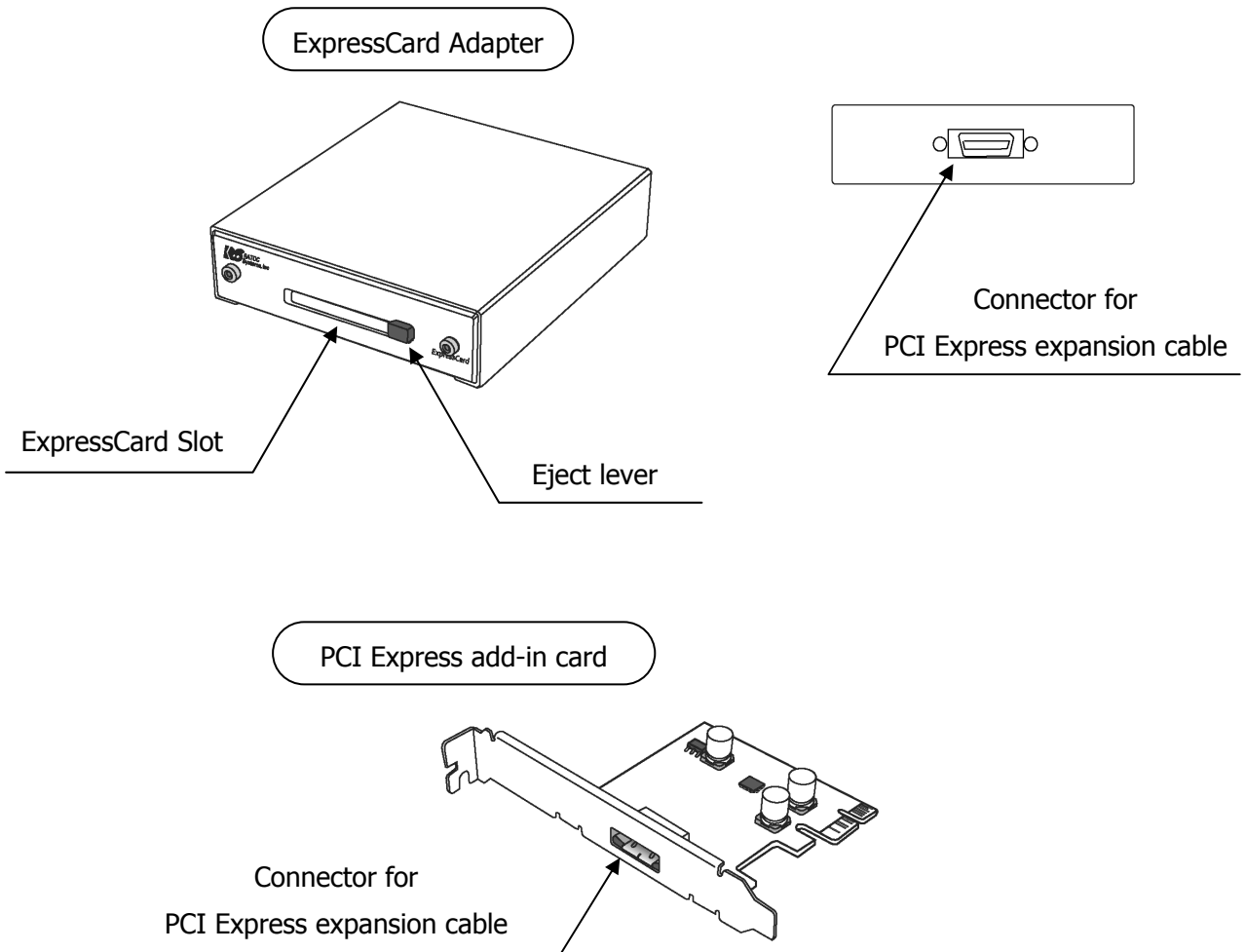


NOTE

For the latest information, go to our web site.

<http://www.ratocsystems.com/english>

1-6.Layout



2 Setup

2-1. Installing the PCI Express add-in card and ExpressCard adapter

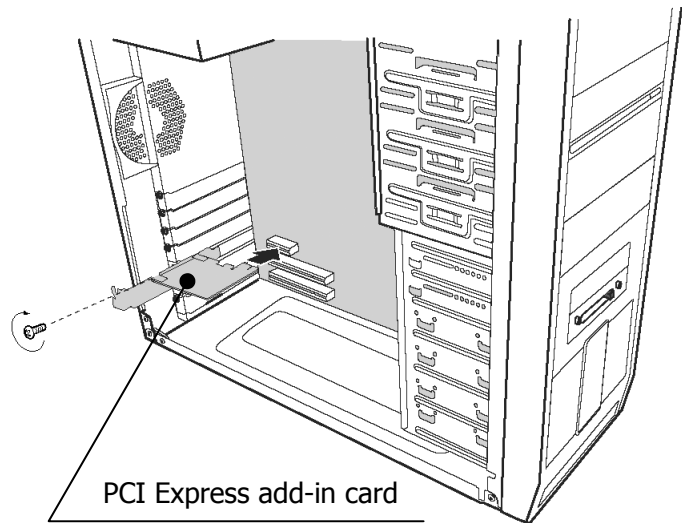
Shut down all power connected to the host computer



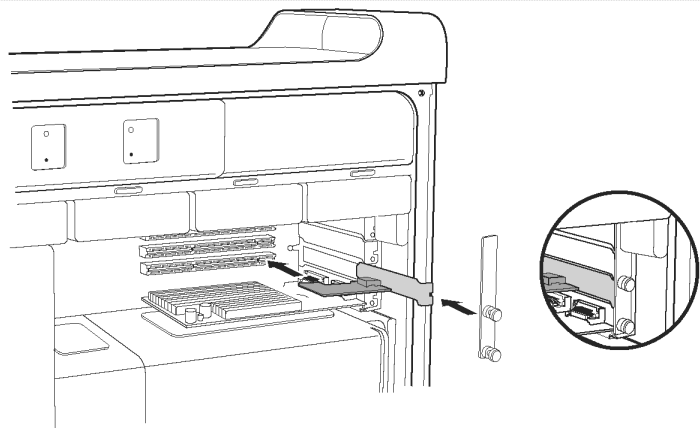
CAUTION

As an added step to ensure safe installation, unplug the power supply from the computer.

After the host computer is off and all power cords disconnected, remove the cover and insert the card into a vacant PCI Express slot by gently pushing the card until it is firmly seated. Be sure to secure the card with a retaining screw.



Windows PC



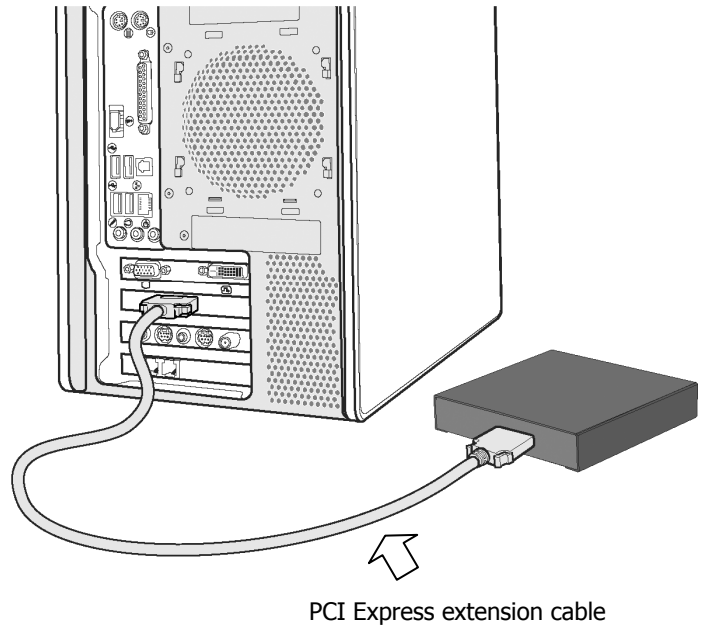
Mac Pro



CAUTION

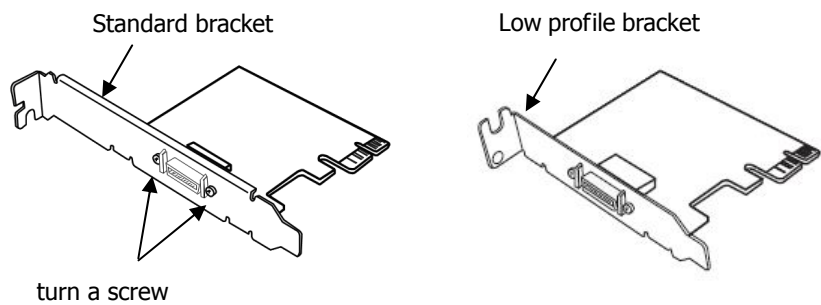
Electrostatic Discharge (ESD) is the enemy of semiconductor devices. You should always take precautions to eliminate any electrostatic charge from your body and clothing before touching any semiconductor device or card by using an electrostatic wrist strap and/or conductive mat.

Connect PCI Express add-in card and ExpressCard Adapter by the PCI Express extension cable



 **NOTE**

If PCI Express slot of your computer is low profile, you need to change the bracket of PCI Express add-in card to low profile bracket

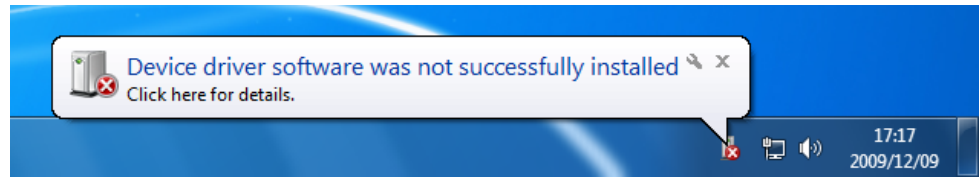


2-2.Windows Software Installation Steps



NOTE

At the first system boot you will see the balloon message below. You do not need to do anything, go ahead to the installation steps below.



➤ Installation Steps

Following steps are example under Windows 7.

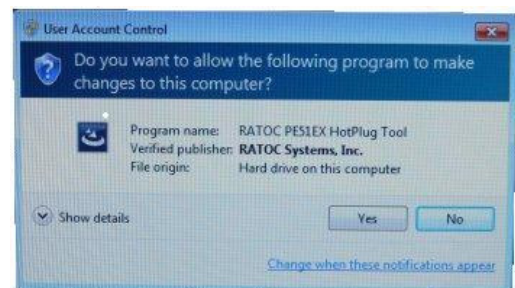
Insert provided CD into your disc drive.

You will see the AutoPlay dialog box, click "Run RATOC-PE51HotPlugTool-Setup.exe".

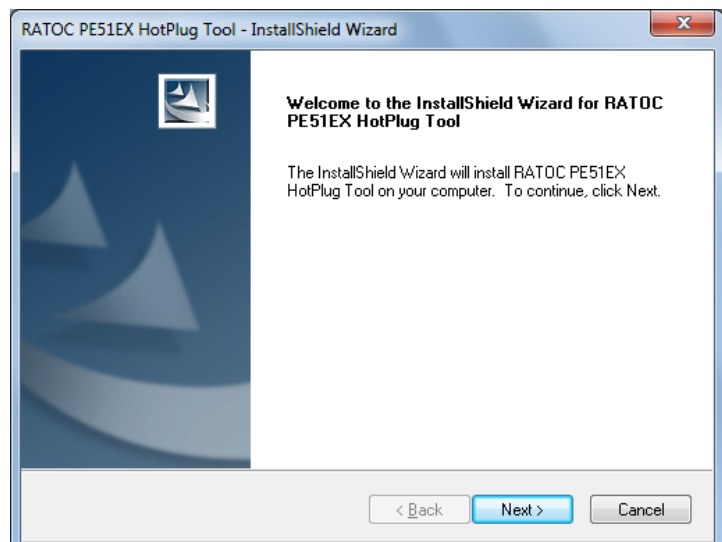


Under Windows 7 or Windows Vista you will see "User Account Control" dialog box.

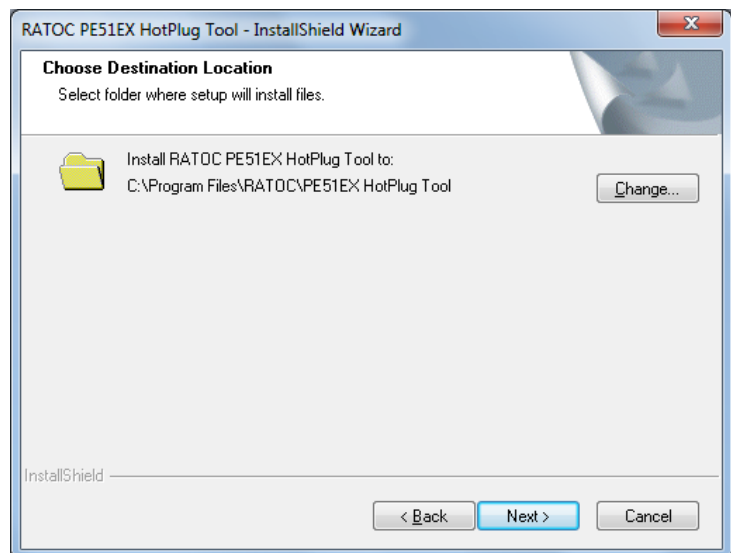
Click "Yes" button.



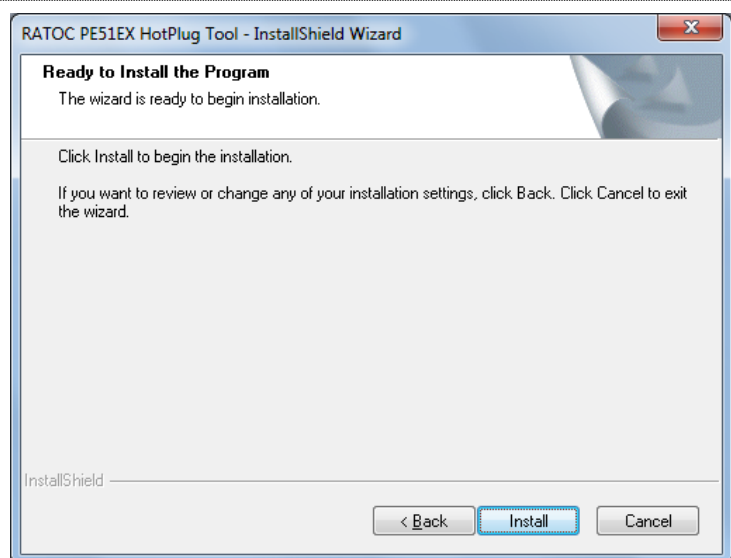
Installation will start, click "Next >" button.



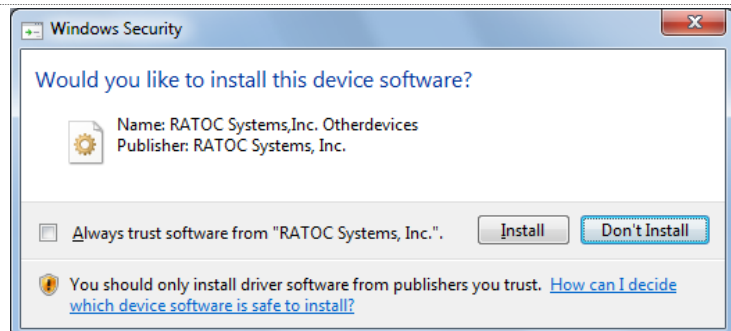
Confirm the destination location and click "Next >" button.



Click "Install" button.

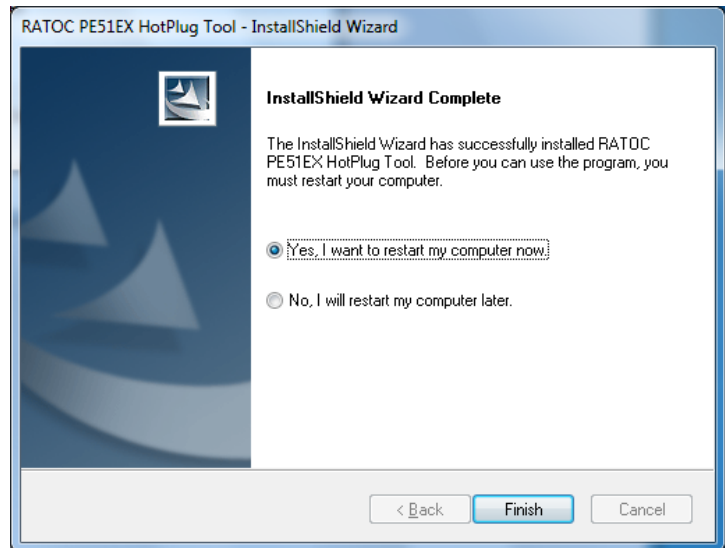


Security warning message will be shown up.
Click "Install" button.

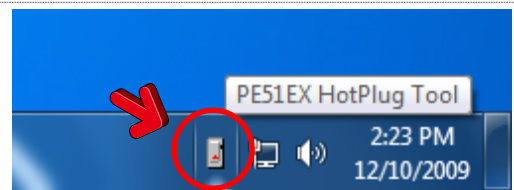


Installation complete.

Select "Yes, I want to restart my computer now" and click "Finish" button.

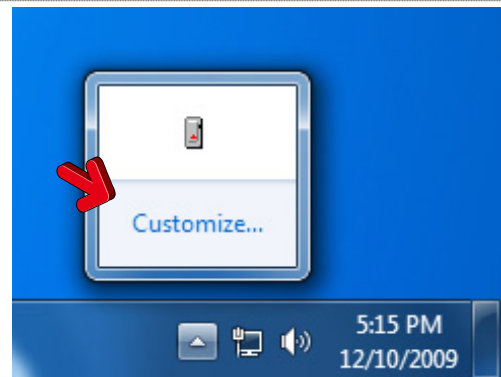


After system restart PE51EX HotPlug Tool icon will stay on TaskBar.

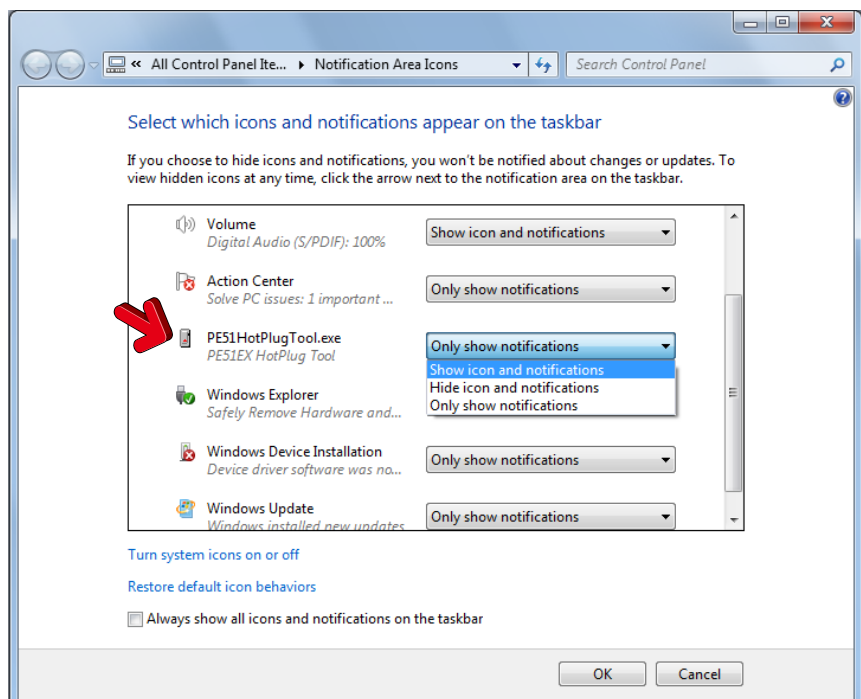


 **NOTE**

Under Windows 7 HotPlug Tool icon is hide. You should change the setting to view hide icon at any time from the "Customize..." menu.



Change the setting from "Only show notification" to "Show icon and notifications".

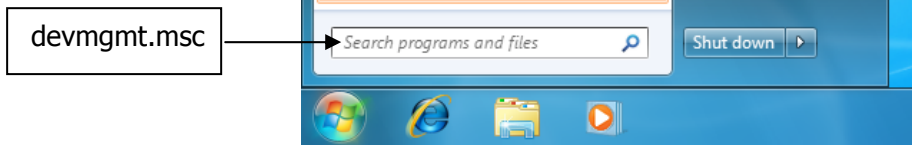




NOTE

You can confirm installation complete successfully or not by Device Manager as follows.

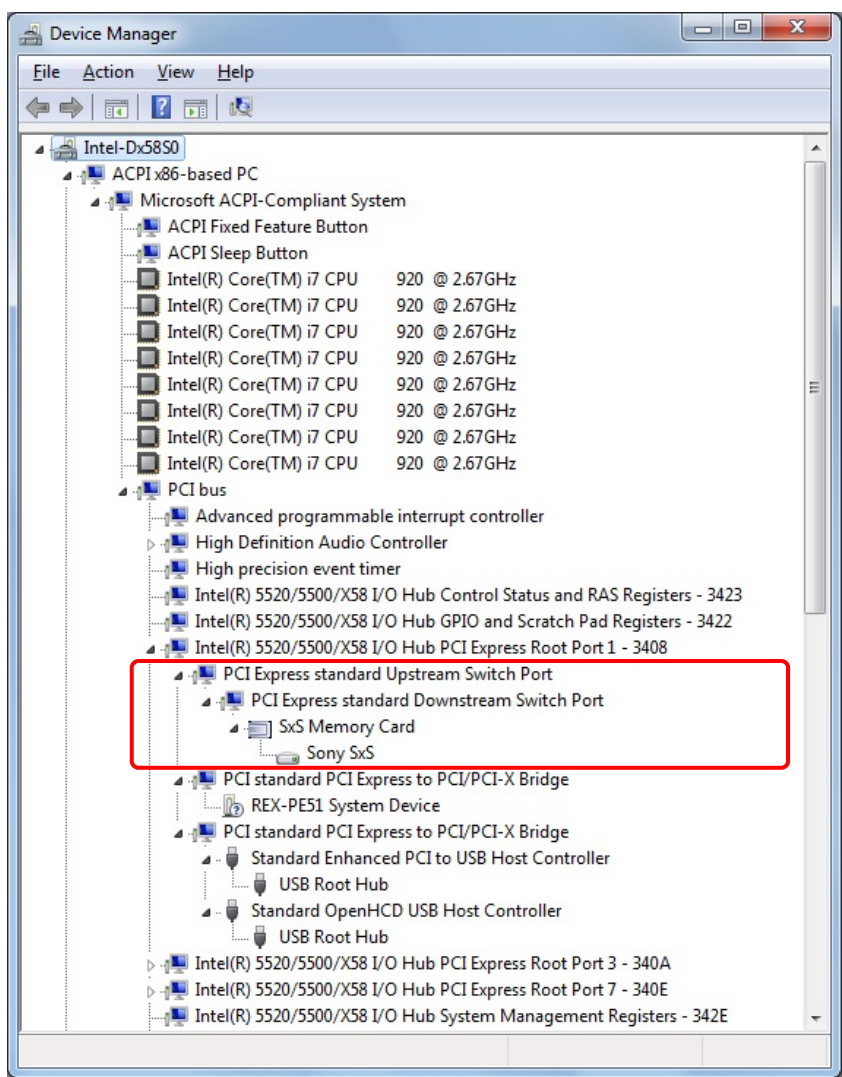
Open start menu and enter "devmgmt.msc" at the "Search programs and files" edit box.



You will see Device Manager. Select "devices by connection" from view menu.

Insert SxS Card.

If you can find "SxS Memory Card" under the "PCI Express standard Upstream Switch Port", installation complete successfully.

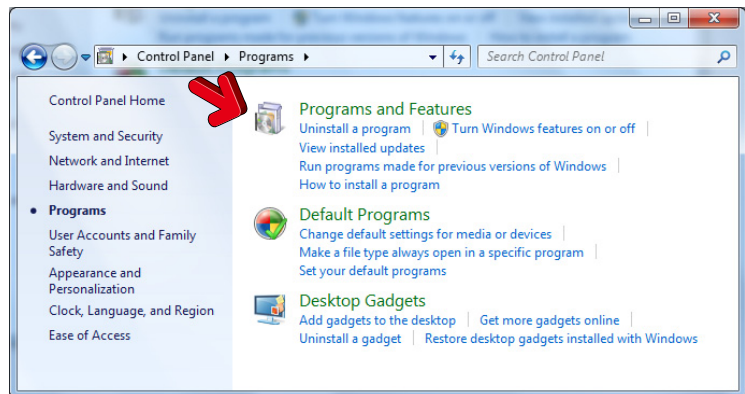


➤ Uninstallation Steps

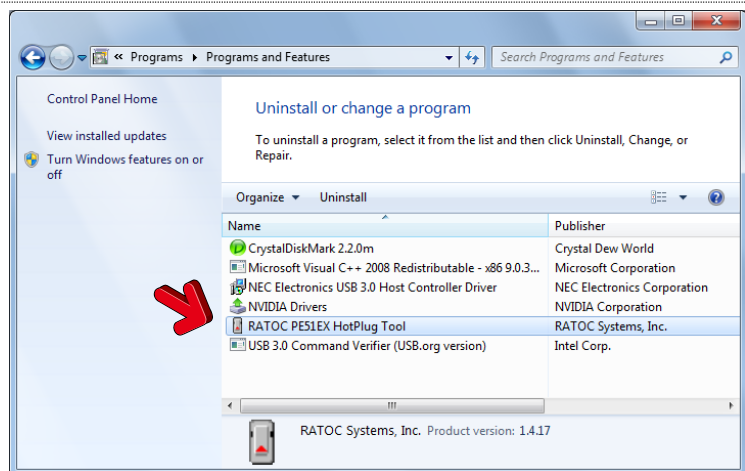
Following steps are example under Windows 7.

Open "Program" folder under control panel from start menu.

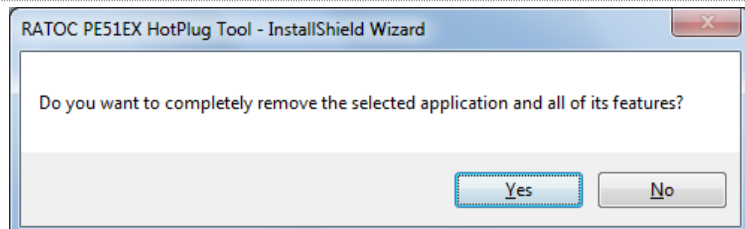
Click "Programs and Features" icon.



Click "RATOC PE51EX HotPlug Tool".

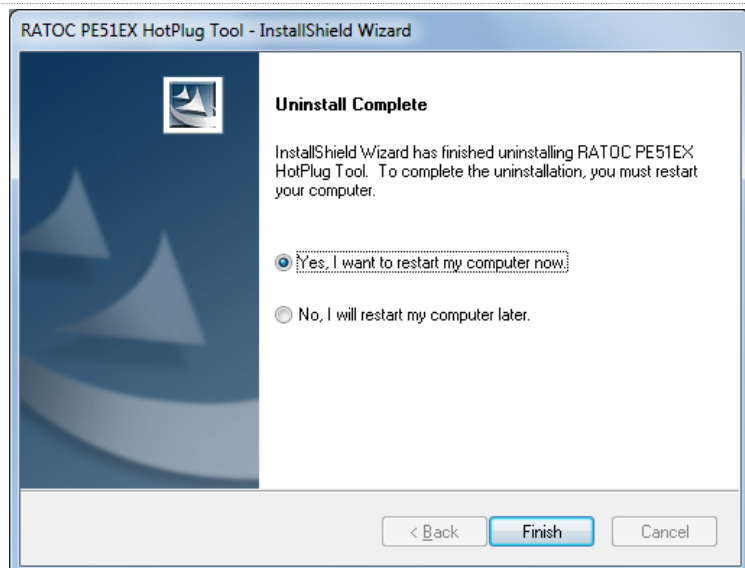


Uninstallation will be start. Click "Yes" button.



Uninstallation complete.

Select "Yes, I want to restart my computer now" and click "Finish" button.



2-3.MAC Software Installation Steps

Insert the provided CD into your disc drive. You will see following file and double click.

- Mac OS 10.4 : PE51_Device_Driver104x.dmg
- Mac OS 10.5 or 10.6 : PE51_Device_Driver.dmg

➤ Installation Steps

Followings are installation steps under Mac OS 10.6.

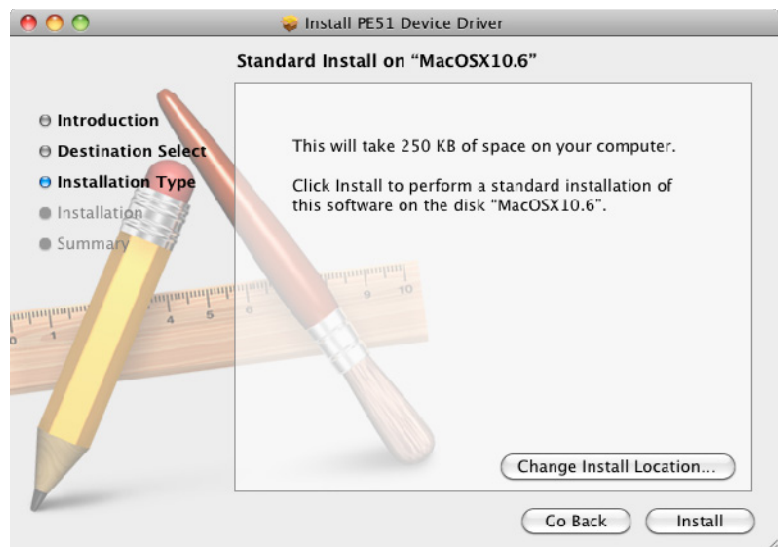
Double click the "PE51_Driver_Installer" icon and installation will start.



Click "Continue" button.



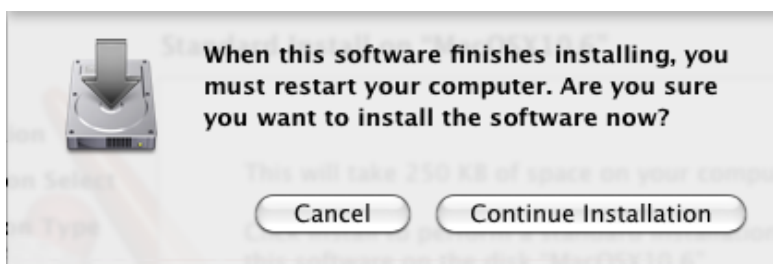
Click "Install" button.



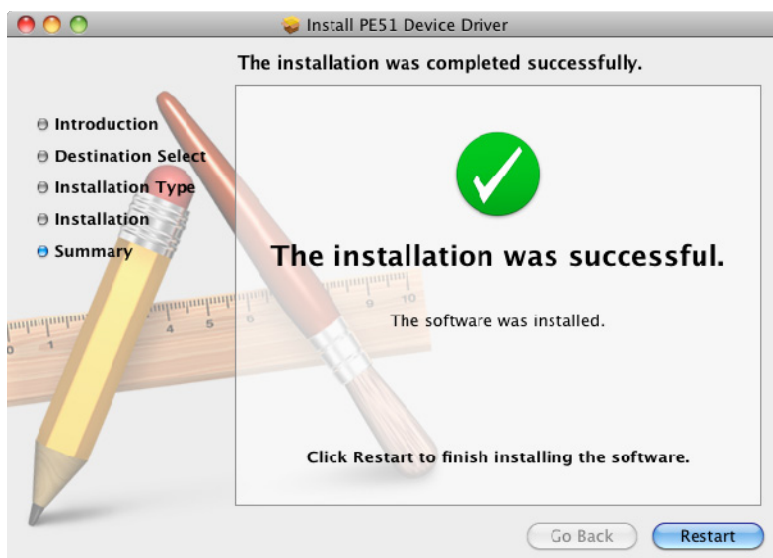
Enter your name and password.
Click "OK" button.



Confirm system restart message and
click "Continue Installation" button.



Installation complete message will be
displayed, click "Restart" button.





NOTE

You can confirm installation complete successfully or not by the system profiler as follows.

1. Run the system profiler under utility folder of application.
2. Open "PCI Cards" on the Hardware as show below.
3. If five kinds of driver is installed, installation complete successfully.

Mac Pro
doi zkinori Mac Pro 09/12/11 16:52

Card	Type	Driver Installed	Bus	Slot
NVIDIA GeForce 7300 GT	display	Yes	PCI	Slot-1
pci-bridge	PCI-to-PCI Bridge	Yes	PCI	Slot-3
pci-bridge	PCI-to-PCI Bridge	Yes	PCI	Slot-3
pci-bridge	PCI-to-PCI Bridge	Yes	PCI	Slot-3@13,0,0
pci1217,2ef	USB Open Host Controller	Yes	PCI	Slot-3@15,0,0
pci1217,2f1	USB Enhanced Host Controller	Yes	PCI	Slot-3@15,0,1

pci-bridge:

Type: PCI-to-PCI Bridge
Driver Installed: Yes
Bus: PCI
Slot: Slot-3
Vendor ID: 0x1217
Device ID: 0x02e0
Revision ID: 0x0001
Link Width: x1
Link Speed: 2.5 GT/s

➤ Uninstallation Steps

Followings are uninstallation steps under Mac OS 10.6.

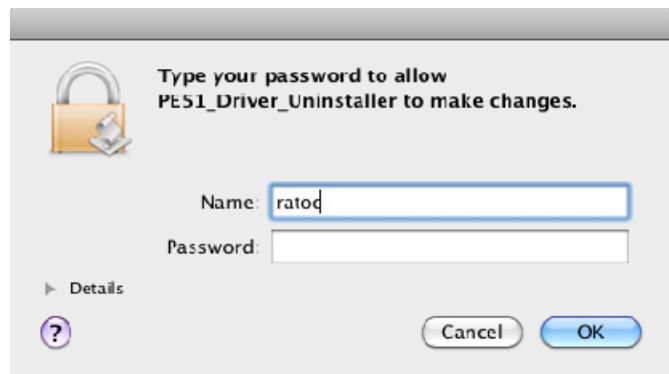
Insert provided CD into your disc drive. You will see following file and double click.

- Mac OS 10.4 PE51_Device_Driver104x.dmg
- Mac OS 10.5 or 10.6 PE51_Device_Driver.dmg

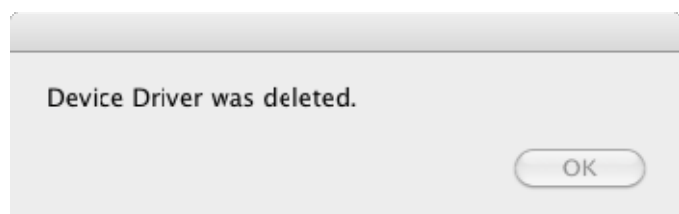
Double click "PE51_Driver_Uninstaller" icon and uninstallation will be start.



Enter your name and password.
Click "OK" button.



Uninstallation complete message will be displayed and click "OK" button.



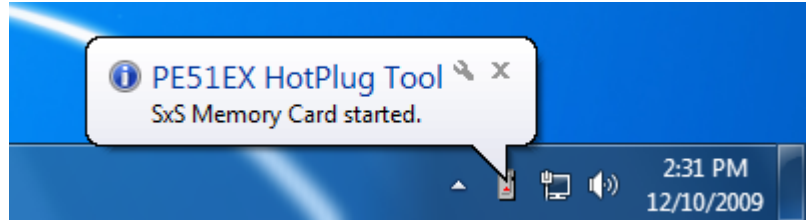
3 SxS Card (EpressCard) HotPlug Operation

3-1. Install SxS Card driver (3rd Party ExpressCard driver)

You need to install SxS Card driver (or 3rd party card driver) before insert SxS Card to PE51EX ExpressCard Slot. Please follow the steps of SxS Card install manual.

➤ Example (Windows PC)

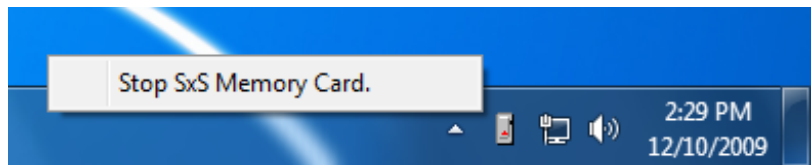
Insert SxS Card to the slot and start balloon message will be displayed.



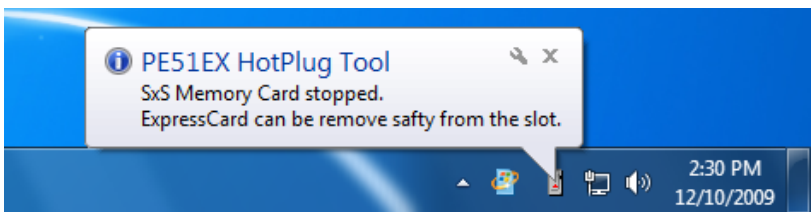
3-2. Windows PC SxS Card Remove operation

Step.1

You must stop SxS Card from HotPlug Tool icon menu first before remove SxS Card from the slot.

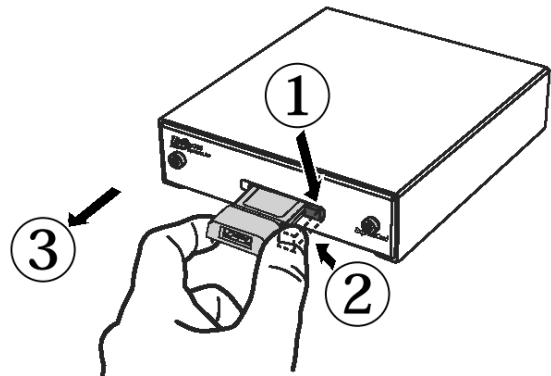


SxS Card stopped balloon message will be displayed. Now you can remove SxS Card from the slot safely.



Step.2

Push out the eject lever(①), push the eject lever(②) again and pull out the SxS Card(③).



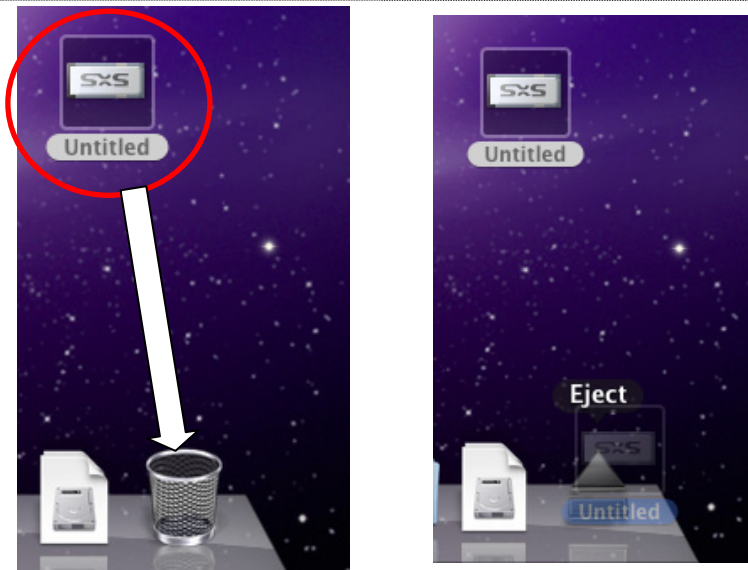
If you remove SxS Card without above step.1 operation, Windows system will be freeze. Don't remove SxS Card suddenly.

3-3. Mac Pro ExpressCard Remove operation

➤ Sony SxS Card

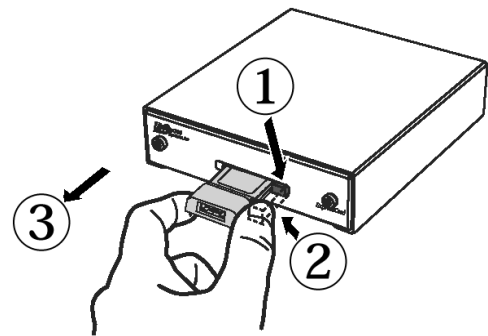
Step.1

Drop mounted drive icon to trash box.



Step.2

Push out the eject lever(①), push the eject lever(②) again and pull out the ExpressCard(③).

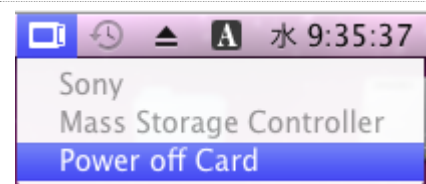


If you remove ExpressCard without above step.1 operation, system will be freeze. Don't remove ExpressCard suddenly.

➤ Other ExpressCard

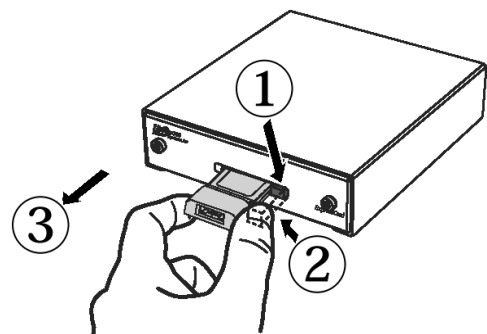
Step.1

Select "Power off Card" from the PC Card icon of menu bar.



Step.2

Push out the eject lever(①), push the eject lever(②) again and pull out the ExpressCard(③).



If you remove ExpressCard without above step.1 operation, system will be freeze. Don't remove ExpressCard suddenly.

4 Troubleshooting

You can visit the RATOC Technical Support FAQ pages on the Internet at :
www.ratocsystems.com/english/support/faq/pe51u.html

Below is a listing of commonly asked questions and basic troubleshooting steps.

Q1 : SxS Card not recognized

►Answer

Please confirm SxS Card is recognized on Device Manager as follows.

1. Open Device Manager and select "devices by connection" from view menu.

Please refer page.9.

2. Select "devices by connection" from view menu of Device Manager.



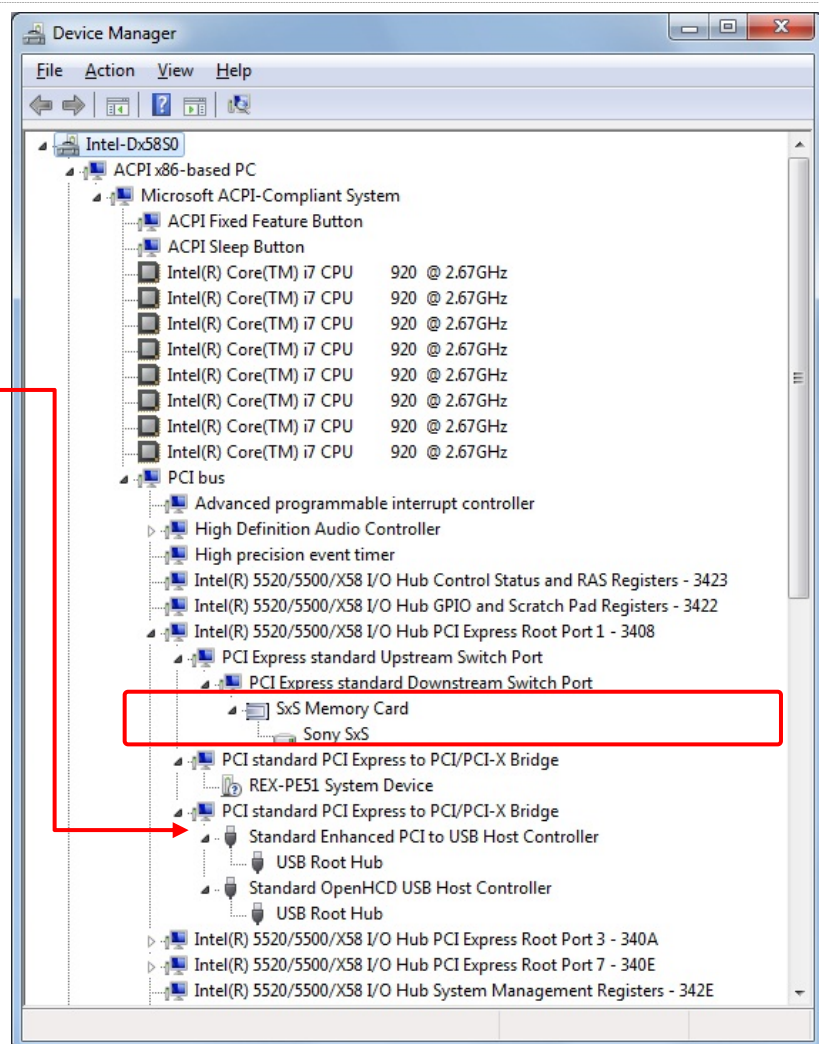
"?" mark is displayed at "REX-PE51 System Device", but this is not a problem.

3. If "SxS Memory Card" is not recognized, please check followings.

a) Make sure PCI Express extension cable is connected to add-in card and SxS Card slot as explained at page.5?

b) Change PCI Express slot where add-in card is inserted as a trial.

c) Make sure SxS Card driver is installed?



Q2 : Yellow “!” mark is displayed at Device Manager.

➤Answer

Step.1

1. Open Device Manager and select “devices by connection” from the view menu.

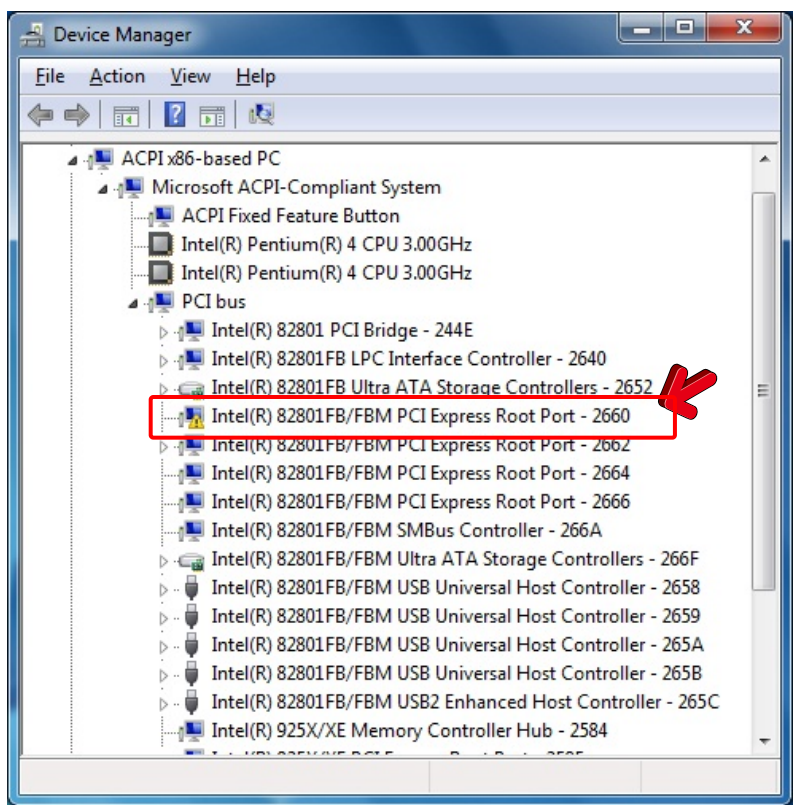
Please refer page.9.

2. If yellow “!” mark is displayed on the PCI Express Root Port, memory resource required by PE51EX conflicts with another device.



NOTE

PCI Express Root Port number “2660” will be different depend on your environment.



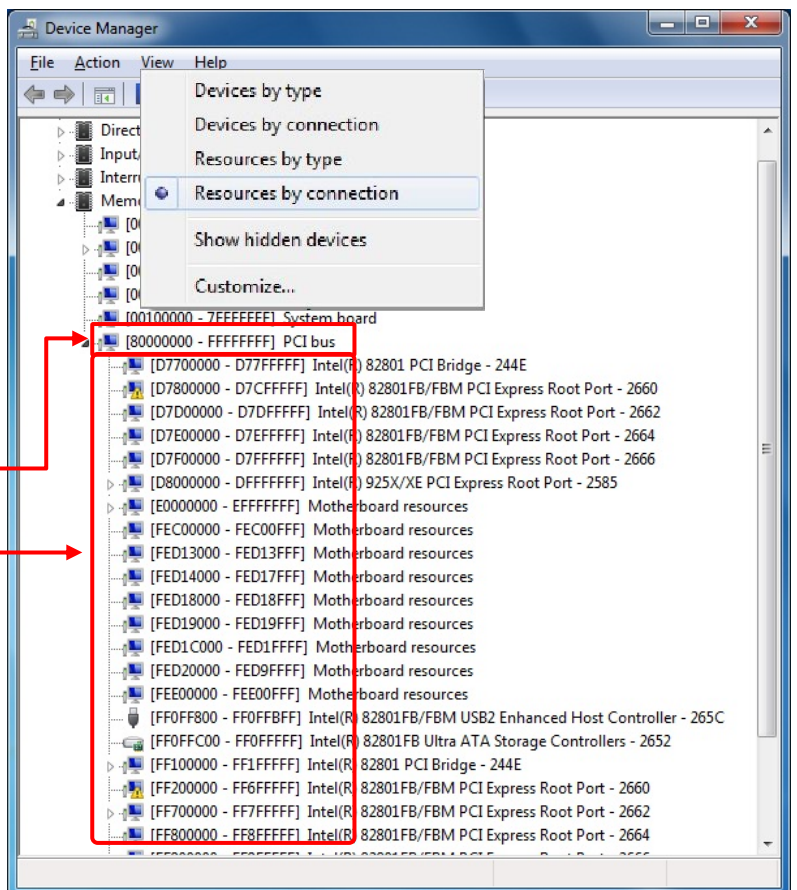
Step.2

To solve memory resource conflict issue follow the steps below.

1.Select “devices by connection” from the view menu.

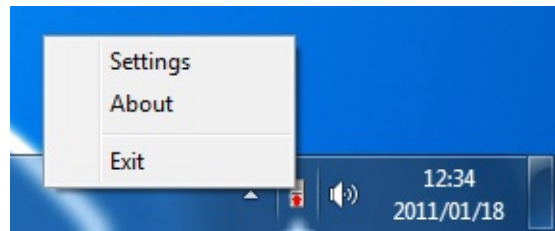
2.You will find “80000000-FFFFFFFF” is assigned for the PCI bus. And “80000000-D76FFFFFFF” is free area

3.This means that you can assign memory range “80000000-D76FFFFFFF” to PE51EX.



Step.3

1.Right click **HotPlug Tool** icon on TaskBar and select "Settings".

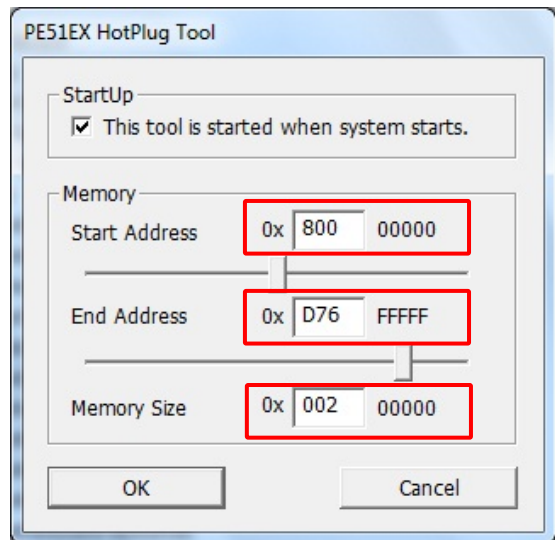


2. Dialog to edit memory resource range will be shown up.

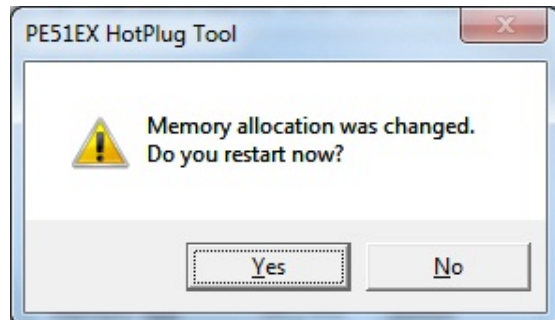
From here you can assign memory range "80000000-D76FFFFFF" to PE51EX.

Enter "800" in the start address, "D76" to the end address and "002" to the memory size.

Click "OK" button.



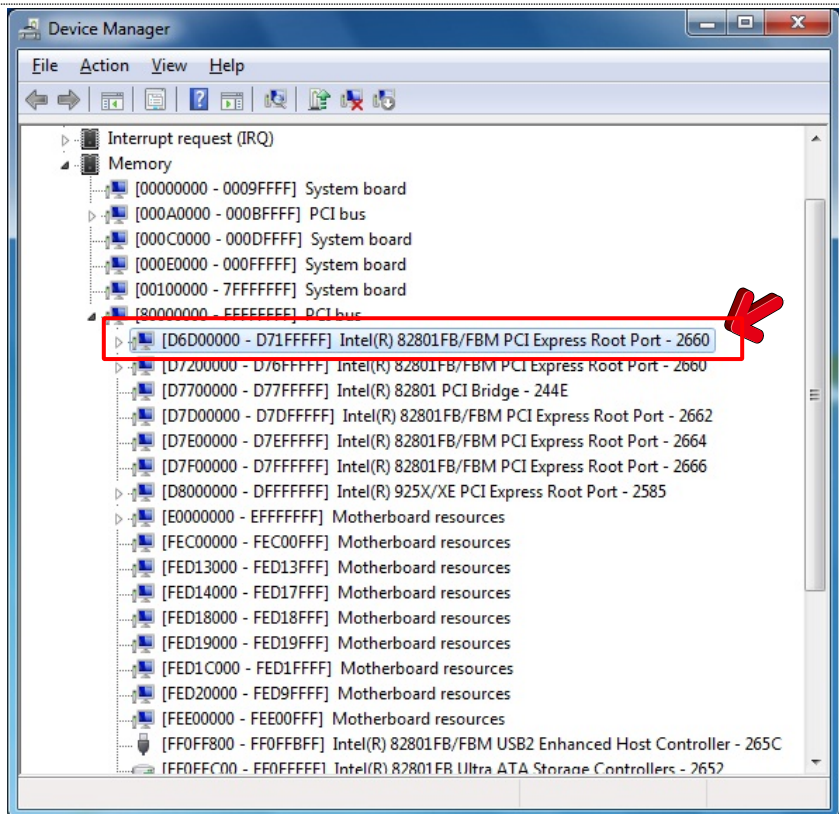
3. Finally restart dialog will be shown up. Click "Yes" button.



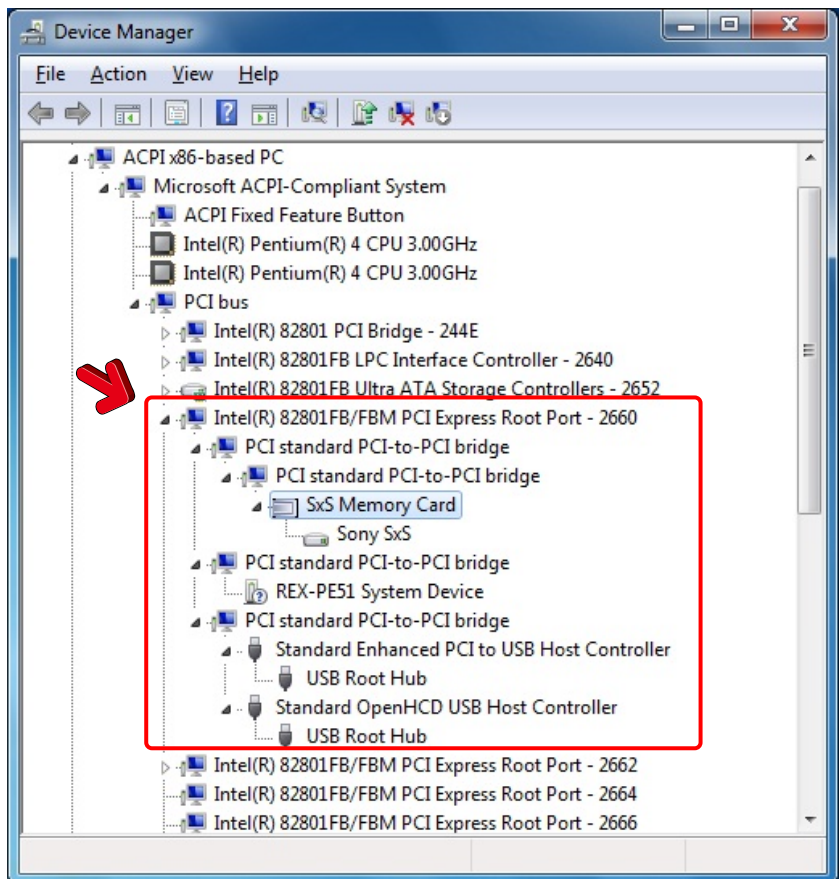
Step.4

1. Confirm device manager after reboot your system.

If memory resource issue is worked out, yellow "!" mark which was on "PCI Express Root Port - 2660" is not displayed any more.



2. Insert SxS Card and confirm "SxS Memory Card" is displayed on device manager.



5 Appendix

➤ Technical Specification

Model Number	PE51EX
Product name	PCI Express to ExpressCard External Adapter
PCI Express BUS Interface	PCI Express Specification Revision 1.1 PCI Express x1 Lane, 2.5Gbps
ExpressCard BUS Interface	ExpressCard Standard Release 1.0 PCI Express(2.5Gbps), USB2.0(480Mbps)
ExpressCard slot	1 slot ExpressCard/34
Max power supply capability (to ExpressCard)	Max.1300mA/3.3V Max.275mA/3.3Vaux Max.650mA/1.5V
Dimension	ExpressCard Adapter 120(L) X 103.6(W) X 27.4(H) PCI Express add-in card 65.3(L) X 69.8(W) X 1.6(T)
Weight	Total 760g
Operating Environment	0°C to 40°C Operating Temperature -20°C to 60°C Storage Temperature
Operational Humidity	20 to 85% Relative Humidity, Non-condensing
Support OS	Windows 7 / Windows Vista / XP (x32/x64) (Latest Service Pack should be installed) Mac OSX 10.4.11 or later / 10.5.6 or later / 10.6 or later
Supported Computer	Windows PC PCI Express slot equipped. Intel Mac Pro
Regulatory Compliance	RoHS FCC Class B Verified
Warranty	1 Year

➤ Compliance

- FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- (1) Reorient or relocate the receiving antenna.
- (2) Increase the separation between the equipment and receiver.
- (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- (4) Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may result in this unit not complying with FCC Rules Part 15.

- CE

The product(s) described in this manual complies with all applicable European Union (CE) directives (EN55022 Class B/EN55024). RATOC will not retest or recertify systems or components that have been reconfigured by customers.



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