TH03

Thunderbolt to ExpressCard

User manual

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Catalog

1   Production Description:

ExpressCard 54 Thunderbolt Adapter designed for ExpressCard devices with USB2.0 or PCIe interface transfer to Thunderbolt.

Main Features:

- **No any drive to install*.**

  It needn't any drive to install, plug into the Thunderbolt port, then you can enjoy it!

- **Expands Your Computer's Connectivity and Capabilities.**

  Enables you to use Express Card 34/54 adapters with Thunderbolt technology-equipped computers.

- **Fast Interface.**

  High-performance 10Gb/s Thunderbolt technology, 5Gb/s ExpressCard/34 2.0 interface.

- **Supports Common ExpressCard/54 Adapters.**

  Supports both USB2.0 or PCIe 2.0 ExpressCards.

* Device Drivers for installed ExpressCard may be required.

2 Production Specification:

Specification	
Product model	TH03
Product name	ExpressCard 54 Thunderbolt Adapter
Chipset adopt	Intel Partridge
External Connectors	1 Thunderbolt and 1 ExpressCard /54
Required Hardware	PC/Mac with Thunderbolt Port
Supported Peripherals	34 / 54 ExpressCard (PCIe or USB)
ExpressCard type	PCIe-based(Gen2 / 5Gbps) or USB 2.0-based
Data Transfer Speeds	Up to 5Gb/s(PCIe 2.0),Up to 480Mbps(USB 2.0)
Driver	No Need any driver
Dimensions	68x92x10mm
Package Contents	ExpressCard /54 Thunderbolt Adapter only
RoHS Compliant	Yes

3 System Requirement:

Apple Products:

Hardware:

Apple: iMac, Mac mini, MacBook air, MacBook Pro with Thunderbolt Ports

Operating System: Mac OS 10.6.8 or later

Windows Products:

Hardware:

Acer: Aspire S5,

ASUS: G55, P8Z77-V PREMIUM, P8Z77-V PRO/THUNDERBOLT, ASUS ROG MAXIMUS V EXTREME

GIGABYTE: GA-Z77MX-D3H TH, GA-Z77MX-UP4 TH, GA-Z77MX-UP5 TH

Intel: DZ77RE-75K

MSI: Z77A-GD80

Operating System: Windows7 SP1 or later (x86,x64), Windows8 (x86,x64)

For the latest products, visit **Thunderbolt Community Products site**;

URL: http://thunderbolttechnology.net/products

4 Installation Guide

As the Picture shows, two external port is used, one is Expresscard, you can plug into two different sizes type of ExpressCard, 34/54, the other one is Thunderbolt interface, plug into the motherboards which include the Thunderbolt port.

Here's two steps to set up: (Please note the order)

1. Plug your Expresscard into slot first.
2. Then connect TH03 to PC with thunderbolt cable.

If you want to restart the TH03, please pull out the Thunderbolt cable and plug again

5   Usage Example: Apple Mac OS:

First power on Apple Mac, provides Mac OS X with an all-in-one hardware and software display tool, aptly named **Apple System Profiler**, which you can find in the **[Utilities]** folder within your **[Applications]** folder. You can also reach the Profiler through the Apple menu. Just click **[About This Mac]** and then click the **[More Info]** button. As you can see from the picture below, there's a lot to digest from the System Profiler window.

Plug your Expresscard into TH03 slot, then connect TH03 to Apple with thunderbolt wire, and you can see the thunderbolt information in Thunderbolt list, as the pictures shows below, it means that TH03 has been recognized by apple.
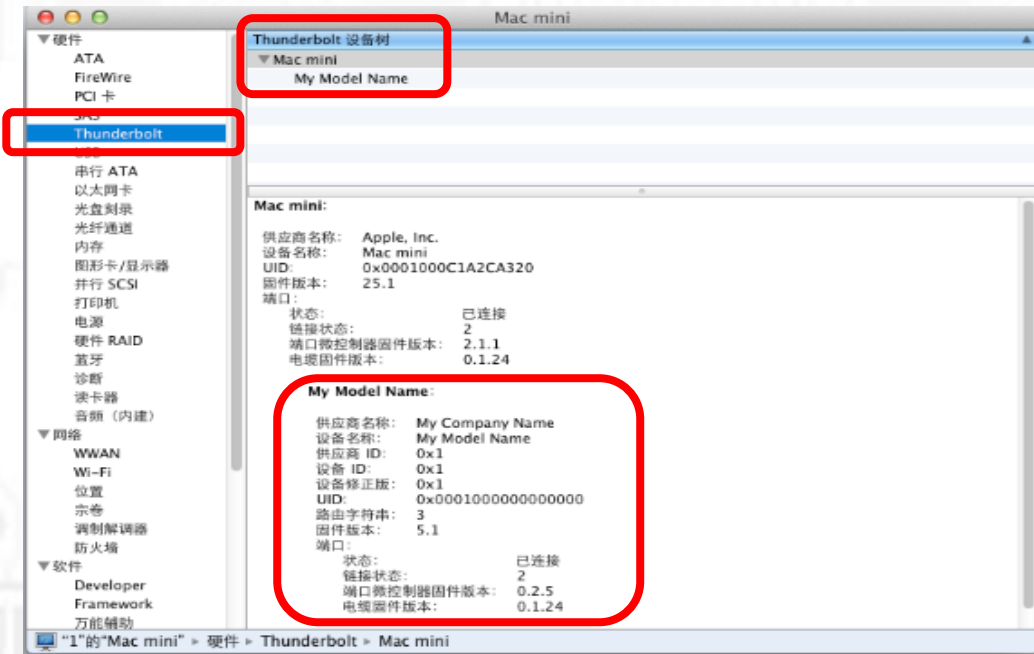
5.1 PCIe function (Mac OS)

For example, now we use our product PE3A + PCIe to USB 4-ports (MosChip, VID: 9710) PCI card + USB FlashDisk, to verify the PCIe function.

After plugging into thunderbolt port, you can check the PCI list and see the PCIe information as the Picture shows below, It means PCIe signal is recognized, then you can use some Peripheral PCIe equipment, for example, here is the PCIe to USB 4-ports module, then you can find USB Flash Disk on your desktop.

5.2 USB function (Mac OS)

Now we use TH03+PE3A+USB Flash Disk (ADATA USB Device), to test USB function.

After plugging into thunderbolt port, you can check the USB list and see the USB Flash Disk information as the Picture shows below, It means USB has been detected.
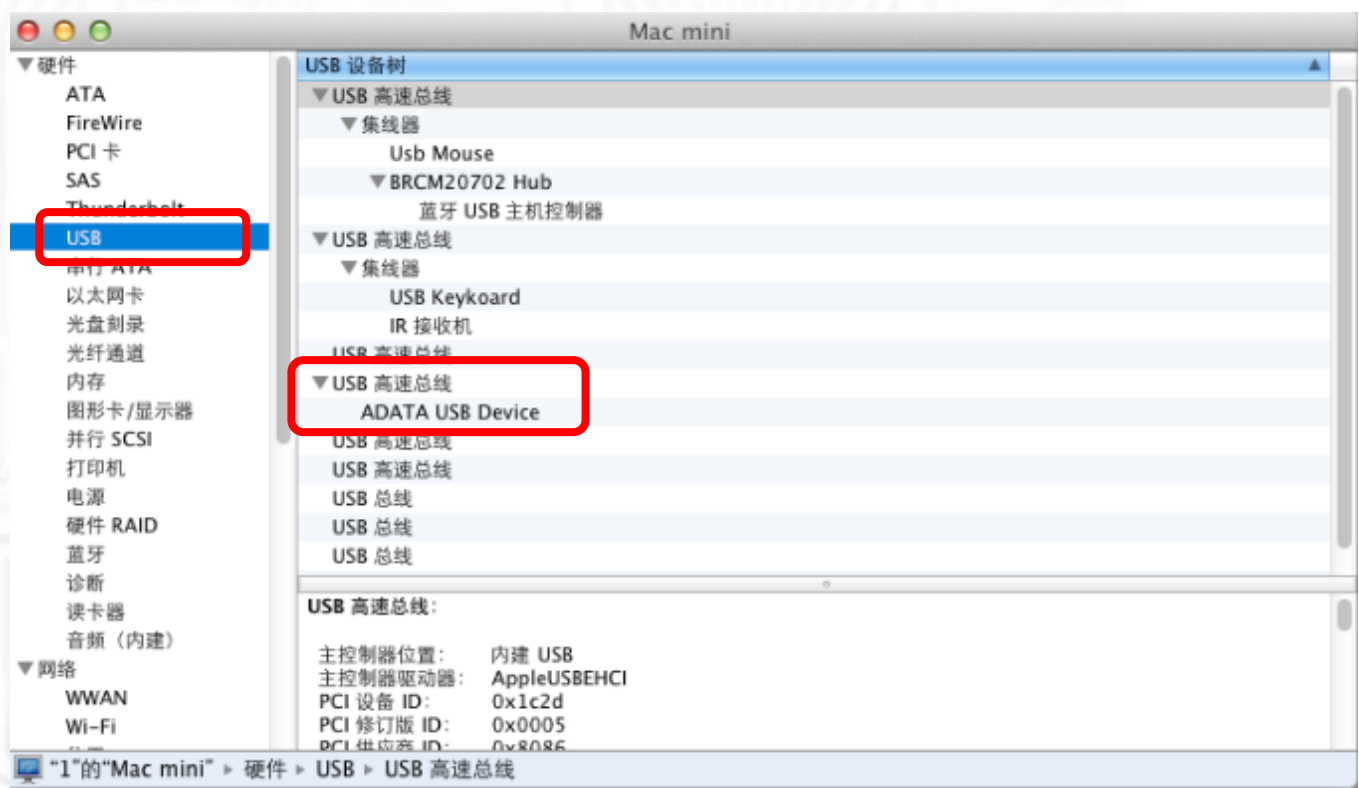
6 Usage Example: Example on Window 7:

Power on PC, you can see the information through **Device Manager**, As the Picture shows:
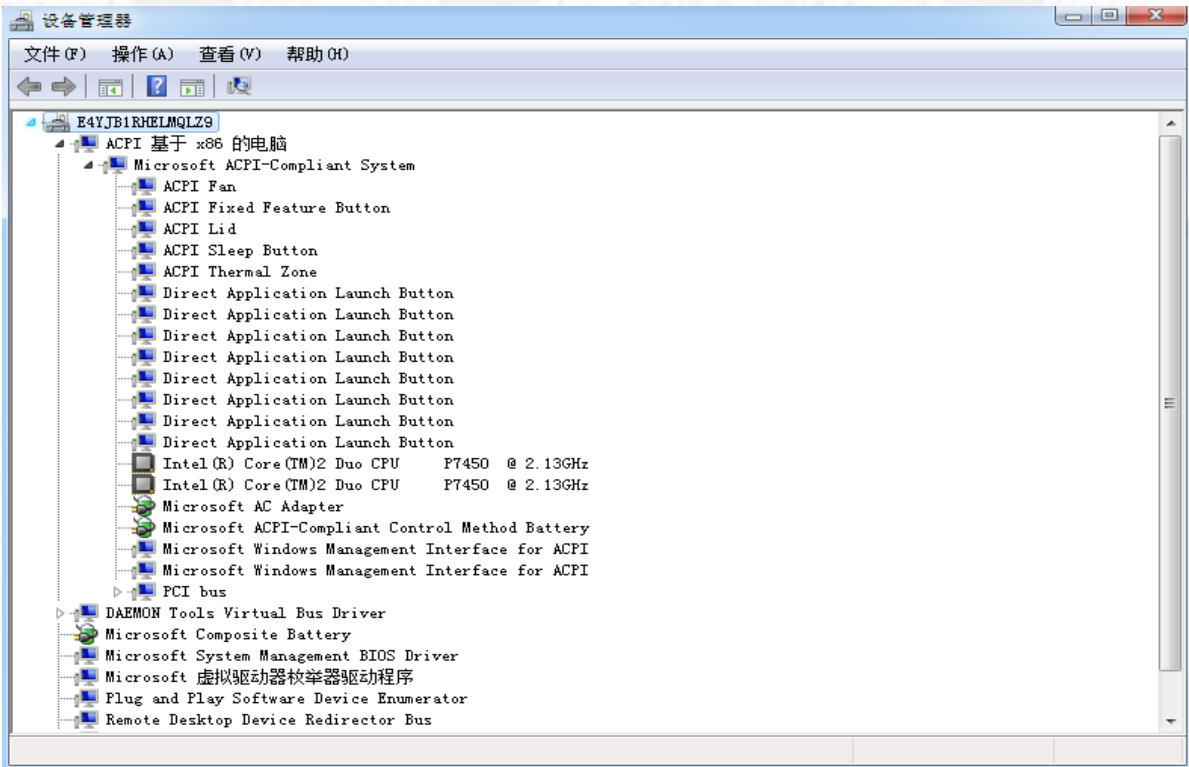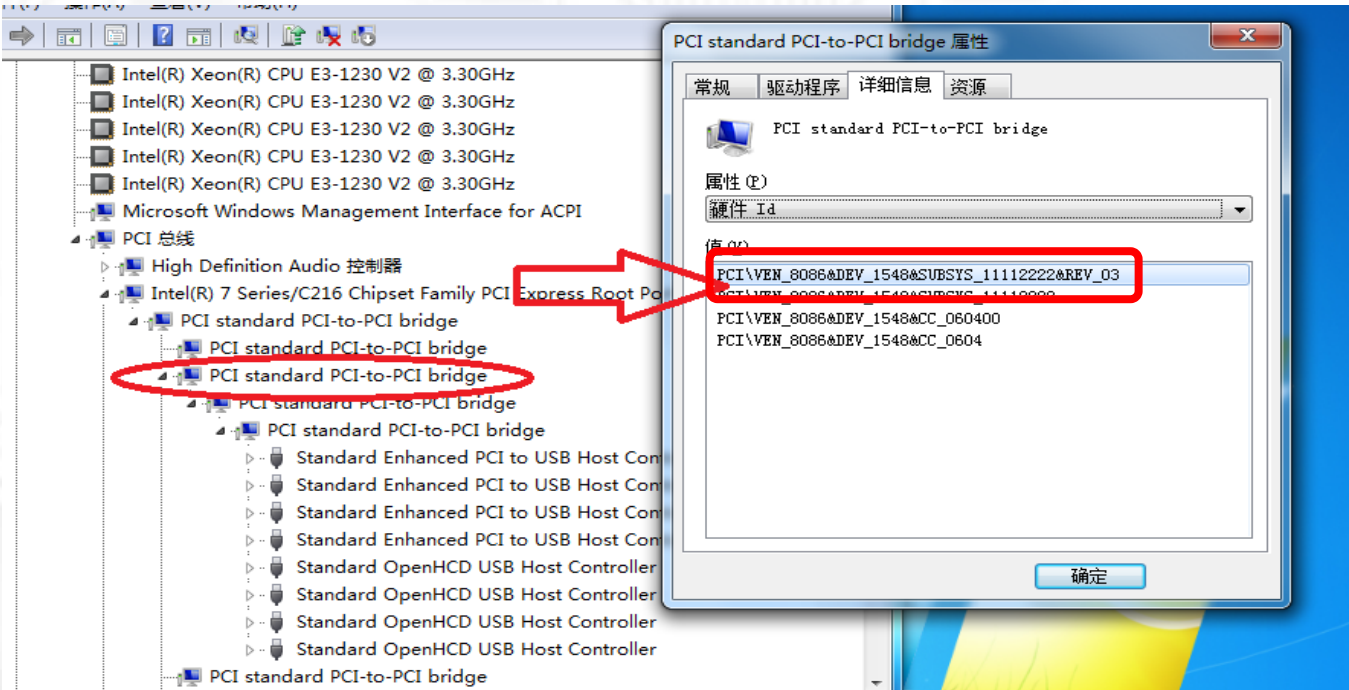

To show device tree to find TH03 easier, please apply **[View]-[Devices by connection]**.

Plug your Expresscard into TH03 slot, then connect TH03 to PC with thunderbolt wire, and you can see the thunderbolt information in Thunderbolt list, as the pictures shows below, you can see "**Hardware ID**", it means that TH03 has been recognized by PC as **Vendor ID=8086, DeviceID=1548**.
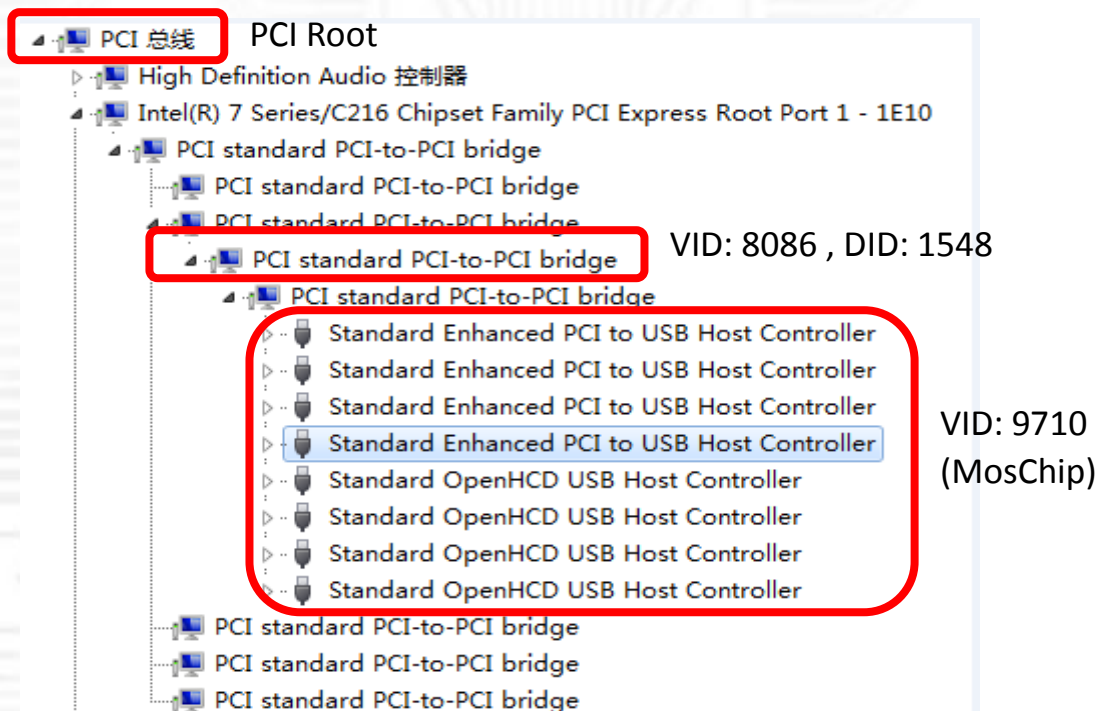
6.1 PCIe function (Win7)

For example, now we use our product PE3A + PCIe to USB 4-ports (MosChip, VID: 9710) PCI card + USB Flash Disk, to verify the PCIe function.

After plugging into thunderbolt port, you can check the PCI list and see the PCIe information as the Picture shows below, It means PCIe signal is recognized, then you can use some Peripheral PCIe equipment, for example, here is the PCIe to USB 4-ports module, then you can find USB Flash Disk on your desktop.

6.2 USB function (Win7)

Now we use TH03+PE3A+USB Flash Disk (ADATA USB Device), to test USB function.

After plugging into thunderbolt port, USB Flash Disk will be found under **[My Computer]**.