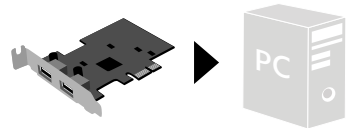




User Manual

USB2.0

USB2.0



Latest Driver & Manual Download :
Visit <http://www.sunix.com> and search keyword “USB2400” or scan the QR code for manual and driver update.

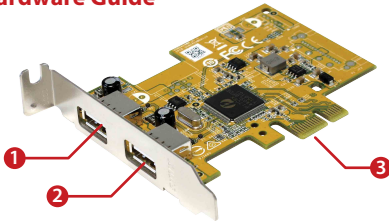
2-port USB2.0 PCI Express Add-On Card

Introduction

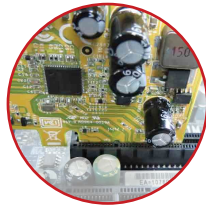
SUNIX USB2400 is a dual-port High-Speed USB2.0 PCI Express card and the interface has a potential transfer rates of 2.5Gbps using a single-lane (or x1) PCI Express link. With native PCI Express EHCI/OHCI USB2.0 host controller, this board is driver free under Windows, MAC and Linux operation system and best compatible with existing USB peripheral to your desktop computer. Each USB port supplies maximum +5VDC / 1000mA power output to USB device with over current protection.

The USB2.0 High-Speed implementation of the Universal Serial Bus standard supports transfer speeds up to 480 Mbps. With USB USB2.0 High-Speed ports, its make you connect kinds of USB devices and peripheral to your desktop computer instantly and conveniently, such as hubs, data storage devices, PC video cameras, digital cameras, CD-R/RWs, DVD-ROMs, scanners, printers, memory card readers, and more.

Hardware Guide



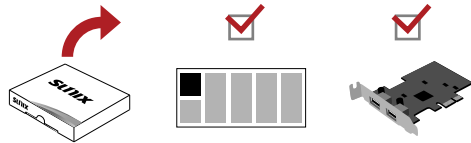
- 1 2 External USB2.0 High-Speed TypeA Female ports
- 3 PCI Express x1 Gold Finger



Package

Please check if the following items are present and in good condition upon opening your package. Contact your vendor if any item is damaged or missing.

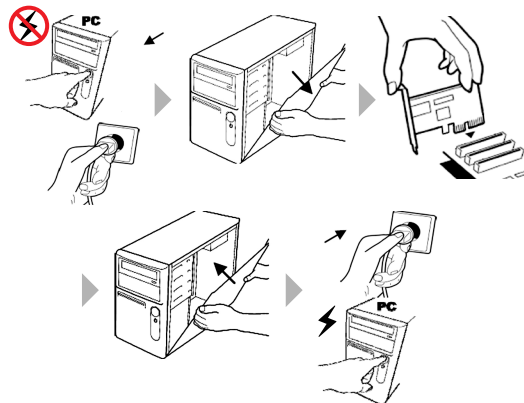
1. USB2400 – 2-port USB PCI Express Add-On Card
2. User Manual (this document)



Hardware Installation

Follow the instruction given below to install the PCI Express Card:

1. Turn your computer off and remove the power plug from the plug socket.
2. Remove the cover from the computer case.
3. Remove the metal cover plate on the rear of a free PCI Express slot (e.g. PCIe16).
4. Insert the card into one free PCI Express slot and screw it firmly on the bracket side.
5. Place the cover back onto the computer.
6. Insert the plug into the plug socket.



Safety First:

To avoid damaging, make sure to discount power connection before wiring or disposing USB3.1 card installation.

Unplugging or ejecting a devices without first stopping them can often cause your computer to crash and lose valuable data. To safely unplug or eject any of the USB devices, always use “Safely Remove USB Device” icon on the taskbar to quickly unplug or eject your USB devices.



Specification

Hardware

BUS	PCI Express Spec 1.1, Single-Lane (x1)
Controller	PCI Express USB2.0 Host controller
USB Standard	Enhanced Host Controller Interface (EHCI) and Open Host Controller Interface (OHCI)
IRQ & IO	Assigned by System

USB Communication

Interface	Universal Serial Bus 2.0 / 1.1
Speed	High-Speed (HS), Full-Speed(FS) and Low-Speed(LS) Data Transfer rate of 1.5, 12, and 480Mbps
No. of Port	2-port
PCB Connector	USB2.0 Type-A Female
Protection	±15KV IEC61000-4-2 Air Gap Discharge ±8KV IEC61000-4-2 Contact Discharge

Power

Source	PCI Express Bus Power
Output Capacity	+5VDC / Maximum 1.0A / each port Note: Total power output capacity will be limited by PC system power supply.
Over Current Protection	+5VDC / 1.1A@5V PTC fuse / each port
Power Consumption	1.1W @ 3.3V (board only without power output to device)

Driver Support

Microsoft Client	XP / Vista / 7 / 8.x / 10 (X86/X64)
Microsoft Server	2000 / 2003 / 2008 / 2008R2 / 2012R2 (X86/X64)
Microsoft Embedded	XP Embedded / POS Ready 2009 / Embedded System
Linux	Linux 2.4.x / 2.6.x / 3.x
Apple MAC	MAC OS X 10.4 or later

Standards and Certifications

EMC	CE, FCC, C-Tick, VCCI, BSMI, Class B Standard
Green	RoHS, CRoHS, WEEE

Environment

Operation Temperature	0 to 60°C (32 to 140°F)
Operation Humidity	5 to 95% RH
Storage Temperature	-20 to 70°C (-4 to 158°F)

Physical Characteristics

PCB Dimension	130 x 68 mm
Bracket	Low Profile 80 mm / Standard 121mm
Bracket Space	1

Driver Installation

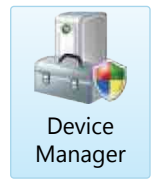
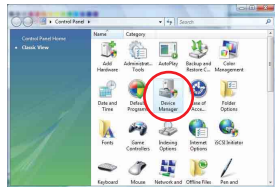
SUNIX USB2400 USB2.0 add-on card is driver free under mainstream Windows, Linux, and MAC OS. The table in this topic provides the operating system for the driver support lists.

Operating System	USB2.0 Driver	Remark
Windows 10	Driver Free	Microsoft Windows in-box driver.
Windows 8 / 8.1		
Windows 7		
Windows Vista		
Windows Server 2012R2		
Windows Server 2008R2		
Windows Server 2003		
Windows XP	Do NOT support	Be sure to upgrade to XP SP2 or later version.
Linux		Linux Kernel 2.4 or later includes USB2.0 driver.
MAC OS		MAC OS 10.4 or later
Windows 98SE		Do NOT support
DOS		

Hardware Verify

Click on the “Device Manager” tab in the Windows Control Panel

Start > Control Panel > Device Manager



Under device manager page, entry Universal Serial Bus controllers catalog, and “Standard Enhanced PCI to USB Host Controller” and “Standard OpenHCD USB Controller” shows in the device manager.



Universal Serial Bus controllers

Standard Enhanced PCI to USB Host Controller

Standard OpenHCD USB Controller

Generic USB Hub

Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host

Troubleshooting

Q 1. If card and devices connected to the computer do not seem to be working properly, please perform below basic troubleshooting steps:

Ans:a. Check that all cables are correct and securely connected.

b. Make sure USB device's power is turned on.

c. Make sure the devices are getting enough power they require.

d. Make sure there is no problem with the card installation.

Q 2. Computer failed to start after inserting the USB PCI Express card.

Ans: Turn off the computer, remove the USB PCI Express card, and try to restart the computer. If the computer starts successfully, it means that the card has not been inserted into the PCI Express slot correctly. Please clean PCI golden finger by eraser firstly, then change another PCI-E slot!

Q 3. How to deal when there is a yellow exclamation point on controller?



Other devices

Universal Serial Bus (USB) Controller

Ans:a. Please shutdown your computer and move the card to another available slot.

b. Please point on this device then right-check on the mouse.

Selecting "Update Driver" to renew USB driver.

c. This exclamation point usually means there is a resource conflict between this card and another card in your system. Please move the card to another available slot. Restart your computer. Windows will re-configure itself and re-assign resources. Check your device manager again.

Q 4. Is it possible to connect current USB 1.1, 2.0, 3.0 devices to this USB PCIe card?

Ans: Yes it works, but device will get maxumin USB2.0 performance.

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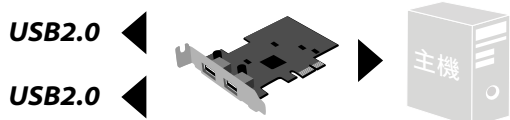
E-mail for technical support: info@sunix.com
Website for product information: www.sunix.com
Tel: +886-2-8913-1987
Fax: +886-2-8913-1986

Made in China
771-USB240000-S04





使用說明書



最新驅動程式與說明書下載：
請至三泰科技官網<http://www.sunix.com.tw>，並搜尋關鍵字“USB2400”或掃描QR code，下載最新版的驅動程式與說明書。

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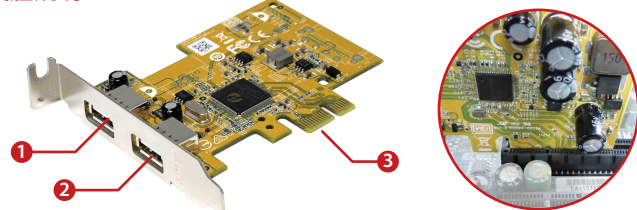


雙埠USB2.0 PCI Express 擴充卡

產品介紹

SUNIX三泰USB2400高速USB2.0擴充卡提供了兩個標準的USB電腦主機端連接埠，搭載原生PCI Express控制器，支援標準EHCI與OHCI通訊協議，確保與傳統的USB設備擁有最佳的相容性，此外，每個USB連接埠可以提供到1000mA@5VDC的電源輸出能力，藉以驅動更多的USB外接設備，以及讓移動性設備（例如：平板、手機）的充電時間大幅縮短。為確保高用電的安全，每個USB埠獨立搭載過電流與短路保護元器件，確保用戶上的使用安全。因此，SUNIX三泰 USB2400高速USB2.0擴充卡將是您PC擴展最新介面的解決方案，不論是連接各種USB存儲設備、數位攝影機、影像顯示擴充、以及各式行動裝置等，將同時兼顧數據傳輸效能、輸出電源效率、以及使用便利性的最佳選擇。

硬體說明



- 1 外接式USB2.0 Type-A母座
- 2 PCI Express x 1 金手指

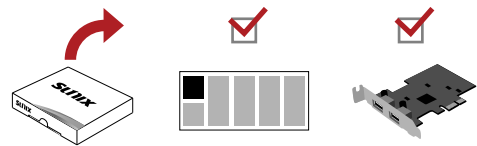
產品特色

- 支援PCI Express Rev1.1代規格, x1(single-lane)匯流排。
- 相容於Universal Serial Bus 2.0規格，傳輸速度達480Mbps。
- 板載原生USB控制晶片支援USB2.0 EHCI 與USB1.1 OHCI規範。
- 擴充卡提供兩個獨立的USB2.0 Type-A連接埠做為主機端擴充。
- 每個USB連接埠支援最高5VDC / 1000mA 電流輸出至USB設備。
- 每個USB連接埠具備獨立的過電流與短路保護元器件。
- 熱插拔USB設備不需要煩冗的操作程序。
- 毋須安裝額外驅動程式支援Windows, MAC, 與Linux作業系統。
- 產品低功耗設計順應綠色節能趨勢，並符合環保RoHS生產製成。
- 通過各國EMC安規認證(CE, FCC, VCCI, C-Tick, BSMI)確保用戶使用電磁輻射的安全。

包裝內容

該產品內容包含下列品項，如有遺缺請速與供應商聯繫。

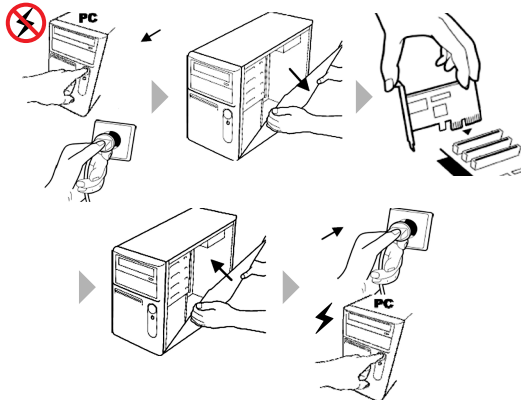
1. USB2400 – USB2.0 雙埠 PCI Express擴充卡
2. 使用說明書 (此份文件)



硬體安裝

請依照下列步驟安裝USB擴充卡。

1. 請關閉電腦（關機），並確實由電源插座拔除電腦電源線。
2. 請打開電腦機箱蓋板。並移除電腦機箱上的PCI Express插槽的預設擋板（例如PCIex16插槽位置）。
3. 請將PCI Express擴充卡安裝於插槽內，並確實鎖附固定擴充卡的擋板於機箱上正確位置。
4. 請將電腦機箱蓋板關閉復位。並將電腦主機歸置定位。
5. 請重新將電腦的電源線重新連接至電源插座，並啟動電腦。



安全第一：
為了避免產生觸電危險，以及損害電腦設備，請務必先行關閉電腦並拔除電源線之後才可以進行擴充卡的安裝步驟。

移除任何連接在USB擴充卡上的USB設備，請務必遵守移除USB裝置的操作程序，透過右下方USB圖示中選擇“安全地移除硬體並退出媒體”，避免資料讀寫過程中因為USB裝置突然移除造成的資料遺失問題。



規格說明

硬體	
匯流排	PCI Express Spec 1.1, x1 匯流排, 用於主機板 PCI Express x16 或 x4 以上的匯流排安裝。
控制器	PCI Express USB2.0 控制器
USB協議	Enhanced Host Controller Interface (EHCI) and Open Host Controller Interface (OHCI)
系統資源	由系統分配

USB 通信

介面	USB 2.0 / 1.1
效能	High-Speed (HS), Full-Speed(FS) and Low-Speed(LS) 各具備1.5、12與480Mbps 的資料傳輸速率
埠數	2 埠
連接器	USB2.0 Type-A 連接器
保護	±15KV IEC61000-4-2 靜電測試 空氣放電 ±8KV IEC61000-4-2 靜電測試 接觸放電

電源

電源來源	PCI Express 匯流排供電
電源輸出	每個USB Type-A 連接埠可以輸出達 +5VDC / 1.0A 能力 (備註：最大電源輸出能力將依照用戶實際使用的電源供應器而定)
電源保護	每個連接埠具備過載與短路保護，+5VDC / 1.1A / 可回復性保險絲(PTC Fuse)
電源功耗	1.1 W @ 3.3VDC (備註：上述擴充卡電源功耗不包含輸出 USB 至設備的電源)

驅動支援

Microsoft Client	XP / Vista / 7 / 8.x / 10 (X86/X64)
Microsoft Server	2000 / 2003 / 2008 / 2008R2 / 2012R2 (X86/X64)
Microsoft Embedded	XP Embedded / POS Ready 2009 / Embedded System
Linux	Linux 2.4.x / 2.6.x / 3.x
Apple MAC	MAC OS X 10.4 或之後版本

認證

EMC安規	CE, FCC, C-Tick, VCCI, BSMI, Class B 標準
綠色環保	RoHS, CRoHS, WEEE

環境

工作溫度	0 to 60° C (32 to 140° F)
工作濕度	5 to 95% RH
儲存溫度	-20 to 70° C (-4 to 158° F)

機構

PCB 尺寸	130 x 68 mm
擋板	標準 121 mm (可選短擋版 80mm)
擋板佔用空間	1

驅動安裝

三泰USB2400 USB2.0 擴充卡在主流Windows、Linux與MAC作業系統下免安裝驅動程式，支援的操作系統列表如下。

操作系統	USB2.0 驅動程式	說明
Windows 10	不需額外交裝	使用Microsoft視窗作業系統預設標準USB驅動程式
Windows 8 / 8.1		
Windows 7		
Windows Vista		
Windows Server 2012R2		
Windows Server 2008R2		
Windows Server 2003	不支援	不支援
Windows XP		
Linux		
MAC OS		
Windows 98SE		
DOS		

硬體安裝驗證

請開啟“裝置管理員”視窗驗證硬體安裝是否完成

開始 > 控制台 > 裝置管理員



在裝置管理員的頁面內，進入“通訊序列匯流排控制器”的選項下，可以查找到“Standard Enhanced PCI to USB Host Controller”與“Standard OpenHCD USB Controller”，即代表USB擴充卡安裝完成。

通用序列匯流排控制器

- Standard Enhanced PCI to USB Host Controller
- Standard OpenHCD USB Controller
- Generic USB Hub
- Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host

疑難排解

Q 1. 若USB設備與卡片連接後，USB設備無法順利運作，請進行以下基本除錯步驟：

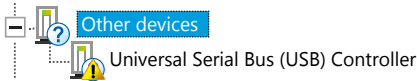
Ans:a. 請確認USB設備的纜線確實連結USB擴充卡。

- 請確認USB設備的電源為開啟狀態。
- 若您的USB設備由USB埠取電，則確認USB設備需求的電源需小於900mA。
- 請確認USB擴充卡片確實安裝正確於PC電腦內。

Q 2. 電腦安裝USB擴充卡後便無法正常啟動。

Ans: 請立即關閉電腦並移除電腦的電源，自電腦內移除USB擴充卡後，請嘗試重新開機確保PC本身運作正常。假設關鍵在於USB擴充卡安裝後變無法開機，則請確認USB擴充卡於PC電腦內確實安裝妥當，嘗試更換PCIe插槽並鎖緊固定的擋板。若問題無法解決，則請使用鉛筆用橡皮擦擦拭USB擴充卡的金手指，確保與主機板插槽的連接金屬接點正確接觸。

Q 3. 電腦安裝USB擴充卡後於裝置管理員內出現驚嘆號。



Ans:a. 請立即關閉電腦並移除電腦的電源，將USB擴充卡更換到其他PCIe插槽再重試。

- 請將游標移至裝置名稱上方並點擊右鍵，選擇“更新驅動程式”以更新USB驅動程式。
- 此驚嘆號通常代表此卡與主機中的其他卡片有資源衝突，請將USB擴充卡更換到其他PCIe插槽後重新開機。待Windows自動重新配置後，請再次檢查您的裝置管理員。

Q 4. 是否可以將既有的USB3.0設備連接到此張USB2.0擴充卡？

Ans: 可以。但USB設備將僅限於USB2.0的效能。