



StarTech.com PEXUSB3S44V PCIe USB Card Specifications and Datasheet

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StarTech.com PEXUSB3S44V PCIe USB Card



4 Port USB 3.0 PCIe Card w/ 4 Dedicated 5Gbps Channels (USB 3.2 Gen 1) – UASP – SATA / LP4 Power – PCI Express Adapter Card

Product ID: PEXUSB3S44V

The PEXUSB3S44V 4-Port PCI Express USB 3.2 Gen 1 Card lets you add four, dedicated 5 Gbps USB 3.2 Gen 1 ports to your PCIe x4-enabled PC. This independent port architecture improves USB 3.2 Gen 1 performance by transferring data on four individual channels to your computer, giving you faster file transfers.

When multiple devices are connected, traditional single bus USB 3.2 Gen 1 cards share your maximum bandwidth between all ports. By employing four host controller chipsets, each port operates on a separate independent transmission channel. Dedicating up to 5 Gbps to each USB port reduces performance bottlenecks, and effectively quadruples your total available to bandwidth to 20 Gbps.

Enhanced with UASP support (USB Attached SCSI Protocol), this USB 3.2 Gen 1 controller performs up to 70% faster than conventional USB 3.2 Gen 1 when paired with a (Note: UASP requires a compatible operating system). Using a more efficient protocol than the traditional USB BOT (Bulk-Only Transport), UASP technology optimizes transfers by allowing multiple commands to be processed simultaneously, significantly increasing transfer speeds for less wait time on data transfers. See our UASP test results below for further details.

For high-power USB devices, this PCIe USB 3.2 Gen 1 card includes an optional SATA or LP4 power connector to connect to your system power supply and deliver up to 900mA of power per port to USB 3.2 Gen 1 bus-powered devices (500mA for USB 2.0). The USB 3.2 Gen 1 card also supports USB Battery Charging Specification 1.2 (Apple Mode only), letting you charge compatible Apple devices (iPhones and iPads) faster than a standard USB 3.2 Gen 1 port.

The controller card is compliant with USB 3.2 Gen 1 standards while offering backward compatibility with existing USB 2.0 / 1.1 devices. For added versatility, the USB 3.2 Gen 1 PCIe card is equipped with a standard profile bracket and includes a low-profile/half-height bracket for installation in small form-factor computers.

Backed by a StarTech.com 2-year warranty and free lifetime technical support.

UASP is supported in Windows 8, 8.1, Server 2012 and Linux kernel 2.6.37 or later. In testing UASP performed with up to a 70% faster read / 40% faster write speed over traditional USB 3.2 Gen 1 at peak performance.

At the same peak in testing, UASP also showed up to an 80% reduction in required processor resources.

Test results were obtained using an Intel Ivy Bridge system, StarTech.com add-on USB 3.2 Gen 1 cards, a UASP-enabled StarTech.com enclosure, and a SATA III solid state drive.

Certifications, Reports and Compatibility



Applications

- Upgrade an older PCIe-based system to USB 3.0 connectivity and UASP support to fully utilize USB 3.0 devices
- Expand the USB capabilities of your system with four external ports for connecting additional external hard drives, CD/DVD drives, MP3 players, printers, scanners, webcams, game controllers, digital cameras, etc. to a computer system

Features

- Provides four external, independent USB 3.2 Gen 1 Ports
- Supports up to 20 Gbps total transfer bandwidth – Up to 5 Gbps per port
- UASP support across all four ports
- PCIe x4 interface compliant with PCI Express 2.0 specifications
- Optional LP4 or SATA power connector provides up to 900mA per USB port
- Supports USB Battery Charging Specification 1.2 (Apple Mode only)
- Fully compliant with USB 3.2 Gen 1 rev 1.0 and Intel xHCI rev 1.0 specifications
- Backward compatible with USB 2.0 and USB 1.0/1.1 devices
- Includes a Low Profile/half-height installation bracket
- Hot-swap feature to connect/disconnect devices without powering down the system

Hardware

- **Warranty:** 2 Years
- **Ports:** 4
- **Interface:** USB 3.2 Gen 1 (5Gbps)
- **Bus Type:** PCI Express
- **Card Type:** Standard Profile (LP bracket included)
- **Port Style:** Integrated on Card
- **Industry Standards:**
 - **USB 3.0 Specification Rev. 1.0**
 - **USB Battery Charging Specification Rev. 1.2 (Apple Mode only)**

- **PCI Express Base Specification Rev. 2.0**
- **Intel xHCI Specification Rev. 1.0**
- **Chipset ID:** Renesas/NEC – PD720202

Performance

- **Maximum Data Transfer Rate:** 5Gbps per port – 20Gbps Total
- **Maximum Cable Length:** 9.8 ft [3 m]
- **Type and Rate:** USB 3.0 – 5 Gbit/s
- **UASP Support:** Yes

Connector(s)

- **Connector Type(s):** 1 – PCI Express x4
- **Internal Ports:** 1 – SATA Power (15 pin), 1 – LP4 (4 pin; Large Drive Power)
- **External Ports:** 4 – USB Type-A (9 pin, 5 Gbps)

Software

- **OS Compatibility:**
 - Windows Vista, 7, 8, 8.1, 10, 11
 - Windows Server 2008 R2, 2012, 2012 R2, 2016, 2019, 2022
 - Linux 2.6.31 and up – LTS Versions only

Special Notes / Requirements

- **System and Cable Requirements**
 - Available PCI Express x4 or greater slot
- **Power**
 - **Input Voltage:** 12V DC
 - **Output Voltage:** 12V DC
- **Environmental**
 - **Operating Temperature:** 0C to 50C (32F to 122F)
 - **Storage Temperature:** -20C to 60C (-4F to 140F)
 - **Humidity:** 5~85% RH
- **Physical Characteristics**
 - **Color:** Black
 - **Material:** Steel
 - **Product Length:** 6.6 in [16.7 cm]
 - **Product Width:** 0.6 in [1.5 cm]
 - **Product Height:** 4.7 in [12.0 cm]
 - **Weight of Product:** 3.2 oz [92.0 g]
- **Packaging Information**
 - **Package Length:** 8.2 in [20.8 cm]

- **Package Width:** 5.7 in [14.5 cm]
- **Package Height:** 1.6 in [4.1 cm]
- **Shipping (Package) Weight:** 7.1 oz [202.0 g]

What's in the Box

• Included in Package

- 1 – 4 Port PCIe USB Card
- 1 – Low Profile Bracket
- 1 – Driver CD
- 1 – Instruction Manual

*Product appearance and specifications are subject to change without notice.

Frequently Asked Questions

What is the StarTech.com PEXUSB3S44V PCIe USB Card, and what does it offer?

The StarTech.com PEXUSB3S44V is a 4-Port PCI Express USB 3.2 Gen 1 Card that allows you to add four dedicated 5 Gbps USB 3.2 Gen 1 ports to your PCIe x4-enabled PC. This card features independent port architecture, improving USB 3.2 Gen 1 performance by transferring data on four individual channels, resulting in faster file transfers.

How does the independent port architecture of this card benefit users?

Traditional single bus USB 3.2 Gen 1 cards share the maximum bandwidth among all ports. However, the StarTech.com PEXUSB3S44V uses four host controller chipsets, with each port operating on a separate independent transmission channel. This dedication of up to 5 Gbps to each USB port reduces performance bottlenecks and effectively quadruples the total available bandwidth to 20 Gbps when multiple devices are connected.

What is UASP support, and how does it enhance performance?

UASP (USB Attached SCSI Protocol) support is integrated into this USB 3.2 Gen 1 controller, allowing it to perform up to 70% faster than conventional USB 3.2 Gen 1 when paired with a compatible operating system. UASP uses a more efficient protocol than traditional USB BOT (Bulk-Only Transport), optimizing transfers by processing multiple commands simultaneously. This results in significantly increased transfer speeds and reduced wait times during data transfers.

Does this card provide power to high-power USB devices?

Yes, the PCIe USB 3.2 Gen 1 card includes an optional SATA or LP4 power connector that can be connected to your system's power supply. This allows it to deliver up to 900mA of power per port to USB 3.2 Gen 1 bus-powered devices (500mA for USB 2.0). Additionally, it supports USB Battery Charging Specification 1.2 (Apple Mode only), enabling faster charging of compatible Apple devices such as iPhones and iPads.

What are the system and cable requirements for this card?

To use this card, you need an available PCI Express x4 or greater slot. It also requires a 12V DC input and output voltage. Please ensure your system meets these requirements for proper functionality.

What operating systems are compatible with the StarTech.com PEXUSB3S44V PCIe USB Card?

This card is compatible with various operating systems, including Windows Vista, 7, 8, 8.1, 10, 11, Windows Server 2008 R2, 2012, 2012 R2, 2016, 2019, 2022, and Linux 2.6.31 and up (LTS Versions only).

What certifications and industry standards does this card adhere to?

The card is compliant with USB 3.2 Gen 1 standards and offers backward compatibility with existing USB 2.0 and USB 1.0/1.1 devices. It also adheres to various industry standards, including USB 3.0 Specification Rev. 1.0, USB Battery Charging Specification Rev. 1.2 (Apple Mode only), PCI Express Base Specification Rev. 2.0, and Intel xHCI Specification Rev. 1.0.

What is the warranty and technical support for this product?

The product is backed by a StarTech.com 2-year warranty. Additionally, it comes with free lifetime technical support, ensuring that you can get assistance if you encounter any issues with the card.

Are there any performance test results available for this card?

Yes, in testing, the UASP performance with this card showed up to a 70% faster read speed and a 40% faster write speed over traditional USB 3.2 Gen 1 at peak performance. Additionally, UASP demonstrated up to an 80% reduction in required processor resources. These results were obtained using an Intel Ivy Bridge system, StarTech.com add-on USB 3.2 Gen 1 cards, a UASP-enabled StarTech.com enclosure, and a SATA III solid-state drive.

Can I use this USB card in my older computer with a PCIe slot?

Yes, you can use this USB card in a PCIe x4 or greater slot in your older computer, as long as it has a compatible slot. It's a great way to upgrade your older system to USB 3.2 Gen 1 connectivity and take advantage of faster data transfer speeds.

What types of devices can I connect to the four external USB ports on this card?

You can connect a wide range of USB devices to the external ports, including external hard drives, CD/DVD drives, MP3 players, printers, scanners, webcams, game controllers, digital cameras, and more. The card provides you with additional USB 3.2 Gen 1 ports to expand your system's capabilities.

Does this card support hot-swapping of USB devices?

Yes, this card features a hot-swap feature that allows you to connect and disconnect USB devices without powering down your system. This convenience makes it easy to add or remove USB peripherals as needed without interrupting your workflow.

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