

U3X4-PCIE4XE101

Quad Channel USB 3.0 to PCI Express x4 Gen 2 Host Card



Highlights

- Compliant with PCI Express Base Specification Revision 2.0
- Supports PCI Express Card Electromechanical Specification Revision 2.0
- Host Bus: PCIe x4 Gen 2 (20.0 Gb/s)
- Compliant with Universal Serial Bus 3.0 specification Revision 1.0
- Compliant with Intel's eXtensible Host Controller Interface (xHCI) specification Revision 1.0
- Four independent USB 3.0 Host Ports

Introduction

The U3X4-PCIE4XE101 is a Quad channel USB 3.0 to PCI Express x4 Gen 2 Host Adapter.

U3X4-PCIE4XE101 is designed with Two key components.

- 8-Lane, 8-Port PCI Express Switch.
- PCI Express to USB 3.0 Single Chip Host Controller (Renesas uPD720202).

Utilizing the standard PCI Express Switch, the 8-Lane/8-Port PCI Express Switch provides the most efficient fan-out solution for integrating four PCI Express to USB 3.0 Single Chip Host controllers into a small board design. Each USB 3.0 to PCI Express Single Chip Host controller takes advantages of 5 Gbps burst rate of 4-lane PCI Express bus in both directions and is fully compliant with PCI Express Base specification r2.0. This solution provides full PCI Express and USB 3.0 functionality and performance.

Technical Specifications

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| Primary PCI Express | <ul style="list-style-type: none">• Standards compliant<ul style="list-style-type: none">○ PCI Express Base Specification r2.0 (Backwards compatible with PCIe r1.0a/1.1)○ PCI Power Management Spec r1.2○ Microsoft Vista®-compliant○ Supports Access Control Services○ Dynamic Link-width control○ Dynamic SerDes speed control• High Performance<ul style="list-style-type: none">○ Non-Blocking Internal architecture○ Full line rate on all Ports○ Cut-Thru latency: 130ns○ 2KB max payload size• PCI Express Power Management<ul style="list-style-type: none">○ Link power management states: L0, L0s, L1, L2/L3 Ready, and L3○ Device states: D0 and D3hot• Quality of Service (QoS) support<ul style="list-style-type: none">○ Two Virtual Channels (VC) per Port○ Eight Traffic Classes per Port○ Weighted Round-Robin Port & VC Arbitration |
| Secondary PCI Express | <ul style="list-style-type: none">• Four Single (x1) PCI Express Lane• Compliant with PCI Express Base Specification Revision 2.0• Supports PCI Express Card Electromechanical Specification Revision 2.0• Supports PCI Bus Power Management Interface Specification Revision 1.2 |
| USB Features | <ul style="list-style-type: none">• Compliant with USB 3.0 Specification Revision 1.0• Compliant with Intel's eXtensible Host Controller Interface (xHCI) specification Revision 1.0• Each USB port supporting SS/HS/FS/LS data rates (5Gbps/480Mbps/12Mbps/1.5Mbps) |
| USB Data Transfer Rate | <ul style="list-style-type: none">• Low-speed (1.5 Mbps)• Full-speed (12.0 Mbps)• High-speed (480.0 Mbps)• Super-speed (5.0 Gbps) |

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|---------------------|--|
| Number of Ports | Four independent USB 3.0 Cable Ports (A-type Receptacle) |
| USB Bus Power Input | Either Big IDE 4-pin DC Power Connector or/and SATA 15pin Power Connector |

Computer Platform

- Computer with PCI Express slot (x4, x8, x16)

Note:

For the best performance (5.0 Gbps), It should be installed in a PCIe Gen 2 compliant slot in the host computer.

Most computers have PCIe Gen 2 (5.0 Gbps) throughput on x8 or x16 slots.

A PCIe Gen 1 compliant slot reaches up to 2.5 Gbps throughput

Operating System Requirements

- USB 3.0 Host Drivers Kit (x86 and x64) for
 - Windows XP
 - Windows Vista
 - Windows 7
 - Windows Server 2008 Release 2

Physical Dimensions

- 139mm(W) x 101mm[120mm](H)
- NW: 96.7g

Kit includes

- U3X4-PCIE4XE101 Host Adapter
- Driver CD