

U3X4-PCIE4XE113

Quad Channel USB 3.0 to PCI Express x4 Host Card

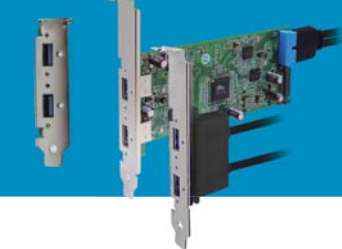
Highlight

- Host Bus: PCIe x4 Gen 2 (20.0 Gb/s), Low-Profile PCI Form Factor
 - Compliant with PCI Express Base Specification Revision 2.0
- Four independent USB 3.0 Host Controllers (Fresco FL1100, USB IF TID 380000026)
 - Compliant with USB 3.0 Specification 1.0
 - Compliant with Extensible Host Controller Interface (xHCI) Specification revision 1.0
 - Support SS/HS/FS/LS data rates (5Gbps/480Mbps/12Mbps/1.5 Mbps)
- Supports UASP (USB Attached SCSI Protocol)
- WHQL certified driver support for Windows 8, Windows 7, Windows Vista and Windows XP
- Linux xHCI support under Linux kernel version 2.6.31 and after
- Four USB 3.0 Cable Ports (A-type Receptacle, USB IF TID 360000003)
 - Provides USB 3.0 cable port lock mechanism

U3X4-PCIE4XE113-A



U3X4-PCIE4XE113-S



Introduction

The U3X4-PCIE4XE113 is a Quad channel USB 3.0 to PCI Express x4 Gen 2 Host Adapter.

U3X4-PCIE4XE113 is designed with Two key components.

- 8-Lane, 8-Port PCI Express Switch.
- PCI Express to USB 3.0 Single Chip Host Controller (FRESCO FL1100; USB IF TID 380000026).

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.

Specification

Primary PCI Express

Standards compliant

- 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

- Non-Blocking Internal architecture
- Full line rate on all Ports
- Cut-Thru latency: 130ns
- 2KB max payload size

PCI Express Power Management

- Link power management states: L0, L0s, L1, L2/L3 Ready, and L3
- Device states: D0 and D3hot

Quality of Service (QoS) support

- Two Virtual Channels (VC) per Port
- Eight Traffic Classes per Port
- Weighted Round-Robin Port & VC Arbitration

Secondary PCI Express

- Four single (x1) PCI Express Lane
- Supports PCI Express Specification Revision 2.1 at 5GT/s
- Supports PCI Bus Power Management Interface Specification revision 1.2
- Support for Latency Tolerance Reporting (PCIe)

USB Features

- Compliant with USB 3.0 Specification Revision 1.0
- Compliant with Extensible Host Controller Interface (xHCI) Specification Revision 1.0
- Each USB port supporting SS/HS/FS/LS data rates

(5Gbps/480Mbps/12Mbps/1.5Mbps)

- Supports UASP (USB Attached SCSI Protocol)
- Supports xHCI debug capability
- Support for Ultra High-performance isochronous applications
- Support for Latency Tolerance Tolerance Messaging (USB)

Advanced Power Saving

- Support all USB 3.0 Power States: U0, U1, U2 and U3
- Support USB 2.0 Link Power management (LPM) USB-IF LPM PDK Standard
- PCIe Active State Power Management (ASPM) L0s and L1

USB Data Transfer Rate

- Low-speed (1.5 Mbps)
- Full-speed (12.0 Mbps)
- High-speed (480.0 Mbps)
- Super-speed (5.0 Gbps)

Number of Ports

Four External USB 3.0 ports with Screw Holes for thumbscrew locking Type USB 3.0 Cable

USB Bus Power Input

Either Big IDE 4-pin DC Power Connector
or SATA 15pin Power Connector

Operating Systems

USB 3.0 Host Drivers Kit (x86 and x64) for

- Windows XP
- Windows Vista
- Windows 7
- Windows 8 and 8.1