

NET 2280 Key Features

- ◆ PCI v3.0 – 33 MHz, 32-bit bus
- ◆ Hi-Speed USB 2.0 Client Port
- ◆ Simplest connectivity between PCs
 - ◆ Connect two PCs with a single USB cable
- ◆ Ultra fast performance of up to 480Mbps
- ◆ 8x8x1 mm FPBGA package for ultra portable devices
- ◆ Software programmable functions
 - ◆ PC Peripheral sharing
 - ◆ File sharing
 - ◆ PC Migration
 - ◆ Data Synchronization
 - ◆ Networking
- ◆ Compliance to USB 2.0 specification
- ◆ Easy hardware integration
 - ◆ 32-bit PCI interface

PEX 8111 Key Features

- ◆ Small package size
 - ◆ 10x10mm Fine-Pitch BGA
 - ◆ 13x13mm Std-Pitch BGA
- ◆ Low power (400mW)
- ◆ Single (x1) PCI Express Lane
- ◆ 32-bit/66MHz PCI Interface
- ◆ Supports both Forward- and Reverse-Mode PCI Express to PCI Bridging



Application:

USB Duet™ ExpressCard for Notebook and Ultra Portable PCs

PLX Products:

NET 2280 – PCI to Hi-Speed USB 2.0 Peripheral Controller

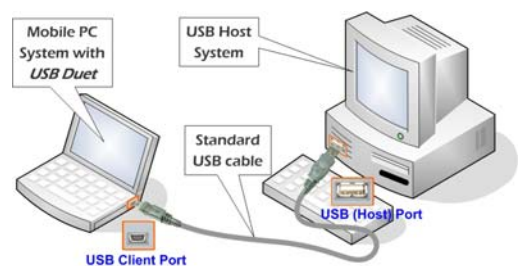
PEX 8111 – x1 PCIe to PCI Bridge

Key Benefit:

Easy Connectivity, Familiar Usage Models

USB Duet Technology

USB is ubiquitous; it can be found everywhere today. This technology is most popular in consumer devices and gadgets, such as digital cameras, flash drives, mobile phones, and printers.



USB Duet Technology adds a USB client port (like on digital cameras) to a mobile *PC system* and enables the port to have multiple functions such as sharing files and peripherals. Its familiar usage models (e.g. mass storage) and plug-and-play capabilities allow instant usability.

The *USB Duet ExpressCard* can be plugged into today's Notebook and Ultra Portable PCs to easily provide a USB client port.

Proven Design

PLX provides the *USB Duet ExpressCard* design, which features the [PEX 8111](#) PCIe to PCI bridge and [NET 2280](#) PCI to USB 2.0 bridge. The [PEX 8111](#) bridges the ExpressCard's x1 PCIe bus to PCI, which the [NET 2280](#) connects to and exposes a USB client port on the other side (see *Figure 1*). In addition, the *USB Duet ExpressCard* also features a separate USB *host* port, which is directly extended out from the ExpressCard's standard USB host bus.

Along with the proven hardware design (*schematics and layout files available*), PLX provides robust software drivers to allow multiple functions on the USB client port on the ExpressCard.

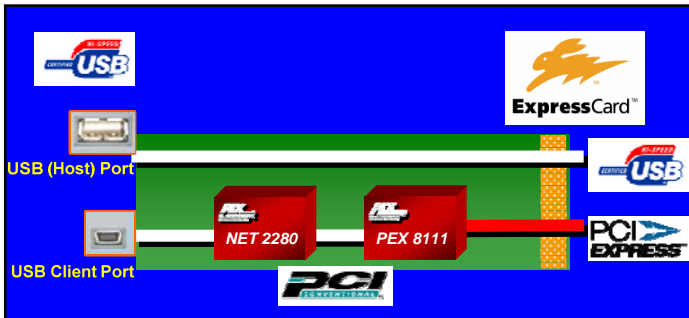


Figure 1 – USB Duet ExpressCard Block Diagram

USB Duet Applications/Usage Models

Share desktop PC's peripherals – USB Duet EZ-Dock

- Share desktop's DVD-ROM to install new software
- Use desktop's big LCD monitor as an external display
- Share desktop's keyboard and mouse

Data synch, backup, share files – USB Duet HD

- Synch e-mail, projects, and settings with desktop PC
- Quickly backup files to desktop PC

Instant Networking at 480Mbps – USB Duet FastLink

- Quick internet sharing
- Easy setup for multi-player network gaming
- Leverage existing network applications (e.g. backup software)

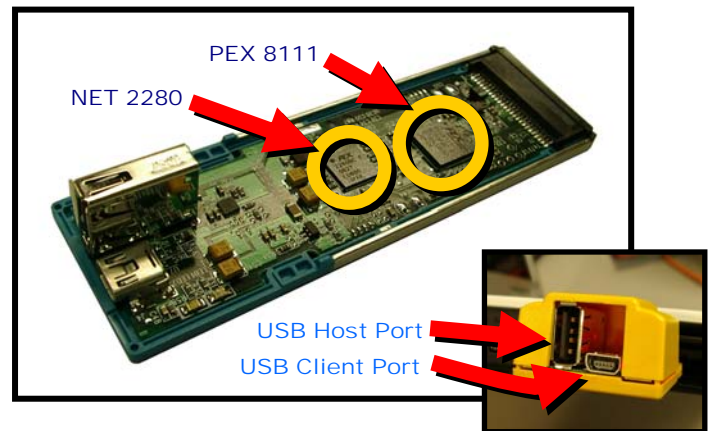


Figure 2 – Share desktop's peripherals with USB Duet EZ-Dock

USB Duet's killer software applications continue to grow, adding more and more value and flexibility to this USB client port on the mobile PC.

Reference Design Available

Reference schematics and Gerber files are ready and available for download.



PLX's ExpressCard reference design is not limited to the USB Duet application with the NET 2280. This proven design provides an easy migration for any PCI product to ExpressCard.

Additional PLX Advantages

- ◆ Superior USB 2.0 expertise and support
- ◆ Complete firmware library for many standard USB device classes (Mass Storage, RNDIS, MTP, etc.)
- ◆ Wide Range of Application Notes
- ◆ Schematic and Layout Design Reviews
- ◆ Full USB 2.0 Compliance Testing Support
- ◆ PCI-based development systems

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