

NET 2282 Key Features

- ◆ PCI v3.0 – 66 MHz, 32-bit bus
- ◆ Hi-Speed USB 2.0 peripheral port
- ◆ PCI Host mode for configuring and controlling PCI devices
- ◆ Integrated 8051 CPU @ 30MHz
- ◆ 32K of integrated RAM for emulating main system memory and storing descriptors
- ◆ 4 DMA controllers with Scatter Gather descriptor capability
- ◆ Easy hardware integration
 - ◆ 32-bit PCI interface
- ◆ Sustained throughput up to 40 Mbytes/sec
- ◆ Low power 0.18μ process
- ◆ Ideal for USB bus-powered operation

Application:

VGA Hi-Speed USB 2.0 Adapter

PLX Product:

NET 2282 – PCI to Hi-Speed USB 2.0 Peripheral Controller

Key Benefit:

Easily add Multiple Monitor Displays

Expand the Desktop

Multiple monitor displays are valuable and convenient to all types of consumers ranging from stocker brokers to extreme gamers. For the professional, the additional desktop space facilitates multi-tasking and increases productivity. For the gamer, the extra displays enhance the gameplay experience and the entertainment value of the game.



Most PCs are limited to one VGA connection, while some higher-end graphics cards can add one more port (VGA or DVI). However, USB ports are widely available on PCs today and most have at least four USB ports. USB ports make it easy to add multiple displays by using the PLX VGA USB 2.0 adapter.

The NET 2282 PCI to Hi-Speed USB 2.0 Peripheral Controller makes it easy to migrate existing PCI-based VGA graphics cards to Hi-Speed USB 2.0 adapters.



Migrating PCI-based VGA Graphics Cards to USB 2.0

The NET 2282 is optimized for migrating PCI-based designs to USB 2.0. Instead of a system's CPU configuring the VGA controller, the NET2282 can act as the PCI host and configure the VGA chip. The 8051 CPU in the NET 2282 functions as the main processor while its shared RAM emulates main system memory (for

holding descriptors other control data). The NET 2282 also includes PCI clock, reset, interrupt and arbitration pins to compensate for those components usually found in a PC.



Add multiple displays with VGA USB 2.0 Adapters

RemotePCI: Tool to Help Convert Existing PCI driver to USB

Although the hardware design between the VGA controller and the NET 2282 is straight forward (just connect the same PCI signals together), the software development is not as trivial. PCI architecture allows the driver to access the hardware directly, while in USB, the driver must go through a number of software layers to access the NET 2282.

PLX offers RemotePCI (RPCI, for Windows PCs) to migrate the existing PCI driver to a USB driver. RemotePCI is a Windows kernel mode driver library that “shims” between an adapted PCI driver and Microsoft’s USB driver stack (MS-USBDD). RPCI’s interface matches PCI’s chip I/O, interrupt, and DMA interface as closely as possible to minimize the amount of software work needed.

RPCI maximizes performance to allow high video data bandwidth for the VGA to Hi-Speed USB 2.0 adapters.

Additional PLX Advantages

- ◆ Superior USB expertise and support
- ◆ RemotePCI software aids in PCI adapter to USB 2.0 migration
- ◆ Wide Range of Application Notes
- ◆ Schematic and Layout Design Reviews
- ◆ USB 2.0 Compliance Testing
- ◆ PCI-based Development Systems

Design Tools & Documentation:

NET 2282:

<http://www.plxtech.com/net2282.asp>

USB Software:

<http://www.plxtech.com/products/NET2000/software/>

Available on PLX website:

- ◆ Data Book, Application Notes, Performance Reports, Migration Guide, Design Guidelines, Video Demos, and more.

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