

### NET 2272 Highlights

- Hi-Speed USB 2.0 Peripheral Port
- Supports driver for mass storage and networking function
- Software driver support for WinCE and Linux
- Fully backwards compatible to Full-Speed USB connections
- Sustained throughput up to 40MBytes/sec
- Lowest active power requirements (186mW)
- Lowest standby power (8.1µW)
- Variable I/O voltage (1.8V to 5.0V)
- 6x6mm, 64 ball, Lead-Free BGA Package

### Application:

## ***KVM (Keyboard, Video, Mouse) Switch***

### PLX Product:

## ***NET 2272 – Local Bus to Hi-Speed USB 2.0 Peripheral Controller***

### Key Benefit:

## ***USB compliance, Advanced HIDs Support, Upgradable Features including Network***

### **What's holding back today's KVM Switch?**

KVM switches, which allow users to control multiple computers through one set of peripherals, have been around for quite some time. However, because of some critical flaws in the design, these switches are not widely used by today's consumers. Here are some of the flaws that hinder the KVM switch from adoption by the market.



### **USB compliance and interoperability issues**

None of today's USB KVM switches are USB compliant, which means they fail to interoperate with other USB devices on the system. Some KVM switches have been known to crash the USB stack, which renders all USB devices on the system useless.

### **No support for advanced HID peripherals**

Today's KVM switch does not support advanced keyboards and mice features (e.g. mouse side-scrolling), which users have grown accustomed to or even rely on.

### **Delay or "break" during switching**

Today's KVM switches use signal switching technology, which maintains only one active link at a time, loses connection with inactive PCs and have to reconnect after every switch. This causes latency and a momentary "break" to the user.

### **Confusing and expensive switching methods**

There are two current methods used in KVM switches for switching computers. The first method, in which the user inputs a specific keystroke, can be confusing and hard to remember (e.g. Scroll Lock + Scroll Lock + '1' + Enter). The second method, which uses manual push buttons, increases costs and forces the user to keep the KVM switch somewhere accessible.



### KVM Switch with PLX NET 2272

PLX's NET 2272 is a Hi-Speed USB 2.0-compliant device controller that can interoperate with other USB peripherals in the system. By designing in the NET 2272, engineers can improve the USB portion of the KVM switch while keeping the existing robust video switching technology. The NET 2272 is programmable and can be configured to translate advanced HID peripheral features (e.g. side-scrolling), thus allowing users to utilize every feature in the latest keyboards and mice.

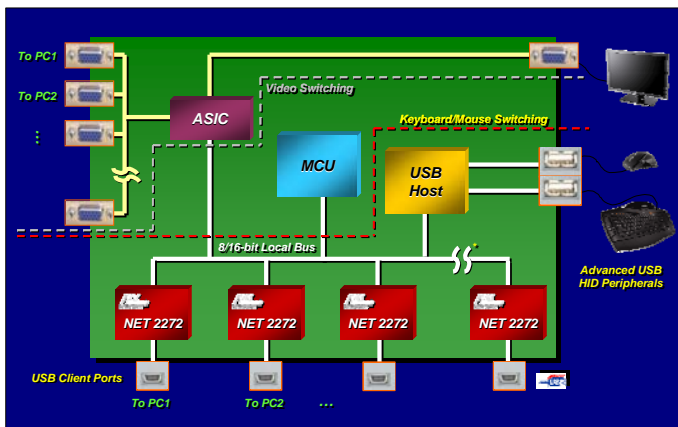


Figure 1: Block Diagram of KVM Switch with NET 2272

As shown in Figure 1, each NET 2272 supports one port in the KVM switch. The number of ports is expandable simply by adding another low-cost NET 2272. The USB Host maintains active connections to all NET 2272s on-board, thereby eliminating any latency or breaks when switching computers.

### Upgradable Features for KVM switch

The NET 2272 supports PLX's USB Duet FastLink™ driver which networks all Windows-based PCs connected to the KVM switch at USB 2.0 speed (480Mbps). This network allows users to run any existing network software and developers can create new killer applications for the KVM switch. One example application is clipboard and file sharing among different PCs. An intuitive switching method can leverage the clipboard sharing function such that a thumbnail preview of all other connected PCs is seen on the desktop. Switching computers is then as simple as one-click on the desired thumbnail!



### 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

### Design Tools & Documentation:

- NET 2272: [www.plxtech.com/2272](http://www.plxtech.com/2272)
- USB Duet FastLink: <http://www.usbduet.com>

### Available on PLX Website:

Databook, Application Notes, Performance Reports, Migration Guide, Design Guidelines, Video Demos, and more.