

PEX 8532 Key Features

- ◆ 32-lane PCI Express switch
- ◆ Integrated SerDes
- ◆ Up to Eight configurable ports (x1, x2, x4, x8, x16)
- ◆ Quality-of-Service with 2 Virtual channels/port
- ◆ Non-blocking Switch Fabric with full line rates
- ◆ Peer-to-peer switching and host centric data transfer
- ◆ SHPC r1.1Standards based Hot-Plug Controllers with Hot Plug on all ports

PEX 8532 Other Features

- ◆ Selectable Non-Transparent Bridge Port
- ◆ Standards Compliant-Exceeds PCIe base specification r1.0a
- ◆ End-to-end CRC and Poison bit support
- ◆ Basic and Advanced error reporting
- ◆ Hardware fixed and Round Robin packet queue arbitration
- ◆ JTAG boundary scan
- ◆ All Link power management states
- ◆ 256 Byte maximum data payload size
- ◆ Lane and polarity reversal
- ◆ Configuration through host or optional EEPROM

Application:
Servers

PLX Product:
PEX 8532 – 32-Lane PCI Express Switch

Key Benefit:
Expands PCIe Slots & End Points

PCI Express in Servers Today



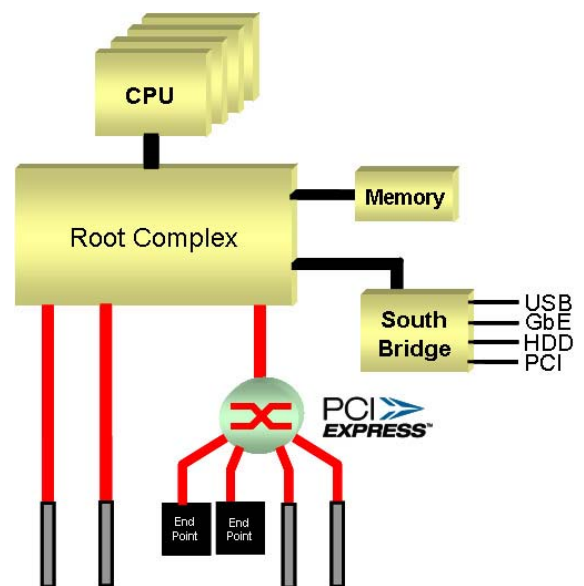
Servers started the transition to PCI Express last year to take advantage of the new serial standard. Current models shipping today offer PCI Express slots, but the majority of the slots are still PCI-X. As new machines are introduced, we will continue to see less PCI-X and more PCI Express.

The root complex’s from companies like Intel and Nvidia offer a fixed number of PCI Express ports. The configurations of these devices are targeted toward the bulk of the market and limit differentiation from one server manufacturer to the next.

PCI Express Switch Expands Server Feature Set

By using one of the PCI Express Switches available today from PLX Technology, server manufacturers can cost effectively add PCIe slots and end points to their systems to differentiate from their competition.

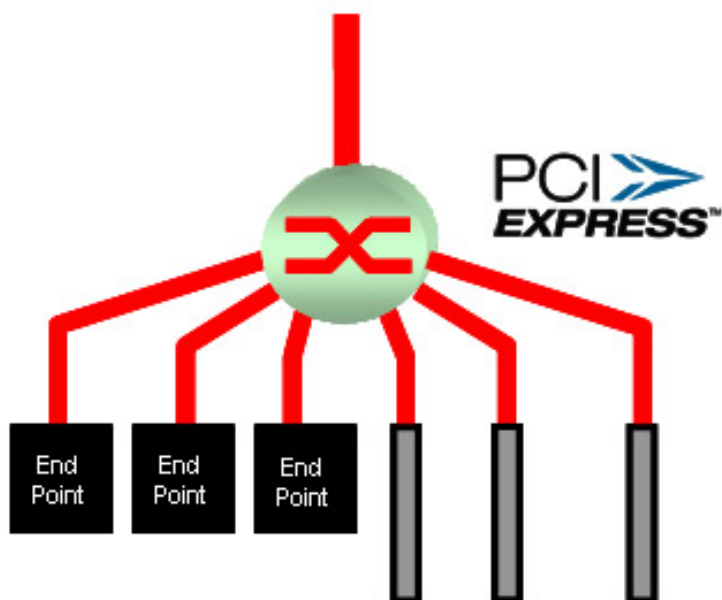
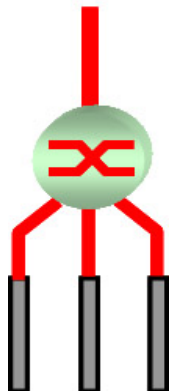
This also allows them to take their standard high volume server and create a higher end model within a particular product line.



Flexible Switch Offers Many Options

The PEX 8532 PCI Express Switch offers 32 Lanes which can be configured many different ways to support fan-out in a server environment.

For example, to add two additional slots, the PEX8532 can take the one x8 upstream ports and fan it out to three x8 downstream ports as demonstrated on the right.



The PLX switches can also fan-out to add additional end points as well as slots as shown above using 7 of the available 8 ports. Each port can be configured as x1, x2, x4, or x8 as long as the total does not exceed 32 lanes.

Other Switches Available

PLX also offers other switch products today including the 16 lane and 24 lane devices. Here is an example using the 24 Lane PEX 8524 device in the 3 port configuration fanning one x8 port into two x8 ports.



Switches Available Today!

All three PCI Express switches are available today from PLX.

Device	# of Lanes	Ports	Availability
PEX 8516	16	4	In Production
PEX 8524	24	6	Sampling
PEX 8532	32	8	In Production

More than Just Fan Out

- ◆ Hot Plug Support
- ◆ Two Virtual Channels
- ◆ Pin Compatible Path to Future Devices
 - Lower Cost
 - Higher Performance

Design Tools & Documentation:

On PLX Public ToolBox:

http://www.plxtech.com/products/pci_express/default.asp

DataBook, BSDI Models, App Notes, Product Brief, Hspice Models

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