

PEX 8532 Key Features

- ◆ PCI Express Switch with 32 lanes
- ◆ Configurable up to 8 flexible ports
- ◆ Non-Transparent bridging
- ◆ Two VCs and Eight TCs
- ◆ Large packet buffer
- ◆ Hot-Plug on every port
- ◆ 35mm x 35mm BGA package
- ◆ Compliant with the PCI-SIG PCIe specification rev 1.0a

Other Features

- ◆ Highly configurable ports in x1, x2, x4, x8 and x16 port widths
- ◆ Strapping signals for port configuration
- ◆ Any port could be up-stream port and hot-plug master
- ◆ Lane reversal and polarity reversal
- ◆ 32 General Purpose Outputs
- ◆ Auto negotiation
- ◆ Peer-to-peer and host centric data transfer
- ◆ Hardware fixed and Round Robin packet queue arbitration
- ◆ Fully non-blocking internal fabric supporting full line-rate
- ◆ 256 Byte maximum packet size
- ◆ Basic and Advanced error reporting
- ◆ End-to-end CRC and poison bit support
- ◆ Configuration through host or optional EEPROM

Application:

Dual and High Resolution Graphics

PLX Product:

PEX 8532 – Versatile PCI Express Switch

Key Benefit:

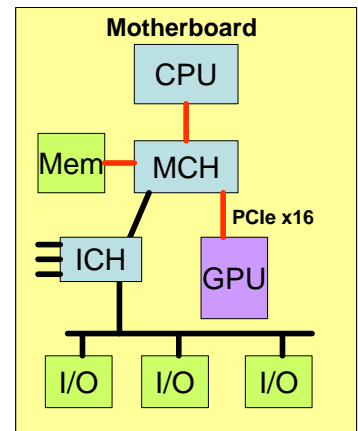
High packet throughput for Dual Graphics

High Performance Graphics Applications pushing for Dual-Graphics Processor Solutions



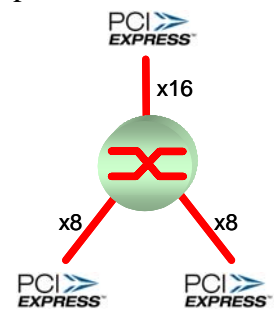
The latest generation of graphics processors (GPUs) has moved to PCI

Express. The PCI Express technology has enabled these GPUs to connect to the CPU or Northbridge through the 16-lane interface (40 Gb/s in each direction) to support high bandwidth connectivity. Even with this increased performance, graphic intensive applications like high end gaming are pushing for additional performance. The popular solution is becoming dual or multiple GPUs in the system. The Intel chip set is not capable of hooking up multiple GPUs without a PCI Express Switch.



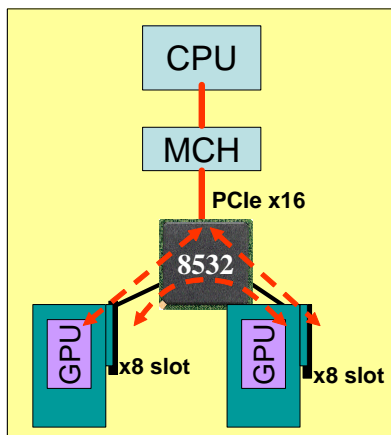
The PEX 8532 Switch Enables Dual-Graphics

The PLX Technology's PEX 8532 PCI Express Switch can split the one x16 PCIe port into two x8 ports for these Intel based systems. This allows companies to add the performance of dual graphics. This 32-Lane switch from PLX is available today and is currently being designed into systems to provide this capability. The peer-to-peer function of the PEX 8532 provides users the capability to perform high performance graphics rendering for high resolution monitors.

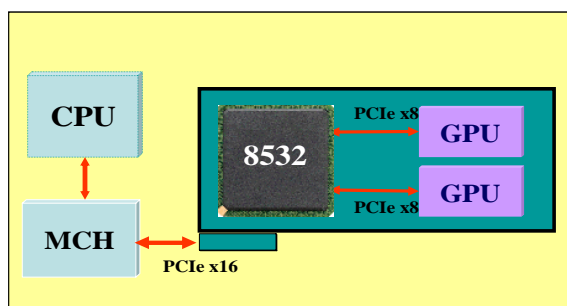


The ExpressLane PEX 8532 Solution

The PEX 8532 PCI Express switch offers two solutions. In one solution a PEX 8532 switch device can be integrated on the motherboard (as shown to the right). It will connect directly to the x16 PCIe port of the MCH (north-bridge) and will fan out the bus to create two x8 slots for two graphics cards.



A second solution would be to build an add-on card with dual GPUs and PEX 8532 switch. The PEX 8532 will be connected to the mother-board's x16 PCIe graphics slot on one side and have two GPUs on the other (as shown below).



In either usage model the PEX 8532 will allow host to GPU packet transfer and GPU to GPU (peer-to-peer) transfer to enable enhanced graphics rendering.

Key Advantages for PLX

The ExpressLane PEX 8532 is the most versatile and flexible PCI Express switch in the industry. It provides advance features such as flexible port configuration, non-transparent bridging, peer-to-peer data transfer, large on-chip packet memory, two virtual channels and advanced error reporting in a compact BGA package at affordable cost.

Maximize Performance

The packet buffers in PEX 8532 are not allocated to any specific port instead the architecture is based on the centralized packet memory. This allows optimum use of the packet memory based on Flow Control Credit assignment by the user for specific ports.

Additional PLX Advantages

- ◆ Broad PCI Express product portfolio that include switches & bridges
- ◆ Core competency in PCI Express technology & leadership in developing PCIe specifications & eco-system
- ◆ Leading efforts in several Industry forums for PCI Express adoption

Design Tools & Documentation:

On PLX Public Tool Box:

http://www.plxtech.com/products/pci_express/PEX85xx/default.asp

- ◆ DataBook, IBIS Models, BSDL Files, App Notes, Product Brief, Hspice Models

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