

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/66 MHz PCI Interface
- ◆ Supports Both Forward- and Reverse-Mode PCI Express to PCI Bridging

Other Features

- ◆ Large 8KB Internal FIFO
- ◆ 128 byte maximum PCI Express payload size
- ◆ 3.3V I/O and 5V tolerant PCI
- ◆ PCI Express Flow Control Buffering
- ◆ Eight (8) outstanding PCI Express Transactions
- ◆ Completely integrated PCI Express PHY
- ◆ External EEPROM configuration option
- ◆ Four (4) GPIO pins for maximum design flexibility
- ◆ JTAG
- ◆ External arbiter or internal programmable arbitration for up to four bus masters
- ◆ Option to provide PCI clock
- ◆ Supports PCI and Virtual Interrupts (MSI)
- ◆ Lead-free packaging also available

Application:

PCI Express Media Gateway

PLX Product:

PEX 8111 – x1 PCIe-to-PCI Bridge

Key Benefit:

Allows continued use of legacy boards in new Server Architectures

Media Gateways are now equipped with PCI Express connectivity

As Media Gateways migrate to include PCI Express (PCIe) backplanes, existing PCI target boards can no longer be used in the new PCIe-based Media Gateways. The target boards now need to be converted to support the new PCIe protocol. This is turning into a huge problem for all the PCI target boards that can no longer be deployed in the new PCIe-based Media Gateways.



A PCI to PCIe Bridge solves the problem

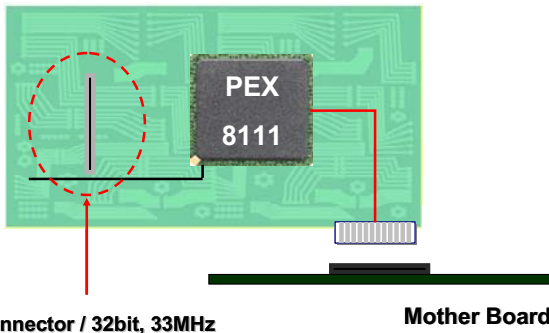


The simple addition of the ExpressLane™ PEX 8111 will quickly solve this problem. This x1 PCIe Bridge will allow continued usage of PCI-based legacy devices, without the need to redesign the silicon to support PCIe for new backplanes in the next-generation Media Gateways.

The PEX 8111 supports up to a 32-Bit / 66MHz PCI bus and converts it to a single x1 lane of PCI Express in Forward Mode. The PEX 8111 was built for opportunities that exist on Media Gateway Target boards. The PEX 8111 makes it easy to convert any PCI solution into a PCIe solution, thereby giving manufacturers the flexibility to supply PCIe-based solutions for the next-generation Media Gateways.

The addition of the PEX 8111 requires only 1 square centimeter of additional board real estate to convert the PCI interface to a single x1 lane PCIe. In addition, the bridge only draws 400 milliwatts of additional power. The small footprint, low power consumption and low cost of the PEX 8111 make it an ideal fit for this application.

PCIe native Target Board:



Now that the PEX 8111 easily transforms existing PCI target boards into PCIe target boards, legacy PCI devices can still be used in the next generation of Media Gateways. Therefore, customers can continue to use PCI cards based on their specific requirements (LAN, audio, graphics, etc.) or even custom cards with no plans of transitioning into the PCIe protocol. A simple PCIe target board with the ExpressLane™ PEX 8111 is the solution!

Shipping NOW!

The PEX 8111 is in production today and samples are in stock at PLX. There are two packages available in both lead-free, ROHS compliant versions as well as the traditional leaded packages:

Part Number	Description
PEX8111-BB66BC	Standard BGA Package
PEX8111-BB66FBC	Fine-pitch BGA Package
PEX8111-BB66BC F	Standard BGA Package, Lead-Free
PEX8111-BB66FBC F	Fine-pitch BGA Package, Lead-Free

Key Advantage of using PLX

PLX is the industry's leading supplier of PCI Express Bridges and Switches. The company is focused on the design and support of silicon in the first wave of PCI Express systems. Below is a table showcasing the PCIe bridges that are available today:

PCIe Bridges	Lanes	Description
PEX 8111	x1	PCI-to-PCIe
PEX 8114	x4	PCI-X to PCIe
PEX 8311	x1	Local bus to PCIe

PLX also offers a PCI Bus to USB 2.0 Bridge chip that converts PCI native devices into a USB solution.

Design Tools & Documentation:

On PLX Public ToolBox:

http://www.plxtech.com/products/pci_express/PEX8111/default.asp

- ◆ Data Book, Product Brief, IBIS Models, HSPICE Models, BSDL Files

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