

PEX 8111 Key Features

- ◆ Supports Both Forward- and Reverse-Mode PCI Express to PCI Bridging
- ◆ 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

Other Features

- ◆ Large 8KB Internal FIFO
- ◆ Completely integrated PCI Express PHY
- ◆ 128 byte maximum PCI Express payload size
- ◆ PCI Express Flow Control Buffering
- ◆ Eight (8) outstanding PCI Express Transactions
- ◆ External EEPROM configuration option
- ◆ Four (4) GPIO pins for maximum design flexibility
- ◆ 3.3V I/O and 5V tolerant PCI
- ◆ 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 Combo I/O Cards - Using PCI Native Silicon Endpoints

PLX Product:

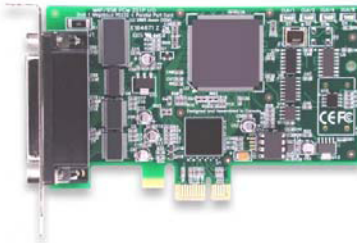
PEX 8111 – x1 PCIe-to-PCI Bridge

Key Benefit:

Deploy Combo Cards for the New Standard!

New Systems Lack Legacy I/O

You may have noticed how many of the new PCs shipping today from the major manufacturers are based on PCI Express rather than PCI. These products continue to expand the number of PCI Express Slots while they decrease the number of PCI slots.



These newer systems often ship *without* the good-old standard I/O functions such as RS-232, 1394 or ethernet interfaces to save cost and board space. That's progress!

However, this trend is creating a problem for users who need their new systems to talk with legacy I/O based peripherals, such as cash registers or audio processors. This is where the PCI Express Combo I/O card is finding a home.

Quick Solution: Low-Cost PCI-to-PCIe Bridge

Many of these designs are based on existing PCI-based I/O cards as shown on the right. This design is converted to a PCI Express solution with the addition of the ExpressLane™ PEX 8111 from PLX. Many of these designs are new, responding to the trend in new systems to eliminate legacy I/O.

The small footprint, low power consumption and low cost of the PEX 8111 make it an ideal fit for this application.

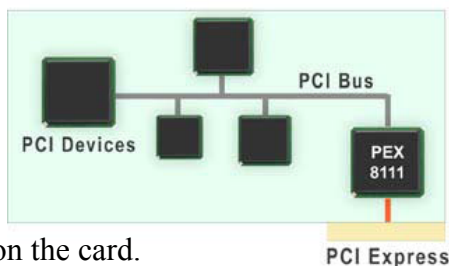


Many Flavors of I/O

Any PCI-native I/O chip can be used with the PEX 8111 to create complex combo cards with extensive connectivity. That is the beauty of PCI and PCI Express: both standards are compatible with existing software and typically new drivers are not required to launch these new cards. These I/O devices include RS-232, 1394, USB, Ethernet, SATA, SCSI and so on.

Multiple I/O Devices and/or Multiple Channels of I/O Supported

The ExpressLane PEX 8111 will support up to 4 loads on the PCI bus so it can also support multiple PCI native devices on the card.



The PEX 8111: A Feature-Rich PCI-to-PCI Express Bridge

The PEX 8111 from PLX supports up to a 66MHz 32-Bit PCI bus and converts it to a single x1 lane of PCI Express. It can be used in both a forward mode as described above, or in reverse mode to allow a PCI Express native chip to bridge back to a legacy PCI system.

The PEX 8111 requires only *1 square centimeter* of additional board real estate to convert the PCI interface to PCIe. In addition, the bridge only draws 400 milliwatts of additional power.

Shipping NOW!

The PEX 8111 is in production today and samples are in stock at PLX. In addition, RDK boards are in stock. These boards allow a quick evaluation of your design concept without having to lay out your own board.

The PEX 8111RDK offers a known, working hardware environment. For example, you can take your existing PCI Card and plug it into this card to prove out the concept. The RDK will be able to plug into a PCI Express socket with your card on the other side of the bridge. RDK boards are available for both forward and reverse mode operation.

Design Tools & Documentation:

On PLX Public ToolBox:

https://www1.plxtech.com/site/common/product_docs/PEX8000.asp

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

Contact Information

PLX Technology, Inc.
870 Maude Ave.
Sunnyvale, CA 94085 USA
Tel: 1-408-774-9060
Applications Support: Local FAE
Product Marketing:
Steve Moore smoore@plxtech.com
Web Site: www.plxtech.com

© 2005 PLX Technology, Inc. All rights reserved. PLX and the PLX logo are registered trademarks of PLX Technology, Inc. ExpressLane, PowerDrive and the PowerDrive logo are trademarks of PLX Technology, Inc., which may be registered in some jurisdiction. All other product names that appear in this material are for identification purposes only and are acknowledged to be trademarks or registered trademarks of their respective companies. Information supplied by PLX is believed to be accurate and reliable, but PLX Technology, Inc. assumes no responsibility for any errors that may appear in this material. PLX Technology, Inc. reserves the right, without notice, to make changes in product design or specification.

8111-Combo-EA-1.0