PEX 8533 RDK

ExpressLane^{TM} PEX 8533 Rapid Development Kit

Features

▪ **PEX 8533 RDK Hardware Module**
- o Module with on-board PEX 8533 PCI Express switch
- o 4 PCI Express Ports
  - ▪ One x16 upstream connector
  - ▪ One x8 downstream slot
  - ▪ Two x4 downstream slots
- o Plugs into a standard PCI Express slot
- o On-board RefClk fan-out buffer, EEPROM, and JTAG Interface

▪ **Complete Design Documents**
- o Schematics & Symbol
- o Layout source with Gerber files
- o Hardware Reference Manual
- o Software User's Manual
- o Quick Start Design Guide
- o Schematic Design Checklist
- o Bill of Materials

▪ **PEX 8533 Software**
- o GUI debug utility
- o PEX API & drivers with complete source code
- o EEPROM images for common configurations
- o Sample applications & code
- o Command Line applications

▪ **Software Environment**
- o Windows 2000, Windows 2003, Windows XP, and Windows Vista
- o Linux v2.4 & v2.6

Multi-purpose Software and Hardware Development Kit

The *ExpressLane* PEX 8533 Rapid Development Kit (RDK) contains powerful tools that allow PEX 8533 users to rapidly develop their hardware and software for easy and timely delivery of their products to market.

The PEX 8533 RDK includes software and hardware components providing everything that a user may need to get started with the device design in their system. In fact, software and hardware components of the RDK allow users to start their development as soon as they receive it.

The hardware provides instant access to the silicon and documentation enables users to utilize hardware reference design schematics, bill of materials, OrCAD symbols and Gerber files to start their hardware design right away.

The software component contains a set of files and Graphical User Interface (GUI) that would allow customers to start evaluating the silicon or writing their configuration code as soon as they power up the system.

Software Architecture Overview

The Software Development Kit (SDK) package supports all PLX *ExpressLane* PCI Express bridges and switches. It is composed of three layers; User Applications, PEX API, and Device Drivers (shown in Figure 1). The SDK benefits the design community by providing a uniform user interface and driver implementation.
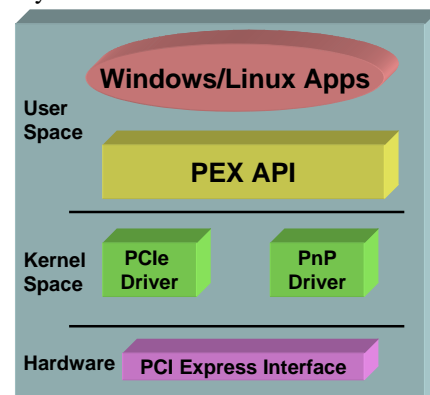
Figure 1. Software Architecture

Software Features

The SDK contains software for various host environments where the PEX 8533 is accessed through its PCI Express ports, typically through a device driver. This package includes the following features:

- PCI/PCIe Device APIs and device drivers compatible with Windows 2000, Windows 2003, Windows XP, and Windows Vista

- User-friendly Graphical User Interface (GUI) and applications

- PCI/PCIe Device API and device drivers compatible with Linux

- Easy download and install (www.plxtech.com/sdk)

Device Drivers

The PEX SDK contains two types of Windows device drivers. The first type is a Windows PCIe service driver for Transparent Mode of operation. The other category of device drivers is a standard driver for Non-Transparent bridging applications.

PCI Express API Library

The PEX SDK includes a PEX API for applications that require communication with multiple Device API libraries. The PEX API provides a set of functions that allow the user to access any PEX 8000 series device type.

Graphical User Interface (GUI)

The GUI utility allows the user to download/upload configurations, load EEPROM images, build code, and use other utilities provided by the SDK.

Figure 2. PEX 8533 RDK

Hardware Module

The hardware module includes the PEX 8533 with one x8 downstream port and two x4 downstream ports (female connectors). These slots can be used to plug in various endpoints (such as NIC cards, HBAs, SATA controllers, etc).

The PEX 8533 RDK board can be installed as an add-in card in a motherboard, tester module or any other system that supports standard PCI Express connectors.

The PEX 8533 RDK hardware module can be used to develop, test and validate your software independent of the SDK provided by the PLX. Additionally, it can be used as an evaluation vehicle for the PEX 8533 features and benefits.

The hardware module provides the following additional features:

- Onboard RefClk fan-out buffer
- Serial EEPROM and JTAG interfaces to configure/monitor the registers
- LEDs to show status of all 4 ports
- DIP switches to control port configuration
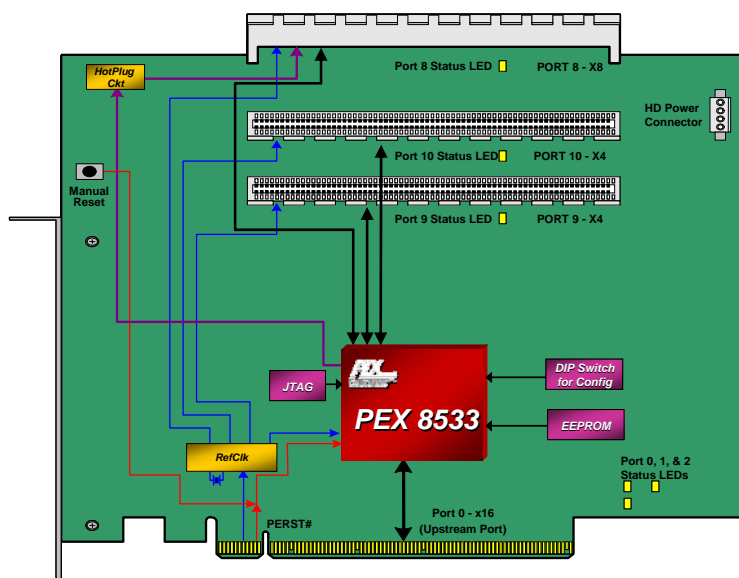- Manual PERST# capability

---

PLX Technology, Inc.
870 Maude Ave.
Sunnyvale, CA 94085 USA
Tel: 1-800-759-3735
Tel: 1-408-774-9060
Fax: 1-408-774-2169
Email: info@plxtech.com
Web Site: www.plxtech.com

Product Ordering Information

Part Number	Description
PEX 8533-AA RDK	PEX 8533 Rapid Development Kit w/ x16 Edge Connector
PEX 8533S-AA RDK	PEX 8533S Rapid Development Kit w/ x16 Edge Connector
x8 Adapter	x16 to x8 PCI Express Adapter
x4 Adapter	x16 to x4 PCI Express Adapter
x1 Adapter	x16 to x1 PCI Express Adapter

Please visit the PLX Web site at http://www.plxtech.com or contact PLX sales at 408-774-9060 for sampling.