



# PCI-X & PCI Core

**Getting Started: Xilinx**

Version 7.2.2 August 2010  
Copyright © PLDA 1996-2010



# PCI-X & PCI Core

## Getting Started

### Documentation Change History

Date	Version Number	Changes
August 2010	7.2.2	• No change
May 2009	7.2.1	• No change
April 2008	7.2.0	• Re-formatted and updated documentation

### Proprietary Notice

Words and logos marked with ® or ™ are registered trademarks or trademarks owned by PLDA SA. Other brands and names mentioned herein may be the trademarks of their respective owners.

Neither the whole nor any part of the information contained in, or the product described in, this document may be adapted or reproduced in any material form except with the prior written permission of the copyright holder.

The product described in this document is subject to continuous developments and improvements. All particulars of the product and its use contained in this document are given by PLDA in good faith. This document is provided “as is” with no warranties whatsoever, including any warranty of merchantability, non infringement, fitness for any particular purpose, or any warranty otherwise arising out of any proposal, specification, or sample.

This document is intended only to assist the reader in the use of the product. PLDA shall not be liable for any loss or damage arising from the use of any information in this document, or any error or omission in such information, or any incorrect use of the product. Nor shall PLDA be liable for infringement of proprietary rights relating to use of information in this document. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted herein.

### Product Status

The information in this document is final content pertaining to the PLDA PCI-X & PCI Core.

### Web Address

<http://www.plda.com>

# Table of Contents

<b>List of Tables</b> .....	<b>4</b>
<b>List of Figures</b> .....	<b>5</b>
<b>Preface</b> .....	<b>6</b>
About this document .....	6
Additional Reading .....	6
Feedback and Contact Information .....	7
<b>Chapter 1 Before you Start...</b> .....	<b>8</b>
1.1 System Requirements .....	8
1.2 EDA Tools Requirements .....	8
1.3 Package Features .....	8
1.4 Installing the Package .....	8
1.4.1 Windows 2000, XP, or Vista .....	8
1.4.2 UNIX/Linux Platform .....	8
1.5 Exploring the Installed Files .....	9
<b>Chapter 2 Frontend Design</b> .....	<b>10</b>
2.1 Creating a Parameterized Instance of the Core .....	10
2.2 You can also use the PLDA PCI-X & PCI Wizard Simulation with ModelSim .....	10
2.3 Simulation with NCSim .....	11
2.4 Timing Compliance .....	11
<b>Chapter 3 Reference Design</b> .....	<b>13</b>
3.1 Reference Design Architecture .....	13
3.2 Directory Structure .....	13
3.3 File Structure .....	14
3.4 Detailed Modules Description .....	15
3.5 Registers .....	15
3.6 Simulation .....	16
3.7 Synthesis and Hardware Implementation .....	17
3.8 Device Programming .....	17
3.9 Reference Design Test .....	17

## List of Tables

<b>Table 1: EDA Tools Requirements</b> .....	<b>8</b>
<b>Table 2: Directory structure for the installed package</b> .....	<b>9</b>
<b>Table 3: Timing compliance</b> .....	<b>11</b>
<b>Table 4: Reference Design Directory structure</b> .....	<b>13</b>
<b>Table 5: Detailed modules description.</b> .....	<b>15</b>
<b>Table 6: Registers description</b> .....	<b>15</b>

## List of Figures

Figure 1: PCI-X & PCI Wizard .....	10
Figure 2: Reference Design architecture .....	13
Figure 3: Sources directory structure .....	14

# Preface

## About this document

### Intended Audience

This document has been written for design managers, system engineers, and designers of Xilinx FPGAs who are evaluating or using the PLDA PCI-X & PCI IP Core.

### Scope

This document provides information to enable designers to integrate the PLDA PCI-X & PCI IP into their design flow as quickly as possible (installing, customizing, integrating, and simulating the Core). Accompanied by the *Reference Manual*, these two documents comprise all of the documentation for the PLDA PCI-X & PCI Core.

### Typographical Conventions

<i>italic</i>	Highlights important notes or publications
<b>bold</b>	Highlights interface elements.
COURIER NEW	DENOTES TEXT USED IN A CODE EXAMPLE OR A SIGNAL.

## Additional Reading

This section lists additional resources from PLDA and third-parties.

PLDA periodically updates its documentation. Please contact PLDA at [support@plda.com](mailto:support@plda.com) or check the Web site at <http://www.plda.com> for current versions.

### PLDA Publications

Please refer to the following documents for further information:

- *PCI-X & PCI Reference Manual*: The *Reference Manual* provides the complete functional description of the PLDA PCI-X & PCI Core.
- *PCI-X & PCI Testbench Reference Manual*: This document describes PLDA's PCI-X & PCI Testbench.
- *Build History*: The *Build History* lists changes made in each version and build of the Core.

### Other Publications

Please refer to the following documents for information on specification standards:

- *PCI-X Addendum to the PCI Local Bus Specification , revision 2.0a - PCI SIG, July 2003*
- *PCI Local Bus Specification , revision 3.0 - PCI Special Interest Group, February 2004*
- *PCI Compliance Checklist , revision 3.0 - PCI Special Interest Group, March 2004*
- *PCI Mobile Design Guide, revision 1.1 - PCI Special Interest Group, December 1998*
- *PCI Bus Power Management Interface, revision 1.2 - PCI SIG, March 2004*
- *CompactPCI Hot Swap Specification , revision 1.0 - PICMG, August 1998*
- *MiniPCI Specification , revision 1.0 - PCI Special Interest Group, October 1999*
- *PC Cards Standard , release 8.0 - PCMCIA Association, April 2001*





















