USB Cable Installation Guide

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XILINX®

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Revision History

The following table shows the revision history for this document.

Date	Version	Revision
02/02/2007	1.0	Initial Xilinx release.
03/06/2008	2.0	• Added support for Platform Cable USB II (DLC10). • Added support for Windows Vista. • Added Figure 1-2, page 12 and Figure 1-3, page 13 to address Windows Vista security dialog boxes. • Updated “Step 4: Determine Installation Flow,” page 14 for Linux operating systems. • Simplified “Step 5: Install the Xilinx USB Cable,” page 17 for Windows operating systems. • Updated download links for Windows and Linux cable driver installers. • Updated document template. • Numerous minor edits to enhancements clarity.
02/17/2009	2.0.1	• Removed link to *Platform Cable USB Data Sheet* in “Additional Documentation,” page 7.

Date	Version	Revision
01/20/2014	2.1	The Windows 7 Professional 32- and 64-bit operating system was added to Table 1, page 8 and to "For Windows 7, Windows XP, or Windows 2000 Professional Operating Systems," page 17.
07/28/2016	2.2	• Differentiated between ISE WebPACK and Vivado WebPACK, and added sentence about cable driver installation for Vivado tools to first paragraph of "About This Guide." • Updated URLs in "Additional Documentation." • Removed reference to Xilinx interactive configuration problem solver from "Additional Resources."

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About This Guide

This guide explains how to install the Xilinx family of USB programming cables, including information related to installing Xilinx USB cables with ISE® and ISE WebPACK™ design tool software. For updated information, see Xilinx Answer 54381. For information on cable driver installation for the Vivado® tools including the Vivado WebPACK edition, see UG973, *Vivado Design Suite User Guide: Release Notes, Installation, and Licensing*.

Guide Contents

This manual contains the following chapters:

- Chapter 1, "Installing Xilinx USB Cables," provides step-by-step installation procedure.
- Chapter 2, "Found New Hardware Wizard," explains installation using this wizard.
- Appendix A, "Known Issues," covers known issues that can occur during the installation procedure.

Additional Documentation

1. DS593, *Platform Cable USB II Data Sheet*

   This data sheet provides a complete description of the Platform Cable USB II hardware, including operation and electrical characteristics.

2. Platform Cable USB Frequently Asked Questions (FAQ)

   This FAQ contains supplemental information for the Platform Cable USB.

3. ISE Design Suite Software Manuals

   The ISE tools software manuals provide software installation instructions, pointers to additional online documentation and listings of known issues.

4. The ISE Release Notes contains WebPACK-specific information supplementing the ISE Software Manual. This includes additional software download and installation information, as well as ISE WebPACK design tool device and feature support.

To find additional documentation, see the Xilinx website at:

www.xilinx.com/literature.

Additional Resources

To search the answer database of silicon, software, and IP questions and answers, or to create a technical support WebCase, see the Xilinx website at:

www.xilinx.com/support

Supported Xilinx Software and Operating Systems

ISE Design Suite WebPACK tool software must be installed on a supported operating system before any Xilinx USB cable can be used. The following table lists operating system and Xilinx software combinations that can be used with Xilinx USB cables.

Table 1: **Supported Operating Systems and ISE or WebPACK Tool Versions**

Operating System	ISE or WebPACK Design Tool Version
Windows 2000 Professional SP4	6.3.03i or later
Windows XP Professional 32-bit	6.3.03i or later
Windows XP Professional 64-bit	9.1i or later
Windows Vista 32- and 64-bit	9.2 or later
Windows 7 Professional 32- and 64-bit	13.1 or later
Red Hat Enterprise Linux WS 3.0 32-bit	7.1i or later
Red Hat Enterprise Linux WS 3.0 64-bit	9.1i or later
Red Hat Enterprise Linux WS 4.0 32-bit	8.2i or later
Red Hat Enterprise Linux WS 4.0 64-bit	9.1i or later
Red Hat Enterprise Linux WS 5.0 32-bit and 64-bit	9.2i or later
SUSE Linux Enterprise 10.0 32- and 64-bit	10.1 or later

Notes:

1. The operating systems supported by Xilinx USB cables are a sub-set of the operating systems supported by the ISE or WebPACK design tool software.
2. WebPACK software is a free application available on the Xilinx ISE CD/DVD or for download at www.xilinx.com/products/design-tools/ise-design-suite/ise-webpack.html.

Conventions

This document uses the following conventions. An example illustrates each convention.

Typographical

The following typographical conventions are used in this document:

Convention	Meaning or Use	Example
`Courier font`	Messages, prompts, and program files that the system displays	`speed grade: - 100`
`Courier bold`	Literal commands that you enter in a syntactical statement	**`ngdbuild`** *design_name*
Helvetica bold	Commands that you select from a menu	**File > Open**
	Keyboard shortcuts	**Ctrl+C**
Italic font	Variables in a syntax statement for which you must supply values	**`ngdbuild`** *design_name*
	References to other manuals	See the *Development System Reference Guide* for more information.
	Emphasis in text	If a wire is drawn so that it overlaps the pin of a symbol, the two nets are *not* connected.
Square brackets [ ]	An optional entry or parameter. However, in bus specifications, such as **`bus[7:0]`**, they are required.	**`ngdbuild`** `[`*`option_name`*`]` *`design_name`*
Braces { }	A list of items from which you must choose one or more	**`lowpwr ={on|off}`**
Vertical bar |	Separates items in a list of choices	**`lowpwr ={on|off}`**

Vertical ellipsis
.
.
.
	Repetitive material that has been omitted	`IOB #1: Name = QOUT'`
		`IOB #2: Name = CLKIN'`
		.
		.
		.

Horizontal ellipsis ...	Repetitive material that has been omitted	**`allow block`** *block_name loc1 loc2 ... locn;*

Online Document

The following conventions are used in this document:

Convention	Meaning or Use	Example
Blue text	Cross-reference link to a location in the current document	See the section "Additional Resources" for details. Refer to "Title Formats" in Chapter 1 for details.
Red text	Cross-reference link to a location in another document	See Figure 2-5 in the *Virtex-II Platform FPGA User Guide.*
Blue, underlined text	Hyperlink to a website (URL)	Go to www.xilinx.com for the latest speed files.

Chapter 1

Installing Xilinx USB Cables

Proprietary device drivers must be installed to allow ISE® Design Suite and WebPACK™ design tool software (for example, iMPACT) to communicate with Xilinx USB cables. Installation flows can differ depending on:

- USB cable model
- ISE or WebPACK design tool software version
- PC operating system

In general, a complete USB cable installation is performed automatically when the latest ISE or ISE WebPACK design tool software is installed. However, additional actions might be necessary if, for example, the cable is to be installed on a Linux operating system. Another example is if Platform Cable USB II (Model DLC10) is to be used with ISE or WebPACK design tool software versions prior to 10.1.

This chapter is organized to provide you with a step-by-step and system-specific procedure for installing Xilinx USB cables. There are five steps required for installation:

Step 1: Install ISE or WebPACK Design Tool Software and USB Cable Drivers

Step 2: Find the Cable Model

Step 3: Find the ISE or WebPACK Design Tool Software Version

Step 4: Determine Installation Flow

Step 5: Install the Xilinx USB Cable

It is highly recommended that you start with Step 1: Install ISE or WebPACK Design Tool Software and USB Cable Drivers and follow the procedure in order.

Step 1: Install ISE or WebPACK Design Tool Software and USB Cable Drivers

1. Install the ISE or WebPACK design tool software. See the appropriate installation guide or WebPACK tool software FAQ (see "Additional Documentation" in "About This Guide").
2. During ISE or WebPACK tool software installation, confirm that the cable drivers are selected (Figure 1-1) to ensure that the drivers are copied from the installation media to the target system.

   Note: Cable drivers are not selected by default for Linux versions of ISE and WebPACK tool software.

   The window shown in Figure 1-1 does not appear when installing **WebPACK - Lab Install (Programming Tools Only)**. The cable drivers are installed automatically with this application.

Note: The window shown in Figure 1-1 can vary for different ISE design tool releases.

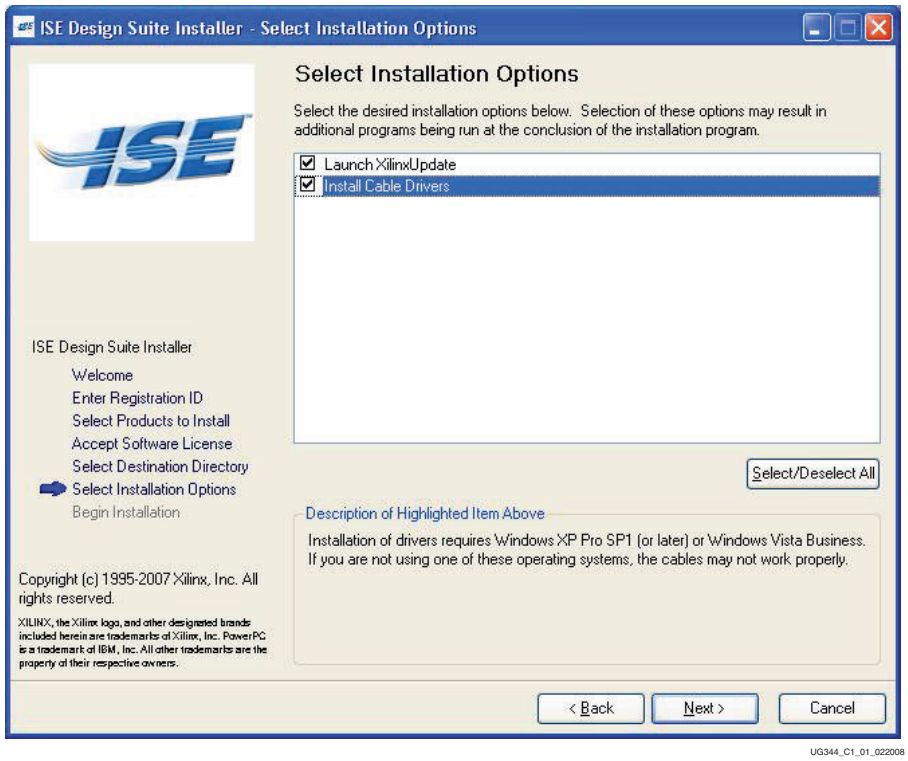
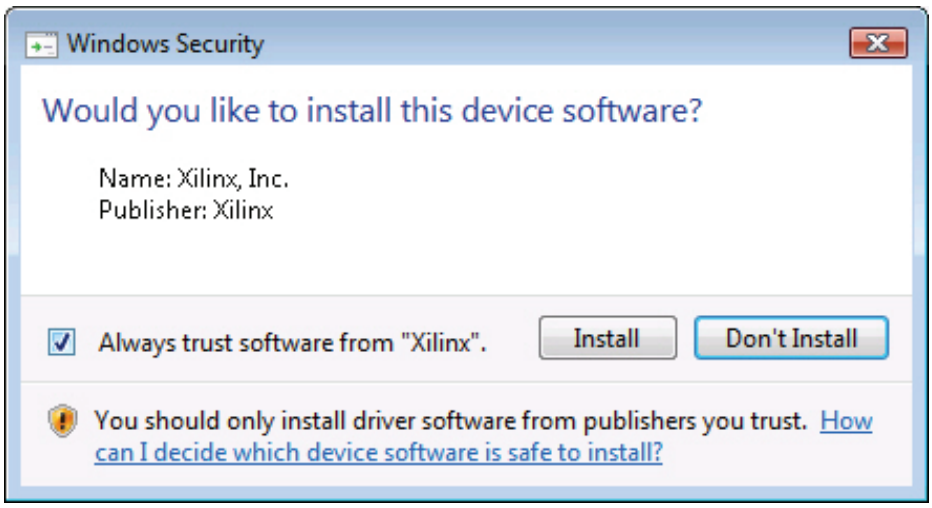


Figure 1-1: **ISE 10.1 Design Suite Installer**

3. (Windows Vista only) During installation, two Windows Security dialog boxes might appear: one for the Jungo driver (Figure 1-2) and one for Xilinx cable driver (Figure 1-3). In both instances, check the box next to **Always trust software from "XXXX"** and then click **Install**.

Figure 1-2: **Windows Security Dialog Box for the Jungo Driver (Windows Vista Only)**



UG344_C01_03_021708

Figure 1-3: **Windows Security Dialog Box for the Xilinx Cable Driver (Windows Vista Only)**

Step 2: Find the Cable Model

1. Find and record the model number of the USB cable. The model number is printed on the label attached to the cable case (Figure 1-4). Table 1-1 shows a complete list of Xilinx USB cable models.

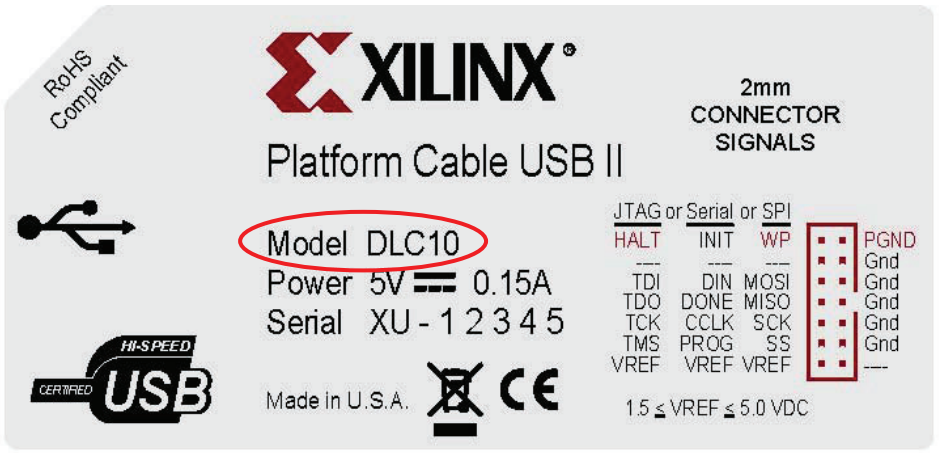


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Figure 1-4: **Model Number on a USB Cable**

Table 1-1: **Xilinx USB Cables**

Name	Model
Platform Cable USB II	DLC10
Platform Cable USB	DLC9G
Platform Cable USB	DLC9LP
Platform Cable USB	DLC9

2. Proceed to "Step 3: Find the ISE or WebPACK Design Tool Software Version."

Step 3: Find the ISE or WebPACK Design Tool Software Version

Find and record the ISE or WebPACK tool software version installed on the host system. Version information can be found using the Project Navigator or iMPACT GUI:

1. Launch the ISE Project Navigator or iMPACT.
2. From the pull-down menus near the top of the GUI, select **Help.**
3. Select **About...**
4. A dialog box similar to Figure 1-5 appears. Record the release version.
5. Proceed to "Step 4: Determine Installation Flow."

Figure 1-5: **Finding the ISE Software Version**

Step 4: Determine Installation Flow

After determining the cable model number and ISE or WebPACK design tool software version, select the installation flow based on the host PC operating system.

For Windows XP Professional or 2000 Professional

For model DLC10

For ISE or WebPACK design tool software version:

- 10.1 or later:

  Cable installation was completed during ISE or WebPACK design tool software installation. No further actions are required.

- 6.3.03i through 9.2.04i:

  Proceed to "Step 5: Install the Xilinx USB Cable."

  Note: Xilinx recommends updating to the latest ISE or WebPACK design tool software version to obtain current USB cable enhancements and fixes.

- 6.3.02i or earlier:

  Xilinx USB cables are not supported. Upgrade to a supported ISE or WebPACK design tool software version and then return to this step.

For Model DLC9LP or DLC9G

For ISE or WebPACK design tool software version:

- 8.2i or later:

  Cable installation was completed during ISE or WebPACK tool software installation. No further actions are required.

- 6.3.03i through 8.1.03i:

  Proceed to "Step 5: Install the Xilinx USB Cable."

  Note: Xilinx recommends updating to the latest ISE or WebPACK tool software version to obtain current USB cable enhancements and fixes.

- 6.3.02i or earlier:

  Xilinx USB cables are not supported. Upgrade to a supported ISE or WebPACK tool software version and then return to this step.

For Model DLC9

For ISE or WebPACK design tool software version:

- 7.1i or later:

  Cable installation was completed during ISE or WebPACK design tool software installation. No further actions are required.

- 6.3.03i (only):

  Proceed to "Step 5: Install the Xilinx USB Cable."

  Note: Xilinx recommends updating to the latest ISE or WebPACK design tool software version to obtain current USB cable enhancements and fixes.

- 6.3.02i or earlier:

  Xilinx USB cables are not supported. Upgrade to a supported ISE or WebPACK design tool software version and then return to this step.

For Windows Vista

For Model DLC10

For ISE or WebPACK design tool software version:

- 10.1 or later:

  Cable installation was completed during ISE or WebPACK design tool software installation. No further actions are required.

- 9.2i through 9.2.04i:

  Proceed to "Step 5: Install the Xilinx USB Cable."

  Note: Xilinx recommends updating to the latest ISE or WebPACK design tool software version to obtain current USB cable enhancements and fixes.

- 9.1.03i or earlier:

  ISE and WebPACK tool software versions prior to 9.2i are not supported on Windows Vista. Upgrade to a supported ISE or WebPACK design tool software version and then return to this step.

For Model DLC9LP, DLC9G or DLC9

For ISE or WebPACK design tool software version:

- 9.2i or later:

  Cable installation was completed during ISE or WebPACK design tool software installation. No further actions are required.

- 9.1.03i or earlier:

  ISE and WebPACK software versions prior to 9.2i are not supported on Windows Vista. Upgrade to a supported ISE or WebPACK design tool software version and then return to this step.

For Red Hat Enterprise Linux WS or SUSE Linux Enterprise

For Model DLC10

For ISE or WebPACK design tool software version:

- 10.1 or later:

  Use Table 1-1, page 13 to verify that the Linux operating system installed on the host supports Xilinx USB cables. If USB cables are supported, then cable installation was completed during the ISE or WebPACK design tool software installation and no further actions are required. Otherwise, upgrade to a supported Linux operating system and re-install the Xilinx design tool to complete the installation.

- 7.1i through 9.2.04i:

  Use Table 1-1 to verify that the Linux operating system installed on the host supports Xilinx USB cables. If USB cables are supported, then proceed to "Step 5: Install the Xilinx USB Cable." Otherwise, upgrade to a supported Linux operating system, re-install the Xilinx design tool, and then return to this step.

  Note: Xilinx recommends updating to the latest ISE or WebPACK design tool software version to obtain current USB cable enhancements and fixes.

- 6.3.03i or earlier:

  Xilinx USB cables are not supported. Upgrade to a supported ISE or WebPACK design tool software version and then return to this step.

For Model DLC9LP, DLC9G or DLC9

For ISE or WebPACK design tool software version:

- 9.2i or later:

  Use Table 1-1 to verify that the Linux operating system installed on the host supports Xilinx USB cables. If USB cables are supported, then cable installation was completed during the ISE or WebPACK design tool software installation and no further actions are required. Otherwise, upgrade to a supported Linux operating system and re-install the Xilinx design tool to complete the installation.

- 7.1i through 9.1.03i:

  Use Table 1-1 to verify that the Linux operating system installed on the host supports Xilinx USB cables. If USB cables are supported, then proceed to "Step 5: Install the Xilinx USB Cable." Otherwise, upgrade to a supported Linux operating system, re-install the Xilinx design tool and then return to this step.

Note: Xilinx recommends updating to the latest ISE or WebPACK design tool software version to obtain current USB cable enhancements and fixes.

- 6.3.03i or earlier:

  Xilinx USB cables are not supported. Upgrade to a supported ISE or WebPACK design tool software version and then return to this step.

Step 5: Install the Xilinx USB Cable

For Windows 7, Windows XP, or Windows 2000 Professional Operating Systems

This section provides a step-by-step procedure for installing Xilinx USB cables on all Windows hosts.

Note: Administrator privileges are required to perform some of the steps described in this section.

1. Disconnect all Xilinx USB cables from the host computer.
2. Download `ug344_windows.zip` from the following Xilinx website:

   secure.xilinx.com/webreg/clickthrough.do?cid=100840

3. Extract the contents of the archive. The extraction creates a folder named install_xusb. Open this folder and double-click on `install_xusb.bat` to start the installation.

   While the installer is running, a DOS terminal window opens and displays installation status messages. Warning messages can be safely ignored.

   Caution! Do not attempt to close this terminal window while the installer is running.

4. (Windows Vista only) While the installer is running, a Windows Security dialog box might appear (Figure 1-3, page 13). In this case, check the box next to **Always trust software from "Xilinx"** and then click **Install**.
5. When the installation is complete, connect the Xilinx USB cable to the desired USB port.

   (Windows XP Professional) Follow the Found New Hardware wizard when it appears (see Chapter 2, "Found New Hardware Wizard").

   (Windows Vista or Windows Professional 2000) Installation is complete and no other actions are required.

If the STATUS indicator on the cable illuminates, then the driver installation completed successfully.

On All Linux Operating Systems

This section provides a step-by-step procedure for installing the Xilinx USB cable on all supported Linux hosts (Table 1-1, page 13).

Note: Root permission is required to perform the steps described in this section.

1. Disconnect all Xilinx USB cables from the host computer.
2. Open a shell or terminal console.
3. Download `install_drivers.tar.gz` from the following Xilinx website:

   secure.xilinx.com/webreg/clickthrough.do?cid=103670

4. Extract the driver script and its support files by typing:

   ```
   tar xzvf install_drivers.tar.gz
   ```

The extraction creates a directory named install_drivers in the current directory.

5. Navigate to the install_drivers directory by typing:

```
cd install_drivers
```

6. Run the script by typing:

```
./install_drivers
```

7. When the installation is complete, connect the Xilinx USB cable to the desired USB port.

If the STATUS indicator on the cable illuminates, then the driver installation completed successfully.

Chapter 2

Found New Hardware Wizard

Running the New Hardware Wizard (Windows XP Professional Only)

The Windows operating system recognizes a USB device through the unique combination of the device USB vendor ID (VID) and the device product ID (PID). Xilinx USB devices have a VID assigned by Xilinx. Similarly, the Xilinx USB cable firmware loader has an associated PID. The Xilinx USB cable firmware, however, has a PID distinct from the USB cable firmware loader. Each specific combination of a device USB VID and PID requires a corresponding device driver to be registered with the physical USB port for proper operation under the Windows operating system.

The first time a cable is attached after software installation, Windows XP Professional invokes the **Found New Hardware Wizard** and registers the device drivers:

- Once for the Xilinx USB cable firmware loader (Figure 2-1 and Figure 2-2)
- Again for the Xilinx USB cable itself (Figure 2-3 and Figure 2-4)

In addition, Windows XP Professional invokes the wizard each time a Xilinx USB cable is plugged into a different physical USB port for the first time, or if a different Xilinx USB cable model is plugged into a previously configured port.

Note: The Found New Hardware Wizard does not appear in Windows Vista and Windows 2000 Professional.

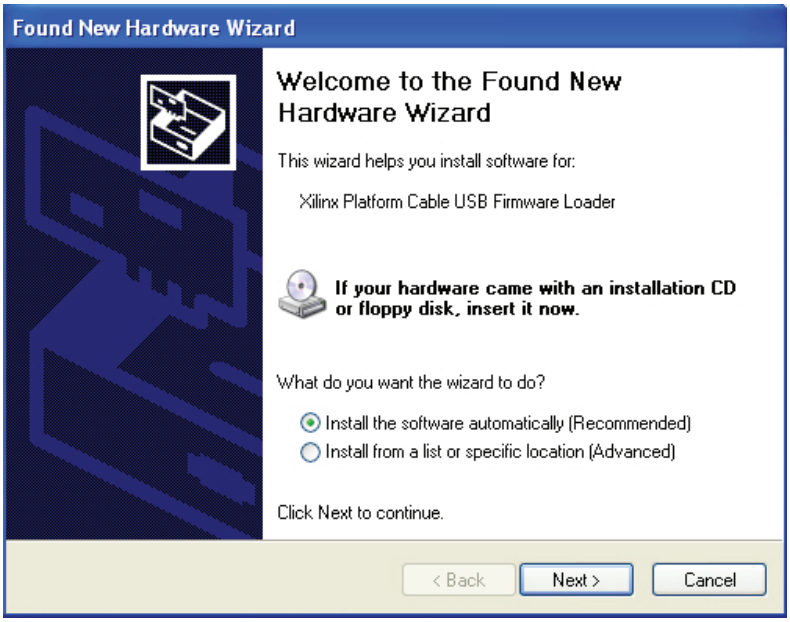

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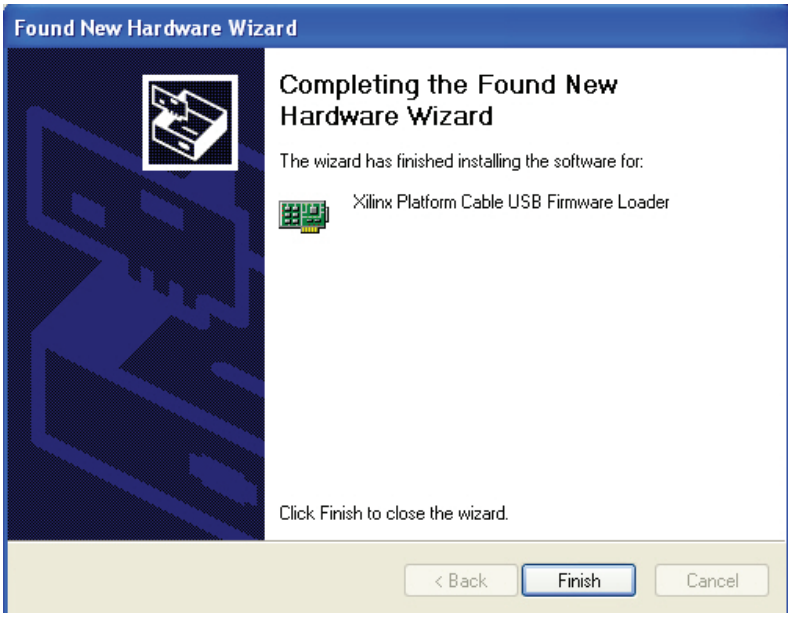
Figure 2-1: **Firmware Loader PID Detected**

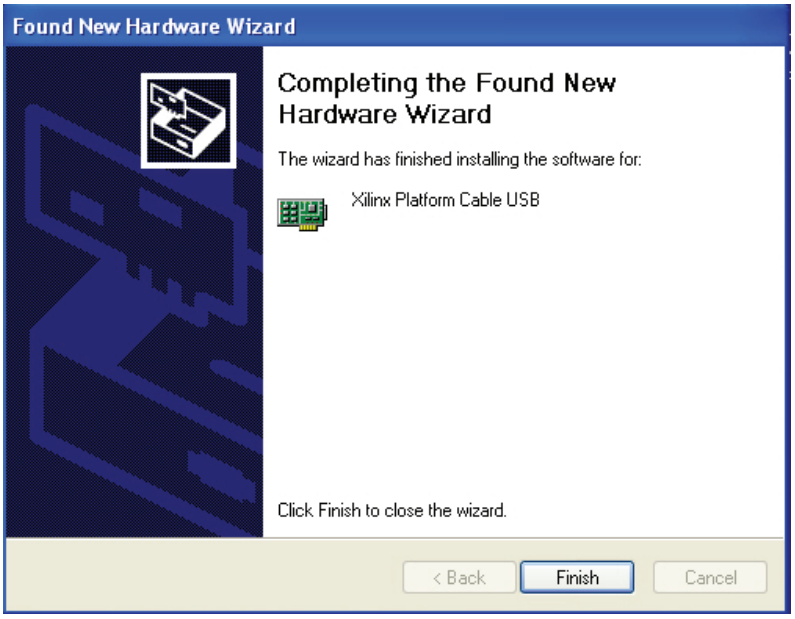


UG344_A1_02_110206

Figure 2-2: **Firmware Loader Driver Registered**

UG344_A1_03_110206

Figure 2-3: **Application PID Detected**



UG344_A1_04_110206

Figure 2-4: **Application PID Registered**

Appendix A

Known Issues

Windows Found New Hardware Messages

'Wizard Cannot Install this Hardware'

After following the **Found New Hardware** wizard, the dialog box shown in Figure A-1 can appear after installing a newer version of ISE® or WebPACK™ design tool software, or if the directory where ISE or WebPACK tools are installed is renamed.

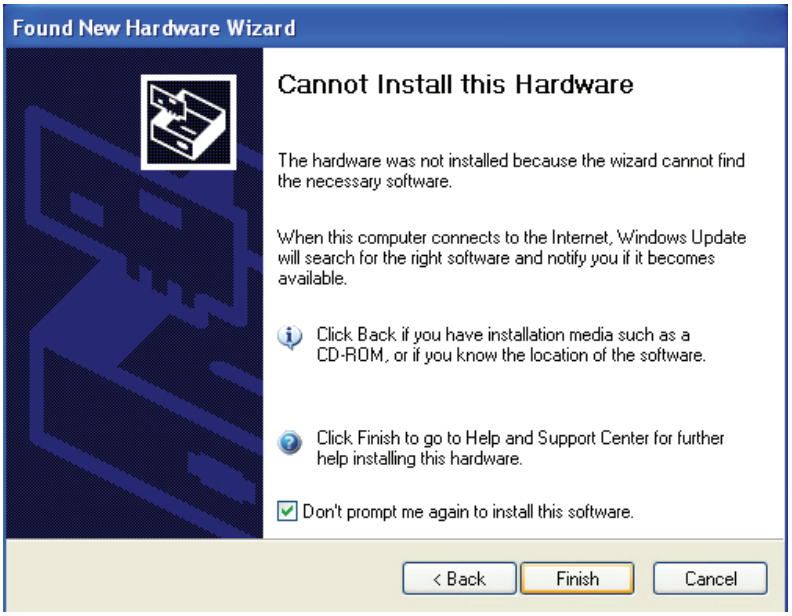


Figure A-1: **Cannot Install this Hardware**

To resolve this issue, follow this procedure:

1. From the window shown in Figure A-1, click **< Back**.
2. When the window switches to the one shown in Figure A-2, select the **Install from a list or specific location (Advanced)** radio button and then click **Next >**.

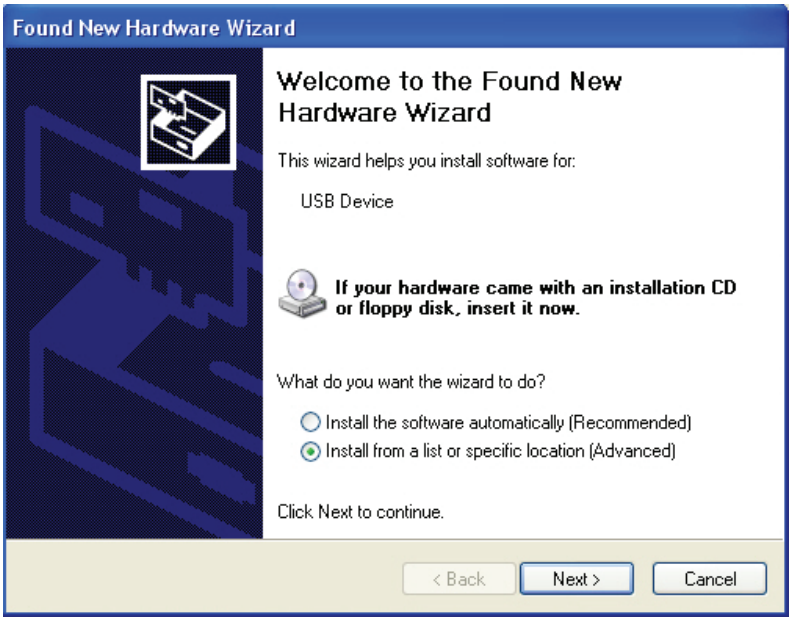


Figure A-2: **Install Software from a Specific Location**

3. When the window switches to the one shown in Figure A-3, click on the check box next to **Include this location in the search** and enter the path to the ISE or WebPACK tools installation directory. Then click **Next >**.

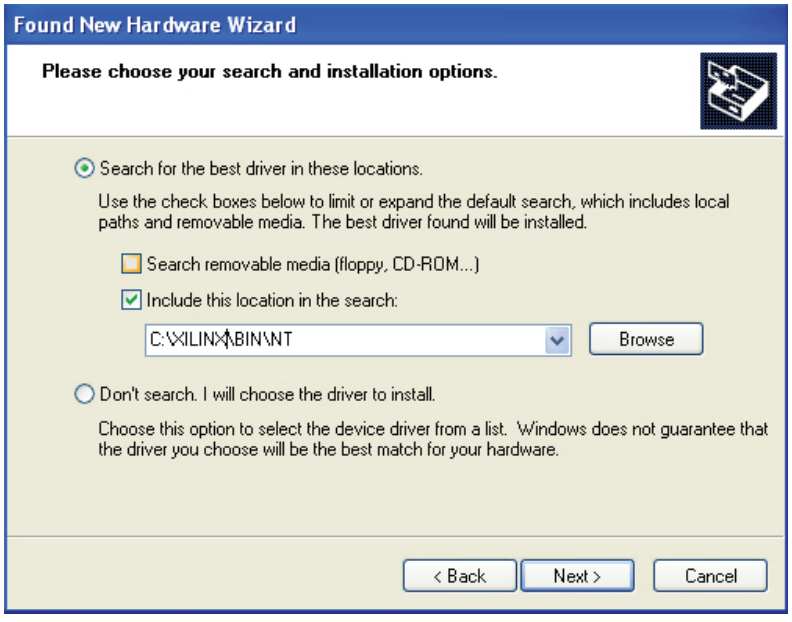


Figure A-3: **Pointing the Wizard to the ISE or WebPACK Installation Directory**

Note: The directory `c:\xilinx\bin\nt` is the default installation path. If an environment variable is used to establish a different installation location using the `%XILINX%` alias, point the wizard to the location defined by `%XILINX%\bin\nt`.

4. After a short file transfer, the wizard should indicate successful installation of the Xilinx Platform Cable USB Firmware Loader (Figure A-4). The "Xilinx Platform Cable USB" text can differ depending on USB cable type.

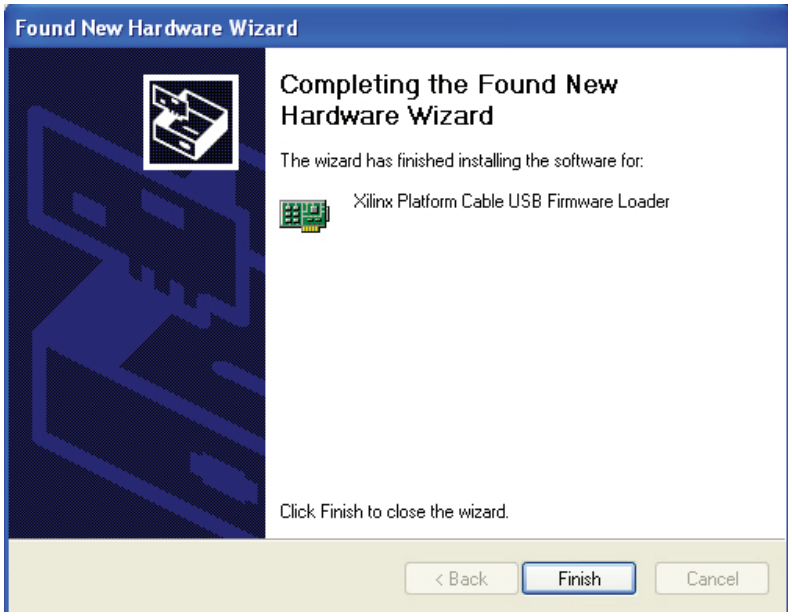


Figure A-4: **Found New Hardware Wizard Completes**

5. Proceed to the next iteration of the **Found New Hardware** wizard and then complete the installation.