

This document provides a brief introduction on how to install and run the LatticeECP3™ PCI Express Basic demo included with the LatticeECP3 Versa Development Kit. Please refer to the LatticeECP3 Versa Development Kit web page at www.latticesemi.com/ecp3versa for further details on additional demo designs, reference designs and other collateral included with the kit.

1 Check Kit Contents

The LatticeECP3 Versa Development Kit contains the following items:

- LatticeECP3 Versa Evaluation Board
- 12V AC/DC Adapter & International Plug Adapters
- USB Cable for Programming via PC (USB-A to Mini-B)
- QuickSTART Guide

Storage and Handling Tips:

Static electricity can shorten the lifespan of electronic components. Please observe these tips to prevent any damage that could occur from electro-static discharge:

- Use anti-static precautions such as operating on an anti-static mat and wearing an anti-static wristband.
- Store the board in the anti-static packaging foam provided.
- Touch the metal USB housing to equalize voltage potential between you and the board.



2 Install the Development Kit

The necessary PCI Express demo design files, bitstream, and drivers are available from the LatticeECP3 Versa Development Kit web page at www.latticesemi.com/ecp3versa.

The LatticeECP3 Versa Evaluation Board is pre-loaded with the LatticeECP3 PCI Express Basic Demo bitstream.

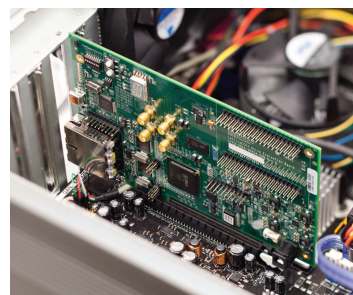
You will need to download PCI Express software drivers on your host PC. For the Windows environment, please download and execute the PCI Express Windows download file to install design files, software drivers, executables, and documentation on your host PC. If you are using a Linux-based system, see Appendix A of the *PCI Express Demos for the LatticeECP3 Versa Evaluation Board User's Guide* for installation instructions.

If you do not have Lattice Diamond® design software (version 1.2 or later) installed on your PC, visit www.latticesemi.com/ecp3versa for instructions on how to download the software and obtain a license.

3 Install the LatticeECP3 Versa Evaluation Board

Switch off power to your PC and install the LatticeECP3 Versa Evaluation Board using the x1 connector into a PCI Express slot.

Note: Ensure that the board is not connected to any external power supply. The board can be installed in any PCI Express slot of the same or greater width than the board.

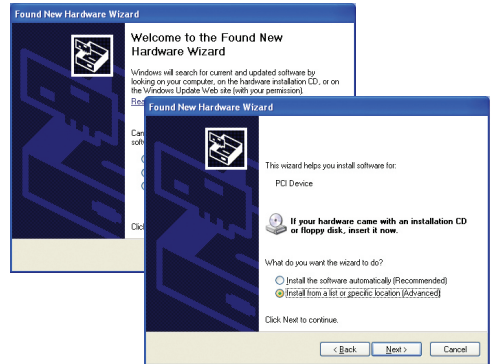


4 Install Hardware Drivers

Turn on power to the PC. A Found New Hardware popup is displayed if the board is recognized by Windows (refer to the *PCI Express Demos for the LatticeECP3 Versa Evaluation Board Troubleshooting* appendix if this window does not appear).

Choose the installation location from the specific location option. The default installation location is: `C:\Lattice_DevKits\ DK-ECP3-PCIE-030\Demonstration\ PCIeBasic\Driver`.

Check that the driver is installed correctly using Device Manager (**Control Panel > System > Hardware**).

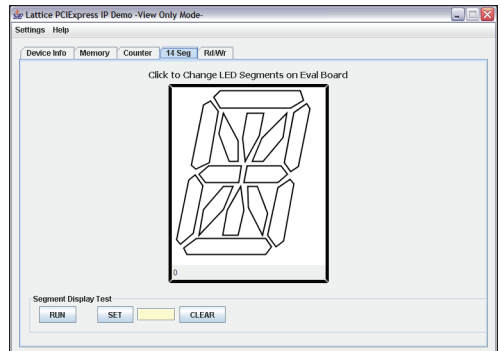


5 Run the PCI Express Basic Demo

To run the PCI Express Basic Demo from the desktop, click **Start > Program > LatticeECP3 Versa Evaluation Board > PCI Basic Demo**.

The 14-Segment Control window in the demo allows interactive control of the 14-segment LED display on the board. The Memory and Read/Write windows allow you to access the FPGA memory over the PCI Express bus.

Refer to the *PCI Express Demos for the LatticeECP3 Versa Evaluation Board User's Guide* for details on running the PCI Express Basic Demo and application features.



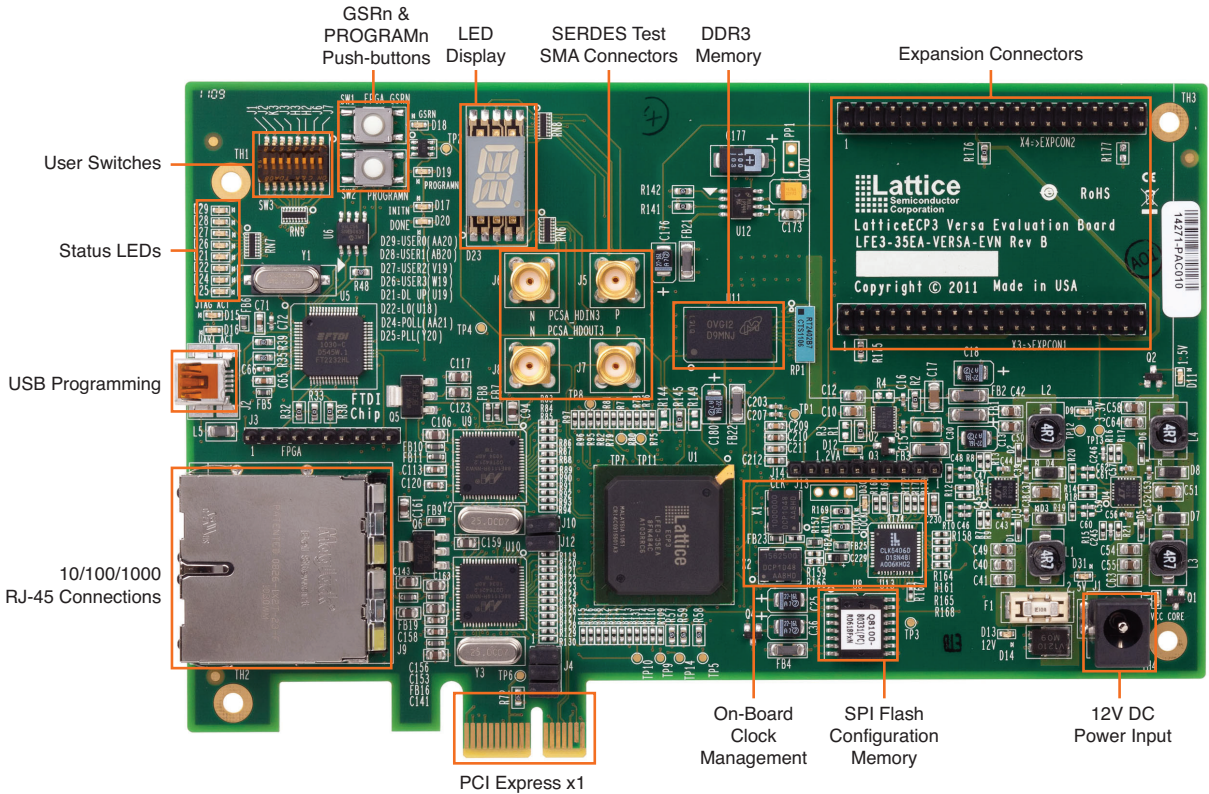
6 Done!

Congratulations! You have successfully installed the Versa Evaluation Board and accessed the LatticeECP3 via a PCI Express link. Refer to the *PCI Express Demos for the LatticeECP3 Versa Evaluation Board User's Guide* for the following:

- Running the PCI Express Throughput and DMA demos
- Modifying and generating the demo bitstreams from the Lattice Diamond project files
- Modifying and generating the demo software drivers from the provided source code

For information on additional LatticeECP3 Versa Development Kit demonstrations, reference designs and other collateral, refer to the LatticeECP3 Versa Development Kit web page at www.latticesemi.com/ecp3versa.

LatticeECP3 Versa Evaluation Board



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