



WHEN YOUR DIGITIZER IS DELIVERED

CHECK THAT YOU HAVE EVERYTHING

Verify receipt of all items on the packing list or invoice copy. The following is shipped with the standard PXD Series Digitizer:

- *Performance or Calibration Certificate*
- *Quick Reference Guide*
- *CD ROM*

NOTE: The warranty below replaces all other warranties, expressed or implied, including but not limited to any implied warranty of merchantability fitness, or adequacy for any particular purpose or use. LeCroy shall not be liable for any special, incidental, or consequential damages, whether in contract or otherwise. The customer is responsible for the transportation and insurance charges for the return of products to the service facility. LeCroy will return all products under warranty with transport prepaid.

Contact the nearest LeCroy customer service center or national distributor if anything is missing or damaged immediately. LeCroy is not responsible for replacement if not contacted immediately.

BE SURE TO READ THIS WARRANTY

The PXD Series Digitizer is warranted for normal use and operation, within specifications, for a period of one year from shipment. LeCroy will either repair or, at LeCroy option, replace any product returned to one of our authorized service centers within warranty period after verification that the product is found to be defective due to workmanship or materials, and not due to misuse, neglect, accident, or abnormal conditions or operation by the purchaser.

Spare and replacement parts, and repairs all have a 90-day warranty.

The Digitizer's firmware has been thoroughly tested and is presumed to be functional. Products not made by LeCroy are covered solely by the warranty of the original equipment manufacturer.

TAKE ADVANTAGE OF MAINTENANCE AGREEMENTS

LeCroy offers a variety of services under the heading of Maintenance Agreements. These provide an extended warranty for after the initial one-year warranty has expired. Installation, training, enhancements, and on-site repairs — among other services — are available through special supplemental support agreements. Inquire at your LeCroy customer service center or national distributor.

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OBTAIN ASSISTANCE

Help with installation, calibration, and the use of your PXD Series Digitizer scope in a range of applications is also available from your customer service center.

RETURN A PRODUCT FOR SERVICE OR REPAIR

Identify returned LeCroy product(s) by model and serial numbers. Describe the defect or failure, and provide name and contact number.

For factory returns, use a Return Authorization Number (RAN), obtainable from customer service. Clearly mark this number on the outside of the shipping package to ensure rapid forwarding within LeCroy.

Return those products requiring only maintenance to the nearest customer service center. Defective or damaged products should be returned directly to our factory. Contact our customer service for the return address.

NOTE: Use the original shipping carton when returning Digitizer for repair or replacement. If this is not possible, the carton used should be rigid. The Digitizer should be packed so that it is surrounded by a minimum of four inches (10 cm) of shock absorbent material.

Transportation charges to the factory are the responsibility of the customer, while products under warranty will be returned with transport prepaid by LeCroy. Outside the warranty period, provide a purchase order number prior to repair or replacement. The customer is responsible for parts and labor related to repair work, and return shipping charges.

Prepay return shipments. LeCroy cannot accept COD (Cash On Delivery) or Collect Return shipments. We recommend using air freight.

STAY UP-TO-DATE

To maintain the PXD Series Digitizer's performance within specifications, LeCroy recommends calibration at least once a year. LeCroy offers state-of-the-art technology by continually refining and improving the instrument's capabilities and operation. We frequently update both firmware and software during service, provided free of charge during warranty.

SAFETY INFORMATION

SAFETY SYMBOLS

The following symbols appear on the Digitizer's front cover or in this manual and alert the customer to important safety considerations.



Refer to the accompanying information or documents in order to protect against personal injury or damage to the instrument.



This symbol is used to denote the measurement ground connection.

CAUTION

The CAUTION sign indicates a potential hazard. It calls attention to a procedure, practice or condition which, if not followed, could possibly cause damage to equipment. If a CAUTION is indicated, do not proceed until its conditions are fully understood and met.

WARNING

The WARNING sign indicates a potential hazard. It calls attention to a procedure, practice, or condition which, if not followed, could possibly cause bodily injury or death. If a WARNING is indicated, do not proceed until its conditions are fully understood and met.

CAT I

Installation (Overvoltage) Category rating per EN 61010-1 safety standard and is applicable for the Digitizer's panel measuring terminals. CAT I rated terminals must only be connected to source circuits in which measures are taken to limit transient voltages to an appropriately low level.

OPERATING ENVIRONMENT

The Digitizer is intended for operation within a PXI chassis as a plug-in module. Ensure that the PXI chassis being used to host the Digitizer fully conforms to the latest PXI specifications.

The Digitizer is intended for indoor use and should be operated in a clean and dry environment.



WARNING

The Digitizer must not be operated in explosive, dusty, or wet atmospheres.

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The design of the Digitizer has been verified to conform to EN 61010-1 safety standard per the following limits:

Installation (Overvoltage) Category I: Refers to signal level, which is applicable for equipment measuring terminals that are connected to source circuits in which measures are taken to limit transient voltages to an appropriately low level.

Pollution Degree 2: Refers to an operating environment where normally only dry non-conductive pollution occurs. Occasionally a temporary conductivity caused by condensation must be expected.

POWER REQUIREMENTS

The Digitizer operates from within a PXI chassis. Power requirements depend on the Digitizer model as indicated in the PXD Series Digitizer Specifications section of this manual. DC voltages are supplied to the instrument from the PXI backplane. The instrument requires a variety of DC currents/voltages as outlined in the Specifications section.



CAUTION

Disconnect power to the PXI Chassis before installing or removing the Digitizer.

COOLING REQUIREMENTS

The Digitizer relies on externally supplied forced air cooling for proper operation. A minimum airflow of 5 cfm (PXD212, 512, 1021) or 15 cfm (PXD114, 214, 514, 522, 1022) to the Digitizer's air inlet at a temperature between 0 °C and 40 °C must be provided by the PXI chassis. The user should ensure that the PXI chassis can satisfy these airflow requirements.

GROUNDING REQUIREMENTS

To conform to the applicable safety and EMC requirements, ensure that the Digitizer instrument panel and the PXI chassis are "earth" grounded.



CAUTION

The outer shells of the front panel terminals (CH1, CH2, CH3, CH4, EXT) are connected to the instrument's chassis and, therefore, to the safety ground.

CALIBRATION

The recommended calibration interval is one year. Calibration should be performed by qualified personnel only.

ABNORMAL CONDITIONS

Operate the Digitizer only as intended by the manufacturer. If you suspect the Digitizer has been impaired, remove it from the PXI Chassis and secure against any unintended operation. The Digitizer is likely to be impaired, if for example, the instrument fails to perform the intended measurements or shows visible damage.



WARNING

Any use of the Digitizer in a manner not specified by the manufacturer may impair the instrument and cause an unsafe condition to develop.

CLEANING

Clean only the exterior of the Digitizer, using a damp, soft cloth. Do not use chemicals or abrasive elements. Under no circumstances allow moisture to penetrate the instrument.



CAUTION

No operator serviceable parts inside. Refer servicing to qualified personnel.

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INSTALL AND POWER UP THE DIGITIZER

INTRODUCTION

Prior to inserting the Digitizer into your chassis, install the necessary software components on your system. The list of components to install depends on the NI components you have already installed:

- If you have LabWindows/CVI 6.0 and/or LabView 6.1 installed, you don't need to install any additional NI components. You can skip the INSTALL NI SOFTWARE COMPONENTS section.
- If you are using an older version of LabWindows/CVI and/or LabView, first check the NI Web site for compatibility issues.
- If you have neither Lab/Windows nor LabView installed, verify that you have the following NI components installed:
 - NI VISA Engine v 2.6.0 or later
 - NI IVI Engine v 1.83 or later
 - NI CVI Runtime engine 6.0 or later

INSTALL NI SOFTWARE COMPONENTS¹

For detailed information about installing NI software, please visit the National Instruments Web site: <http://www.ni.com>.

The IVI Engine software is necessary when you are using IVI drivers. Visit <http://www.ni.com/ivi> and <http://www.ivifoundation.org> for more information about the IVI standard.

You also must have an IVI.INI in your directory `\VXIppnpWinNT\ivi`. If not, create one with the following default content:

```
[IviLogicalNames]  
[LogicalName->SampleScope]  
Description = "Sample Oscilloscope Logical Name"
```

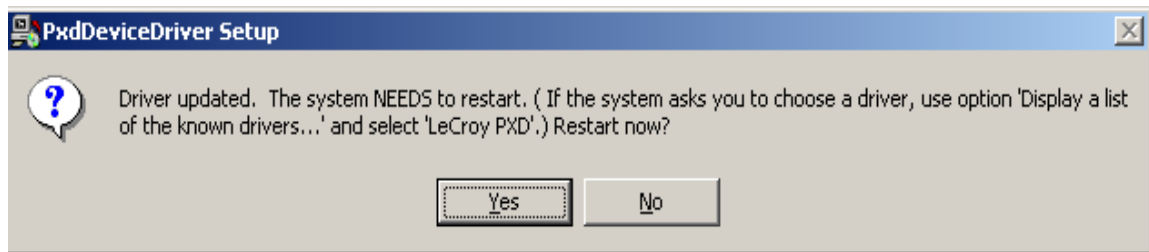
1. Each component is protected by copyright © 2001 by National Instruments Corporation, all rights reserved.

INSTALL PXD DEVICE DRIVER

Note: It is best to install the device driver with the Digitizer already installed in the chassis.

The Installation process is divided into five parts.

- I. Install the PXD Device Drivers onto the controller.
- II. Turn Power off and install the PXD Module hardware into the PXI mainframe.
- III. Repower and Run the Found New Hardware Wizard.
- IV. Install the PXD IVI Application software.
- V. Install the PXD IVI Driver. The following section will guide you step by step in this process.
 - Run the PxdDeviceDriver.exe file from the PXD Series Driver sub-directory on the CD ROM. The following dialog box will appear:



- Click **No**, then turn computer off and install Digitizer hardware.

INSTALL THE PXI DIGITIZERS

- Shut down the instrument and install the Digitizer in the PXI chassis slot by first inserting the Digitizer's card edge into the front module guides (top and bottom). Slide the Digitizer to the rear of the mainframe with the injector/ejector handle pushed down.
- When the Digitizer is securely in place, push up on the injector/ejector handle to fully seat the Digitizer in the chassis.
- Secure the Digitizer to the front panel of the chassis with the mounting screws.
- Cover any open slots in the PXI chassis to ensure proper air flow.

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- Power up the chassis. (If you are connecting to the chassis via an MXI-3 connection, power up the computer *after* powering up the chassis.)

CAUTION



Overheating will result if any slots in the PXI chassis remain open. Cover all open slots to ensure proper air flow. Chassis fans should be at maximum speed. Chassis cooling will vary from manufacturer to manufacturer. A minimum airflow of 5 cfm through the PXD 212, 512, and 1021; and 15 cfm through the PXD 114, 214, 514, 522, and 1022 to the Digitizer's air inlet at a temperature between 0 °C and 40 °C must be provided.

CAUTION



Static-sensitive parts. Proper handling, including a grounded wrist strap, should be observed at all times.

- Windows 2000 will recognize that you have a new PCI device installed and will also install the device drivers automatically.
- Windows XP will recognize that you have a new PCI device installed, and will prompt you for instructions on installing the device driver.
- After restart, you will see the "Found New Hardware" box, confirming that the hardware has been recognized.

NOTE: Windows XP and Win2000 users can confirm that the PXI Digitizer is properly recognized by the OS by viewing the Device Manager. This can be found within the "System" control panel option.

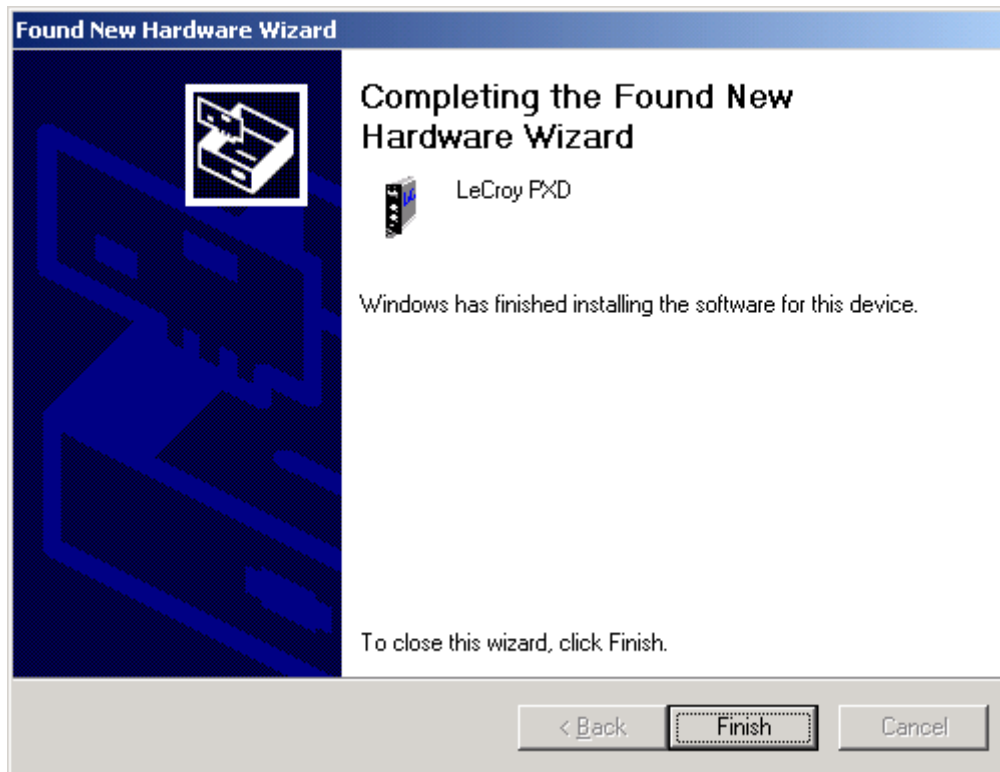
- Windows XP will start the New Hardware Wizard.



Click "Install the software automatically"

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- Click on Next to finish the installation.



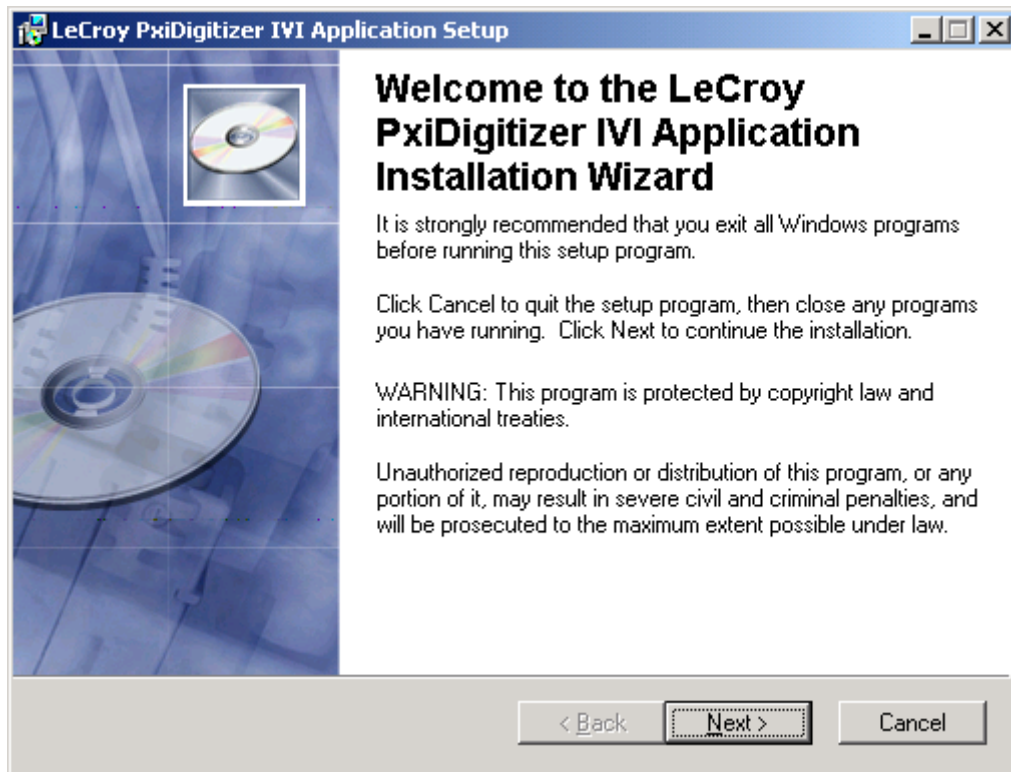
INSTALL PXD IVI APPLICATION SOFTWARE

This software is intended to be a tool to test operation of the module, and for simple triggering and viewing of signals.

Note: Before you install PXD IVI Application and Driver software, uninstall the previous version using Windows Add/Remove programs.

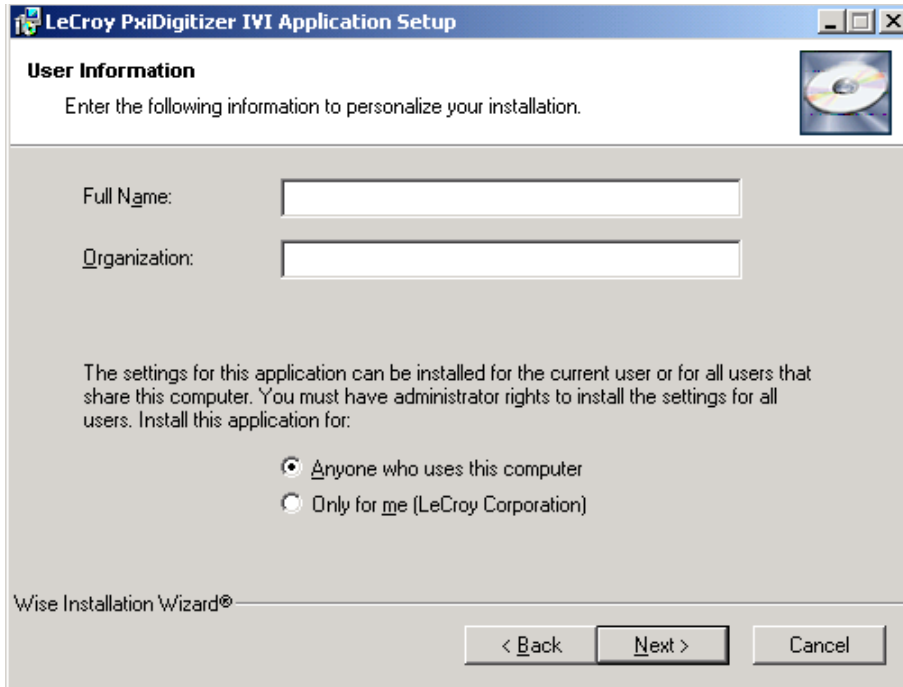
Demo program will not run until installation of IVI Driver is complete. Complete the next section before attempting to run application software.

- Run PXDIVIapplication.exe from the PXDIVI application subdirectory on the CD-ROM.
- Click on Next button to begin the installation.



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- Enter Name and Organization information. Select option for single or multiple users. You must have administrator rights to install the settings for all users.
- Click on the Next button.



LeCroy PxiDigitizer IVI Application Setup

User Information
Enter the following information to personalize your installation.

Full Name:

Organization:

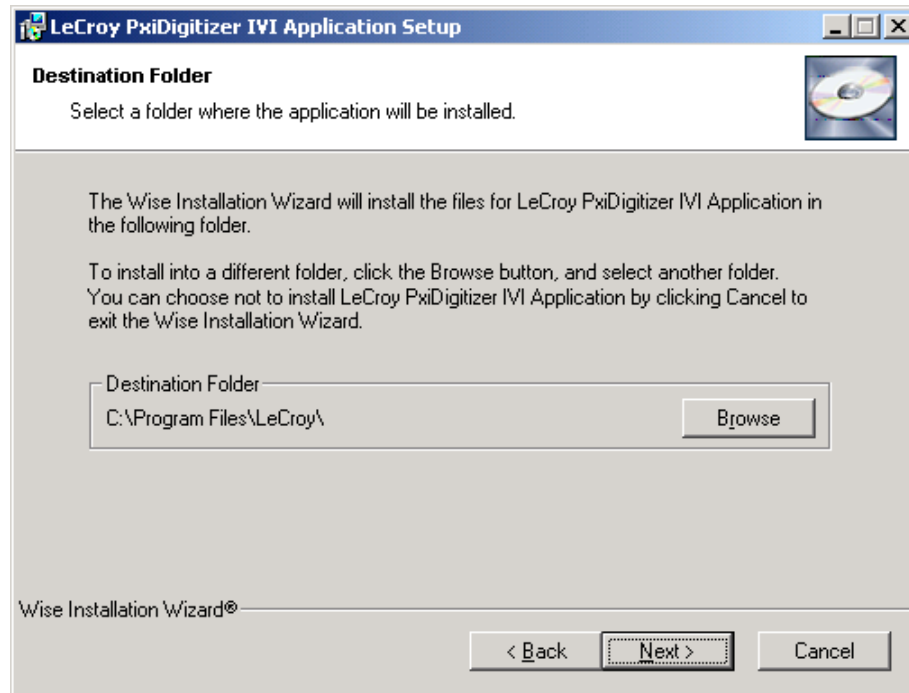
The settings for this application can be installed for the current user or for all users that share this computer. You must have administrator rights to install the settings for all users. Install this application for:

Anyone who uses this computer
 Only for me (LeCroy Corporation)

Wise Installation Wizard®

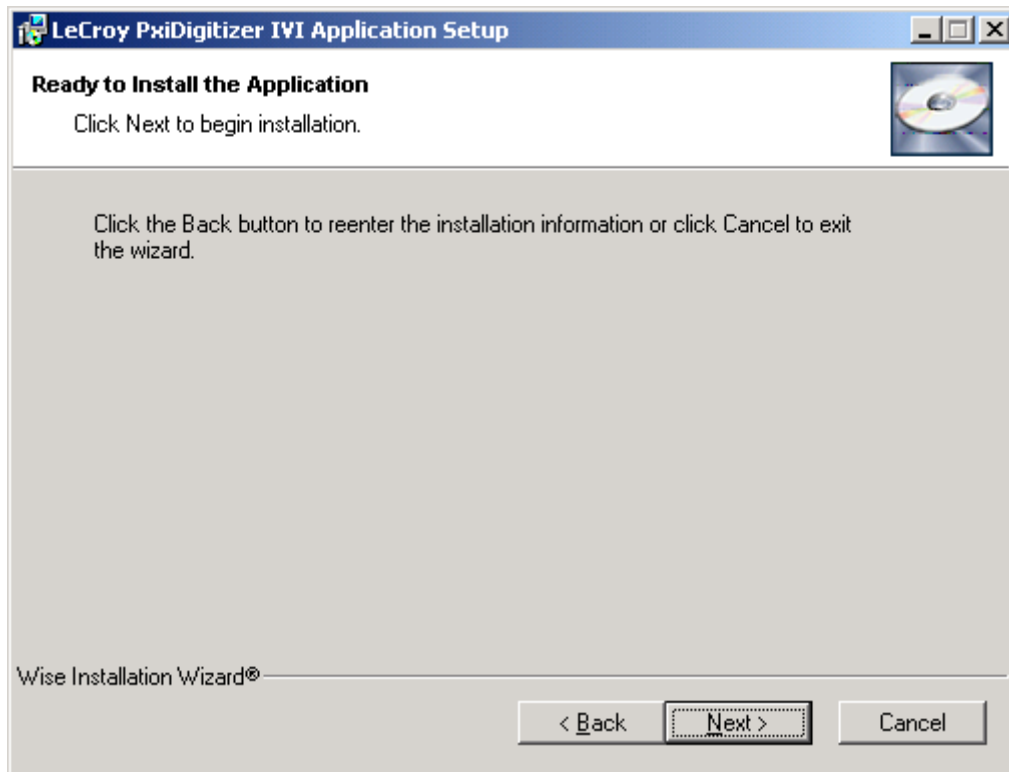
< Back Next > Cancel

- Files for LeCroy PxiDigitizer IVI Application will be located in C:\ProgramFiles\LeCroy\ destination folder. To install into a different folder, click on Browse and select new folder destination.
- Click on the Next button.

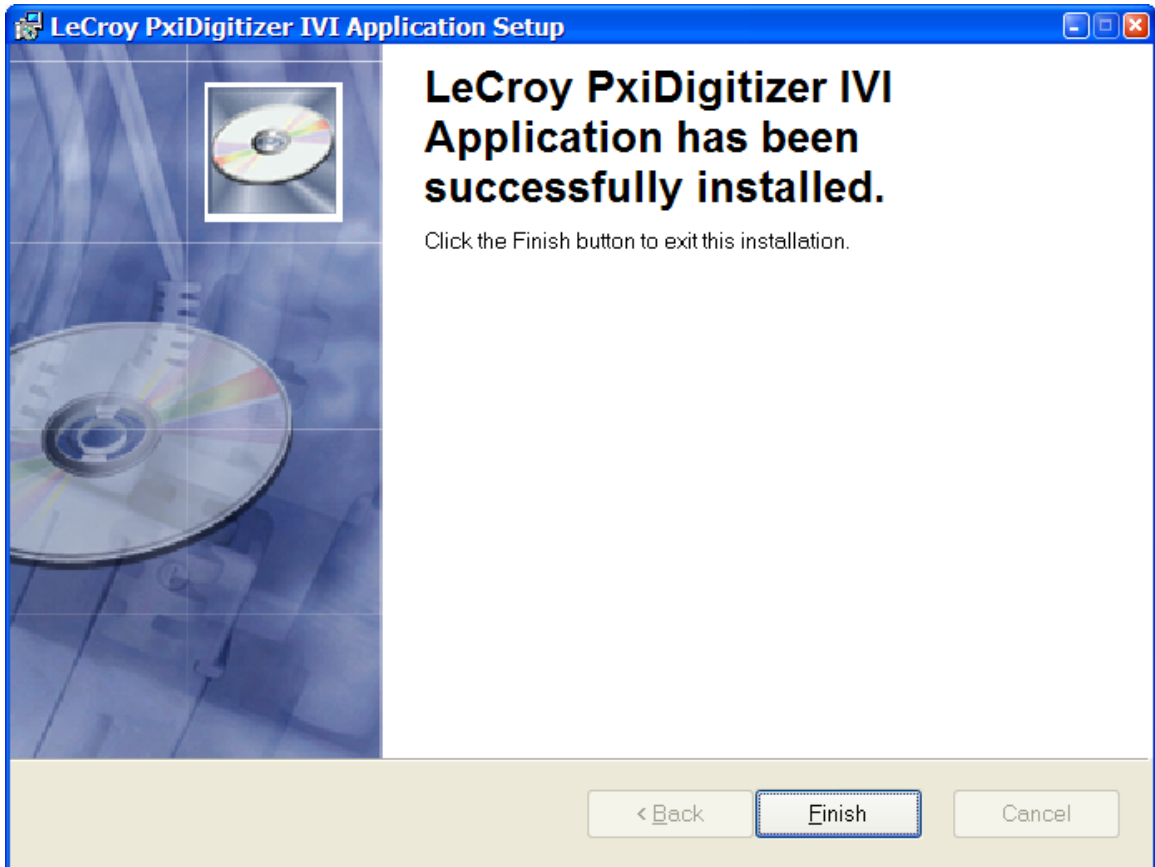


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- Click on the Next button to install the application.



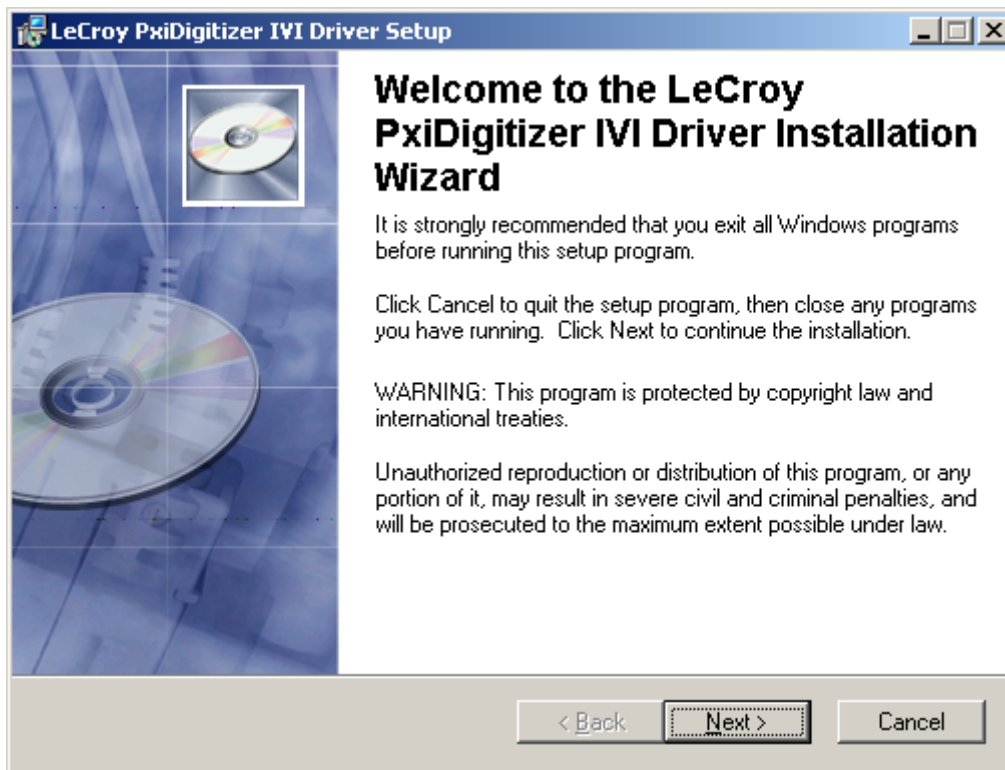
- Click on the Finish button. Installation is complete.



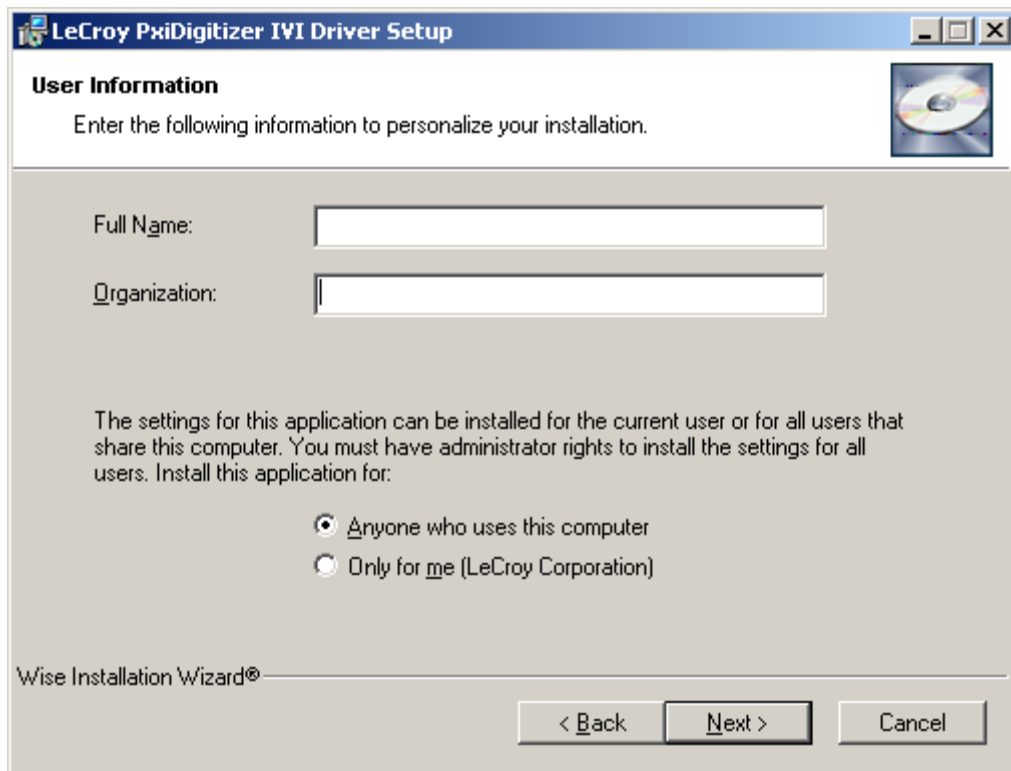
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INSTALL PXD IVI DRIVER

- Run PXDIVIdriver.exe from the PXDIVI driver subdirectory on the CD-ROM.
- Click on Next button to begin the installation.



- Enter Name and Organization information. Select option for single or multiple users. You must have administrator rights to install the settings for all users.
- Click on the Next button.

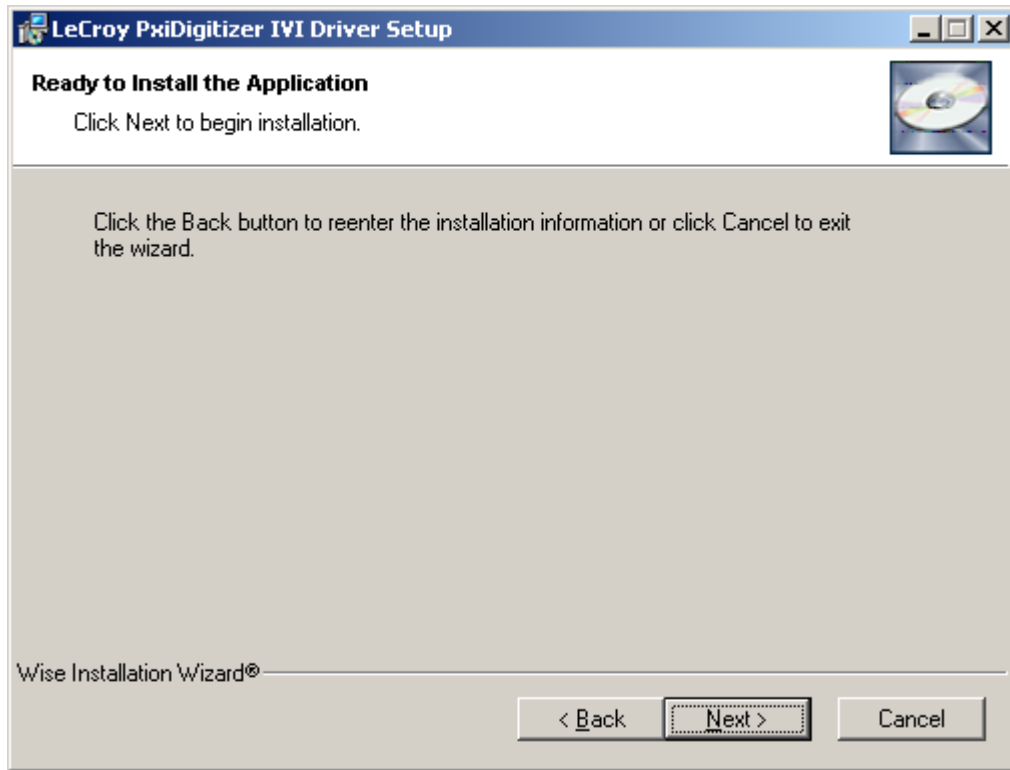


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- Files for LeCroy PxiDigitizer IVI Driver are installed in the following folder. To install into a different folder, click on Browse and select new folder destination.
- Click on the Next button.

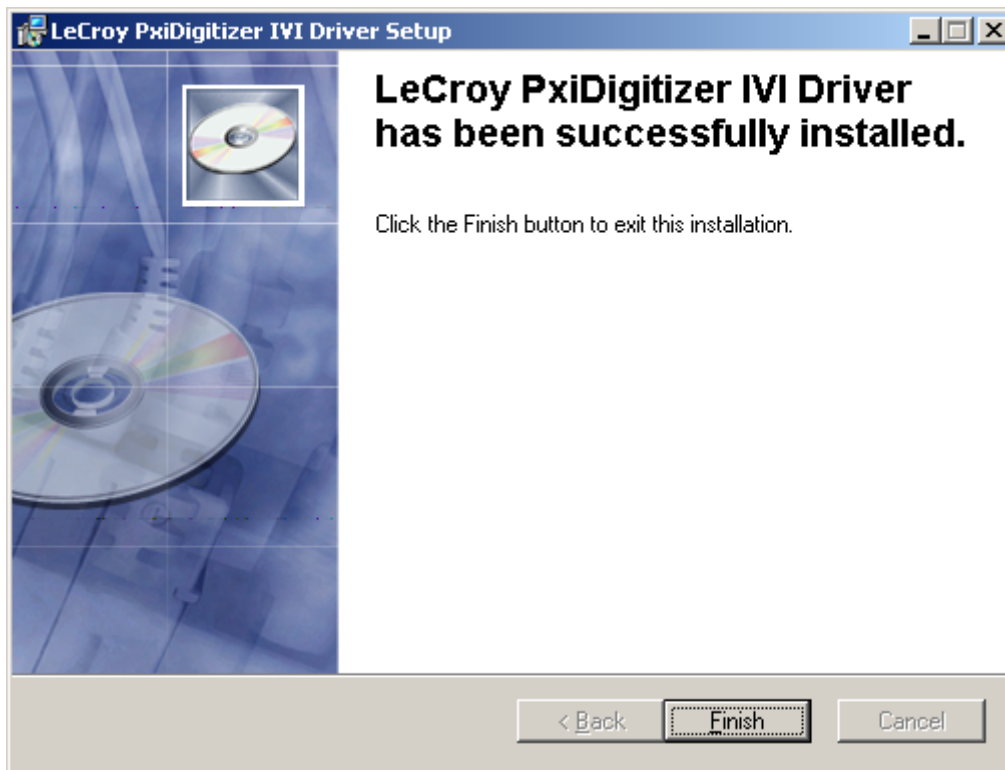


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- Click Next to begin installation.



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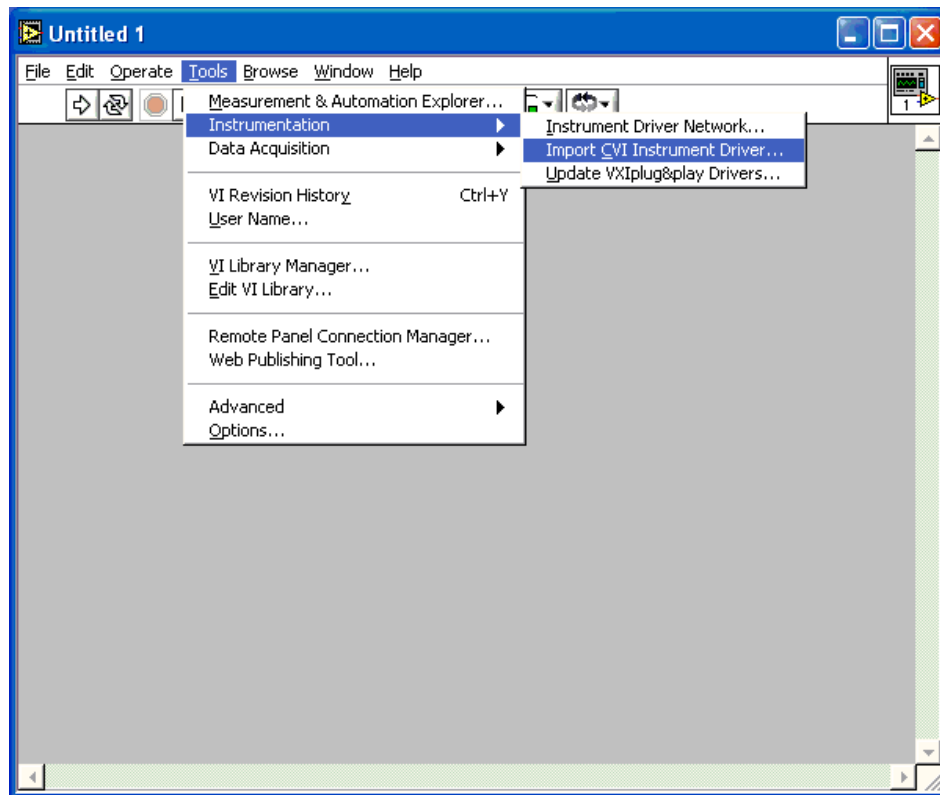
- Installation is complete. Run application program.



INSTALL COMPLEMENTARY FILES ONTO YOUR HARD DRIVE (OPTIONAL)

In order to run the example programs provided, you have to generate a LabView driver from the CVI driver:

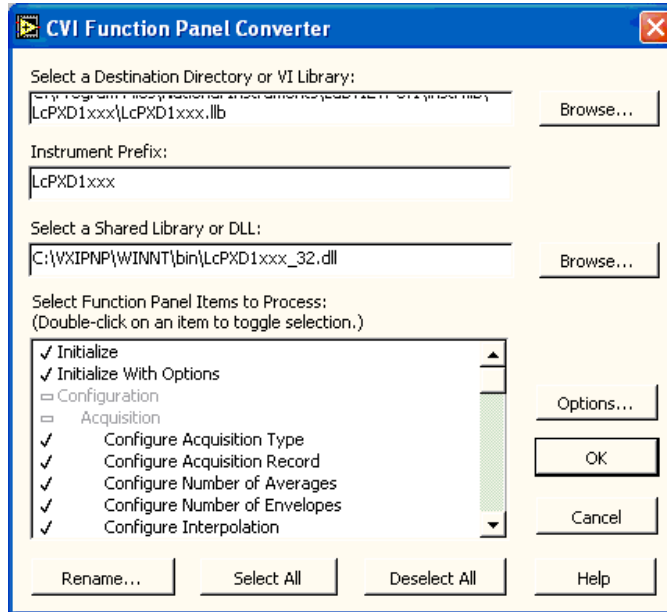
1. Start LabView.
2. Select menu **Import CVI Instrument Driver**:



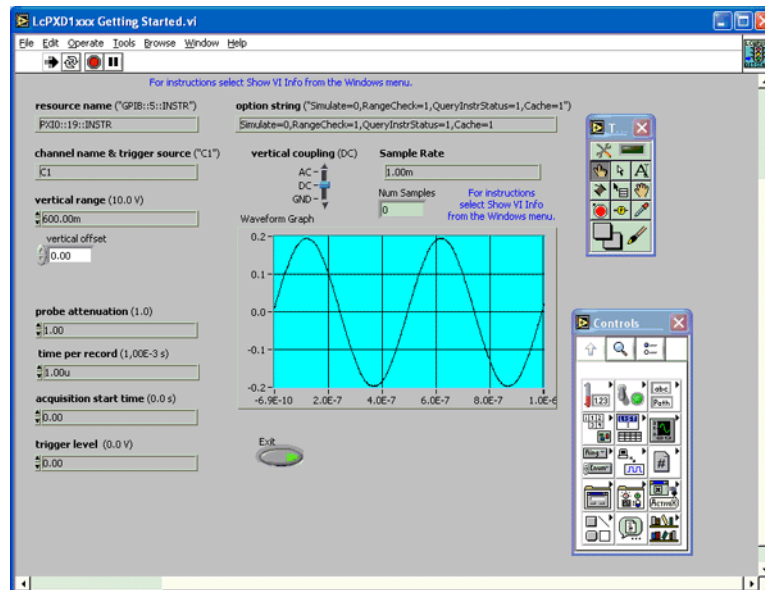
3. Select file **LcPXD1xxx.fp** in directory `VXI\pnp\winnt\LcPXD1xxx`. If you have LabWindows/CVI installed, this file is in directory `C:\Program Files\National Instruments\MeasurementStudio\CVI\instr`.
4. Select CVI driver DLL **LcPXD1xxx_32.dll** from `VXI\pnp\WINNT\bin`.

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- Click OK



- Open the example file provided (LcPXD1xxx Getting Started.vi) and start running:



- Click the **Exit** button.

- 
8. Wait until execution is finished.
 9. Exit from LabView.

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