LabWindows/CVI

LabWindows/CVI meets the changing needs of test engineers with an interactive development environment designed for virtual instrumentation. With easy-to-use development tools, you can quickly create, configure, and display measurements during program design, verification, and testing. LabWindows/CVI automates much of the manual coding and compiling.

1. **Designing User Interfaces**
   - Design graphical user interfaces (GUIs) in the intuitive User Interface Editor. Select from controls designed specifically for instrumentation.

2. **Customizing Controls**
   - Customize each GUI control with easy-to-use dialog boxes.

3. **Generating Code**
   - Automatically generate an ANSI C program based on the GUI with LabWindows/CVI CodeBuilder. CodeBuilder creates code that responds automatically to user events such as mouse clicks, key presses, and menu selections.

4. **Using Function Panels**
   - Use interactive function panels to generate library calls, test the calls, and insert them into the program. A function panel is a graphical representation of a LabWindows/CVI function and its parameters.

5. **Editing Source Code**
   - Complete your program using the built-in source editor. Use the source code completion options to view functions, variables, prototypes, and help within the Source window. You also can access input selection dialog boxes for parameters and declare parameter variables from within the Source window.

6. **Debugging**
   - Use LabWindows/CVI debugging tools to catch common programming mistakes. The patented User Protection feature automatically checks for invalid program behavior. Set breakpoints and use tooltips to pause program execution and view or modify variable values.

7. **Distributing Applications**
   - Create a distribution to package your LabWindows/CVI application and all of its dependencies so that you can distribute your application to another computer.

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**System Requirements**

- Personal computer using a Pentium 600 or higher microprocessor
- Microsoft Windows 2000/XP
- 800 x 600 resolution (or higher) video adapter
- Minimum of 128 MB of RAM, 256 MB recommended
- 150 MB free hard disk space
- Microsoft-compatible mouse

**Product Resources**

- LabWindows/CVI Help—Use the LabWindows Help to access comprehensive information about LabWindows/CVI, its functions, tools, and menus. To launch the LabWindows/CVI Help from LabWindows/CVI, select Help » Contents.
- Guide to Documentation—Use the Guide to LabWindows/CVI Documentation to find resources that can help you develop applications in LabWindows/CVI. The Guide to LabWindows/CVI Documentation contains information for new and upgrade users, directions for searching installed PDFs and using context-sensitive help, and links to PDFs of the following documents:
  - LabWindows/CVI Release Notes
  - Getting Started with LabWindows/CVI
  - LabWindows/CVI Instrument Driver Developers Guide
  - Application notes
  - White papers

**User Interface Library**

This section includes functions that programmatically control the user interface. It covers aspects such as:

- **Set/Get/Check Attribute**
- **Callbacks**
- **Instrument Driver Session**
- **Logical Names**
- **Memory Allocation**
- **Error Information**

**PV Library**

- **Accessing Pixel Values**
- **Batch Drawing**
- **Axis Label Strings**
- **Strip Chart Traces**
- **Graph Legend**
- **Graph Cursors**

**Utility Library**

- **Advanced Analysis Library**
- **Utility Library**
- **NI-DAQmx Library**
- **ActiveX Library**
- **Formatting and I/O Library**
- **DIAdem Connectivity Library**
- **Internet Library**

**IVI Library**

- **The IVI Library contains functions that program and control IVI drivers. IVI-compliant drivers have a standard interface between other Windows applications using the DDE standard.**

**LabWindows/CVI Library**

- **The LabWindows/CVI Library contains functions that perform various operations, including using the system timer, managing disk files, handling user input, and generating multiple threads.**

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**Note:**

- The LabWindows/CVI Base Package does not include the Internet Library.
- The DIAdem Connectivity Library contains functions that directly transfer data between LabWindows/CVI and DIAdem.
- The RS-222 Library contains functions that control multiple RS-222 ports using interrupt driven I/O.