

LabVIEW Enterprise Connectivity Toolset

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Database Connectivity Tools

- Direct interaction with local or remote databases
- Connectivity to most popular databases through Microsoft ADO technology
- High-level, easy-to-use functions for common database operations
- Save records in XML format
- Complete SQL functionality
- Advanced functions for detailed accessibility to databases

SPC Tools

- Perform online SPC while collecting data or analyzing recorded data
- Create control charts
- Display process statistics and histograms
- Perform Pareto analysis

Internet Tools

- Incorporate Web server access control/security
- Send e-mail from applications
- Send files or raw data to an FTP server
- Build common gateway interface (CGI) programs to perform server operations



Overview

As your business grows, you need enterprise connectivity tools to track the progress of your product as it moves from research and development to production, test, and deployment. The NI LabVIEW Enterprise Connectivity Toolset provides integrated tools for database operations and SPC, and Internet-enabling technologies that give you the access and networking you need for your business operation. The components of the Enterprise Connectivity Toolset are also available separately in the Database Connectivity Toolset, the SPC Toolkit, and the Internet Toolkit.

Engineers and scientists often need to perform important functions such as conducting research, publishing conclusions, displaying data on the Web, archiving source code versions, and scheduling for test development teams. With the LabVIEW Enterprise Connectivity Toolset, you can easily incorporate these and many other important capabilities into your LabVIEW applications.

Database Connectivity Toolset

The new LabVIEW Database Connectivity Toolset contains easy-to-use function libraries for performing database operations within LabVIEW without SQL programming. With this toolset, engineers and scientists can easily create a framework to manage their test data using records of information. For example, instead of measurement numbers, databases can store complete test results with operator names, test times, and other information in a single record. This makes it easier to store and retrieve test information, compare actual results to historical data, document a large series of different tests, and so on.

Databases Made Easy

The LabVIEW Database Connectivity Toolset provides powerful, easy-to-use tools for quickly accessing databases. With this toolset you can:

- Insert and select data from databases
- Create and drop database tables
- List the tables and columns in a database
- Accept or reject multiple database operations (transactions) based on user-defined criteria
- Execute parameterized or immediate structured query language (SQL) statements
- Execute stored procedures in a database
- Select information in a database and save it to a file in XML format

Compatible Databases

The LabVIEW Database Connectivity Toolset readily connects to popular databases such as Microsoft Access, Microsoft SQL Server, Oracle, dBase, and more. With the LabVIEW Database Connectivity Toolset, you can access any database for which you have an appropriate ADO-compliant OLE DB provider or ODBC driver.

ActiveX Data Objects (ADO)

Microsoft ActiveX Data Objects (ADO) provide the foundation for the LabVIEW Database Connectivity Toolset. ADO offers an easy-to-use interface for any OLE DB or ODBC data source, and has an ActiveX Automation interface, high-speed performance, and low memory overhead.

INFO CODES

For more information, or to order products online visit ni.com/info and enter:

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lvdbconn

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SPC Toolkit

The Enterprise Connectivity Toolset contains SPC libraries for LabVIEW targeted at process-monitoring applications. You can use these SPC tools to identify problems and improve the quality of your process, and to analyze and track process performance. The functionality included addresses three areas of SPC – control charts, process statistics, and Pareto analysis. For each area, the toolkit contains analysis functions for computing important information and plotting functions for displaying analysis results.

SPC Toolkit Functions

Control Charts

Calculation

- X-bar and S chart/X-bar and R chart
- X and moving range chart
- Single point X-bar and R/S
- Single point x/mX-bar and mR
- P chart/np chart
- U chart/c chart
- Check control limits
- Rule checker (AT&T/Western Electric or Nelson)
- Process shift detector
- Sequence checker

Plotting

- Draw control, run, tier charts
- Draw chart with zones/variable limits

Process Statistics

Calculation

- Process mean and sigma
- Compute process capability
- Sample statistics
- Fit normal PDF to histogram
- Histogram

Plotting

- Normal PDF with or without limits
- Vertical bar graph with or without limits
- Rotate graph

Pareto Analysis

Calculation

- Pareto counter
- Cause code lookup

Plotting

- Pareto chart
- Array to bar/comb graph

Internet Toolkit – Web Publishing, E-Mail, and FTP

All LabVIEW development systems have built-in Internet functionality for publishing documents and images of VI panels. The Internet Toolkit includes a Web server that goes beyond the Web server built into LabVIEW by providing more control over security levels. You can extend the Web server with common gateway interface (CGI) programs written as LabVIEW VIs. The Internet toolkit also includes libraries for adding e-mail, FTP transfer, and Telnet capabilities to your virtual instruments.

Internet-Enabling Capabilities

- Send e-mail messages
- Attach file(s)
- FTP client
- CGI programming
- Telnet

Ordering Information

LabVIEW Enterprise Connectivity Toolset

- Windows 2000/NT/XP/Me/9x777871-03
- Mac OS777871-23

Individual Toolkits

Database Connectivity Toolset for

- Windows 2000/NT/XP/Me/9x776975-01
- SPC Toolkit for Windows 2000/NT/XP/Me/9x, Mac OS,
Sun, Linux776954-01

Internet Developers Toolkit for

- Windows 2000/NT/XP/Me/9x777343-01
- Mac OS777343-21
- Sun, Linux777343-11

Also available as part of NI Developer Suite Professional Editions.
See page 39 for information.

LabVIEW Ordering Information

NI LabVIEW for Windows 2000/NT/XP/Me/9x Development Systems

	Part Number	Page
Full Development System	.....776670-03	.....52
Professional Development System	.....776678-03	.....52
Base Package	.....776671-03	.....52
Application Builder	.....776675-01	.....59
Debug License	.....900866-01	.....59

Modules

LabVIEW Datalogging and Supervisory Control Module	.....778311-03	.....53
LabVIEW Real-Time Module	...777844-03	.....56
LabVIEW Vision Development Module	.....777859-03	.....58

Add-On Toolsets

Enterprise Connectivity Toolset	.....777871-03	.....64
Database Connectivity Toolset	.....776975-01	.....64
Internet Developers Toolkit	.....777343-01	.....64
IVI Driver Toolset	.....777855-03	.....61
Order Analysis Toolset	.....778392-03	.....69
PID Control Toolset	.....777874-03	.....67
Report Generation Toolset	.....778406-03	.....66
SPC Toolkit	.....776954-01	.....64
System Simulation and Design Toolset	.....777553-03	.....96
Signal Processing Toolset	.....777136-01	.....94
Sound and Vibration Toolset	...777970-03	.....92

LabVIEW for Mac OS* Development Systems

Professional Development System	.....776698-03	.....52
Full Development System	.....776690-03	.....52

Add-On Toolsets

Application Builder	.....776695-01	.....59
Enterprise Connectivity Toolset	.....777871-23	.....64
Internet Developers Toolkit	.....777343-21	.....64
PID Control Toolset	.....777874-23	.....67
SPC Toolkit	.....776954-01	.....64
System Simulation and Design Toolset	.....777553-03	.....72

LabVIEW for Linux Development Systems

Full Development System	.....777756-03	.....52
Professional Development System	.....778249-03	.....52

Add-On Toolsets

Application Builder	.....777755-03	.....59
Internet Developers Toolkit	....777343-11	.....64
SPC Toolkit	.....776954-01	.....64

LabVIEW for Sun Development Systems

Full Development System	.....776680-031	.....52
Professional Development System	.....776688-03	.....52

Add-On Toolsets

Application Builder	.....776685-01	.....59
Internet Developers Toolkit	....777343-11	.....64
SPC Toolkit	.....776954-01	.....64

LabVIEW Service and Support Software Subscription Service

Windows 2000/NT/XP/Me/9x	..930000-02	.....18
Mac OS*	.....930000-02	.....18
Linux	.....930000-02	.....18
Sun	.....930000-03	.....18

Training

Basics I Training Course	.....910013-xx ¹	.....761
Basics II Training Course	.....910017-xx ¹	.....761
Advanced Performance and Communication Course	.....910514-xx ¹	.....761
Advanced Application Development	...910607-01	.....762
Data Acquisition and Signal Conditioning	.....910010-01	.....762

NI Developer Suite offers many of these products bundled with other NI software tailored for test or control applications. See page 39 for more information.

Part numbers listed denote single-user licenses. For multi-user licenses, contact National Instruments.

¹Please refer to the Training Services section to complete the part number.

*Visit ni.com/mac for the latest Mac OS information.