

# IMAQ Vision Builder

## Version 6.0

IMAQ Vision Builder is a software package for prototyping vision applications or testing and learning how various machine vision and image processing functions work.

These release notes describe what is new and what has changed in IMAQ Vision Builder 6.0, lists minimum requirements, and provides installation instructions for your software. Please also see the `readme.txt` file included with your software for the most up-to-date information about this release of IMAQ Vision Builder.

## What's New in IMAQ Vision Builder 6.0

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IMAQ Vision Builder 6.0 includes a number of major additions, as follows:

- **LabVIEW VI Creation**—IMAQ Vision Builder gives you the tools to create a LabVIEW VI for IMAQ Vision that performs the prototype you created in IMAQ Vision Builder. The Creation Wizard allows you to create an IMAQ Vision VI from the current script or a previously saved script, and guides you through the creation process.
- **Image Acquisition Board Support**—IMAQ Vision Builder now supports the IMAQ PCI/PXI-1409 (analog grayscale acquisition) and PCI/PXI-1428 (Camera Link digital acquisition) image acquisition boards.
- **Color Processing**—IMAQ Vision Builder now includes Color Location and Color Pattern Matching functions in the **Color Image Processing** menu.
- **Machine Vision**—IMAQ Vision Builder features new machine vision functions, including the Find Straight Edge, Find Circular Edge, and Clamp tools.
- **Binary Image Processing**—IMAQ Vision Builder includes a new function for processing binary images—Invert Binary Image—which reverses the dynamic of images containing two different grayscale populations.

- Calibration—IMAQ Vision Builder offers the following new calibration functions: Simple Calibration, Grid Calibration, Calibration from Image, and Image Correction.
- Region of Interest Tools—The ROI Tools Palette now includes a Rotated Rectangle tool and an Annulus tool for drawing regions of interest in your image.

## Changes from Previous Versions

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IMAQ Vision Builder 6.0 includes the following changes:

- The Edge Detection, Pattern Matching, and Caliper functions have been moved from the **Grayscale** menu to the **Machine Vision** menu.
- The Region of Interest tools (located in the Tools Palette) are now context-sensitive. You can move or adjust your ROI by grabbing and dragging the control points, or by grabbing and dragging the entire ROI.
- The binary images that result from applying a threshold operation to an image are now represented with pixels valued at 0 and 1, instead of 0 and 255.
- The Lookup Table:Reverse function no longer inverts a binary image correctly. Use the new Invert Binary Image function to invert a binary image.

## Minimum Requirements

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To run IMAQ Vision Builder, your computer must meet the following minimum system requirements:

- 133 MHz Pentium or higher microprocessor (233 MHz Pentium MMX or higher microprocessor recommended)
- Microsoft Windows 2000/NT/Me/9x. If you are using Windows NT 4.0, you must have Service Pack 3 or higher installed on your computer to run IMAQ Vision Builder.
- 800 × 600 resolution (or higher) video adapter, 65,536 colors (16-bit) or higher
- National Instruments IMAQ hardware and NI-IMAQ 2.5 or higher for Windows 2000/NT/Me/9x (if you are acquiring images with National Instruments IMAQ image acquisition boards)

- Minimum of 32 MB RAM (64 MB recommended)
- Minimum of 40 MB of free hard disk space



**Note** You need Microsoft Excel 97 installed on your computer to complete a few steps in the second tutorial of the *IMAQ Vision Builder Tutorial*.

## Installation Procedures

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**Note** To install IMAQ Vision Builder on a Windows NT or Windows 2000 system, you must be logged in with Administrator privileges.

1. Insert the IMAQ Vision Builder CD into your CD-ROM drive.  
If the CD startup screen does not appear, use Windows Explorer to run the `SETUP.EXE` program in the `\Setup` directory on the CD.
2. Follow the setup instructions you see on your screen.

By default, the IMAQ Vision Builder installation program creates a new folder, `\Program Files\National Instruments\IMAQ Vision Builder 6`, that contains the following items:

- `program` folder—`IMAQ Vision Builder.exe`, the online help file, function libraries, and other related program files
- `readme.txt`—Late-breaking information about IMAQ Vision Builder
- `examples` folder—Images and scripts that you need to complete the example tutorials in the *IMAQ Vision Builder Tutorial*
- `manuals` folder—Portable Document Format (PDF) versions of the *IMAQ Vision Concepts Manual*, *IMAQ Vision Builder Release Notes*, and the *IMAQ Vision Builder Tutorial*. You must have Adobe Acrobat Reader installed to access these documents.
- `solutions` folder—Example images and scripts

## IMAQ Vision Builder Documentation

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The IMAQ Vision Builder documentation set includes these release notes, online help, the *IMAQ Vision Builder Tutorial* in both printed and PDF versions, and a PDF version of the *IMAQ Vision Concepts Manual*. You must install Adobe Acrobat Reader, which is included on your IMAQ Vision Builder CD, to access the PDF documents.



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