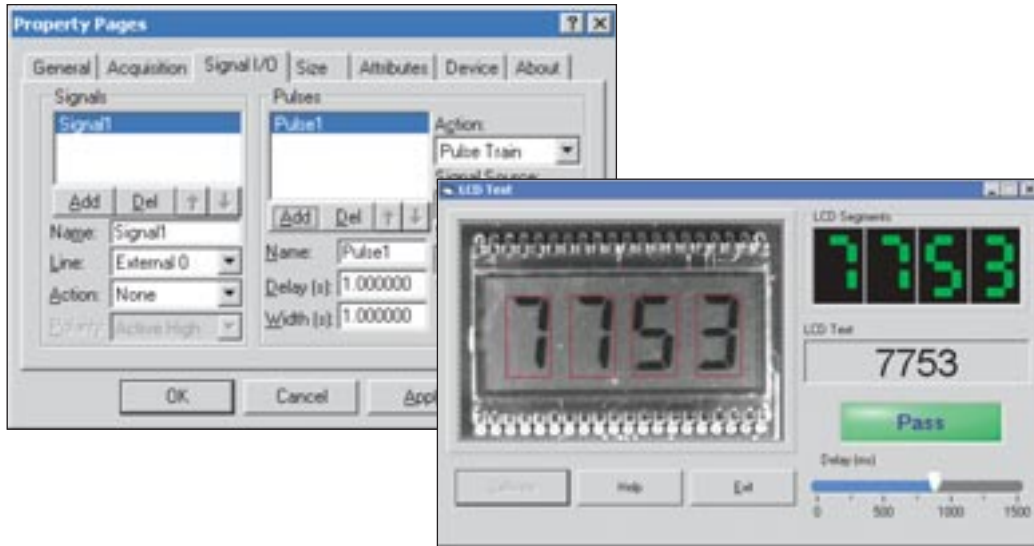


# Measurement Studio Modules and Add-On Tools



## Vision Development Module

National Instruments Vision Development Module includes NI IMAQ Vision, a library of ActiveX vision controls, and NI Vision Assistant, an interactive environment for configuring vision applications. The Vision Development Module is for scientists, automation engineers, and technicians who build machine vision and scientific imaging applications. NI Vision Assistant is for developers who need to quickly prototype vision applications without programming.

Engineers, scientists, and technicians use the NI Vision Development Module in an ever-widening array of industrial process and inspection applications. Vision can gauge the distance between a hard disk read/write head and the magnetic medium, test for flaws in semiconductor wafers, and look for flaws in home insulation during manufacturing. Use vision to improve your manufacturing process, as well as to monitor quality.

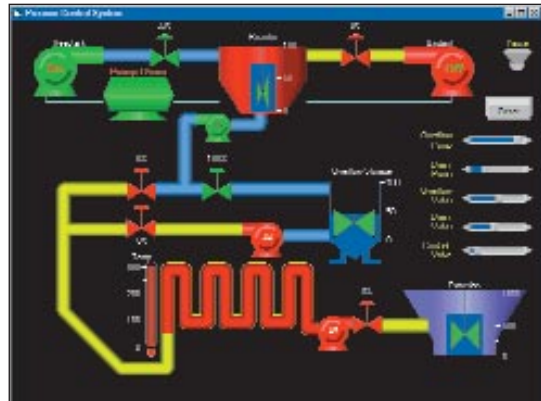
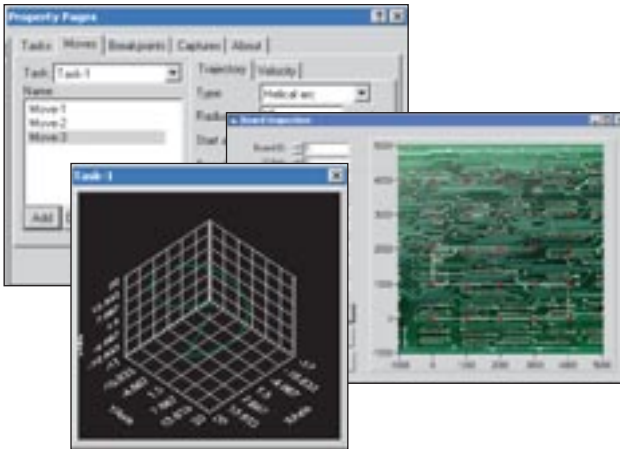
## IMAQ Vision

- Inspection and
- Pattern matching (color/black and white)
- Blob analysis and morphology
- Measurement and gauging
- Image enhancement and quantitative analysis
- Color image processing and frequency domain processing

## NI Vision Assistant

- Interactive environment
- Scripting and batch processing
- Visually managed image

# Measurement Studio Modules and Add-On Tools



## Motion Control Module

The Motion Control Module for Measurement Studio gives you an intuitive way to control the motors, drives, and encoders that make up your motion system. First, configure and verify your hardware within NI Measurement & Automation Explorer. Then, use the interactive property pages of the Motion ActiveX controls to configure a set of axes and a sequence of moves that are executed on those axes. Specify the criteria for the transition from one move in the sequence to the next – you can easily merge moves or specify a dwell time between moves. Finally, your application executes moves depending on the current criteria; so you can focus on your motion system rather than developing the required movements.

- Compatible with NI 7350, NI 7340, and NI 7330 Series controllers
- Motion sequence configured with interactive property pages
- Sequence of moves executed with a single command
- Simplified trajectory moves (arcs, point-to-point), contour moves, and velocity profiling
- Included single and buffered breakpoint outputs
- Single and buffered high-speed capture inputs
- Event notification for trajectory, axis, and motion I/O operations

## Automation Symbols Toolkit

National Instruments offers a collection of ActiveX controls for building graphical interfaces for industrial monitoring and control applications. You can use these tools to convert many standard ActiveX control container user interfaces into powerful HMI applications. Applications for industrial automation and process control often require user interfaces that use symbols standardized by the International Society for Measurement and Control. Engineers and operators universally recognize these automation symbols as standard representations of process equipment.

## PID Control Toolkit

With the PID ActiveX control tools, you can add advanced process control algorithms to your application. In addition to implementing the standard PID algorithm, these tools include the Autotuning Wizard to help you optimize the PID parameters for your specific system. You can use PID tools with any kind of physical input and output options, including DAQ devices and PLCs.

# Measurement Studio Ordering Information

Measurement Studio	Standard Edition	Professional Edition	Enterprise Edition
Project templates	✓	✓	✓
User interface controls	✓	✓	✓
GPIB interfaces	✓	✓	✓
VISA interfaces	✓	✓	✓
NI-DAQmx interfaces	✓	✓	✓
C++ FieldPoint interface	✓	✓	✓
Signal generation	✓	✓	✓
C++ LabVIEW Real-Time connectivity	✓	✓	✓
UI DataSocket binding		✓	✓
DataSocket server		✓	✓
Filtering		✓	✓
Statistics		✓	✓
Parameter assistant		✓	✓
Instrument I/O assistant integration		✓	✓
Instrument I/O assistant code generation		✓	✓
Data acquisition assistant integration		✓	✓
Data acquisition assistant code generation		✓	✓
ActiveX controls for Visual Basic 6.0		✓	✓
Visual C++ 6.0 classes		✓	✓
NI-Reports			✓
C++ Microsoft Office interface (Word & Excel)			✓
3D graph for Visual C++			✓
DSP measurements			✓
Curve fitting			✓
Signal processing			✓
Windowing			✓
NI TestStand .NET and C++ integration			✓
NI LabWindows/CVI FDS			✓

## Enterprise Edition

For high-end applications, the Measurement Studio Enterprise Edition has everything you need. The Enterprise Edition adds digital signal processing (DSP) and advanced analysis capabilities, signal generation, report generation, NI LabWindows/CVI complete ANSI C development environment, and NI TestStand connectivity to the Professional Edition.

## Professional Edition

The Professional Edition includes DAQ Assistant, Instrument I/O Assistant, .NET and C++ user interface controls, and base analysis. The package also adds DataSocket networking technology for developing distributed virtual instrumentation systems.

## Standard Edition

The NI Measurement Studio Standard Edition includes the base set of controls needed to build a measurement application. It includes acquisition controls (DAQ, GPIB, serial, and VISA), and standard user interface controls.

## NI Developer Suite

NI Developer Suite is a subscription program that includes the software tools you need for building a complete measurement system. From making measurements to analyzing and presenting results, NI Developer Suite puts the latest powerful, industry-standard software at your fingertips and provides you with regular quarterly updates of National Instruments application and driver software and other software resources to keep you up to date with the very latest development tools (see page 39).

## Services and Support

As a complement to your Measurement Studio product, consider the following services and visit [ni.com/services](http://ni.com/services):

**Measurement Studio SSP** – Software upgrades and priority support for one year – [ni.com/ssp](http://ni.com/ssp)

**Technical Support** – through Applications Engineers worldwide, Web resources, and Premier Support – [ni.com/support](http://ni.com/support)

## Alliance with Microsoft

To integrate efficiently into the Microsoft Visual Studio development environment, National Instruments formed an alliance with Microsoft through the Visual Studio Integration Program (VSIP). Measurement Studio tools integrate tightly into Visual Studio and are used in exactly the same way as standard Microsoft tools.

Optimized for



## Ordering Information

NI Measurement Studio	
Development systems	
Enterprise Edition* .....	778800-03
Professional Edition* .....	778801-03
Standard Edition .....	778802-03
Modules	
Motion Control Module .....	778804-03
Vision Development Module .....	777860-03
Add-on tools	
Automation Symbols Toolkit .....	777607-01
PID Control Toolkit.....	777757-01
Software subscription service .....	930800-01

\*Includes Visual Studio 6.0 tools

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.

## BUY ONLINE!

Visit [ni.com/info](http://ni.com/info) and enter *mstudio*.