GETTING STARTED WITH YOUR IMAQ VISION 1400 SYSTEM

This note describes how to set up the IMAQ Vision 1400 system, a complete, general-purpose system for quickly developing PC-based machine vision applications.

With the IMAQ Vision 1400 system, you can develop low-cost, customizable solutions for pattern matching, alignment, gauging, inspection, and optical character recognition (OCR) applications. The IMAQ Vision 1400 system includes development software, an IMAQ PCI-1408 image acquisition device, an analog monochrome camera, a lens, and cabling.

What You Need to Get Started

To set up your IMAQ Vision 1400 system, you need the following:

❑ IMAQ PCI-1408 and documentation

❑ National Instruments driver and application software, as follows:
- NI-IMAQ version 2.1 or higher
- LabVIEW 5.1 or higher
- Advanced IMAQ Vision 4.1.1 or higher
- IMAQ Vision Builder 1.0 or higher
- IMAQ Vision OCR 1.0 or higher

❑ RS-170 or CCIR analog monochrome camera

❑ Camera power supply and cable

❑ Lens

❑ BNC cable

322457A-01   *June 1999*

Installing Your Software

Note You must install the NI-IMAQ driver software before installing the PCI-1408.

Install your software in the following order:

1. LabVIEW—Follow the directions in the *LabVIEW Version 5.1 Addendum* to install LabVIEW.

2. NI-IMAQ—Follow the directions in the *NI-IMAQ for Windows NT/98/95 Release Notes* to install the NI-IMAQ driver software.

Note If you do not have Adobe Acrobat Reader installed on your computer, also install it at this time. You will need Acrobat Reader to access much of the IMAQ and LabVIEW documentation.

3. Advanced IMAQ Vision—Follow the directions in the *IMAQ Vision for G Release Notes* to install IMAQ Vision.

4. IMAQ Vision Builder—Follow the directions in the *IMAQ Vision Builder Tutorial* to install IMAQ Vision Builder.

5. IMAQ Vision OCR—Follow the directions in the *IMAQ Vision OCR Release Notes* to install IMAQ Vision OCR.

Installing Your Hardware

Refer to Figure 1 as you follow these general instructions to install your hardware:

1. Install your PCI-1408. Follow the instructions on pages 1 and 2 of the *Getting Started with Your IMAQ System* document. For more information on installing your hardware, see the *IMAQ PCI/PXI-1408 User Manual*.

2. Assemble the camera and lens.

3. Connect the camera to the PCI-1408 with the BNC cable.

4. Connect the power supply to the camera.

5. Connect the power supply cord to the power supply.

6. Plug the power supply cord into a power outlet.
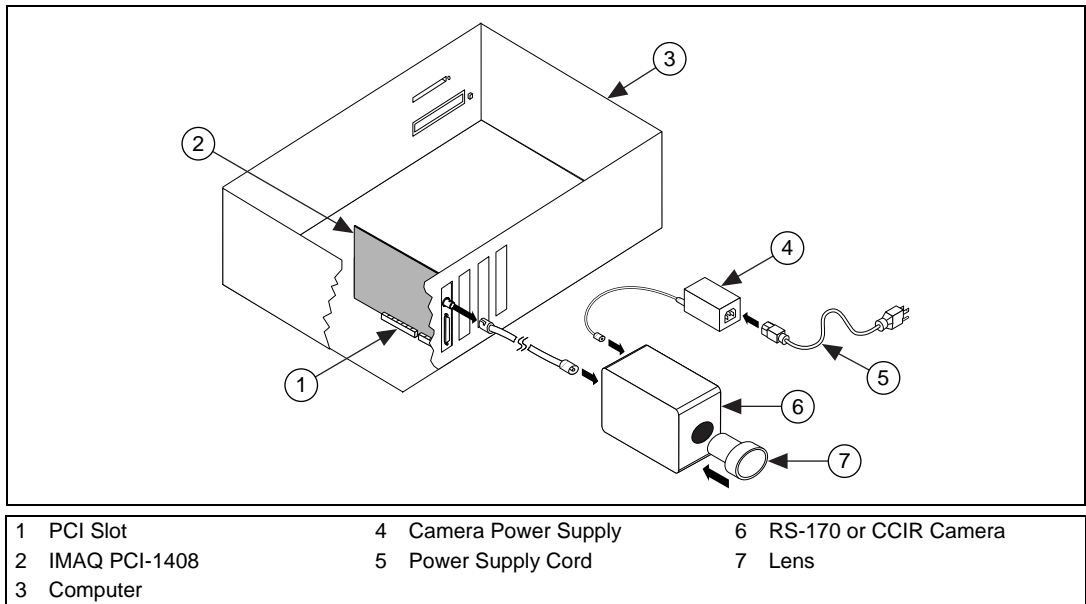
7. Start your computer.

1	PCI Slot	4	Camera Power Supply	6	RS-170 or CCIR Camera
2	IMAQ PCI-1408	5	Power Supply Cord	7	Lens
3	Computer				

Figure 1. Installing the IMAQ Vision 1400 System

Where to Start

Follow these general steps to learn how to acquire your first image and begin building imaging applications:

1. Follow the instructions on pages 3 and 4 of the *Getting Started with Your IMAQ System* document to acquire your first image.

2. Complete the activities in the *LabVIEW QuickStart Guide* if you are a new LabVIEW user. If you are an experienced LabVIEW user, consult the *LabVIEW User Manual* and the *G Programming Reference Manual* to review basic LabVIEW programming concepts.

3. To learn how to use the NI-IMAQ VIs, consult the *NI-IMAQ VI Reference Manual* and online help. You can find the *NI-IMAQ VI Reference Manual* in portable document format (PDF) in the **Start»National Instruments IMAQ»Documentation** folder. You can access the online help from the LabVIEW **Help** menu.

4. To learn how to use IMAQ Vision Builder to build prototypes of your application, perform the exercises in the *IMAQ Vision Builder Tutorial*.

5. To run examples for IMAQ Vision, consult the IMAQ Vision online help files. You can access the online help from the LabVIEW **Help** menu. For additional information on IMAQ Vision, consult the *IMAQ Vision User Manual* and the *IMAQ Vision for G Reference Manual*.

6. To learn how to use IMAQ Vision OCR, consult the *IMAQ Vision OCR Release Notes* and run the IMAQ Vision OCR online help, which you can access from the LabVIEW **Help** menu.