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***PXI-1409***

## INSTALLATION GUIDE

# IMAQ™ A8055 Camera Cable

This guide describes how to use the National Instruments IMAQ A8055 analog camera cable to connect the PCI/PXI-1409 or PCI-1410 image acquisition (IMAQ) device to the Sony XC-55 camera.

The IMAQ A8055 cable provides direct connection between the IMAQ 1409/1410 device and the camera without using a breakout box.



**Note** Refer to the Sony Web site and documentation for information about the functionality of the Sony XC-55.

## Getting Started

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The following items are necessary for connecting the IMAQ A8055 cable:

- ☐ IMAQ A8055 cable
- ☐ *IMAQ A8055 Camera Cable Installation Guide*
- ☐ IMAQ 1409 device and documentation  
or
- ☐ IMAQ 1410 device and documentation
- ☐ Sony XC-55 camera and documentation

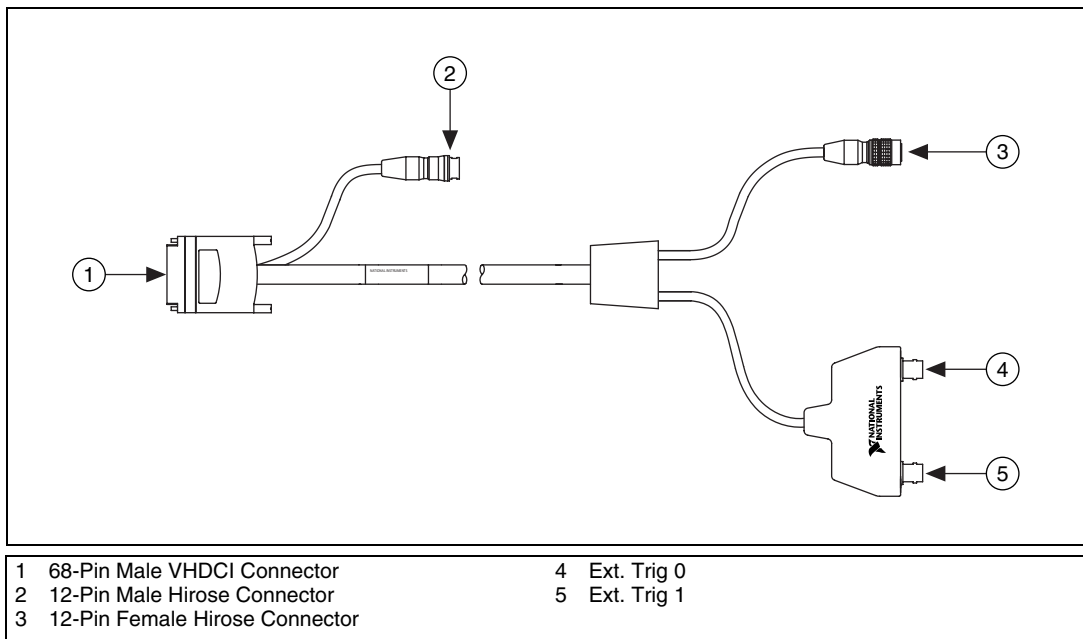
# Installation

Complete the following steps to connect the IMAQ A8055 cable to the IMAQ 1409/1410 device and Sony XC-55 camera. Refer to Figure 1 for an illustration of the IMAQ A8055 cable.

1. Connect the 68-pin male VHDCI connector to the connector on the IMAQ 1409/1410 device and tighten the thumbscrews.
2. Connect the 12-pin male Hirose connector to the camera power supply.
3. Connect the 12-pin female Hirose connector to the input receptacle on the camera.

## Optional Connections

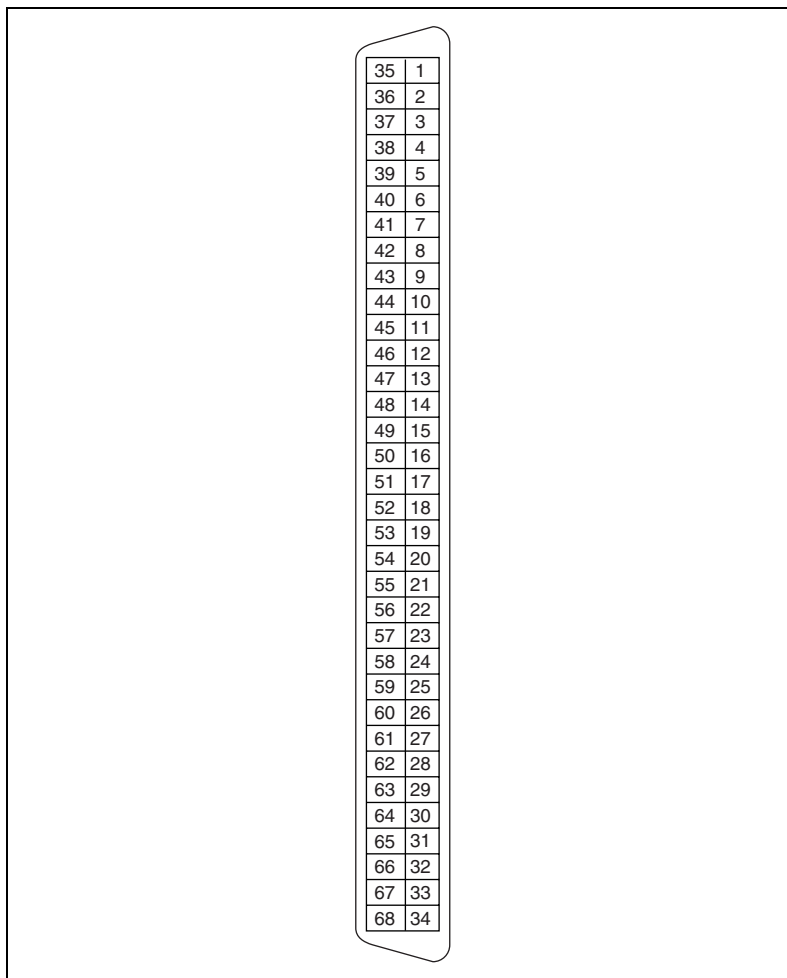
4. Connect the external trigger to the **Ext. Trig 0** BNC.
5. Connect any device requiring general-purpose digital input/output, such as a strobe light, to the **Ext. Trig 1** BNC.



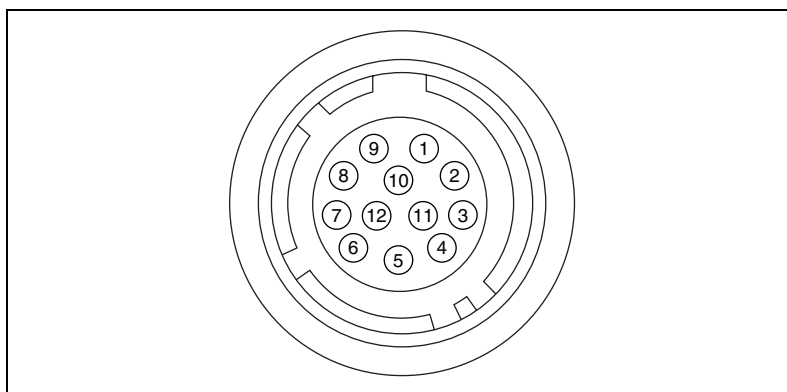
**Figure 1.** IMAQ A8055 Cable

## Connectors

The 68-pin VHDCI connector provides connection to the IMAQ 1409/1410 device, and the 12-pin Hirose connectors provide connection to the camera. Figures 2 and 3 show the pinouts for these connectors.



**Figure 2.** 68-Pin VHDCI Connector (Cable)



**Figure 3.** Hirose Connector (Cable)

# Pin Assignments

Table 1 shows the pin assignments for the connectors on the IMAQ A8055 cable.

**Table 1.** IMAQ A8055 Connector Pin Assignments

Signal	68-Pin VHDCI	12-Pin Male Hirose (to Power Supply)	12-Pin Female Hirose (to Camera)	Ext. BNC 0	Ext. BNC 1
VIDEO(0) +	68	—	4	—	—
VIDEO(0) –	67	—	3	—	—
HSYNC_IN +	16, 12*	—	6	—	—
DGND	26	—	5	—	—
VSYNC_IN +	15, 5*	—	7	—	—
DGND	2	—	12	—	—
TRIG(2)	6	—	9	—	—
DGND	41	—	8	—	—
TRIG(0)	8	—	—	Center	—
DGND	42	—	—	Shield	—
TRIG(1)	7	—	—	—	Center
DGND	39	—	—	—	Shield
DC +12V	—	2	2	—	—
DGND	—	1	1	—	—
* These pins are connected internally.					

## Triggering

You can use the IMAQ A8055 cable for applications requiring precise triggering or exposure control. In addition to connecting the video signal between the camera and the IMAQ 1409/1410 device, the IMAQ A8055 cable also connects the camera control lines on the IMAQ 1409/1410 to the exposure and trigger inputs on the camera. The IMAQ 1409/1410 can then be programmed to generate precise timing pulses for controlling the camera.



**Tip** Visit the National Instruments Camera Advisor Web site at [ni.com/camera](http://ni.com/camera) for application notes and sample code for the Sony XC-55.

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