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SH68-68-EP

USER GUIDE

DAQ Adapter

This guide describes how to install the National Instruments DAQ Adapter and provides pinout information. The DAQ Adapter allows you to connect a 68-pin E or M (E/M) Series data acquisition (DAQ) device to an evaluation board through a PCI edge connector.

What You Need to Get Started

To set up and use the DAQ Adapter, you need the following:

- Hardware
 - DAQ Adapter kit:
 - DAQ Adapter
 - Rubber feet (5)
 - One of the following:
 - E Series DAQ device with an SH68-68-EP shielded cable
 - M Series DAQ device with an SHC68-68-EPM or an SHC68-68-EP shielded cable
 - Sensors as required by your application
- Documentation
 - *DAQ Adapter User Guide*
 - Documentation for your evaluation board

You can download NI documents from ni.com/manuals.

Installing the DAQ Adapter

To install the DAQ Adapter, refer to Figure 1 while completing the following steps:

1. Remove the adhesive backing from each of the five rubber feet.
2. Place one rubber foot near each of the four corners of your evaluation board and apply pressure to adhere the rubber foot to the board.
3. Place the fifth rubber foot near the center of your evaluation board and apply pressure to adhere the rubber foot to the board.
4. Connect the DAQ Adapter to your evaluation board.
5. Connect one end of the 68-pin cable to the DAQ Adapter.
6. Connect the other end of the 68-pin cable to the E/M Series DAQ device.

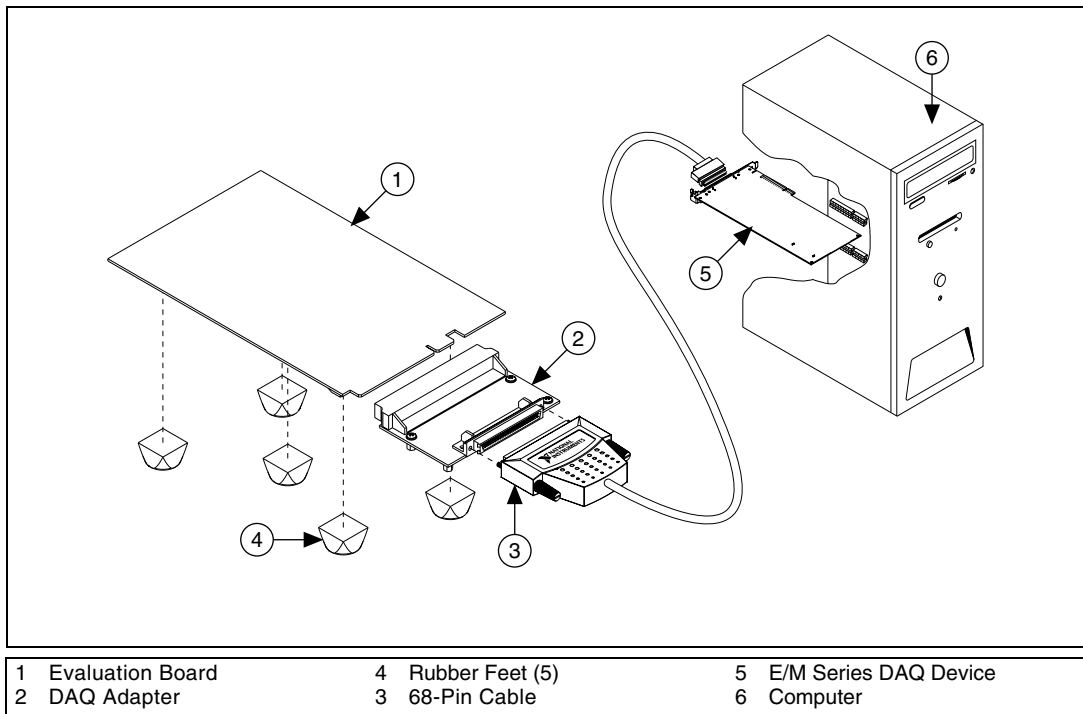


Figure 1. DAQ Adapter Installation Diagram

Pinout Signal Information

Use the information in Table 1 to determine the correct signal connections for your application.

Table 1. SCSI/PCI Connector Pinouts and Corresponding Signal Names

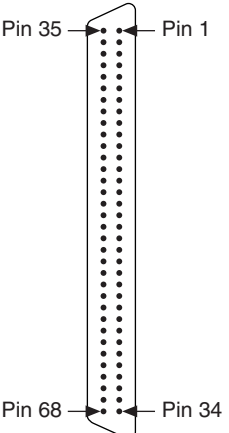
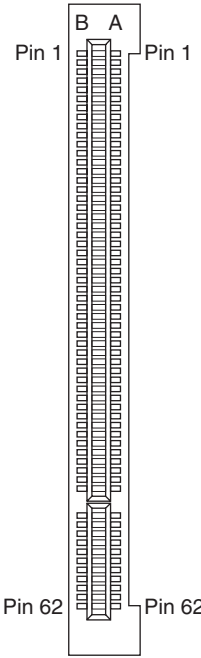
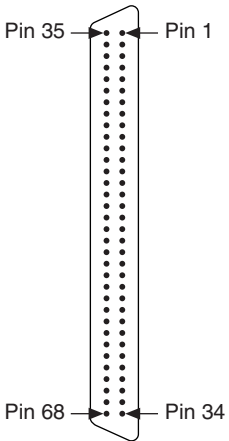
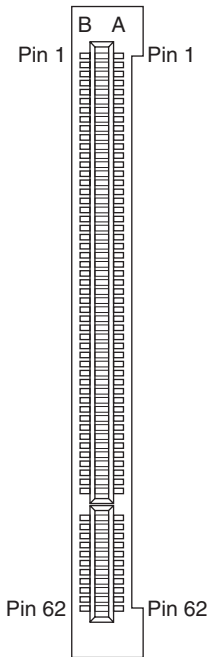
| SCSI Connector | SCSI Pin Number | MIO Signal Name | PCI Pin Number | PCI Connector |
|---|---|-----------------|--|--|
|  | 4, 7, 9, 12, 13, 15, 18, 35, 36, 39, 44, 50, 53 | D GND | A6, A18, A23, A37, A55, A61, B3, B4, B5, B6, B18, B23, B37, B56, B61 |  |
| | 24, 27, 29, 32, 56, 59, 64, 67 | AI GND | A39, A44, B39, B44 | |
| | 16 | P0.6 | A7 | |
| | 19 | P0.4 | A8 | |
| | 49 | P0.2 | A9 | |
| | 52 | P0.0 | A10 | |
| | 6 | PFI 5 | A30 | |
| | 43 | PFI 2 | A31 | |
| | 46 | SCAN CLK | A32 | |
| | 11 | PFI 0 | A33 | |
| | 41 | CTR1_GATE | A34 | |
| | 37 | CTR0_SOURCE | A35 | |
| | 2 | CTR0_OUT | A36 | |
| | 60 | AI 5 | A42 | |
| | 28 | AI 4 | A43 | |
| | 30 | AI 3 | A45 | |
| | 65 | AI 2 | A46 | |
| | 33 | AI 1 | A47 | |
| | 68 | AI 0 | A48 | |
| | 62 | AI SENSE | A49 | |
| 22 | DAC 0 | A60 | | |
| 48 | P0.7 | B7 | | |

Table 1. SCSI/PCI Connector Pinouts and Corresponding Signal Names (Continued)

| SCSI Connector | SCSI Pin Number | MIO Signal Name | PCI Pin Number | PCI Connector |
|---|-----------------|-----------------|----------------|--|
|  | 51 | P0.5 | B8 |  |
| | 47 | P0.3 | B9 | |
| | 17 | P0.1 | B10 | |
| | 5 | PFI 6 | B29 | |
| | 38 | PFI 7 | B30 | |
| | 45 | EXT STROBE | B31 | |
| | 10 | PFI 1 | B32 | |
| | 42 | CTR1_SOURCE | B33 | |
| | 40 | CTR1_OUT | B34 | |
| | 3 | CTR0_GATE | B35 | |
| | 1 | FREQ_OUT | B36 | |
| | 26 | AI 13 | B42 | |
| | 61 | AI 12 | B43 | |
| | 63 | AI 11 | B45 | |
| | 31 | AI 10 | B46 | |
| | 66 | AI 9 | B47 | |
| | 34 | AI 8 | B48 | |
| 8, 14 | +5V | B55 | | |
| 21 | DAC 1 | B60 | | |

Note: PCI locations A50, A51, B50, and B51 have no pins due to the locating keyway. All other PCI pins not listed are unused.

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