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NB-DIO-32F



SCXI-1348 DIO-32F Cable Assembly Installation Guide

Part Number 320620-01

This guide describes how to install the SCXI-1348 cable assembly between an SCXI module and an AT-DIO-32F, MC-DIO-32F, or NB-DIO-32F data acquisition board. In addition to the SCXI-1348 kit contents, you will also need an SCXI chassis, an SCXI module, a computer, a DIO-32F data acquisition board, and a small flathead screwdriver.

Introduction

With the SCXI-1348 cable assembly, you can connect a digital I/O SCXI module to your DIO-32F data acquisition board. The DIO-32F works with the SCXI-1160, SCXI-1161, SCXI-1162, and SCXI-1163 modules.

If you have a newly released module or a data acquisition board other than a DIO-32F, contact National Instruments for information on your cable needs.

The SCXI-1348 cable assembly consists of an adapter board and an NB4 50-conductor shielded ribbon cable that connects the adapter board to a DIO-32F data acquisition board. The adapter board converts the signals from the DIO-32F I/O connector to the pinout that a digital SCXI module rear signal connector uses. To extend the unconverted signals of the DIO-32F to another module or to an SCXI-1180 feedthrough panel, you can use the male breakout connector that is on the center of the adapter board.

What Your Kit Should Contain

The contents of the SCXI-1348 cable assembly kit are as follows:

Kit Name and Part Number	Component	Component Part Number
SCXI-1348 Cable Assembly (776574-48)	Cable adapter Two small screws 1 m NB4 shielded 50-pin ribbon cable <i>SCXI-1348 DIO-32F Cable Assembly Installation Guide</i>	182252-01 742413-01 180554-10 320620-01

If your kit is missing any of the components, contact National Instruments.

Installation Procedure

Figure 1 illustrates the components of your SCXI system.

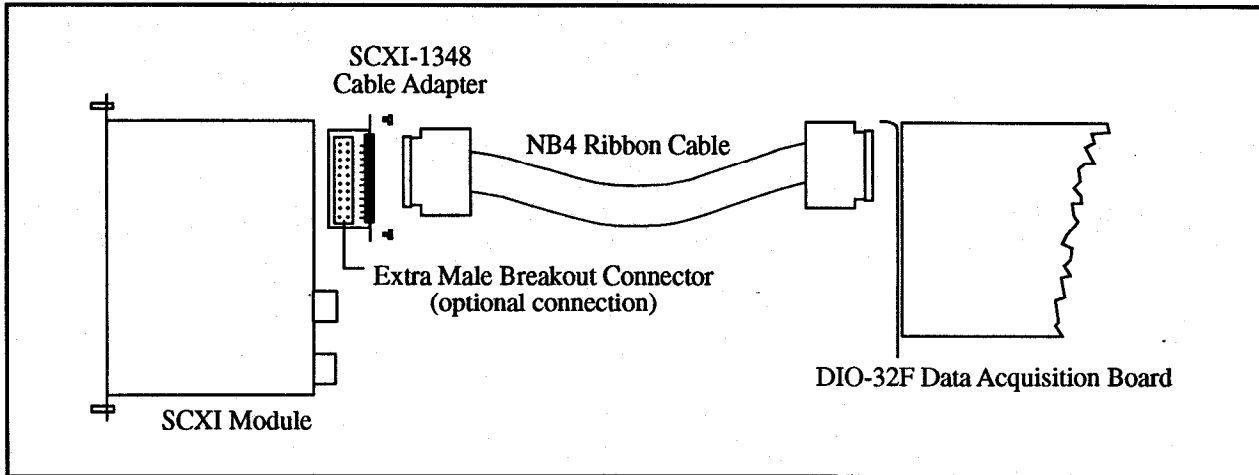


Figure 1. Connecting the SCXI-1348 to Your DIO-32F Data Acquisition Board and SCXI Module

Perform the following steps to install the SCXI-1348 cable adapter:

1. Turn off the power to your computer and the SCXI chassis.
2. Install your SCXI module in the SCXI chassis, following the instructions in your module user manual.
3. Plug the front connector of the SCXI-1348 into the rear signal connector of the SCXI module. A corner of the adapter board will enter the upper board guide of the chassis.
4. Secure the SCXI-1348 adapter board by screwing the two screws through the rear panel of the adapter board and into the threaded strips in the rear of the SCXI chassis.
5. Connect one end of the 50-pin shielded ribbon cable to the adapter board rear connector.
6. Install your data acquisition board in a slot in your computer, following the instructions in your data acquisition board user manual.
7. Connect the loose end of the shielded ribbon cable to the I/O connector on the data acquisition board as shown in Figure 2.

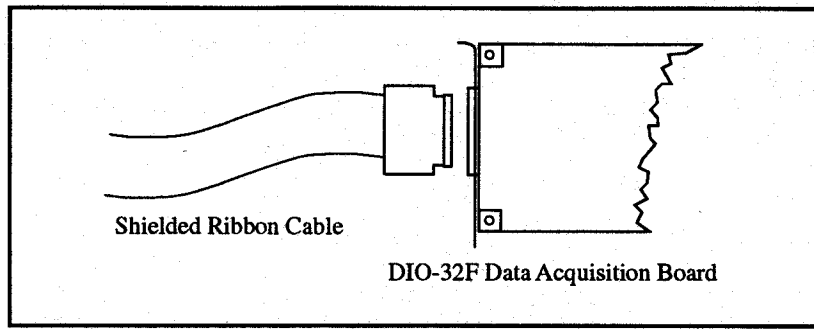


Figure 2. Cable to I/O Connector Connection

The finished installation should look like Figure 3.

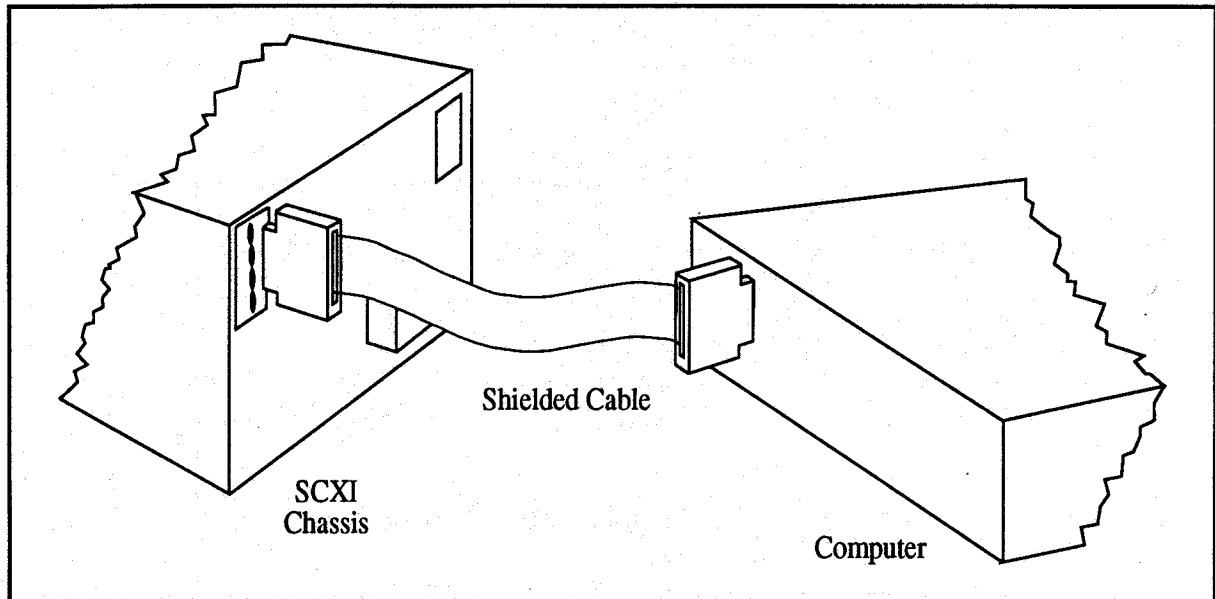


Figure 3. Installed Cable

The following table lists the way that the SCXI-1348 translates pins from a DIO-32F board to the SCXI module.

SCXI-1348 Pin Translations

DIO-32F Rear Connector Pin	DIO-32F Signal Name	Module Connector Pin
1	DIOD1	46
2	DIOD4	40
3	DIOD3	42
4	DIOD0	48
5	DIOD6	36
6	DIOD7	34
7	DIOD2	44
8	DIOD5	38
9	DIOC5	5
10	DIOC7	1
11	DIOC3	9
12	DIOC1	13
13	DIOC2	11
14	DIOC0	15
15	DIOC6	3
16	DIOC4	7
17, 19*	DIGGND	2, 4*
21, 23*	DIGGND	6, 8*
25, 26*	DIGGND	10, 12*
28, 30*	DIGGND	14, 16*
32, 34*	DIGGND	50*
18	ACK2	26
20	IN2	28
22	OUT2	30
24	REQ2	32
27	ACK1	18
29	IN1	20
31	OUT1	22
33	REQ1	24
35	DIOA4	39
36	DIOA6	35
37	DIOA0	47
38	DIOA2	43
39	DIOA1	45
40	DIOA3	41
41	DIOA7	33
42	DIOA5	37
43	DIOB5	21
44	DIOB2	27
45	DIOB7	17
46	DIOB6	19
47	DIOB0	31
48	DIOB3	25
49	DIOB4	23
50	DIOB1	29

*All DIG GND pins are connected to each other on the SCXI-1348 adapter board.