



# R6850 Cable Assembly Installation Guide

Part Number 371671A-01

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This guide describes how to use the R6850 cable assembly to connect a plug-in board with a 68-pin I/O connector, such as the AT-MIO-16X, to a 50-pin accessory.

## Introduction

The R6850 cable assembly consists of a 50-conductor NB1 ribbon cable and a 68-to-50-pin adapter. With the R6850 cable assembly, you can connect 50-pin accessories to your plug-in board. You use the 68-to-50-pin adapter to connect the 50-pin ribbon cable to the 68-pin I/O connector of your plug-in board.

**Note:** The R6850 is a low-cost ribbon cable option for 68-pin data acquisition boards. If you require shielded cabling or longer cable lengths, use the SH6850 or SH6868 cable assemblies, which are available in lengths of 1, 2, 5, and 10 m.

## What Your Kit Should Contain

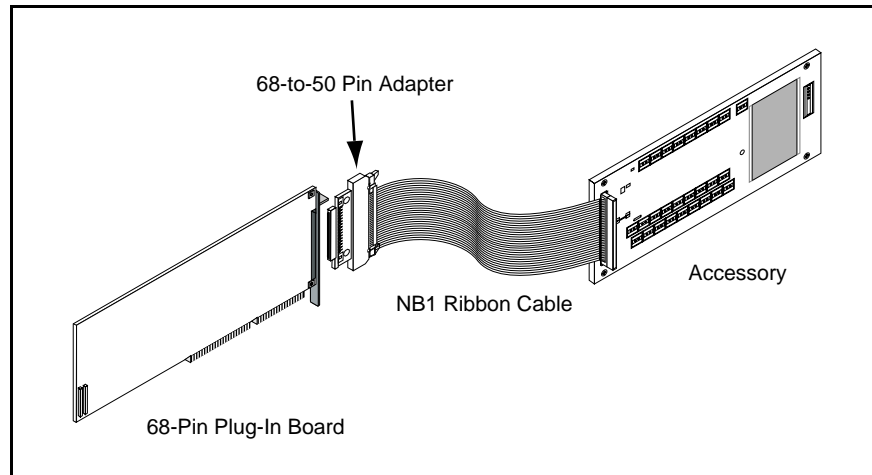
The R6850 cable assembly kit (part number 776842-01) contains the following components:

Kit Component	Part Number
68-to-50-pin adapter	182420-01
1.0 m NB1 cable	180524-10
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If your kit is missing any of the components, contact National Instruments.

## Installation

The following figure shows the components of your R6850 cable assembly kit and how to connect them to your plug-in board and accessory.



Perform the following steps to install the R6850 cable assembly:

1. Turn off the power to your computer and accessory (if applicable).
2. Plug the NB1 ribbon cable into the 68-to-50-pin adapter and latch it.
3. Plug the 68-to-50-pin adapter into the 68-pin I/O connector on the plug-in board.
4. Plug the NB1 ribbon cable into the accessory.

## R6850 Pin Designations

The following table lists the pin designations for 50-pin and 68-pin I/O connectors and the corresponding AT-MIO-16X signal names.

<b>50-Pin Connector Pin Numbers</b>	<b>AT-MIO-16X Signal Names</b>	<b>68-Pin Connector Pin Numbers</b>
1, 2	AIGND	24, 27, 29, 32, 56, 59, 64, 67
3	ACH0	68
4	ACH8	34
5	ACH1	33
6	ACH9	66
7	ACH2	65
8	ACH10	31
9	ACH3	30
10	ACH11	63
11	ACH4	28
12	ACH12	61
13	ACH5	60
14	ACH13	26
15	ACH6	25
16	ACH14	58
17	ACH7	57
18	ACH15	23
19	AISENSE	62
20	DAC0	22
21	DAC1	21
22	EXTREF	20
23	AOGND	54, 55
24, 33	DGND	4, 7, 9, 12, 13, 15, 18, 35, 36, 39, 44, 50, 53
25	ADIO0	52
26	BDIO0	19
27	ADIO1	17
28	BDIO1	51
29	ADIO2	49
30	BDIO2	16
31	ADIO3	47
32	BDIO3	48
34, 35	+5V	8, 14
36	SCANCLK	46
37	EXTSTROBE*	45
38	EXTTRIG*	11
39	EXTGATE*	10
40	EXTCONV*	43
41	SOURCE1	42
42	GATE1	41
43	OUT1	40
44	EXTTMRTRIG*	6
45	GATE2	5
46	OUT2	38
47	SOURCE5	37
48	GATE5	3
49	OUT5	2
50	FOUT	1