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**PCI-6722**

## NOTE TO USERS

# NI 67xx Pinout Labels for the SCB-68A


### Analog Output Modules/Devices Using the 68-Pin Shielded Connector Block

If you are using an NI 67xx (formerly referred to as AO Series) analog output device or module with the SCB-68A, you can print and attach a connector-specific pinout label to the cover of the connector block for easy connection reference. This document provides labels for the following models:

- NI 6703
- NI 6704
- NI 6711
- NI 6713
- NI 6715
- NI 6722
- NI 6723
- NI 6731
- NI 6733
- NI 6738
- NI 6739

Use the following label if you are connecting the SCB-68A to the NI 6703 model.

**Figure 1. NI 6703**



**Analog**

68	AO GND 0
34	AO 0 (V)
67	NC
33	AO GND 1
66	AO 1 (V)
32	NC
65	AO GND 2
31	AO 2 (V)
64	NC
30	AO GND 3
63	AO 3 (V)
29	NC
62	AO GND 4
28	AO 4 (V)
61	NC
27	AO GND 5
60	AO 5 (V)
26	NC

**Analog**

59	AO GND 6
25	AO 6 (V)
58	NC
24	AO GND 7
57	AO 7 (V)
23	NC
56	AO GND/NC*
22	AO 8 (V)
55	AO GND 8
21	NC
54	AO 9 (V)
20	AO GND 9
53	NC
19	AO GND/NC*
52	AO 10 (V)
18	AO GND 10

**Analog**

51	NC
17	AO 11 (V)
50	AO GND 11
16	NC
49	AO GND 12
15	AO 12 (V)
48	NC
14	AO GND 13
47	AO 13 (V)
13	NC
46	AO GND 14
12	AO 14 (V)
45	NC
11	AO GND 15
44	AO 15 (V)
10	NC

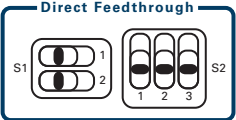
**Analog/  
Digital**

1	+5V
35	D GND/NC*
2	P0.0
36	D GND
3	P0.1
37	D GND
4	P0.2
38	RESERVED
5	P0.3
39	D GND
6	P0.4
40	RESERVED
7	P0.5
41	D GND
8	P0.6
42	D GND
9	D0.7
43	AO GND/NC*

**SCB-68A Quick Reference Label**

NI 6703 AO Series


**Direct Feedthrough**



\*: Connected to Ground on NI 6703; No Connect (NC) on SH68-68-D1 cable.

Use the following label if you are connecting the SCB-68A to the NI 6704 model.

**Figure 2. NI 6704**



**Analog**

68	AO GND 0/16
34	AO 0 (V)
67	AO 16 (I)
33	AO GND 1/17
66	AO 1 (V)
32	AO 17 (I)
65	AO GND 2/18
31	AO 2 (V)
64	AO 18 (I)
30	AO GND 3/19
63	AO 3 (V)
29	AO 19 (I)
62	AO GND 4/20
28	AO 4 (V)
61	AO 20 (I)
27	AO GND 5/21
60	AO 5 (V)
26	AO 21 (I)

**Analog**

59	AO GND 6/22
25	AO 6 (V)
58	AO 22 (I)
24	AO GND 7/23
57	AO 7 (V)
23	AO 23 (I)
56	AO GND/NC*
22	AO 8 (V)
55	AO GND 8/24
21	AO 24 (I)
54	AO 9 (V)
20	AO GND 9/25
53	AO 25 (I)
19	AO GND/NC*
52	AO 10 (V)
18	AO GND 10/26

**Analog**

51	AO 26 (I)
17	AO 11 (V)
50	AO GND 11/27
16	AO 27 (I)
49	AO GND 12/28
15	AO 12 (V)
48	AO 28 (I)
14	AO GND 13/29
47	AO 13 (V)
13	AO 29 (I)
46	AO GND 14/30
12	AO 14 (V)
45	AO 30 (I)
11	AO GND 15/31
44	AO 15 (V)
10	AO 31 (I)

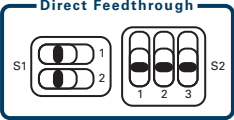
**Analog/  
Digital**

1	+5V
35	D GND/NC*
2	P0.0
36	D GND
3	P0.1
37	D GND
4	P0.2
38	RESERVED
5	P0.3
39	D GND
6	P0.4
40	RESERVED
7	P0.5
41	D GND
8	P0.6
42	D GND
9	D0.7
43	AO GND/NC*

**SCB-68A Quick Reference Label**

NI 6704 AO Series


**Direct Feedthrough**



\*: Connected to Ground on NI 6704; No Connect (NC) on SH68-68-D1 cable.

Use the following label if you are connecting the SCB-68A to the NI 6711/6731 models.

**Figure 3. NI 6711/6731**



**Analog**

68 NC

34 AO GND

67 AO GND

33 NC

66 AO GND

32 AO GND

65 NC

31 AO GND

64 AO GND

30 NC

63 AO GND

29 AO GND

62 NC

28 NC

61 AO GND

27 AO GND

60 NC

26 AO GND

**Analog/  
Digital**

59 AO GND

25 AO 3

58 AO GND

24 AO GND

57 AO 2

23 AO GND

56 AO GND

22 AO 0

55 AO GND

21 AO 1

54 AO GND

20 AO EXT REF

53 D GND

19 P0.4

52 P0.0

18 D GND

**Digital**

51 P0.5

17 P0.1

50 D GND

16 P0.6

49 P0.2

15 D GND

48 P0.7

14 +5V

47 P0.3

13 D GND

46 NC

12 D GND

45 EXT STROBE

11 PFI 0

44 D GND

10 PFI 1

**Digital**

1 FREQ OUT

35 D GND

2 CTR 0 OUT

36 D GND

3 PFI 9/CTR 0 GATE

37 PFI 8/CTR 0 SOURCE

4 D GND

38 PFI 7

5 PFI 6/AO STARTTRIG

39 D GND

6 PFI 5/AO SAMP CLK

40 CTR 1 OUT

7 D GND

41 PFI 4/CTR 1 GATE

8 +5V

42 PFI 3/CTR 1 SOURCE

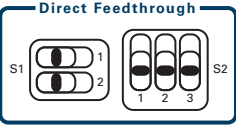
9 D GND

43 PFI 2

**SCB-68A Quick Reference Label**

NI 6711/6731 AO Series

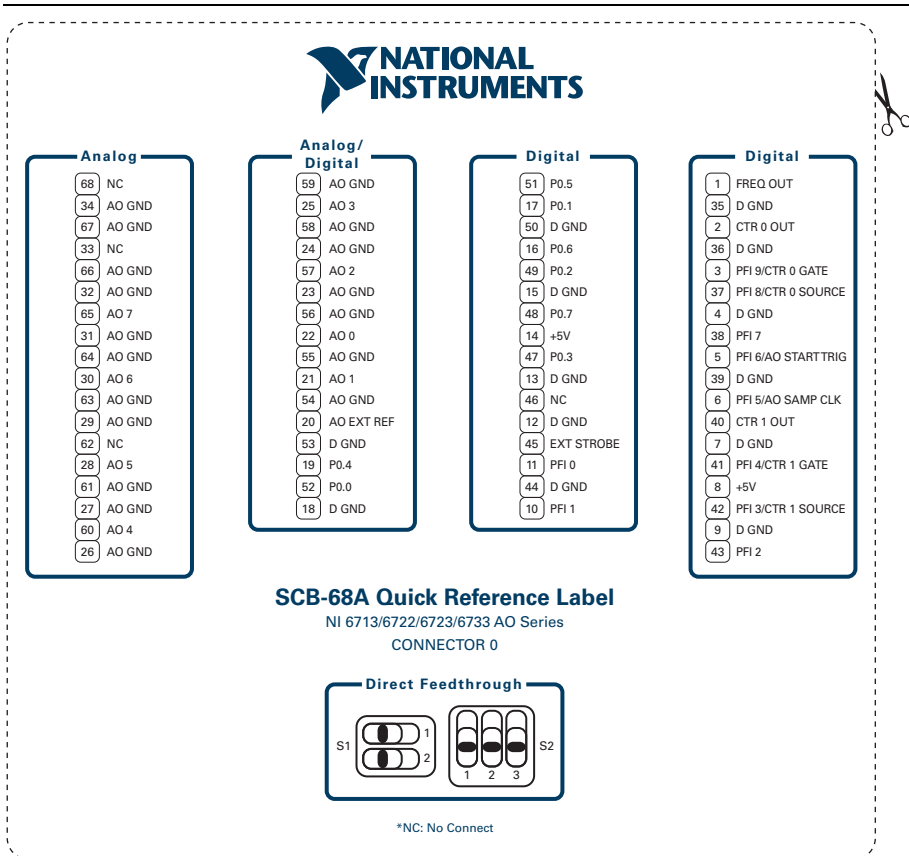
**Direct Feedthrough**



\*NC: No Connect

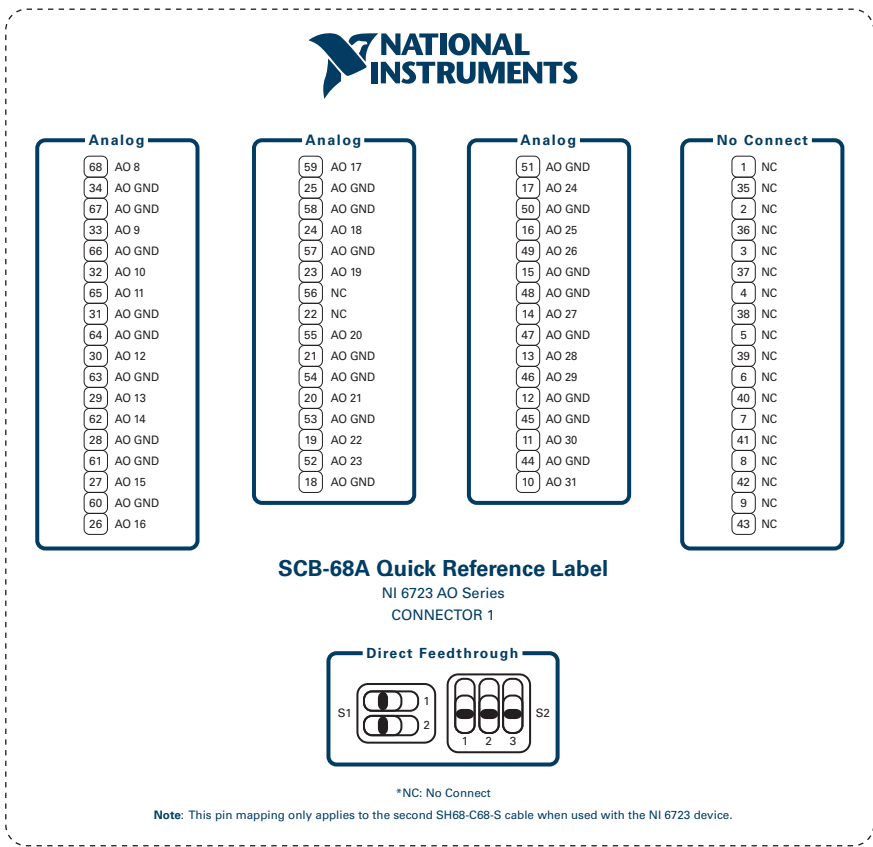
Use the following label if you are connecting the SCB-68A to Connector 0 of the NI 6713/6722/6723/6733 models.

**Figure 4. NI 6713/6722/6723/6733 Connector 0**



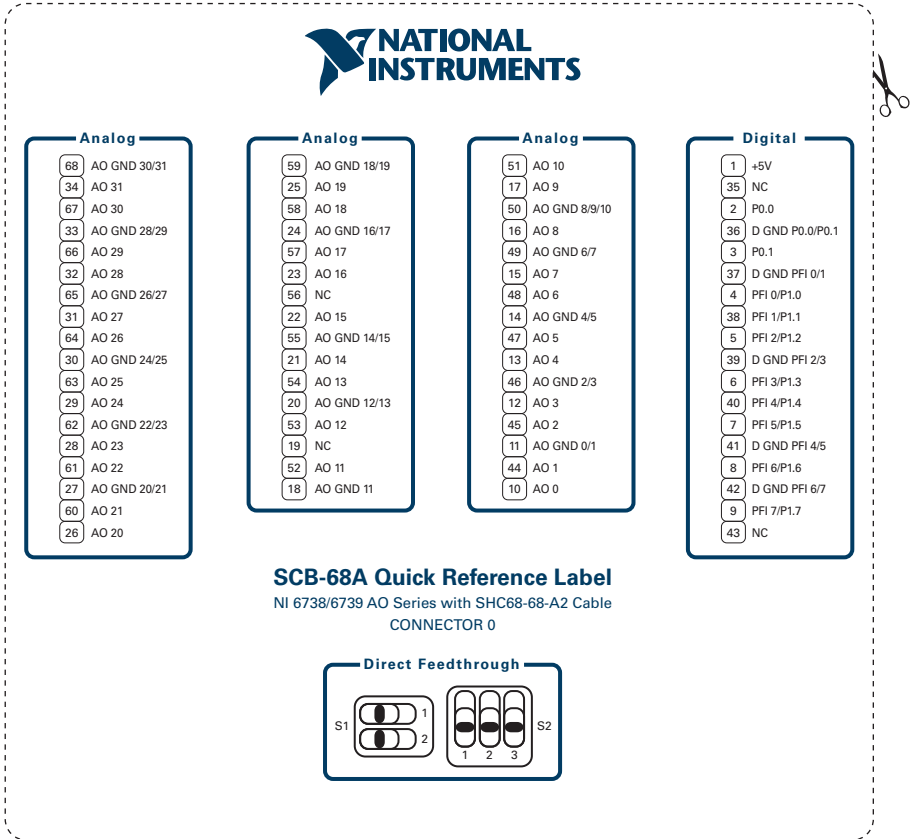
Use the following label if you are connecting the SCB-68A to Connector 1 of the NI 6723 model.

**Figure 5.** NI 6723 Connector 1



Use the following label if you are connecting the SCB-68A to Connector 0 of the NI 6738/6739 models with the SHC68-68-A2 cable.<sup>1</sup>

**Figure 6.** NI 6738/6739 Connector 0 with SHC68-68-A2 Cable

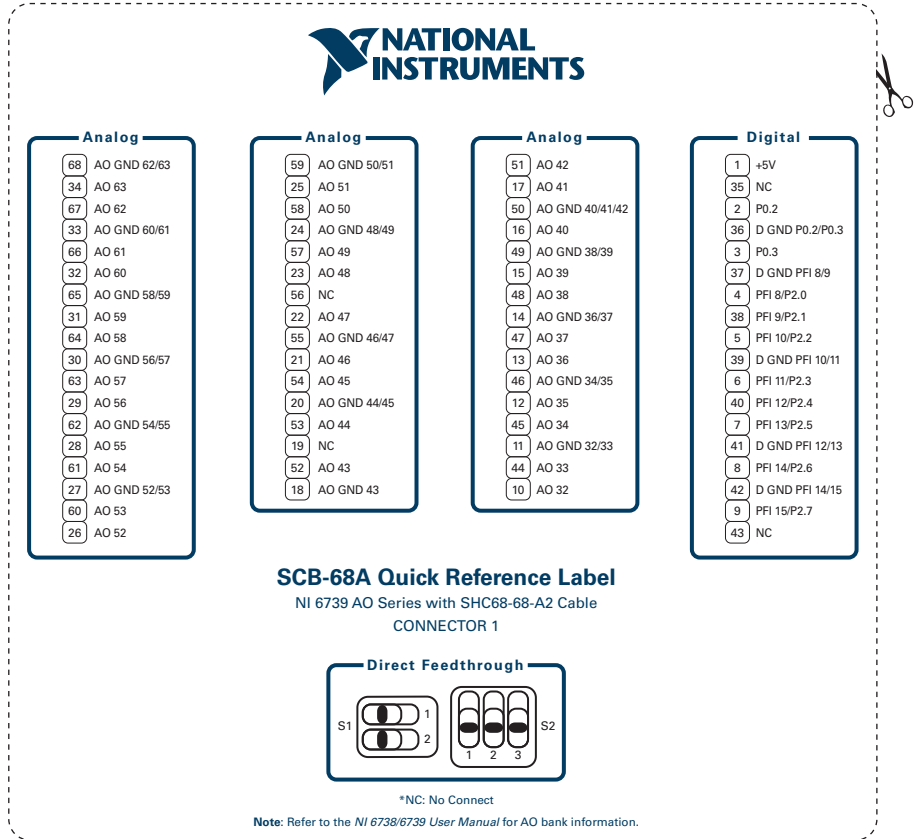


<sup>1</sup> Refer to Figure 8 if you are using the NI 6738/6739 with the SH68-C68-S cable and NI PXIe-6738 Adapter or NI PXIe-6739 Adapter.



Use the following label if you are connecting the SCB-68A to Connector 1 of the NI 6739 model with the SHC68-68-A2 cable.<sup>1</sup>


**Figure 7. NI 6739 Connector 1 with SHC68-68-A2 Cable**



<sup>1</sup> Refer to Figure 9 if you are using the NI 6739 with the SH68-C68-S cable and NI PXIe-6739 Adapter.

Use the following label if you are connecting the SCB-68A to Connector 0 of the NI 6738/6739 models with the SH68-C68-S cable and NI PXIe-6738 Adapter or NI PXIe-6739 Adapter.

**Figure 8.** NI 6738/6739 Connector 0 with SH68-C68-S Cable and NI PXIe-6738/6739 Adapter



**Analog**

68	AO GND 30/31
34	AO 31
67	AO 30
33	AO GND 28/29
66	AO 29
32	AO 28
65	AO GND 26/27
31	AO 27
64	AO 26
30	AO GND 24/25
63	AO 25
29	AO 24
62	AO GND 22/23
28	AO 23
61	AO 22
27	AO GND 20/21
60	AO 21
26	AO 20

**Analog**

59	AO GND 18/19
25	AO 19
58	AO 18
24	AO GND 16/17
57	AO 17
23	AO 16
56	AO GND
22	AO 15
55	AO GND 14/15
21	AO 14
54	AO 13
20	AO GND 12/13
53	AO 12
19	AO GND
52	AO 11
18	AO GND 11

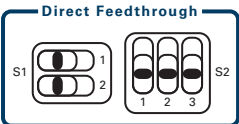
**Analog**

51	AO 10
17	AO 9
50	AO GND 8/9/10
16	AO 8
49	AO GND 6/7
15	AO 7
48	AO 6
14	AO GND 4/5
47	AO 5
13	AO 4
46	AO GND 2/3
12	AO 3
45	AO 2
11	AO GND 0/1
44	AO 1
10	AO 0

**Digital**

1	+5V
35	D GND
2	P0.0
36	D GND P0.0/P0.1
3	P0.1
37	D GND PFI 0/1
4	PFI 0/P1.0
38	PFI 1/P1.1
5	PFI 2/P1.2
39	D GND PFI 2/3
6	PFI 3/P1.3
40	PFI 4/P1.4
7	PFI 5/P1.5
41	D GND PFI 4/5
8	PFI 6/P1.6
42	D GND PFI 6/7
9	PFI 7/P1.7
43	D GND

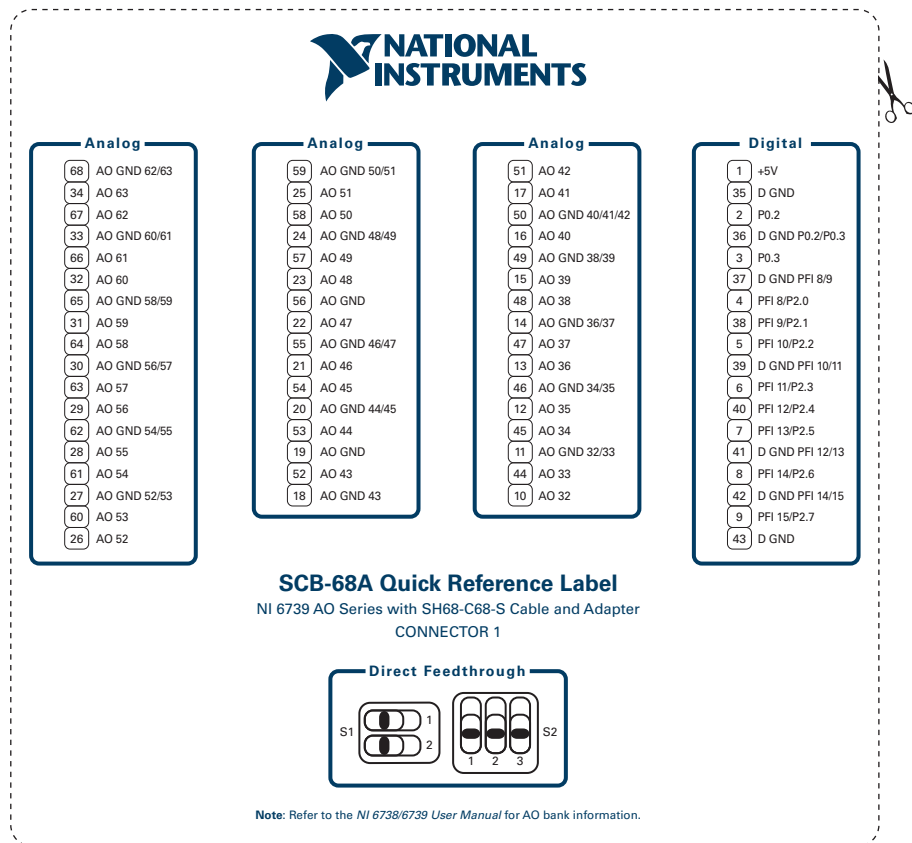
**SCB-68A Quick Reference Label**  
 NI 6738/6739 AO Series with SH68-C68-S Cable and Adapter  
 CONNECTOR 0



Note: Refer to the NI 6738/6739 User Manual for AO bank information.

Use the following label if you are connecting the SCB-68A to Connector 1 of the NI 6739 model with the SH68-C68-S cable and NI PXIe-6739 Adapter.

**Figure 9.** NI 6739 Connector 1 with SH68-C68-S Cable and NI PXIe-6739 Adapter



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