



APEX WAVES PCIe-6612 Counter-Timer Module User Guide

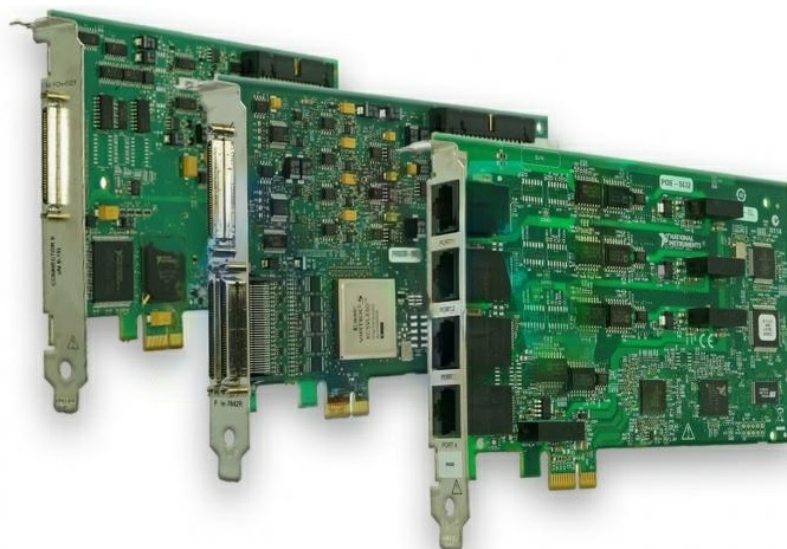
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APEX WAVES PCIe-6612 Counter-Timer Module



Product Information

The PCIe-6612 is a Counter/Timer Module that is used with the SCB-68A Shielded Connector Block. It is compatible with NI 6601, NI 6602, NI 6608, NI 6612, and NI 6614 models. The module has a 68-pin connector block and provides various input and output terminals for signal measurement and generation.

Product Usage Instructions

To use the PCIe-6612 Counter/Timer Module, follow the below instructions:

1. Connect the SCB-68A Shielded Connector Block to the PCIe-6612 module.
2. Refer to the appropriate pinout labels for the NI model you are connecting to the SCB-68A. Use Figure 1 for NI 6601, NI 6602, and NI 6608 models. Use Figure 2 for NI 6612 and NI 6614 models.
3. Connect the input/output terminals to the appropriate signal sources or measurement devices.
4. Configure the module settings using the appropriate software (such as NI-MAX or LabVIEW) depending on your application requirements.
5. Start acquiring or generating signals as per your application needs.

Counter/Timer Modules/Devices Using the 68-Pin Shielded Connector Block

If you are using an NI 66xx (formerly referred to as TIO) counter/timer 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 the label for the following models:

Models

- NI 6601
- NI 6602
- NI 6608
- NI 6612
- NI 6614

Use the following label

Use the following label if you are connecting the SCB-68A to NI 6601, NI 6602, and NI 6608 models.

NI 660x



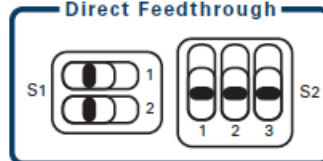
DIO/CTR		DIO/CTR		DIO/CTR		DIO/CTR	
68	D GND	59	D GND	51	PFI 10/P0.10/CTR 7 GATE	1	+5 V
34	PFI 31/P0.31/CTR 2 SOURCE	25	PFI 19/P0.19/CTR 5 SOURCE	17	PFI 9/P0.9/CTR 7 AUX	35	R GND
67	PFI 30/P0.30/CTR 2 GATE	58	PFI 18/P0.18/CTR 5 GATE	50	D GND	2	PFI 39/CTR 0 SOURCE
33	D GND	24	D GND	16	PFI 8/P0.8/CTR 7 OUT	36	D GND
66	PFI 29/P0.29/CTR 2 AUX	57	PFI 17/P0.17/CTR 5 AUX	49	D GND	3	PFI 38/CTR 0 GATE
32	PFI 28/P0.28/CTR 2 OUT	23	PFI 16/P0.16/CTR 5 OUT	15	PFI 7/P0.7	37	RESERVED
65	D GND	56	R GND	48	PFI 6/P0.6	4	RESERVED
31	PFI 27/P0.27/CTR 3 SOURCE	22	PFI 15/P0.15/CTR 6 SOURCE	14	D GND	38	RESERVED
64	PFI 26/P0.26/CTR 3 GATE	55	D GND	47	PFI 5/P0.5	5	PFI 36/CTR 0 OUT
30	D GND	21	PFI 14/P0.14/CTR 6 GATE	13	PFI 4/P0.4	39	D GND
63	PFI 25/P0.25/CTR 3 AUX	54	PFI 13/P0.13/CTR 6 AUX	46	D GND	6	PFI 33/CTR 1 AUX
29	PFI 24/P0.24/CTR 3 OUT	20	D GND	12	PFI 3/P0.3	40	PFI 37/CTR 0 AUX
62	D GND	53	PFI 12/P0.12/CTR 6 OUT	45	PFI 2/P0.2	7	PFI 35/CTR 1 SOURCE
28	PFI 23/P0.23/CTR 4 SOURCE	19	R GND	11	D GND	41	D GND
61	PFI 22/P0.22/CTR 4 GATE	52	PFI 11/P0.11/CTR 7 SOURCE	44	PFI 1/P0.1	8	PFI 34/CTR 1 GATE
27	D GND	18	D GND	10	PFI 0/P0.0	42	D GND
60	PFI 21/P0.21/CTR 4 AUX					9	PFI 32/CTR 1 OUT
26	PFI 20/P0.20/CTR 4 OUT					43	R GND

SCB-68A Quick Reference Label

NI 660x Counter/Timer (TIO) Models

R GND: These terminals are routed to RESERVED when using the product with a SH68-68-D1 shielded cable or routed to D GND when using the product with a R68-68 ribbon cable.

Direct Feedthrough



Use the following label if you are connecting the SCB-68A to NI 6612 and NI 6614 models.

NI 661x



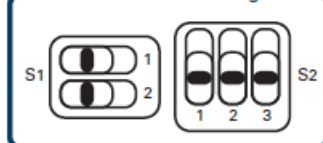
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SCB-68A Quick Reference Label

NI 661x Counter/Timer (TIO) Models

R GND: These terminals are routed to RESERVED when using the product with a SH68-68-D1 shielded cable or routed to D GND when using the product with a R68-68 ribbon cable.

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References

- [NI Engineer Ambitiously - NI](#)
- [NI Trade Compliance - NI](#)
- [NI National Instruments Patents - NI](#)
- [NI Trademarks and Logo Guidelines - NI](#)
- [NI PCIe-6612 National Instruments Counter/Timer Device | Apex Waves](#)

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