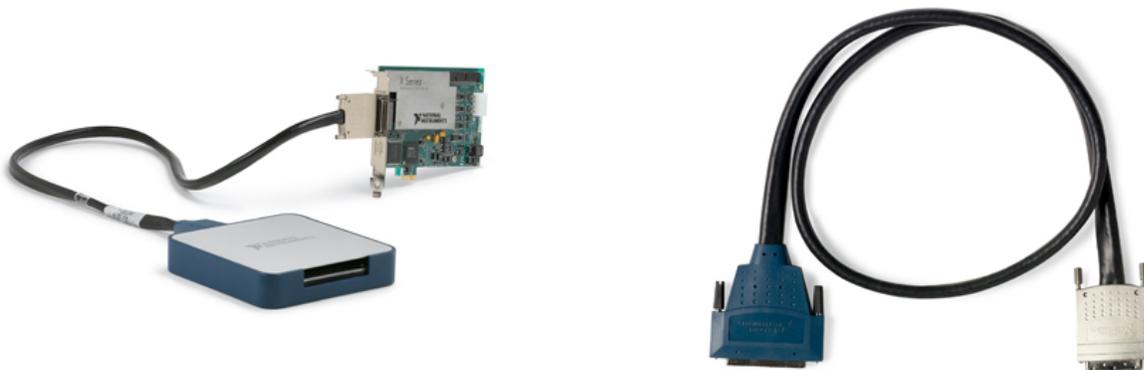


For user manuals and dimensional drawings, visit the product page resources tab on ni.com.

Last Revised: 2014-11-06 07:14:50.0

## DAQ Accessories Selection Guide



- Shielded and unshielded cables available in many lengths
- Custom cable connector kits and mounting accessories
- Direct BNC connectivity for most products
- Shielded, unshielded, and DIN mountable terminal blocks
- Custom connectivity

### Overview

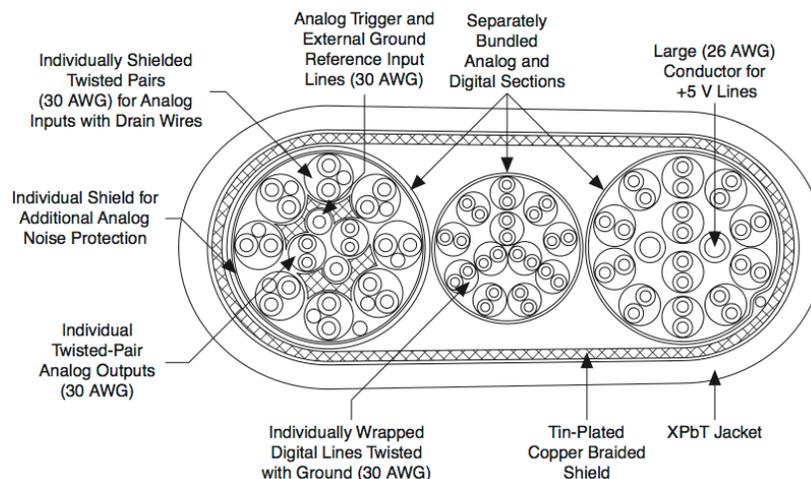
National Instruments accessories offer the flexibility you need in creating your measurement system. From shielded cables and terminal blocks to RTSI and ribbon cables, NI provides a variety of connectivity solutions including screw terminals and BNC connectors. NI shielded connector block (SCB) products feature rugged, very low-noise signal termination, and the NI terminal block (TB) and connector block (CB) families offer unshielded, low-cost alternatives.

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## Application and Technology

### NI Cable Design Advantages

National Instruments provides many different high-performance shielded cables that have been designed for specific NI multifunction DAQ devices. Each type of cable features improved signal integrity using the following technologies:



## Multifunction DAQ Accessories

### NI X and M Series Devices

	Feature	Connect to...	Connector	Cable	Accessory
68-pin devices	Noise reducing	SCC portable signal conditioning	0 or 1	SHC68-68-EPM	SCC-68
	Noise reducing	SCXI high-performance signal conditioning	0 only	SHC68-68-EPM	NI SCXI signal conditioning hardware
	Noise reducing	Screw terminals	0 or 1	SHC68-68-EPM	SCC-68, SCB-68A, or TBX-68
	Noise reducing	Screw terminals (PXI only)	0 only	--	TB-2706
	Noise reducing	Screw terminals (PXI only)	0 or 1	SHC68-68-EPM	BNC-2110, BNC-2111, BNC-2120, or BNC-2090
	Noise reducing	BNC terminal block	0 or 1	SHC68-68-EPM <sup>2</sup>	50-pin accessories
	Basic shielding	50-pin connector	0 or 1	SHC68-68	SCB-68A, CB-68LP, CB-68LPR
	Low cost	Screw terminals	0 or 1	RC68-68	CB-68LP or CB-68LPR
	Custom connectivity	Board mounting connectors	0 or 1	SHC68-68-EPM	PCB mounting connectors
	Custom connectivity	68-pin female connector	0 or 1	SHC68-68M-EPM	Custom-built or third-party
37-pin devices	150 V CAT II, DIN rail	Screw terminals	0 only	SH37F-37M	CB-37F-HVD
	High-voltage isolated	Screw terminals	0 only	DB37M-DB37F-EP <sup>1</sup>	CB-37F-HVD, CB-37FH, or CB-37FV
	DIN rail	Screw terminals	0 only	SH37F-37M or R37F-37M-1	CB-37FH or CB-37FV
	Custom connectivity	Unterminated	0 only	SH37F-P-4	Custom-built or third-party
	Custom connectivity	Crimp and poke termination	0 only	--	TB-37F-37CP
	Custom connectivity	Solder cup termination	0 only	--	TB-37F-37SC
	Low cost	Screw terminals	0 only	--	CB-37F-LP

<sup>1</sup>Cable works with only NI 6230 and NI 6236; <sup>2</sup>Use the 68M-50F-MIO with the SHC68-68-EPM when connecting to 50-pin accessories.

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### S Series Devices

	Feature	Connect to...	Connector	Cable	Accessory
NI 6115, NI 6120, NI 6123, NI 6133, NI 6122, NI 6132, NI 6110, NI 6111	Noise reducing	SMB terminal block (PXI only)	0 only	--	TB-2708 or TB-2709
	Noise reducing	Screw terminals (PXI only)	0 only	--	TB-2705
	Noise reducing	Screw terminals	0 only	SH68-68-EP	SCB-68A
	Noise reducing	BNC terminal block	0 only	SH68-68-EP	BNC-2110, BNC-2120, or BNC-2090A
	Low cost	Screw terminals	0 only	R6868	CB-68LP or CB-68LPR
NI 6143	Noise reducing	Screw terminals (PXI Only)	0 only	--	TB-2706
	Noise reducing	Screw terminals	0 only	SHC68-68-EP	SCB-68A
	Low cost	Screw terminals	0 only	RC68-68	CB-68LP or CB-68LPR
NI 6154	High-voltage isolated	Screw terminals	0 only	DB37M-DB37F-EP	CB-37F-HVD, CB-37FH, or CB-37FV

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### Analog Output Devices

Model	Shielding	Connect to...	Cable	Accessory
NI 673x, PCI-671x, PXI-671x	Shielded	BNC	SH68-68-EP	BNC-2110
	Shielded	Screw terminals	SH68-68-EP	SCB-68A or TBX-68
	Shielded	Screw terminals	--	TB-2705 (PXI)
	Shielded	Custom	SH68-68-EP	CA-1000
	Unshielded	Screw terminals	R6868	CB-68LP or CB-68LPR
NI 6723	Shielded	BNC	2 SH68-C68-S	BNC-2110 and BNC-2115
	Shielded	Screw terminals	2 SH68-C68-S	2 SCB-68A or TBX-68
	Shielded	Custom	2 SH68-C68-S	2 CA-1000
NI 6722	Shielded	BNC	SH68-C68-S	2 CA-1000
	Shielded	Screw terminals	SH68-C68-S	BNC-2110
	Shielded	Custom	SH68-C68-S	SCB-68A
	Unshielded	Screw terminals	RC68-68	CB-68LP or CB-68LPR
NI 6703, 6704	Shielded	Screw terminals	SH68-68-D1	SCB-68A
	Shielded	Custom	SH68-68-D1	CA-1000
	Unshielded	Screw terminals	R6868	CB-68LP or CB-68LPR
DAQCard-6715	Shielded	BNC	SHC68-68-EPM	BNC-2110
	Shielded	Screw terminals	SHC68-68-EPM	SCB-68A
	Shielded	Custom	SHC68-68-EPM	CA-1000
	Unshielded	Screw terminals	RC68-68	CB-68LP or CB-68LPR

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### Digital Input/Output Devices

Product	Feature	Connect to...	Cable	Accessory
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100-pin				
NI 6509, NI 6511, NI 6512, NI 6513, NI 6514, NI 6515, NI 6527, NI 6528, PC-DIO-96	Noise reducing	Screw terminals	SH100-100-F	SCB-100
	Low Cost	Screw terminals	Cable included	CB-100 kit
50-pin				
NI 6503, USB-6501 OEM, PC-DIO-24, DAQCard-DIO-24	Noise reducing	Screw terminals	PSH27-50F-D1	CB-50, CB-50LP
	Low cost	Screw terminals	NB1	CB-50, CB-50LP
37-pin				
NI 6510, NI 6516, NI 6517, NI 6518, NI 6519, NI 6520, NI 6521	High voltage	Screw terminals	SH37F-37M	CB-37F-HVD
	High voltage	Screw terminals	--	TB-2621 (PXI only)
	Noise reducing	Screw terminals	SH37F-37M	CB-37FH, CB-37FV
	Low cost	Screw terminals	R37F-37M-1	CB-37FH, CB-37FV
	Low cost	Screw terminals	--	CB-37F-LP
	Custom connectivity	37-pin female connector	--	TB-37F-37CP, TB-37F-37SC
	Custom connectivity	37-pin female connector	SH37F-P-4	--

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## Timer/Counter Devices

Product	Feature	Connect to...	Cable	Accessory
100-pin				
NI 6624	Noise reducing	Screw terminals	SH100-100-F	SCB-100
	Low cost	Screw terminals	Cable included	CB-100 kit
68-pin				
NI 6601, 6602, 6608	Noise reducing	Screw terminals	SH68-68-D1	SCB-68A
	Noise reducing	BNC	SH68-68-D1	BNC-2121
	Noise reducing	Screw terminals	--	TB-2715
	Low cost	Screw terminals	R6868	CB-68LP
	Low cost	Screw terminals	R6868	TBX-68

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## 100-Pin Accessories

### Cables

**SH100100**—Shielded 100-conductor cable terminated with 100-pin male 0.050 series D-type connectors. This cable connects the 100-pin E Series devices to 100-pin accessories.

1 m .....182853-01  
2 m .....182853-02

**SH1006868**—Shielded cable that connects to 100-pin E Series devices and terminates with two female 68-pin 0.050 series D-type connectors.

1 m .....182849-01  
2 m .....182849-02

**SH100-100-F**—Shielded 100-conductor cable for connecting 100-pin digital I/O (DIO) and totalizer I/O (TIO) devices to 100-pin accessories.

2 m .....185095-02

**R1005050**—Connects 100-pin E Series, DIO, and TIO devices to standard 50-pin third-party or custom connectors.

1 m .....182762-01  
2 m .....182762-02

### Connector Blocks

**SCB-100**—Shielded I/O connector block for rugged, low-noise signal termination with 100-pin E Series, DIO, and TIO devices. It also includes general-purpose breadboard areas and an IC temperature sensor for cold-junction compensation in temperature measurements.

**SCB-100** .....776990-01  
Dimensions—19.5 by 15.2 by 4.5 cm (7.7 by 6.0 by 1.8 in.)



**CB-100**—Includes two CB-50 I/O connector blocks and an R1005050 ribbon cable for connecting to any devices with a 100-pin SCSI I/O connector. Each CB-50 block includes hardware for mounting the accessory on a standard DIN rail or panel.

**CB-100 with 1 m R1005050 cable** .....777812-01

**PCB Mounting Connectors for Custom Accessories**—Build custom accessories that connect to 100-conductor shielded and ribbon cables using these connectors.

100-pin, female, right-angle mounting .....	777778-01
100-pin, female, vertical mounting .....	777779-01

## 68-Pin Accessories

### Cables

**SHC68-68-EPM**—A high-performance shielded 68-conductor cable terminated with a VHDCI 68-pin male connector at one end and a 68-pin female 0.050 D-type connector at the other end for connecting M Series, DAQCard, and select S Series devices to standard 68-pin accessories.

0.5 m.....	192061-0R5
1 m .....	192061-01
2 m .....	192061-02
5 m .....	192061-05
10 m .....	192061-10



**SHC68-68**—A low-cost cable for connecting M Series DAQ devices to 68-pin accessories and signal conditioning systems. It features individually twisted cable pairs but does not have shields between the analog and digital signals. For improved noise rejection, consider the SHC68-68-EPM.

1 m .....	191945-01
2 m .....	191945-02

**SH68-C68-S**—Basic shielded cable featuring twisted pairs and additional ferrites for connecting NI 672x analog output devices to 68-pin accessories.

2 m .....	186381-02
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**SHC68U-68-EP**—Shielded 68-conductor cable terminated with an inverted VHDCI 68-pin male connector at one end and a 68-pin female 0.050 series D-type connector at the other. When using two E Series DAQCard devices in adjacent slots, use one SHC68-68-EPM and one SHC68U-68-EP.

0.5 m.....	187406-0R5
1 m .....	187406-01

**SH68-68-EP, SH68-68R1-EP**—Shielded 68-conductor cable terminated with two 68-pin female 0.050 series D-type connectors. They connect to 68-pin mass-terminated USB M Series, E Series, S Series, and B Series devices. If you need a right-angle connector, use the **SH68-68R1-EP**.

#### SH68-68-EP

1 m .....	184749-01
2 m .....	184749-02
5 m .....	184749-05
10 m .....	184749-10

#### SH68-68R1-EP

1 m .....	187051-01
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**SH68-68-D1**—Shielded 68-conductor cable terminated with two 68-pin female 0.050 series D-type connectors. This cable connects counter/timer and NI 670x analog output devices to 68-pin accessories.

1 m .....	183432-01
2 m .....	183432-02



**SH6868**—Shielded 68-pin cable terminated with two 68-pin 0.050 series D-type connectors. Cable is used to connect NI 4350 and NI 4351 devices to 68-pin accessories.

1 m .....	182419-01
2 m .....	182419-02
5 m .....	182419-05
10 m .....	182419-10

**SH6850**—A shielded cable that connects a 68-pin E Series, S Series (except NI 6143), or B Series multifunction DAQ product to a third-party or custom standard 50-pin accessory. The cable provides a screw-latching 68-pin female connector on one side and a standard 50-pin female connector on the other side.

1 m .....	776784-01
2 m .....	776784-02

**SHC68-68M-EPM**—A shielded cable used to connect M Series devices with custom-built accessories. One end terminates with a 68-pin VHDCI male connector and the other with a 0.050 D-type male connector.

0.3 m.....	192288-0R3
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**SHC68-NT-S**—A shielded 68-conductor cable terminated with a 68-pin male VHDCI connector at one end and open to bare wires at the other. The cable connects M Series, NI 6143, and R Series devices to custom accessories through bare wires.

2 m .....	189041-02
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**RC68-68**—A 68-conductor ribbon cable that connects a DAQCard, M Series device, or NI 6143 directly to 68-pin accessories. You can use two RC68-68 cables together in adjacent PCMCIA slots or on 2-connector M Series devices.

- 0.25 m .....187252-0R25
- 0.5 m .....187252-0R5
- 1 m .....187252-01



**R6868**—A low-cost, 68-conductor flat ribbon cable terminated with two 68-pin connectors. Use this cable to connect a 68-pin E Series, S Series (except NI 6143), or B Series multifunction DAQ device to 68-pin accessories.

- 1 m .....182482-01

**R6850**—Combines a 68F-50M cable adapter and a standard 50-pin cable with female connectors on both ends. It is designed to adapt a 68-pin E Series, S Series, or B Series multifunction DAQ device to a third-party or custom 50-pin accessory.

- 1 m .....776842-01

**68-Pin Custom Cable Connector/Backshell Kit**—A kit used to make custom cables for devices with 68-pin SCSI 2 connectors. Solder-cup contacts are available for soldering cable wires to the connector.

- 68-pin connector/backshell kit** .....776832-01

**Connector Blocks**

**SCB-68A**—Shielded I/O connector block for rugged, low-noise signal termination with 68-pin DAQ devices. It includes general-purpose breadboard areas and an IC temperature sensor for cold-junction compensation in temperature measurements. The SCB-68A is the evolution of the SCB-68 connector block. Completely redesigned from the ground up, it has a brand new mechanical enclosure, smaller footprint, and magnetic lid. It also includes features like a resettable fuse and the ability to mount via DIN rail or panel.

- SCB-68A** .....782536-01
- Dimensions—14.7 by 14.7 by 3.0 cm (5.8 by 5.8 by 1.2 in.)



**SCB-68**—Shielded I/O connector block for rugged, low-noise signal termination with 68-pin DAQ devices. It includes general-purpose breadboard areas and an IC temperature sensor for cold-junction compensation in temperature measurements.

- SCB-68** .....776844-01
- Dimensions—19.5 by 15.2 by 4.5 cm (7.7 by 6.0 by 1.8 in.)

**SCC-68**—High-performance I/O terminal block for M Series and

E Series DAQ devices that provides four slots for analog input and digital SCC signal conditioning modules, general-purpose breadboard areas, an IC temperature sensor for cold-junction compensation, and 68 screw terminals for direct I/O connectivity.

- SCC-68** .....779475-01
- Dimensions—24.46 by 17.78 by 5.30 cm (9.63 by 7.0 by 2.09 in.)



**BNC-21xx**—Shielded connector blocks with BNC connectors for easy connectivity to I/O signals. The BNC-2110 and BNC-2120 (for 68-pin M Series, S Series, and B Series) have BNC inputs for eight differential analog input signals, analog output signals, and some digital I/O signals. Other digital I/O signals are accessible through screw terminals. The BNC-2120 also provides a function generator, quadrature encoder, temperature reference, thermocouple connector, and LEDs for digital I/O signals. The BNC-2111 (for 68-pin M Series and B Series) has BNC inputs for 16 single-ended analog input signals, analog output signals, and some digital I/O signals. The unshielded version of the BNC-2111 is suitable for OEM applications. The BNC-2115 has BNC connectors for the extended I/O channels of 100-pin E Series devices (NI 6025E/6031E/6033E/6071E).

- BNC-2110** .....777643-01
- Dimensions—29.3 by 11.2 by 5.5 cm (8.0 by 4.4 by 2.2 in.)

- BNC-2111, shielded** .....779347-01

- BNC-2111, unshielded** .....779347-02
- Dimensions—19.05 by 10.5 by 3.5 cm (7.4 by 3.5 by 2.0 in.)

- BNC-2115** .....777807-01
- Dimensions—20.3 by 11.2 by 5.5 cm (8.0 by 4.4 by 2.2 in.)

- BNC-2120** .....777960-01
- Dimensions—26.7 by 11.2 by 6.0 cm (10.5 by 4.4 by 2.4 in.)



**BNC-2121**—The BNC-2121 connector accessory is a terminal block that connects signals to an NI 660x counter device and can be used to test features of an NI 660x device.

- BNC-2121** .....778289-01
- Dimensions—20.3 by 11.2 by 5.5 cm (8.0 by 4.4 by 2.2 in.)

**BNC-2090A, BNC-2090**—A shielded, 1U, 19 in. rack-mountable adapter with 22 signal-labeled BNC connectors to simplify connections to your I/O signals. The accessory provides access to all analog I/O; analog and digital triggers; clocks for synchronization purposes; and two user-defined signals through BNC connectors. Digital I/O signal connectivity is provided through 29 spring terminals. The BNC-2090A includes easy access to areas where users can build custom signal conditioning circuitry including lowpass filters, highpass filters, and voltage dividers (attenuators). 68-pin SCSI connectors are featured on the front and back of the accessory, providing additional options for connecting to the data acquisition device. The BNC-2090A can connect to any 68-pin M Series (connectors 0 and 1), E Series, S Series, or B Series DAQ device. The BNC-2090A is a RoHS-compliant accessory.



For existing users of the BNC-2090, the BNC-2090A provides complete backward compatibility with existing systems. The BNC-2090A offers easier assembly/disassembly, easier access to areas for custom signal conditioning, a smaller footprint, RoHS compliance, and optimization for M Series and other NI-DAQmx supported devices. NI recommends the BNC-2090A instead of the BNC-2090 for all use cases.

**BNC-2090A** .....779556-01  
**BNC-2090** .....777270-01  
 Dimensions—48.3 by 4.4 by 18.8 cm (19.0 by 1.7 by 7.4 in.)

**SC-2075**—Connector block with breadboard area for prototyping, as well as BNC and spring-terminal connectivity for 68-pin M Series, E Series, and B Series multifunction DAQ devices. The built-in  $\pm 15$  V or adjustable 0 to 5 V power supply and LEDs for digital lines make the SC-2075 ideal for academic laboratories.

**SC-2075** .....778147-90  
 Dimensions—26.7 by 20.7 by 4.4 cm (10.5 by 8.2 by 1.7 in.)

**TBX-68**—Connector block for easy connection of field I/O signals to 68-pin DAQ devices. The TBX-68 includes 68 screw terminals and one 68-pin male connector for direct connection to 68-pin cables. The TBX-68 is mounted in a protective plastic base with hardware for mounting on a standard DIN rail.

**TBX-68** .....777141-01  
 Dimensions—12.50 by 10.74 cm (4.92 by 4.23 in.)

**TB-270x**—TB-270x devices are 68-pin shielded accessories with screw terminals for I/O signals that mount directly to the front panel of 68-pin PXI DAQ modules. The TB-2705 works with NI PXI-6030E/6040E/6052E/6070E E Series modules and NI PXI-6115/612x/613x S Series modules. The TB-2706 works with 68-pin PXI M Series modules and the NI PXI-6143. The TB-2708 and TB-2709 provide nine SMB connectors for direct access to simultaneous sampling I/O, and an auxiliary connector for advanced timing and triggering with the MFIT-Pigtail cable. The TB-2708 works with the PXI-6115/6120 S Series modules. The TB-2709 works with the PXI-612x/613x S Series modules.

**TB-2705** .....778241-01  
**TB-2706** .....779183-01  
**TB-2708** .....778823-01  
**TB-2709** .....779554-01  
 Dimensions—10.7 by 8.6 by 2.0 cm (4.2 by 3.4 by 0.8 in.)



**TB-2715**—Terminal block for PXI counter/timer devices with which you can connect signals directly without additional cables. Screw terminals provide easy connection of I/O signals. The TB-2715 latches to the front of your PXI module with locking screws and provides strain relief.

**TB-2715** .....778242-01  
 Dimensions—8.43 by 10.41 by 2.03 cm (3.32 by 4.1 by 0.8 in.)

**CB-68LP, CB-68LPR**—Low-cost termination accessories with 68 screw terminals for easy connection of I/O signals to 68-pin M Series, E Series, S Series, or B Series multifunction DAQ devices. They include one 68-pin male connector for direct connection to 68-pin cables and standoffs for use on a desktop or for mounting in a custom panel. The CB-68LP has a vertical-mounted 68-pin connector. The CB-68LPR has a right-angle mounted connector, and can be used with the CA-1000.



**CB-68LP** .....777145-01  
 Dimensions—14.35 by 10.74 cm (5.65 by 4.23 in.)

**CB-68LPR** .....777145-02  
 Dimensions—7.62 by 16.19 cm (3.00 by 6.36 in.)

**DAQ Signal Accessory**—For demonstration of analog, digital, and counter/timer functions of DAQ devices. You can use the DAQ Signal Accessory with any 68-pin M Series, E Series, or B Series DAQ device. It features a built-in function generator, quadrature encoder, solid-state relay, IC temperature sensor, noise generator, microphone jack, thermocouple jack, four LEDs, and a digital trigger button.

**DAQ Signal Accessory** .....777382-01  
 Dimensions—12.7 by 12.7 cm (5.0 by 5.0 in.)



**PCB Mounting Connectors for Custom Accessories**—Build custom accessories that connect to 68-conductor shielded and ribbon cables using these connectors.

68-pin, male, right-angle mounting .....777600-01  
 68-pin, male, vertical mounting .....777601-01

## 37-Pin Accessories

### Cables

**DB37M-DB37F-EP**—High-performance shielded 37-pin female-to-male D-SUB cable with separate analog input, analog output, and digital sections designed to reduce noise. This cable is for use with the isolated S Series (NI PCI-6154) and select isolated M Series (NI 6230 and NI 6236) devices.

1 m .....193737-01

**SH37F-37M**—37-pin D-SUB female-to-male shielded I/O cables.

1 m .....778621-01  
2 m .....778621-02



**SH37F-P-4**—37-pin D-SUB shielded female-to-pigtail cable for custom wiring.

4 m .....778620-04

**R37F-37M**—37-pin D-SUB female-to-male ribbon I/O cable.

1 m .....779195-01

### Connector Blocks

**CB-37F-HVD**—UL-listed (150 V, 2 A) 37-pin female D-SUB horizontal terminal block that mounts in line with the DIN rail.

**CB-37F-HVD** .....779491-01



**CB-37F-LP**—Direct mountable connector block for 37-pin DAQ devices. The easily accessible screw terminals and low cost make this accessory ideal for OEM applications.

**CB-37F-LP** .....779353-01



**CB-37FV**—37-pin female D-SUB vertical terminal block that mounts perpendicular to the DIN rail.

**CB-37FV** .....778672-01



**CB-37FH**—37-pin female D-SUB horizontal terminal block that mounts in line with the DIN rail.

**CB-37FH** .....778673-01

**TB-2621**—37-pin front-mounting PXI terminal block. High-voltage, UL-listed for CAT II, 150 VDC/VAC.

**TB-2621** .....779444-01

**TB-37F-37CP**—37-pin female D-SUB crimp and poke termination accessory for custom cabling.

**TB-37F-37CP** .....779185-01

**TB-37F-37SC**—37-pin female D-SUB solder cup termination accessory for custom cabling.

**TB-37F-37SC** .....779184-01

**37-Pin HV Safety Kit**—Accessories for modifying two connectors with safety keying for use in high-voltage DAQ with devices such as an NI 6521.

**37-Pin HV Safety Kit** .....779445-01



## Specialty Accessories

**CA-1000**—A configurable enclosure that gives you maximum user-defined connectivity and flexibility through customized panelettes. Each enclosure can accommodate up to nine panelettes.

Dimensions—30.7 by 25.4 by 4.3 cm (21.1 by 10.0 by 1.7 in.)

**USB Accessory Kits**—Connectors, labels, and screw drivers for use with USB-6008/6009 multifunction DAQ and USB-6501 digital I/O devices.

**USB-6008/6009 Analog I/O Accessory Kit** .....779371-01  
**USB Digital I/O Accessory Kit** .....779376-01

**Hi-Speed USB Cables**—Designed to connect any USB DAQ device to the USB port of your computer. They feature a B-type connector for the device-side connection and an A-type connector for the host-side connection.

1 m .....184125-01  
2 m .....184125-02

**PSH27-50F-D1**—Shielded cable that connects to the DAQCard-DIO-24 and is terminated with a 50-pin female connector that attaches directly to 50-pin accessories.

0.5 m .....776989-0R5  
1 m .....776989-01

**SH-15-15, SH-15-15B**—Shielded 15-conductor cables for use with the CF-6004. The SH-15-15 terminates in a 15-pin D-SUB connector, while the SH-15-15B terminates in bare wires for custom connectivity.

**SH-15-15** .....191067-0R5  
**SH-15-15B** .....191070-0R5



**SCB-15**—A shielded compact connector block for use with the CF-6004.

**SCB-15** .....779197-01

**CB-15**—DIN-rail mountable connector block for use with the CF-6004. Easily accessible screw terminals make this accessory great for prototyping.

**CB-15** .....779198-01



**MFIT-Pigtail**—Shielded 14-conductor cable terminated with a 14-position MFIT female connector at one end and unterminated bare wires at the other end. It connects to the auxiliary connector of the TB-2708 and TB-2709 for access to digital I/O and trigger lines on various S Series PXI modules.

1 m .....194123-01

**Strain-Relief Accessory**—Attaches to the bottom of your notebook computer or DAQPad and provides adjustable strain relief for one or two PCMCIA cables attached to DAQCard devices, or a USB cable attached to a DAQPad device.

**Strain-relief accessory** .....777550-01



**RTSI Bus Cables**—Connect timing and synchronization signals among DAQ, M Series, E Series, S Series, vision, motion, and CAN boards for PCI. For systems using long and short boards, order the extended RTSI cable.

2 boards .....776249-02  
3 boards .....776249-03  
4 boards .....776249-04  
5 boards .....776249-05  
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## Signal Conditioning

**SCC**—A portable modular signal conditioning system consisting of modules that plug into a low-profile shielded carrier. Choose from a variety of signal conditioning options including sensor, input, isolation, and filtering modules. SCC is compatible with M Series, E Series, and some B Series and portable devices.

**SCXI**—A high-performance modular signal conditioning platform that provides a front end to your M Series or E Series DAQ device. You can expand your analog inputs to 3,072 channels. SCXI offers a variety of modules for sensor conditioning, amplification, filtering, and other modules.

**R Series Expansion Chassis**—The NI cRIO-9151 is a chassis that connects directly to any digital connector on R Series intelligent DAQ devices and houses up to four C Series I/O modules for low-cost signal conditioning, I/O channel expansion, and direct connectivity. Many types of C Series modules are available, including 24-bit thermocouple inputs, IEPE accelerometer inputs, current and voltage output modules, 24 V industrial digital I/O modules, and electromechanical relay modules.

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## Support and Services

### System Assurance Programs

NI system assurance programs are designed to make it even easier for you to own an NI system. These programs include configuration and deployment services for your NI PXI, CompactRIO, or Compact FieldPoint system. The NI Basic System Assurance Program provides a simple integration test and ensures that your system is delivered completely assembled in one box. When you configure your system with the NI Standard System Assurance Program, you can select from available NI system driver sets and application development environments to create customized, reorderable software configurations. Your system arrives fully assembled and tested in one box with your software preinstalled. When you order your system with the standard program, you also receive system-specific documentation including a bill of materials, an integration test report, a recommended maintenance plan, and frequently asked question documents. Finally, the standard program reduces the total cost of owning an NI system by providing three years of warranty coverage and calibration service. Use the online product advisors at [ni.com/advisor](http://ni.com/advisor) to find a system assurance program to meet your needs.

## Calibration

NI measurement hardware is calibrated to ensure measurement accuracy and verify that the device meets its published specifications. To ensure the ongoing accuracy of your measurement hardware, NI offers basic or detailed recalibration service that provides ongoing ISO 9001 audit compliance and confidence in your measurements. To learn more about NI calibration services or to locate a qualified service center near you, contact your local sales office or visit [ni.com/calibration](http://ni.com/calibration).

## Technical Support

Get answers to your technical questions using the following National Instruments resources.

- **Support** - Visit [ni.com/support](http://ni.com/support) to access the NI KnowledgeBase, example programs, and tutorials or to contact our applications engineers who are located in NI sales offices around the world and speak the local language.
- **Discussion Forums** - Visit [forums.ni.com](http://forums.ni.com) for a diverse set of discussion boards on topics you care about.
- **Online Community** - Visit [community.ni.com](http://community.ni.com) to find, contribute, or collaborate on customer-contributed technical content with users like you.

## Repair

While you may never need your hardware repaired, NI understands that unexpected events may lead to necessary repairs. NI offers repair services performed by highly trained technicians who quickly return your device with the guarantee that it will perform to factory specifications. For more information, visit [ni.com/repair](http://ni.com/repair).

## Training and Certifications

The NI training and certification program delivers the fastest, most certain route to increased proficiency and productivity using NI software and hardware. Training builds the skills to more efficiently develop robust, maintainable applications, while certification validates your knowledge and ability.

- **Classroom training in cities worldwide** - the most comprehensive hands-on training taught by engineers.
- **On-site training at your facility** - an excellent option to train multiple employees at the same time.
- **Online instructor-led training** - lower-cost, remote training if classroom or on-site courses are not possible.
- **Course kits** - lowest-cost, self-paced training that you can use as reference guides.
- **Training memberships** and training credits - to buy now and schedule training later.

Visit [ni.com/training](http://ni.com/training) for more information.

## Extended Warranty

NI offers options for extending the standard product warranty to meet the life-cycle requirements of your project. In addition, because NI understands that your requirements may change, the extended warranty is flexible in length and easily renewed. For more information, visit [ni.com/warranty](http://ni.com/warranty).

## OEM

NI offers design-in consulting and product integration assistance if you need NI products for OEM applications. For information about special pricing and services for OEM customers, visit [ni.com/oem](http://ni.com/oem).

## Alliance

Our Professional Services Team is comprised of NI applications engineers, NI Consulting Services, and a worldwide National Instruments Alliance Partner program of more than 700 independent consultants and integrators. Services range from start-up assistance to turnkey system integration. Visit [ni.com/alliance](http://ni.com/alliance).

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