E Series Multifunction DAQ Accessories

Selection Guide

Step 1. Select your E Series device.

Step 2. Using Tables 1 and 2 as a guide, determine which accessories are appropriate for that device. Select an accessory. Table 3 provides descriptions for E Series device accessories.

Step 3. Using Tables 1 and 2, determine which cable is required to connect your selected device and accessory.

	Accessory			
Device	TBX-68, CB-68LP, CB-68LPR, DAQ Signal Accessory, CA-1000, BNC-2110, BNC-2120, BNC-2090, SCB-68	TB-2705	SCXI, Signal Conditioning	SCC Modular
	Cables			
68-pin E Series (except DAQCard)	SH68-68-EP (shielded) R6868 (unshielded)	Connects directly to the device (PXI only)	See page 385 for SCXI Signal Conditioning details	See page 461 for SCC Modular Signal Conditioning details
Latching DAQCards NI 6024E, NI 6062E	SHC68-68-EP (shielded) RC68-68 (unshielded)	N/A	See page 385 for SCXI Signal Conditioning details	See page 461 for SCC Modular Signal Conditioning details
Nonlatching DAQCards AI-16E-4, AI-16XE-50	PSHR68-68 (shielded) PR68-68F (unshielded)	N/A	See page 385 for SCXI Signal Conditioning details	See page 461 for SCC Modular Signal Conditioning details

Table 1. Accessories and Cables for 68-Pin and DAQCard E Series Devices

	Accessory					
Device	TBX-68, CB-68LP, CB-68LPR, DAQ Signal Accessory, CA-1000, BNC-2110, BNC-2120, BNC-2090, SCB-68	BNC-2115	TBX-68, CB-68LP CB-68LPR, CA-1000, SCB-68	SCB-100	SCXI Signal Conditioning	SCC Modular Signal Conditioning
	Cables					
100-pin E Series with 64 AI channels NI 6071E, NI 6031E, NI 6033E AT-MIO-64E-3	SH1006868 (shielded); splits into two 68-pin connectors; these accessories are used with the first 68-pin connector. See Figure 16 on page 260.	SH1006868 (shielded); splits splits into two 68-pin connectors;these accessories are used with the second 68-pin connector.	SH1006868 (shielded); splits into two 68-pin connectors; these accessories are used with the second 68-pin connector.	SH100100 (shielded)	See page 385 for SCXI Signal Conditioning details	See page 461 for SCC Modular Signal Conditioning details
100-pin E Series with 16 AI channels and 32 DIO lines PCI-6025E, AT-6021E	SH1006868 (shielded); splits ino two 68-pin connectors; these accessories are used with the first 68-pin connector. See Figure 16 on page 260.	SH1006868 (shielded); splits into two 68-pin connectors;these accessories are used with the second 68-pin connector.	SH1006868 (shielded); splits into two 68-pin connectors; these accessories are used with the second 68-pin connector.	SH100100 (shielded)	See page 385 for SCXI Signal Conditioning details	See page 461 for SCC Modular Signal Conditioning details

Table 2. Accessories and Cables for 100-Pin and DAQCard E Series Devices

Accessory	Description	Page
SCXI Signal Conditioning	High channel-count signal conditioning platform	385
SCC Modular Signal Conditioning	Single or dual channel signal conditioning modules	461
AMUX-64T, 5B, SSR, ER, and SC-204x Signal Conditioning	External signal conditioning accessories	478
BNC-2110	BNC accessory for 68-pin E Series devices	257
BNC-2115	BNC accessory for extended I/O on 100-pin E Series devices	257
BNC-2120	BNC accessory with function generator (for 68-pin E Series devices)	257
BNC-2090	Rack-mountable BNC accessory (for 68-pin E Series devices)	257
CA-1000 enclosure	Configurable connectivity enclosure	257
TB-2705	Latching screw terminal block for PXI E Series modules	258
SCB-100	100-pin, shielded screw terminal block with breadboard areas	258
SCB-68	68-pin, shielded screw terminal block with breadboard areas	258
TBX-68	68-pin, DIN rail-mountable screw terminal block	258
CB-68LP, CB-68LPR	68-pin, low-cost screw terminal block	258
Signal Source and Demo Accessory	DAQ signal accessory to demo and test analog, digital and counter/timer functions	259

For complete and up-to-date information about accessories, visit ***ni.com/catalog***

Table 3. Overview of E Series DAQ Accessories

E Series Multifunction DAQ Accessories

SCXI High-Performance Signal Conditioning (see Figure 1)

SCXI is a modular high-performance signal conditioning platform that you use as a front end to your E Series DAQ device. With the SCXI multiplexing architecture, you can expand your analog inputs to 3,072 channels. Additionally, SCXI offers a variety of modules for connecting to thermocouples, RTDs, strain gauge transducers, LVDT position sensors, ICP-compatible accelerometers/microphones, thermistors, millivolt inputs, voltage inputs up to 1000 V, current inputs (0-20mA), frequency inputs or dynamic signals.

See page 385 for details on SCXI Signal Conditioning.

Figure 1. SCXI High-Performance Signal Conditioning

SCC Series – Modular Signal Conditioning for Low-Channel Count Applications (see Figure 2)

The SCC Series modular signal conditioning system consists of SCC modules that plug into a low-profile SC-2345 shielded carrier. SCC modules give you single or dual-channel signal conditioning for up to 16 analog input channels and eight digital I/O lines of your plug-in E Series DAQ device. The SCC Series offers signal conditioning for a variety of inputs, including thermocouples, RTDs, strain gauges, ICP-compatible accelerometers, accelerators, analog inputs requiring isolation, high voltage (up to 100 V), current (0-20mA), and optically isolated digital I/O. Lowpass filtering and bread boarding modules are also available.

See page 461 for details on SCC Signal Conditioning.

Figure 2. SCC Portable, Modular Signal Conditioning

Connector Blocks

BNC-2100 Series Connector Blocks (see Figure 3)

Shielded connector blocks with signal-labeled BNC connectors for easy connectivity of your analog input, analog output, digital I/O and counter/timer signals to your E Series device. The BNC-2110 and BNC-2120 work with all E Series devices. The BNC-2120 also provides a function generator, quadrature encoder, temperature reference, thermocouple connector and LED so that you can test the functionality of your hardware. The BNC-2115 has 24 BNC inputs for connecting to the extended I/O channels of our 100-pin E Series DAQ devices.

BNC-2110.....777643-01
Dimensions – 20.3 by 11.2 by 5.5 cm (8.0 by 4.4 by 2.2 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.)

Figure 3. BNC-2100 Series Connector Blocks

Figure 4. BNC-2090 Shielded BNC Adapter Chassis

BNC-2090 Shielded BNC Adapter Chassis (see Figure 4)

Shielded, rack-mountable adapter with signal-labeled BNC connectors, spring terminal blocks, and component locations for passive signal conditioning. Consists of 22 BNC connectors and 28 spring terminals to simplify connection to your analog, digital, trigger and counter/timer signals. The BNC-2090 has silk-screened component locations that you use to develop simple signal conditioning circuits. For added flexibility, you can connect any E Series DAQ device to the BNC-2090 from the front or rear through dual 68-pin connectors.

BNC-2090 777270-01
Dimensions – 48.3 by 4.4 by 18.8 cm (19.0 by 1.7 by 7.4 in.)

Figure 5. CA-1000 Configurable Signal Conditioning Enclosure

E Series Multifunction DAQ Accessories

Figure 6. TB-2705 Terminal Block

Figure 7. SCB-68 and SCB-100 Shielded I/O Connector Blocks

Figure 8. TBX-68 I/O Connector Block

Figure 9. CB-68LP and CB-68LPR I/O Connector Blocks

Figure 10. DAQ Signal Accessory

CA-1000 Configurable Signal Conditioning Enclosure (see Figure 5)

Configurable enclosure that gives you maximum user-defined connectivity and flexibility through customized panelettes. Each enclosure can accommodate up to 9 panelettes.

Dimensions – 30.7 by 25.4 by 4.3 cm (21.1 by 10 by 1.7 in.)

See page 263 for more information about the CA-1000.

TB-2705 Terminal Block for 68-pin PXI E Series Devices (see Figure 6)

Screw terminal block for PXI that works with your PXI E Series DAQ devices. Latches to the front of your PXI module with locking screws and provides strain relief as well as easy access to your analog, digital, trigger and counter/timer signals through screw terminals.

TB-2705 778241-01

Dimensions – 8.43 by 10.41 by 2.03 cm (3.32 by 4.1 by 0.8 in.)

SCB-68 and SCB-100 Shielded I/O Connector Blocks (see Figure 7)

Shielded I/O connector blocks for rugged, very low-noise signal termination for connecting to 68-pin or 100-pin E Series DAQ devices, respectively. Silk-screened component locations for easy addition of simple signal-conditioning circuitry for your analog input channels. They also include general-purpose breadboard areas (two on the SCB-68; three on the SCB-100) as well as 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.)

SCB-100 776990-01

Dimensions – 19.5 by 15.2 by 4.5 cm (7.7 by 6.0 by 1.8 in.)

TBX-68 I/O Connector Block with DIN-Rail Mounting (see Figure 8)

Termination accessory with 68 screw terminals for easy connection of field I/O signals to 68-pin DAQ devices. Includes 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.)

CB-68LP and CB-68LPR I/O Connector Blocks (see Figure 9)

Low-cost termination accessory with 68 screw terminals for easy connection of field I/O signals to 68-pin E Series DAQ devices. Includes one 68-pin male connector for direct connection to 68-pin cables. The connector blocks include 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 is used with the CA-1000 (see page 263).

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.)

E Series Multifunction DAQ Accessories and Cables

Signal Source and Demo Accessory (see Figure 10)

The DAQ Signal Accessory demonstrates and tests the use of analog, digital, and counter/timer functions of DAQ devices. You can connect the DAQ Signal Accessory directly to your 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. The DAQ Signal Accessory works with all E Series DAQ devices.

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

Figure 11. RTSI Bus Cable

RTSI Bus Cables (see Figures 11 and 12)

Use RTSI bus cables to connect timing and synchronization signals among Measurement, Vision, Motion, and Controller Area Network (CAN) boards for PCI and ISA and DAQPad 6070E boards. 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
Extended, 5 boards.....777562-05
3 external boards.....186464-01

Figure 12. Extended RTSI Bus Cable

Shielded I/O Cables

SH68-68-EP Shielded Cable (see Figure 13)

Shielded 68-conductor cable terminated with two 68-pin female 0.050 series D-type connectors. Features individually-shielded analog twisted pairs for reduced crosstalk with high-speed devices. This cable works with all 68-pin E Series devices (except latching DAQCards). If you need a right-angle connector, the SH68-68R1-EP shielded cable is fully compatible.

1 m.....184749-01
2 m.....184749-02

Figure 13. SH68-68-EP Shielded Cable

SH68-68R1-EP Shielded Cable (see Figure 14)

Shielded 68-conductor cable; one end terminates with a 68-pin female 0.050 series D-type connector and the other end terminates with a right-angle 68-pin female 0.050 series D-type connector.

1 m.....187051-01

Figure 14. SH68-68R1-EP Shielded Cable

SH100100 Shielded Cable (see Figure 15)

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

Figure 15. SH100100 Shielded Cable

E Series Multifunction DAQ Accessories and Cables

Figure 16. SH1006868 Shielded Cable

SH1006868 Shielded Cable (see Figure 16)

Shielded cable that connects to 100-pin E Series devices and terminates with two female 68-pin 0.050 series D-type connectors. See Table 2 on page 256 for accessories compatible with each 68-pin connector.

1 m 182849-01
2 m 182849-02

Figure 17. SHC68-68-EP Shielded Cable

SHC68-68-EP and SHC68U-68-EP Shielded Cables for Latching E Series DAQCards (see Figure 17)

These cables connect a latching E Series DAQCard (NI 6062E and NI 6024E) to standard 68-pin accessories. Latching screws secure the shielded connector to the PCMCIA DAQCard. The SHC68-68-EP is a shielded 68-conductor cable terminated with a VHDCI 68-pin male connector at one end and a 68-pin female 0.050 series D-type connector at the other. The SHC68U-68-EP is identical to the SHC68-68-EP except it uses an inverted VHDCI 68-pin male connector. Use the SH68U-68-EP for a DAQCard located in the bottom PCMCIA slot in your laptop. Use the SHC68-68-EP cable with a DAQCard inserted in the upper PCMCIA slot in your laptop. When using two E Series DAQCard PCMCIA devices in adjacent slots, you must use one SHC68-68-EP and one SHC68U-68-EP.

SHC68-68-EP
0.5 m 186838-0R5
1 m 186838-01
SHC68U-68-EP
0.5 m 187406-0R5
1 m 187406-01

Figure 18. PSHR68-68 Shielded Cable Kit

PSHR68-68 Shielded Cable Kit for Nonlatching DAQCards (see Figure 18)

Shielded cable for use in connecting non-latching E Series DAQCards (AI-16E-4 and AI-16XE-50) with 68-pin accessories. The kit contains the PSHR68-68M, the PCMCIA Strain-Relief Adapter and a 1 m SH68-68-EP cable.

1 m 777293-01

Figure 19. PSHR68-68M Shielded Cable

PSHR68-68M Shielded Cable for Nonlatching DAQCards (see Figure 19)

Shielded cable for use in connecting non-latching E Series DAQCards (AI-16E-4 and AI-16XE-50) with custom cables and other 68-pin cable assemblies.

0.1 m 183569-01

Figure 20. R6868 Ribbon Cable

E Series Multifunction DAQ Accessories and Cables

Ribbon I/O Cables

R6868 Ribbon Cable for E Series Devices (see Figure 20)

68-conductor flat ribbon cable terminated with two 68-pin connectors. Use this cable to connect a 68-pin E Series device to 68-pin accessories.

1 m 182482-01

Figure 21. RC68-68 Ribbon Cable

RC68-68 Ribbon Cable for Latching DAQCards (see Figure 21)

Ribbon cable that connects to a latching E Series DAQCard (NI 6062E, NI 6024E) and is terminated with a 68-pin female connector that attaches directly to 68-pin accessories. Two RC68-68 cables can be used together in adjacent PCMCIA slots.

0.25 m 187252-0R25

1 m 187252-01

Figure 22. PR68-68F Ribbon Cable

PR68-68F for Non-Latching DAQCards (see Figure 22)

Ribbon cable that connects to a non-latching E Series DAQCard (AI-16E-4, AI-16XE-50) and is terminated with a 68-pin female connector that attaches directly to 68-pin accessories.

0.2 m 183646-0R2

1 m 183646-01

Custom Connectivity Components

68-Pin Custom Cable Connector/Backshell Kit (see Figure 23)

68-pin female mating connector and backshell kit for use in making custom cables. Solder-cup contacts are available for soldering of cable wires to the connector.

68-pin connector/backshell kit 776832-01

Figure 23. 68-Pin Custom Cable Connector/Backshell Kit

PCB Mounting Connectors for Custom Accessories (see Figure 24)

PCB connectors for use in building custom accessories that connect to 68-conductor or 100-conductor shielded and ribbon cables. Two connectors are available, one for right-angle and one for vertical mounting onto a PCB.

68-position, male, right-angle mounting 777600-01

68-position, male, vertical mounting 777601-01

100-position, female, right-angle mounting 777778-01

100-position, female, vertical mounting.....777779-01

Figure 24. PCB Mounting Connectors for Custom Accessories

PCMCIA Strain-Relief Accessory (see Figure 25)

Accessory that attaches to the bottom of your notebook computer and provides adjustable strain relief for one or two PCMCIA cables attached to the installed PCMCIA card(s). Used with non-latching E Series DAQCards (AI-16E-4, AI-16XE-50).

PCMCIA Strain-Relief Accessory 777550-01

Figure 25. PCMCIA Strain-Relief Accessory

E Series Multifunction DAQ Accessories and Cables

Figure 26. USB Cable

USB Cable (see Figure 26)

Cable that connects DAQPad devices for the Universal Serial Bus (USB) to a USB port. The USB cables have a USB B-type connector and a USB A-type connector.

1 m 184125-01
2 m 184125-02

Figure 27. IEEE 1394 Cable

IEEE 1394 Cable (see Figure 27)

Cable that connects DAQPad devices for IEEE 1394 (FireWire) to an IEEE 1394 port.

1 m (latching) 185798-01
2 m (latching) 185798-02

Use Interactive Online Catalog Configurator for Quick Product Selection

You can now easily configure NI multifunction data acquisition (DAQ) measurement systems using a new, interactive feature of our online catalog. The interactive online catalog offers a better, easier way to select and purchase measurement solutions from National Instruments. Based on user imput, the interactive online catalog suggests products and then suggests the appropriate cables and accessories for those products. This new automated tool helps eliminate ordering mistakes and product-compatibility errors.

To take advantage of the online catalog for multifunction DAQ devices, visit ***ni.com/catalog***

From the Products and Services menu, select Data Acquisition, then select Multifunction I/O. The online catalog prompts you with a series of questions regarding preferences for operating system, computer bus, number of channels, and maximum sampling rate. The online catalog then recommends several appropriate DAQ devices. You can review specifications on each device and select your preferred product. Next, the catalog suggests the preferred accessory and cable solution designed to work with the selected DAQ device. You have the option of choosing the preferred configuration or choosing from a separate list of accessories and cables that also work with the selected DAQ device. You can purchase the selected items online.

Figure 28. Use the interactive configuration tool in the NI online catalog to select and purchase multifunction DAQ solutions.

Configurable Signal Conditioning Enclosure

CA-1000

- Versatile connector/enclosure system
- Houses signal conditioning and connector block accessories
- Wide variety of I/O connectivity and panelette options
- Holds maximum of 18 connectivity/interface panelettes
- Low profile enclosure
- Rack-mount and stacking kits available

I/O Connectivity

- BNC
- Thermocouple
- Banana jack
- LEMO® connector (B-Series)
- MIL-Spec
- SMB
- Dual 9-pin D-Sub
- Strain relief

Interface Panelettes

- Momentary pushbutton switch
- Potentiometer
- Toggle switch
- Rocker switch
- LED

Overview

The National Instruments CA-1000 is a configurable signal conditioning enclosure designed for maximum user-defined I/O connectivity and flexibility. The CA-1000 is a portable enclosure for laptop, desktop, and rack-mount applications. In the CA-1000, you can install many NI signal conditioning accessories, such as the SC-204x signal conditioning products, and the SCB-68, CB-68LPR, and CB-50LP terminal blocks. The result is a compact, portable, flexible, and comprehensive signal conditioning/interconnection system. The CA-1000 also facilitates quick connection and disconnection with standard I/O connectors for easy system integration and reconfiguration. By adding interface panelettes, such as toggle switches, potentiometers, and LEDs, you can locally control and verify system operation.

Description

The CA-1000 system includes four components: 1) CA-1000 enclosure, 2) I/O and interface panelettes, 3) signal conditioning or measurement accessories installed in the CA-1000, and 4) for 50-pin accessories, an internal cable adapter to connect the signal conditioning accessory to the cable attached to the CA-1000.

CA-1000 Enclosure

The metal enclosure provides a low-profile, portable housing for signal conditioning and connector accessories. You can place the enclosure under a laptop PC, on a benchtop, or in a 19 in. rack. You can also stack two or more enclosures with the stacking kit. The CA-1000 enclosure includes five cable entry locations, so you can place the 68-pin or 50-pin connector that you cable to your measurement device on either the side or the rear of the CA-1000 enclosure. Please note, the CA-1000 is shipped without any panelettes, signal conditioning accessories, connector blocks, or cables. Order all of these components separately.

INFO CODES

For more information or to order products online, visit *ni.com/info* and enter:

ca1000

BUY ONLINE!

Internal Accessories

The CA-1000 houses a variety of signal conditioning and data acquisition accessories, including the SC-204x, SCB-68, CB-68LPR, and CB-50LP (Table 1 on page 264). You mount these accessories to the bottom panel of the CA-1000 enclosure.

I/O Panelettes

The CA-1000 includes a user-configurable signal connection scheme. This connectivity flexibility is achieved with interchangeable panelettes. The panelettes, which come with standard signal connectors – for example, BNC, SMB, banana jack, thermocouple plugs, and LEMO, MIL-Spec, and 9-pin D-Sub connectors – mount in the front of the CA-1000 enclosure. The CA-1000 front panel offers nine panelette slots. The rear panel can also be removed offering nine more panelette slots. However, this option is not available if you are using the SCB-68 inside the CA-1000. You can mix and match different types of panelettes. Each panelette (except for the strain-relief panel) includes lead wires that you connect to the screw terminals of the accessory mounted inside the CA-1000. You can therefore connect the panelettes to any I/O signal available on the accessory.

Configurable Signal Conditioning Enclosure

Interface Panelettes

National Instruments also offers interface panelettes, which expand the functionality of the CA-1000. Interface panelettes include traditional interface controls and displays, such as rocker switches, toggle switches, momentary switches, potentiometers, and LEDs. Using interface panelettes, which are mounted alongside I/O panelettes, you can change hardware inputs, trigger events, or verify operational status. Each interface panelette includes lead wires for connection to the screw terminals of the accessory mounted inside the CA-1000.

Cabling

The cabling needed to connect the CA-1000 to the measurement device depends on the accessories installed in the CA-1000 and the measurement device used. Some accessories installed in the CA-1000 require internal cabling to connect the accessory to the CA-1000 wall. Use Table 1 to determine what cabling components you need, including the cable to your measurement device.

The CA-1000 also provides the flexibility of five external interconnection locations, giving convenient cabling for laptop applications by aligning the I/O connector with the location of the PCMCIA slots on laptop computers. With the five external interconnection locations, you can also customize desktop and rack-mount applications for added convenience.

Device	Connector Blocks		
	SC-204x Series	CB-50LP	CB-68LPR or SCB-68
68-pin E Series DAQ Devices (except DAQCards)	R68M-50F and SH68-68-EP[1]	N/A	SH68-68-EP[1]
100-pin E Series DAQ Devices[3]	Applicable for one leg	N/A	SH1006868
Latching E Series DAQCards:	R68M-50F and SHC68-68-EP	N/A	SHC68-68-EP
DAQCard-6062E, DAQCard-6024E	–	–	–
Nonlatching E Series DAQCards:	R68M-50F and PSHR68-68 Shielded Cable Kit[2]	N/A	PSHR68-68 Shielded Cable Kit[2]
DAQCard-AI-16E-4, DAQCard-AI-16XE-50			
68-pin Digital I/O and Counter/Timer Devices (except DAQCards)	N/A	N/A	SH68-68-D1
PCI-DIO-32HS, PXI-6533, AT-DIO-32HS,	–	–	–
NI 6534, NI 660x	–	–	–
Nonlatching 68-pin Digital I/O DAQCards:	N/A	N/A	PSHR68-68-D1 Shielded Cable Kit
DAQCard-6533	–	–	–
Simultaneous Sampling Multifunction DAQ Devices	N/A	N/A	SH68-68-EP[1]
PCI-6503	N/A	R50M-50F and SH50-50	N/A
PC-DIO-24	–	–	–
DAQCard-DIO-24	N/A	R50M-50F and PSH27-50F-D1	N/A
NI 6527[3], PCI-DIO-96[3], PXI-6508[3], DAQPad-6508[3]	N/A	Two R50M-50F and R1005050 [4]	N/A
PC-DIO-96[3]	N/A	Two R50M-50F and NB5[4]	N/A

[1]You can also use the SH68-68R1-EP or R6868. [2]You can also use the PR68-68F. [3]You can use two CA-1000 enclosures with one of these devices. Please note: If you are using a NI 435x series data logger, please see Figure 1 on page 298 for information on cabling to a CB-68T and CA-1000. [4]Splits into two 50-pin connectors. See page 319 for information on using the CA-1000 with signal source products.

Table 1. CA-1000 Cabling

Table 2. CA-1000 Panelette Options

Configurable Signal Conditioning Enclosure

Panelette	Description	Connectors/Units per Panelette	Slot Width
Minithermocouple Jack	J-type	2	1
	K-type	2	1
	Uncompensated	2	1
Thermocouple Jack	J-type	1	1
	K-type	1	1
	Uncompensated	1	1
BNC	BNC connector	2	1
SMB	SMB connector	4	1
Banana Jack	Banana Jack	2	1
LEMO	2-pin female	2	1
	4, 6-pin female	1	1
MIL-Spec	2, 4, 6-pin female	1	1
9-pin D-sub	Single (male)	1	2
	Single (female)	1	2
	Dual (male)	2	3
	Dual (female)	2	3
Momentary Pushbutton Switch	On – off	2	1
Toggle Switch	(On – off – on)	2	1
Rocker Switch	(On – off – on)	1	1
LED	A red, green, yellow, and orange LED	4	1
Potentiometer	1 turn, 10 kW	1	1
Strain Relief	Screw clamp	1	2
Blank	Filler panel	–	1

Table 3. CA-1000 Panelette descriptions

Ordering Information

CA-1000 (enclosure only) 777664-01
Dimensions – 30.7 by 25.4 by 4.3 cm (12.1 by 10.3 by 1.7 in.)

I/O Connector Panelettes

Minithermocouple, J-type (2 included) 184736-01
Minithermocouple, K-type (2 included) 184736-02
Minithermocouple, uncompensated (2 included) 184736-03
Thermocouple, J-type 187597-01
Thermocouple, K-type 187597-02
Thermocouple, uncompensated 187597-03
BNC (2 included) 184737-01
Banana jack (2 included) 186405-01
LEMO connector (B-Series)
Dual 2-pin, female 187585-01
4-pin, female 187585-02
6-pin, female 187585-03
MIL-C-26482 (Series 1)
MS3112E8-2 S.....187591-01
MS3112E8-4 S.....187591-02
MS3112E10-6 S.....187591-03
SMB (4 included) 185505-01

Ordering Information (continued)

Strain relief.....184721-01
9-Pin D-Sub
Single male.....184738-01
Dual male.....184738-02
Single female.....184738-03
Dual female.....184738-04
Blank 184483-01

Interface Panelettes

Momentary pushbutton switch (2 included) 185380-01
Rocker switch (on/off/on).....185379-01
Toggle switch (on/off/on – 2 included) 185378-01
Potentiometer (10 kΩ, single turn) 185377-01
LED 4 – (Includes: 1 green,
1 red, 1 orange, 1 yellow) 185376-01

External Cables

SH68-68-EP, 1 m 182419-01
SH68-68-D1, 1 m.....183432-01
SH68-68R1-EP, 1 m 187051-01
SH50-50, 1 m 777720-01
R6868, 1 m 182482-01
R1005050, 1 m 182762-01
NB5, 1 m 181304-10
SH1006868, 1 m 182849-01
PSHR68-68 Shielded Cable Kit 777293-01
PSHR68-68-D1 Shielded Cable Kit 777420-01
PR68-68F, 1 m 183646-01
PSH27-50F-D1, 1 m.....776989-01
SHC68-68-EP, 1 m 186838-01

Internal Cables

R50M-50F ribbon cable.....184526-0R3
R68M-50F MIO bulkhead ribbon cable 777660-0R3

Accessories

CA-1000 Rack-Mount Kit (1U) 777665-01
CA-1000 Stacking Kit.....777666-01
CA-1000 Panel Mount Kit 187243-01
Strain Relief Kit[1].....187407-01
[1]You cannot use the Strain Relief Kit in conjunction with the rack-mount, panel-mount, or stacking kits.

For information on extended warranty and value added services, see page 22.