

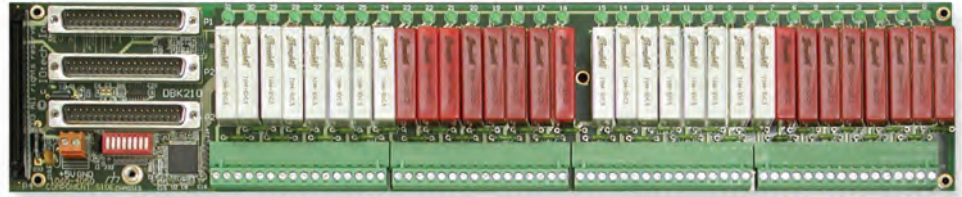
Features

- Accepts up to 32 Grayhill-compatible isolated solid-state digital I/O modules (Grayhill 70M Series*)
- 250 VDC channel-to-channel and channel-to-system isolation
- Channels are DIP switch configured as either inputs or outputs in groups of eight
- Removable screw terminals (12-26 AWG) for easy signal connection
- Each module location has an LED to indicate module status
- On-board logic permits the disabling of outputs upon external power loss
- On-board logic disables outputs upon detection of a CPU reset
- Up to eight DBK210 boards can be daisy chained, supporting expansion up to 256 isolated digital I/O channels
- Easily configured, without programming
- Optional rack and DIN-rail mount kits
- Requires +5 VDC external power supply

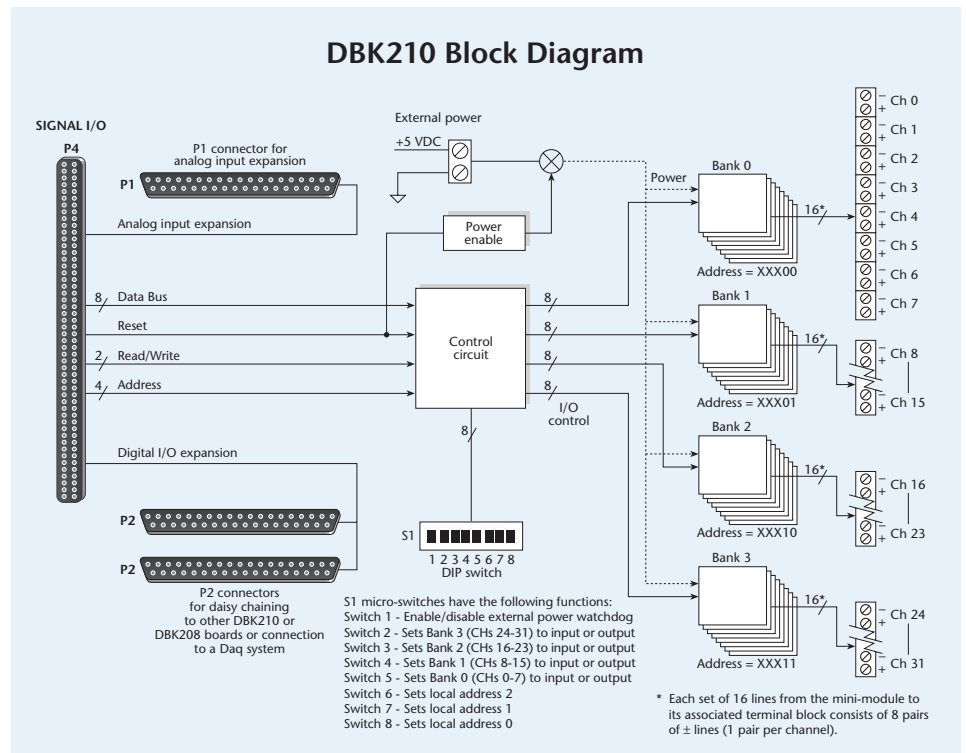
The DBK210 signal conditioning and expansion board can be configured with up to 32 isolated Grayhill 70M Series-compatible solid-state digital I/O modules. Four 8-channel banks can be switch-selected for convenient connection of field signals. Also, each module location features an LED to indicate channel status.

User-configurable signal conditioning modules feature 250V isolation from the system (DaqBoard or Daq system) and from other channels. A wide variety of solid-state modules are available to sense AC and DC signals and to switch AC and DC loads.

An on-board switch setting allows users to determine the status of the digital outputs in the event of the loss/recovery of external power. When enabled, the loss of external power disables module outputs until the application program writes new values to the data bus. When disabled, the



The DBK210 accepts up to 32 Grayhill 70M Series digital I/O modules



loss of power has no effect on the state of the outputs. Additionally, on-board logic disables module outputs upon detection of a CPU reset.

Up to 8 DBK210 boards can be daisy chained (via multiple CA-37-x cables) providing expansion up to 256 digital I/O channels. Because of the DBK210's on-board daisy-chain capability, only a single cable is necessary from the host (DaqBoard or Daq system) to one of the DBK210s. For applications with both analog and digital

I/O channel expansion requirements, the DBK210 also has a P1 connector for attaching analog signals or expanding with analog DBK options (such as the DBK207) when used with DaqBoard/2000 Series only.

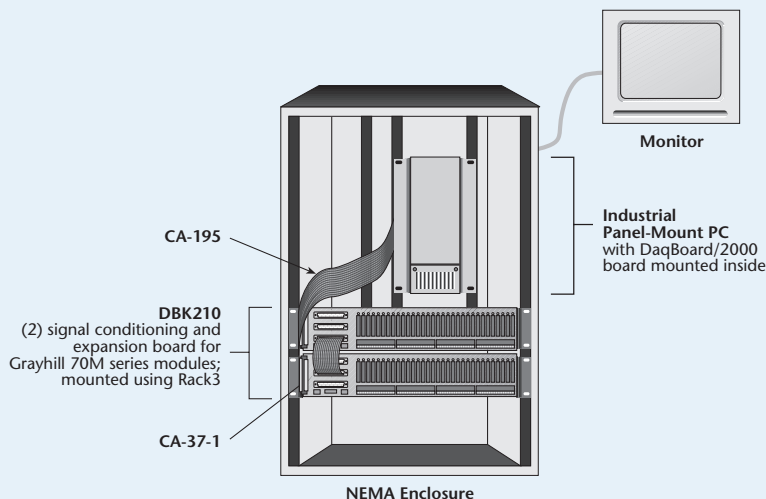
The DBK210 ships with panel-mount hardware and can also be either DIN-rail or rack-mounted with optional mounting kits.

* Grayhill 70M Series modules must be purchased separately. All sales are final with no right of return.

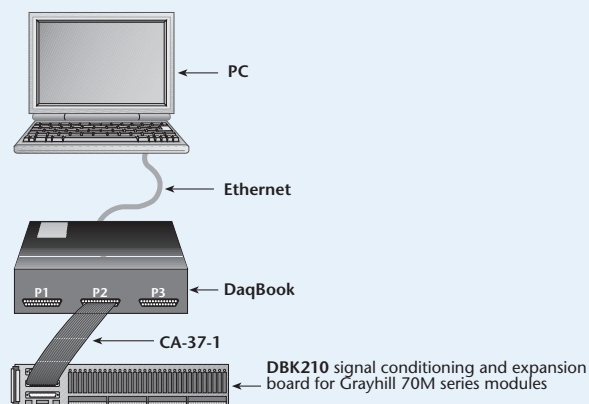
DBK210

Specifications & Ordering Information

DBK210 Expansion Examples



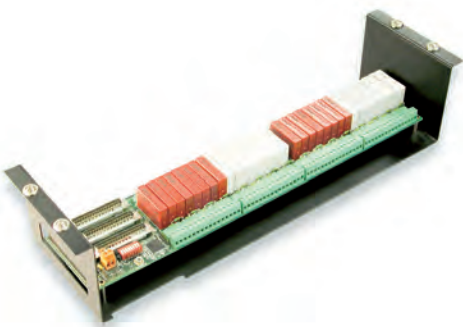
Two DBK210 isolated digital signal conditioning and expansion boards (8 max) using Rack3 mounting option



The DaqBook/2020 with one DBK210 isolated digital signal conditioning and expansion board (8 max)

Rack3 Rack-Mount Kit

19" rack-mount kit for the DBK210.



DIN1 DIN-Rail Kit

Snap-track (DIN-rail) mounting kit for the DBK210.



Specifications

Module Capacity: 32, Grayhill 70M Series solid-state modules

Cable (optional): CA-37-x or CA-195

DC Input Fuse: 3.0A, resettable type

DC Input Connector: Non-removable screw terminal (+5 VDC, GND)

Power Requirement: 5 VDC, $\pm 5\%$; 0.600A min

Operating Environment

Temperature: 0 to 70 °C

Relative Humidity: 95% RH, non-condensing

Connectors

P4: 100-pin connector provides connection to DaqBoard/2000 Series P4 connector via a CA-195 cable

P2: Two P2 (DB37) connectors provide digital expansion (to other DBK210s, for example) via a single CA-37-x cable or multiple CA-37-1 cables or connection to a Daq system

P1: One P1 (DB37) connector provides analog expansion (to DBK207s, for example) via a single CA-37-X cable

Screw Terminals: 4 sets of removable 16-connector blocks for I/O signals

Isolation

Channel-to-System: 250V

Channel-to-Channel: 250V

Ordering Information

Description	Part No.
32-channel isolated high-density digital I/O board	DBK210

Accessories

Rack-mount kit	Rack3
DIN-rail adapter kit	DIN1

Cables

Ribbon cable for connecting DBK Series expansion options; where x is the number of DBK devices attached	CA-37-x
100-conductor expansion cable, mates with P4 on DaqBoard/2000 Series	
3 ft. expansion cable	CA-195
6 ft. expansion cable	CA-195-6
Same as CA-195 with CE compliance; 3 ft.	CA-209

Grayhill 70M Series Modules

AC control module 120 VAC	PCAC1-70M
DC control module 3-60 VDC	PCDC1-70M
DC input module 3-32 VDC	PSDC1-70M
AC/DC input module	
12-32 VAC/10-32 VDC	PSAC1-70M
AC input module 120 VAC	PSAC3-70M

Product Compatibility

- ✓ LogBook
- ✓ DaqBook
- ✓ DaqLab
- ✓ DaqScan
- ✓ DaqBoard/2000 Series