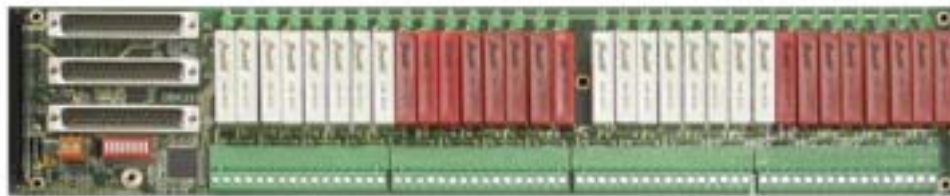# DBK210™

32-Channel Isolated High-Density Digital I/O

NEW

Compatibility: ✔ LogBook ✔ DaqBook ✔ DaqLab ✔ DaqScan ✔ DaqBoard/2000 Series

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**
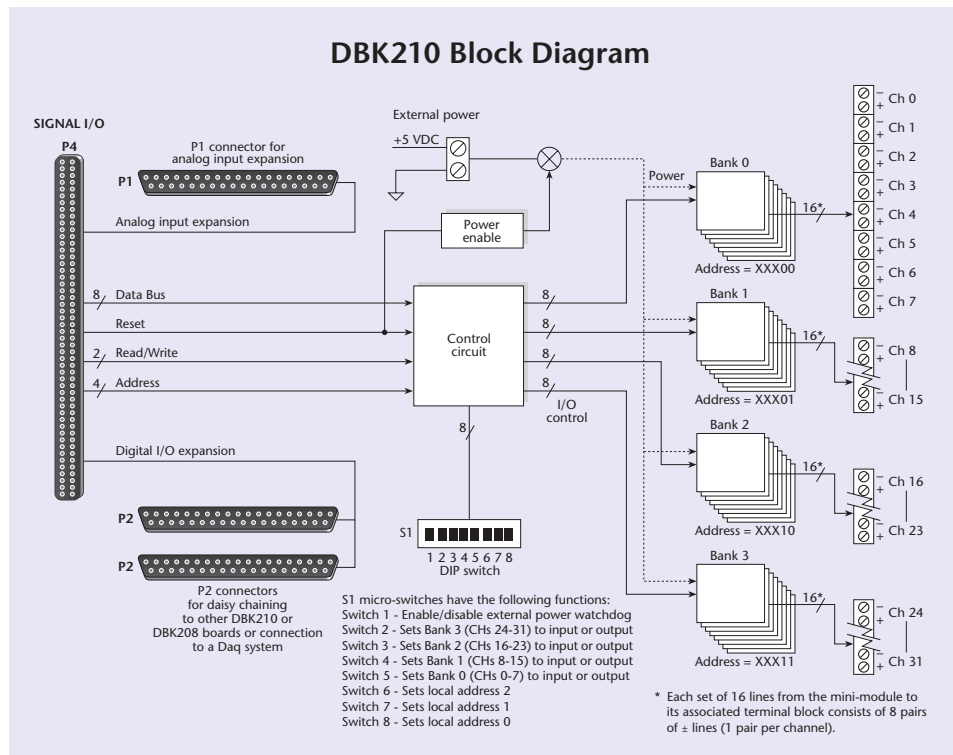- **Requires +5 VDC external power supply**

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 as either inputs or outputs. The DBK210 features removable screw terminals 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

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

writes new values to the data bus. When disabled, the 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.
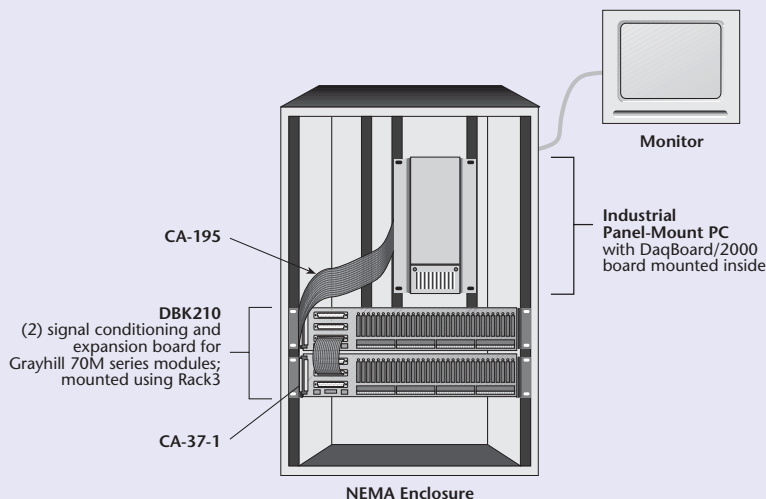
* Grayhill 70M series modules are available from IOtech. Contact factory.
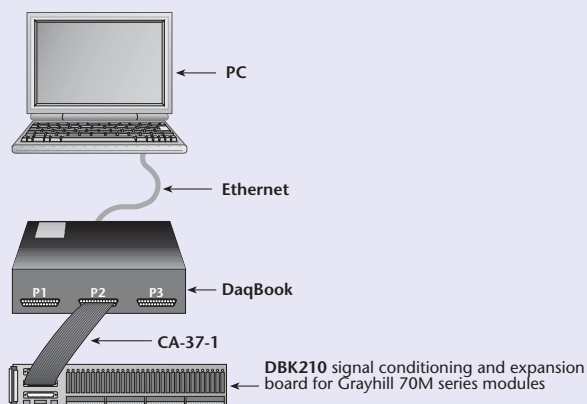
PC Data Acquisition Hardware

DBK210™
Specifications & Ordering Information
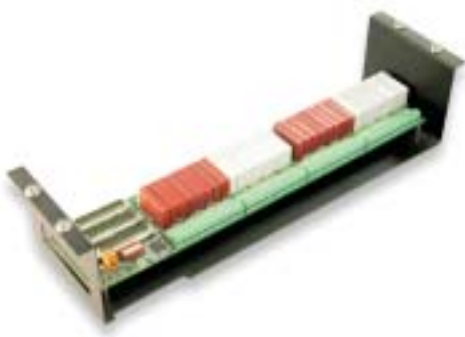
DBK210 Expansion Examples

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, ±5%; 0.600A min
Operating Environment:
  Temperature: 0˚C 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
Optional hardcopy manual set (3); includes programmer's manual, DaqBoard/2000 and DaqBoard/2000c series user's manual, and DBK option cards and modules user's manual	1033-0900

Cables

Expansion-card cable for connecting DBK200 series expansion options; specify number of option cards (x) to be connected	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
AC control module 220 VAC	PCAC2-70M
DC control module 3-60 VDC	PCDC1-70M
DC control module 4-200 VDC	PCDC2-70M
DC input module 3-32 VDC	PSDC1-70M
AC/DC input module 12-32 VAC/10-32 VDC	PSAC1-70M
AC/DC input module 35-60V AC/DC	PSAC2-70M
AC input module 120 VAC	PSAC3-70M
AC input module 220 VAC	PSAC4-70M

For complete information on accessories and cables, visit
www.iotech.com/acc

PC Data Acquisition Hardware