



# 48-Channel Digital I/O Board

## For IBM PC and Compatibles



CIO-DIO48  
\$89



IBM PC

- ✓ 48 TTL Digital I/O Lines
- ✓ Single 50-Pin Connector Carries All 48 Digital Lines plus Power



DIO

- ✓ Labview Support

The CIO-DIO48 can control 48 devices or sense 48 contact closures from a single half-size card in a PC. The CIO-DIO48 employs two 8255 parallel peripheral interface chips which are programmable in three modes; simple byte input or output or strobed I/O. The 8255 is simple to program. The CIO-DIO48 can provide 2.5 mA to activate other chips, but not enough for LED's or relays. The CIO-DIO48H can source 15 mA or source 64 mA, enough for switching most relays and SSR's.

Each 8255 has 24 I/O lines. The chip is configured as three ports. Two ports, A & B, are 8-bits wide, while port C may be an 8-bit port or two 4-bit ports. Individual ports may be configured as input or output, and are written to or read from as a unit.

The CIO-DIO48 is a member of a family of digital I/O boards which use a 50-pin connector. Applications can easily be sized from 48 to 192 digital I/O points or more. Software is extensible to multiple points and all the accessories, including screw terminal boards, electro-mechanical relay boards and solid state relay boards interface to the same connector, regardless of which digital I/O board is used.

### PROGRAMMING

The I/O register map shows how many addresses and their functions for the board. Optional software drivers, called UNIV-DRVR, are available for programming in both DOS, Windows 3.1 & Windows 95. DOS support includes QuickBasic 4.5, Visual Basic, Turbo C, Visual C++, Microsoft C and Quick C. Windows support includes Microsoft C, Visual C++, Visual Basic, Borland C, and C++. Labview drivers are also available. (requires UNIV-DRVR)



### I/O REGISTER MAP

The CIO-DIO48 occupies 8 I/O addresses. The first address, or BASE address, is fixed by the base address switch.

Base + 0	Port A #1	Base + 4	Port A #2
Base + 1	Port B #1	Base + 5	Port B #2
Base + 2	Port C #1	Base + 6	Port C #2
Base + 3	#1 Control	Base + 7	#2 Control

### CABLING AND CONNECTION

Cabling to the CIO-DIO48 is via standard 50-pin, 0.10" spacing AMP type ribbon cable connectors. Each cable carries 48 digital I/O lines, +5 V and ground.

The CIO-MINI50 provides 50 12 to 22 AWG screw terminals. The CIO-SPADE50 provides terminals for 50 spade type connections. The SSR-RACK24 mounts 24 solid state relays, and the CIO-ERB24 mounts 24 electro-mechanical relays.

### Specifications

- TTL Output High:** 3.0 V min @ -2.5 mA
- TTL Output Low:** 0.4 V max @ 2.5 mA
- TTL Input High:** 2.0 V min, 7 V max
- TTL Input Low:** -0.5 V min, 0.8 V max
- Current Drive:** CIO-DIO48 (source or sink): 2.5 mA  
CIO-DIO48H (source): 15 mA; (sink): 64 mA
- Power:** +5 V @ 100 mA typ, 200 mA max
- Operating Ambient:** 0 to 50°C (32 to 122°F); 0 to 90% RH, non-condensing
- Storage Ambient:** -20 to 70°C (-4 to 158°F)
- Weight:** 142 g (5 oz)

To Order ( <i>Specify Model Number</i> )		
Model No.	Price	Description
CIO-DIO48	\$89	48 channel digital I/O board
CIO-DIO48H	129	48 channel high drive digital I/O board
CIO-MINI50	49	50 channel 4" x 4" screw terminal board, requires cable
CIO-SPADE50	149	50 channel 16" x 4" spade lug terminal board, requires cable
SSR-RACK24	160	24 channel solid state relay rack; needs cable and relays
CIO-ERB24	199	24 channel electro-mechanical relay board, requires cable
C50FF-2	25	50-conductor connection cable, 2 ft
UNIV-DRVR	49	Universal Driver for DOS and Windows
CIO-Labview-Drvr	49	Labview Driver (requires UNIV-DRVR)