

DIG-64

64 Channel Digital Input/Output Card



The DIG-64 is a PC-compatible ISA card that provides the user with 16 digital opto-isolated inputs, 16 relay outputs and 32 TTL-level digital input/outputs.

The card features user selectable base address and interrupt level. In addition the field replaceable series resistance packs allow selection of the input voltage range.

The card is fitted with "Polyswitch" resettable fuses to protect each of the relay outputs and the +5 volt and +12 volt feeds out of the card. These "fuses" rupture if their rating is exceeded and then heal themselves once power is removed for 20 minutes or so. This prevents unnecessary repair work when errors are made during installation or wiring.

16 digital opto-isolated inputs

16 relay outputs with or without mercury wetted contacts

32 digital programmable input/outputs

User selectable base address and interrupt level

Field replaceable series resistance packs allow selection of the input voltage range

"Polyswitch" resettable fuses protecting relay outputs and +5 volt/+12 volt outputs

37 way D-type & 40 way IDC connectors

IDC to 37 way D-type cable option

Blue Chip Technology



ACQUISITION CARDS

DATA

DIG-64

64 Channel Digital Input/Output Card

Technical Specification

Number Of Opto-isolated Input Channels	16
Number Of Relay contact pairs	16
Number of TTL digital input/output channels	32
Interrupt Signal Options	IRQ-2 to -7 inclusive (Default from PIO 1 port A bit 0)

Input Characteristics

All inputs are opto-isolated from computer Ground and each other. Inputs may be either AC or DC signals.

Isolation Voltage	100 Volts
Voltage Input Range	Min. 3 Volts Max. 24 Volts*
Input Load Current	10ma @ 24v Input*

* Depends on series resistance packs fitted.

Relay Contact Characteristics

(Mercury Wetted Reed Relays)

Switching voltage	Max 500 volts
Switching current	Max 2 Amps DC peak/AC resistive
Carry current	Max 3 Amps DC peak/AC resistive
Contact rating	50 watts DC peak/AC resistive
Life expectancy	200x10 ⁶ at 1 volt / 10mA
Static contact resistance	40mΩ
Contact material	Mercury (16mg)
Operate time	Max 1.75mSecs
Release time	Max 1.5 mSecs

Note: We do not recommend high voltage operation because of the limitations of the connectors used and their presence within a computer system.

Digital Input/Outputs

Number Of I/O Channels 32 arranged as 1 x 3 x 8 and 1 x 1 x 8 I/O bits

Signal Levels 5 Volt TTL Logic Levels

Outputs

Logic Low Level	0 Volts (min.) - 0.4 Volts (max.) @ I _{OL} = 2.5mA
Logic High Level	3.5 Volts (min.) - 5 Volts (max.) @ I _{OH} = -400μA
Drive Current	2.5 mA. (Logic Low) V _{out} = 0.4 Volts -400 μA (Logic High) V _{out} = 3.5 Volts

Input Loading -10 μA (Logic Low)
+10 μA (Logic High)

Addresses

Total I/O Address Range Required 16 Bytes

Board Connections

Opto-Isolated Inputs	37 way D type socket
Relay Outputs	40 way header
Digital Input/Output	1 x 10 way header 1 x 20 way header 1 x 9 way mini DIN (plus screen)
Bus:	PC 8-bit ISA

Protection

Relay Outputs	Raychem RXE110 rated @ 0.89 Amps @ 40°C or 1.10Amps @ 20°C "Trips" in 15 seconds at 3 Amps @ 20°C
+5 & +12 volt Outputs	Raychem RUE110 rated @ 0.91 Amps @ 40°C or 1.10 Amps @ 20°C "Trips" in 60 seconds at 3 Amps @ 20°C

Dimensions

	Board	Overall
Length	250	253
Height	120	127
Width	15	25



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