PC104PLUS-69

16 Ch Opto Input & 16 Ch Relay Output

Embedded PCI Data Acquisition

DESCRIPTION

The **PC104PLUS-69** is the first in our range of new PC/104PLUS-bus interface boards. PC/104PLUS adds the benefit of the high speed PCI bus to embedded systems.

It features 16 opto-isolated inputs and 16 reed relay outputs. The opto-isolated inputs can be used for inputs up to 28V, AC or DC. Opto-isolated inputs are required in industrial/military applications for protection against voltage spikes up to 2500V.

The relays can be used to switch light current external devices up to 100V @ 250mA (max). These relays have coaxial shielding, high reliability and have hermetically sealed contacts for long life, and are excellent for RF and Fast Rise Time Pulse switching (up to 6 GHz).

Inputs and outputs are separated on two sets of 2mm pitch IDC40 headers.

Designed from the outset to have a wide operating temperature, the PC104PLUS-69 can operate from -20°C to +85°C. All components are surface mounted and conformal coating is available as a special request.

Each board comes supplied with an extensive free software developer's kit with support for most Windows OS's and also Linux. VXWorks is available on request.

FEATURES

- 16 Opto-Isolated Inputs (Up to 28VDC/AC)
  - 2500V (max.) Isolation Voltage
  - Up to 24VDC voltage protection for isolation channel
  - Inputs can accept DC & AC
  - Frequency response up to 10kHz
- 16 Reed-Relay Outputs
  - 1500V (max.) Isolation Voltage
  - Relay switching speed up to 0.25mS
  - Load switching up to 3W
- PC/104PLUS 32-bit interface
- 5VDC only operation
- Windows98/ME/2000/XP/NT OS Support
- Linux OS Support
- -20° to +85°C Operating temperature

Specifications

Optically Isolated Input Characteristics		
Optically Isolated Inputs:		16
Frequency Response:		Up to 10kHz
		(Computer and software dependent)
Logic Levels:		
	0V to 3V:	Logic 0
	3.1V to 24V:	Logic 1
Isolation Voltage:		450Vrms
Maximum Reverse Voltage:		50V
Input Current:		
	Continuous:	30mA
	Peak:	1A (Pulse 300ms, 2% Cycle)
Max forward current [LED]:		50mA
Reed Relay Characteristics		
Number of channels:		16
Relay Contact Data		
	Contact Form:	Form A (SPST)
	Rated Power:	3W
	Switching Voltage:	100V
	Switching Current:	0.25A
	Carry Current:	0.5A
	Contact Resistance:	0.125Ohms
	Switching Time:	0.25mS
	Release Time:	0.5mS
External Interface		
Connector:		IDC40 #1 (16x Opto Inputs)
		IDC40 #2 (16x Reed Relays)
Environmental / Physical		
Operating Temp:		-20° to +85°C
Board Dimensions:		PC/104PLUS (Standard)
Power Requirements		
+5V:		400mA typ
+5V:		200mA (external loads)
+12V:		200mA (external loads)

IDC-40M 16 x OPTO I/P'S

OPTO0(+)	1	2	OPTO0(-)
OPTO1(+)	3	4	OPTO1(-)
OPTO2(+)	5	6	OPTO2(-)
OPTO3(+)	7	8	OPTO3(-)
OPTO4(+)	9	10	OPTO4(-)
OPTO5(+)	11	12	OPTO5(-)
OPTO6(+)	13	14	OPTO6(-)
OPTO7(+)	15	16	OPTO7(-)
OPTO8(+)	17	18	OPTO8(-)
OPTO9(+)	19	20	OPTO9(-)
OPTO10(+)	21	22	OPTO10(-)
OPTO11(+)	23	24	OPTO11(-)
OPTO12(+)	25	26	OPTO12(-)
OPTO13(+)	27	28	OPTO13(-)
OPTO14(+)	29	30	OPTO14(-)
OPTO15(+)	31	32	OPTO15(-)
COMA	33	34	COMB
DGND	35	36	DGND
+5V	37	38	DGND
+5V	39	40	DGND

2.0mm Pitch R/A Header (2 x 20 pin) MALE

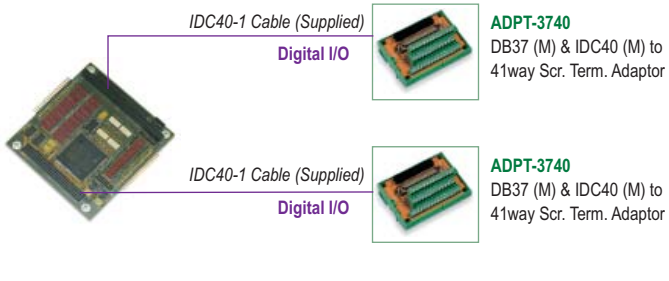
IDC-40M 16 x R/RELAY

RELAY0	1	2	RELAY0RET
RELAY1	3	4	RELAY1RET
RELAY2	5	6	RELAY2RET
RELAY3	7	8	RELAY3RET
RELAY4	9	10	RELAY4RET
RELAY5	11	12	RELAY5RET
RELAY6	13	14	RELAY6RET
RELAY7	15	16	RELAY7RET
RELAY8	17	18	RELAY8RET
RELAY9	19	20	RELAY9RET
RELAY10	21	22	RELAY10RET
RELAY11	23	24	RELAY11RET
RELAY12	25	26	RELAY12RET
RELAY13	27	28	RELAY13RET
RELAY14	29	30	RELAY14RET
RELAY15	31	32	RELAY15RET
DGND	33	34	DGND
DGND	35	36	DGND
+5V	37	38	DGND
DGND	39	40	+5V

2.0mm Pitch R/A Header (2 x 20 pin) MALE

Supplied with PC/104 Mounting Kit and IDC40-1 Ribbon Cables

Optional Accessories Diagram



Optional Accessories

ADPT-3740	DB37 (M) & IDC40 (M) to 41way Screw Terminal Adaptor
IDC40-1	40way Ribbon Cable (Supplied)

Ordering Information

Supplied with EDR Enhanced Software, PC/104 Mounting Kit and Ribbon Cable (IDC40-1)	
PC104PLUS-69	16 Channel Opto Input & 16 Channel Relay Output Board