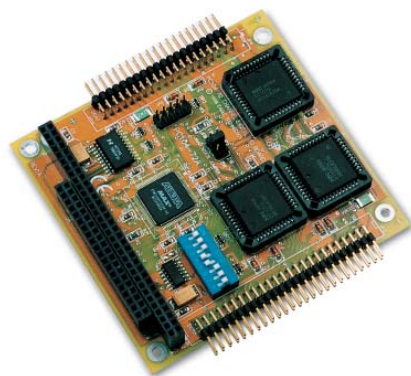


### Embedded PCI Data Acquisition



## DESCRIPTION

The **PCI04-72A** is a PC/104 based digital I/O board. Each board uses three industry-standard Programmable Peripheral Interface chips (PPI) to achieve 72 channels of digital I/O. Advanced features are implemented on this board, making it ideal for industrial and control applications. Most features are software controlled which eliminates the need for a change in jumper settings. Port C0 and C3 of each PPI are tagged to a global interrupt sharing line. This makes it ideal for multi-tasking environments where host CPU overhead must be kept to a minimum. Only a level change on any of these port lines will generate an interrupt.

Wait-state generation is incorporated into the PCI04-72A for operation on CPU modules with fast bus clock speeds. It is fully PC/104 Rev 2.3 compliant and compatible with the ISA based digital I/O boards allowing easy migration from ISA to the PC/104 based PCI04-72A. The PCI04-72A utilizes SMT and high-density logic (FPGA) design for its operation and interface to the PC/104-bus.

The PCI04-72A offers optimal performance under DOS and Windows98/ME/2000/XP/NT. This ensures that most key features can be controlled from software. Data transfers through the PC/104-bus can exceed 50Kb/S which means that host CPU overhead is kept to a minimum.

## FEATURES

- 72 Digital Inputs or Outputs
- Each Port C0 and C3 are protected up to a voltage of  $\pm 12V$
- Software configurable IRQs for each Port C0 and C3
- Windows98/ME/2000/XP/NT OS Support
- Linux OS Support

## Ordering Information

Supplied with EDR Software, PC/104 Mounting Kit and Ribbon Cable (IDC50 and IDC40)

PCI04-72A      72 Channel Digital I/O Board

## Specifications

PPI Characteristics	
Number of I/O Lines:	72
Compatibility:	TTL
Logic Levels:	
Input Low:	-0.3V (Min), 0.8V (max)
Input High:	2.2V (min), 5.3V (max)
Output Low:	0.4V (Iout = 2.5mA)
Output High:	3.7V (Iout = -2.5mA)
Current Output Drive:	$\pm 3mA$ (each line configured as outputs)
Power On State:	Input
I/O Protection:	$\pm 12V$ on PC0, PC3
Interrupt on State-Change:	On all Port C0 and C3
Handshaking:	All ports – C0, C3
Data Transfers:	Interrupts, Polled I/O
Bus Interface:	PC/104
Transfer Rate:	50Kb/S
External Interface	
Connector Types:	
PPI0, PPI1	50-way 2.54mm Male Header
PPI3	40-way 2.54mm Male Header
PC/104 Interface	
Base Address:	Selectable from 0 to 7FFh
No of registers:	32x 8-bit Register
Interrupts:	Auto selected
Wait State Generation:	0, 1, 2, 4, 8
Environmental / Physical	
Rel. Humidity:	0% to 90% (non-condensing)
Operating Temp:	0°C to 70°C
Board Dimensions:	90.2 mm x 95.9 mm
Weight:	70 g
Power Requirements	
+5V:	400mA typ
+5V:	200mA (for external loads)

### IDC-50M

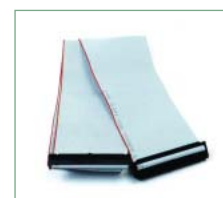
DGND	50	49	+5V
1PC7	48	47	1PC6
1PC5	46	45	1PC4
1PC3	44	43	1PC2
1PC1	42	41	1PC0
1PB7	40	39	1PB6
1PB5	38	37	1PB4
1PB3	36	35	1PB2
1PB1	34	33	1PB0
1PA7	32	31	1PA6
1PA5	30	29	1PA4
1PA3	28	27	1PA2
1PA1	26	25	1PA0
0PC7	24	23	0PC6
0PC5	22	21	0PC4
0PC3	20	19	0PC2
0PC1	18	17	0PC0
0PB7	16	15	0PB6
0PB5	14	13	0PB4
0PB3	12	11	0PB2
0PB1	10	9	0PB0
0PA7	8	7	0PA6
0PA5	6	5	0PA4
0PA3	4	3	0PA2
0PA1	2	1	0PA0

(2.54mm/100mil Pitch)

### IDC-40M

DGND	40	39	DGND
DGND	38	37	DGND
DGND	36	35	DGND
DGND	34	33	DGND
DGND	32	31	DGND
DGND	30	29	DGND
2PC7	28	27	2PC6
2PC5	26	25	2PC4
2PC3	24	23	2PC2
2PC1	22	21	2PC0
DGND	20	19	DGND
2PB7	18	17	2PB6
2PB5	16	15	2PB4
2PB3	14	13	2PB2
2PB1	12	11	2PB0
DGND	10	9	DGND
2PA7	8	7	2PA6
2PA5	6	5	2PA4
2PA3	4	3	2PA2
2PA1	2	1	2PA0

(2.54mm/100mil Pitch)



Supplied with PC/104 Mounting Kit, IDC40 and IDC50 Ribbon Cables

## Optional Accessories

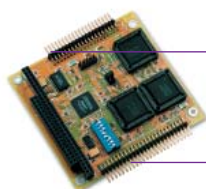
### OPTION 1:

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

### OPTION 2:

ADPT-5050	DB50 (M) & IDC50 (M) to 51way Screw Terminal Adaptor
IDC50	50way Ribbon Cable (Supplied)

## Optional Accessories Diagram

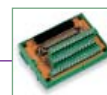


IDC40 Cable (Supplied)

Digital I/O (PPI-2)

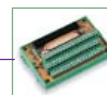
IDC50 Cable (Supplied)

Digital I/O (PPI-0 & -1)



### ADPT-3740

DB37 (M) & IDC40 (M) to 41way Screw Term. Adaptor



### ADPT-5050

DB50 (M) & IDC50 (M) to 51way Screw Term. Adaptor