



## P104-DIO-96 Series

### PC/104-Plus Digital Communication

|                      |
|----------------------|
| Software             |
| Analog Input         |
| Analog Output        |
| Digital Input/Output |
| Serial Communication |
| Watchdogs            |
| Bus Expansion        |
| Ethernet             |
| Wireless             |
| Distributed I/O      |
| PCI Bus Products     |
| PC/104 Bus           |
| USB                  |
| ETX                  |
| Systems              |
| Miscellaneous        |
| Accessories          |

| Part #      | \$US  |
|-------------|-------|
| P104-DIO-96 | \$395 |

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|                                 |
|---------------------------------|
| P104-DIO-96<br>ACCESSORIES      |
| <a href="#">104-HDW-KIT(X)</a>  |
| <a href="#">104-SPC-KIT</a>     |
| <a href="#">C104-50F-D25M</a>   |
| <a href="#">C104-50F-D9M(x)</a> |
| <a href="#">CAB50-6</a>         |
| <a href="#">CAB50F-6</a>        |
| <a href="#">CAB50F-XX</a>       |
| <a href="#">STA-112</a>         |
| <a href="#">STA-50</a>          |
| <a href="#">STB-50</a>          |
| <a href="#">I-BOX</a>           |
| <a href="#">MP104-DIN</a>       |

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#### FEATURES

- PC/104 Plus (PCI-104 Optional)
- 96 Channel TTL-DTL high speed digital I/O
- Software selectable in vs. out as 8 bit and 4 bit ports
- Emulates 4 industry standard 8255 PPIs (mode 0)
- Full 32-bit PCI interface design
- Buffered circuits for higher driving capacity
- Low CPU overhead
- Known power-up states
- Output port status read back
- Standard 50-pin IDC connectors (x4)
- 0 to +70° C and -40 to +85° C versions available

[Specifications](#)


#### FUNCTIONAL DESCRIPTION

Each I/O line of this card is buffered and capable of sourcing 32mA, or sinking 64mA. The board simulates Programmable Peripheral Interface chips (PPI) to provide a computer interface to digital I/O lines. Each PPI supports two 8-bit ports (A, B) and two 4-bit ports (Chi, Clow). Each port can be configured to function as either input or output latches. The I/O line buffers (types 74ABT240 and 74ABT245) are configured automatically by hardware logic for input or output according to the PPI Control Register direction software assignment.

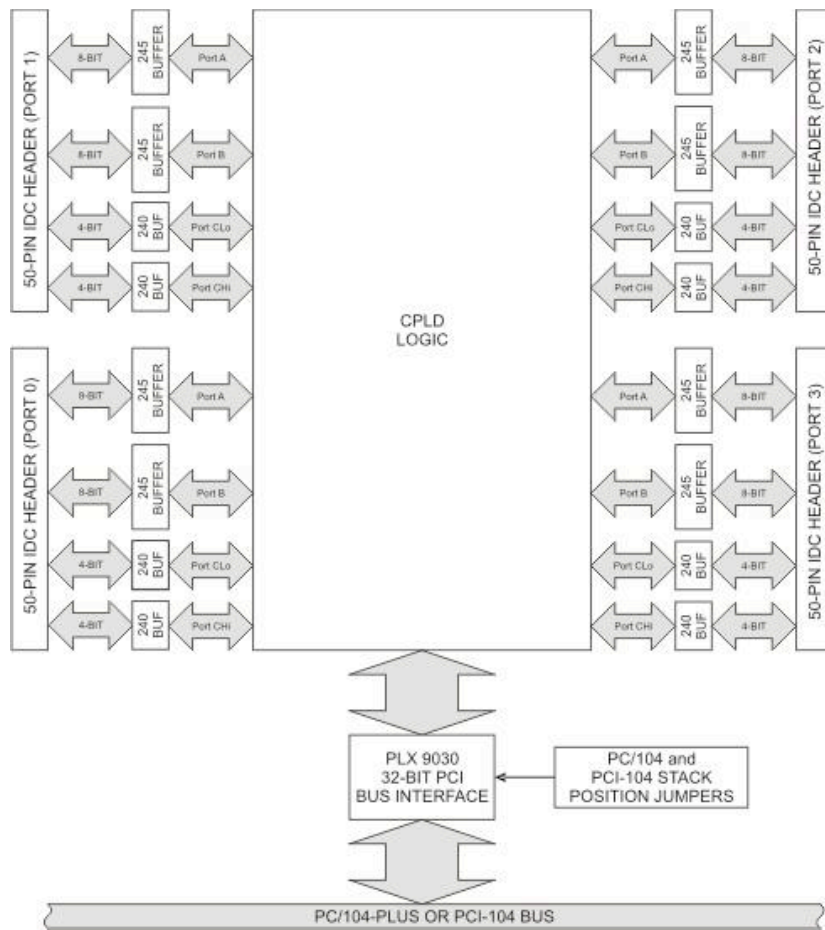
Outputs of the I/O buffers are pulled up through 10KΩ resistors to +5VDC.

I/O wiring connections are via 50-pin headers on the board. This provides compatibility with OPTO-22, Gordos, Potter & Brumfield, Western Reserve Controls, etc. module mounting racks. Every second conductor of the flat cables is grounded to minimize crosstalk between signals. If needed for external circuits, +5VDC power is available on each I/O connector at pin 49. If you use this power, we recommend that you include a 1A fast blow fuse in your circuits in order to avoid possible damage to the host computer.

The card occupies 32 addresses within the PCI I/O space. The base address is assigned by the system. Refer to the Option Selection Section of this manual for a detailed description.

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#### Specifications



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## Specification

### Data Transfer Rate, I/O Mapped

- I/O connector to/from PCI bus: 7.37M bytes per second

### Digital Inputs (TTL Compatible)

- Logic High: 2.0 to 5.0 VDC
- Logic Low: -0.5 to +0.8 VDC
- Input Load (High): 10 $\mu$ A
- Input Load (Low): -10 $\mu$ A

### Digital Outputs

- Logic High: 2.5 VDC min., source 32 mA
- Logic Low: 0.5 VDC max., sink 64 mA
- Power Output: +5 VDC from computer bus (onboard resettable 0.5A fuse) on each digital group's I/O connector
- Power Required: 290 mA typical at 5V (all I/O pins disconnected, all I/O ports set as inputs)

### Environmental

- Operating Temperature: -20°C to +70°C
- Humidity: 0 to 90% RH, non-condensing
- Storage Temperature: -50°C to +120°C



CE testing & approval must be done at the system level, in the designed enclosure, and is

not done on individual boards.

| Part Number | Price (USD) |
|-------------|-------------|
| P104-DIO-96 | 395.00      |

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