

ACCES
I/O PRODUCTS, INC.

P104-DIO-96
PC/104 Plus 96 Digital I/O's

FEATURES

- PC/104 Plus 96 bit (or 48 bit) TTL-CMOS high speed digital I/O
- Change of State detection = Low CPU overhead
- Software selectable in / out as 8 bit and 4 bit ports
- I/O lines provide 32mA source, 64mA sink current
- I/O buffers enabled or tri-stated under S/W control
- I/O pulled up to 5V for contact monitoring
- Resettable fused 5V outputs at 50-pin connectors
- Compatible with Industry-Standard I/O Racks such as Gordos, OPTO22, Potter & Brumfield, etc.
- Emulates 4 industry standard 8255 PPIs (mode 0)
- Full 32-bit PCI interface design, 33MHz clock
- Known power-up states
- Output port status read back
- Standard 50-pin IDC connectors (x4)



FACTORY OPTIONS

- Extended operating temperature -40 to +85°C
- PCI-104 (no ISA connector)
- RoHS compliance

FUNCTIONAL DESCRIPTION

This PC104 plus board features 96 bits of TTL-compatible digital I/O with high-current capabilities. Each digital port can be programmed to accept inputs or to drive outputs. The I/O wiring connections are via industry standard 50-pin connectors. For external circuits, fused 5VDC power is available at pin 49 of each I/O connector. The resettable fuse is rated at 0.5A.

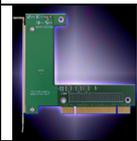
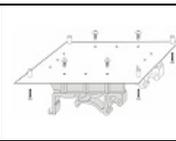
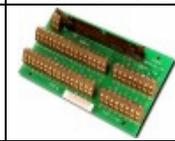
All I/O lines are buffered by a type ABT family tristate transceiver capable of sourcing 32mA or sinking 64mA per pin. The buffers are configured under program control for input or output. Pull-up (10k ohm) resistors are useful for contact monitoring and assure that there are no erroneous outputs at power-up until the card is initialized by software.

VERSIONS

The P104-DIO-96 has 96 digital I/O lines, 16 of which (4 per group) have change-of-state detection capabilities for reduced CPU overhead and timing critical and process control applications. For less-dense or non-timing critical applications, specify our P104-DIO-48.

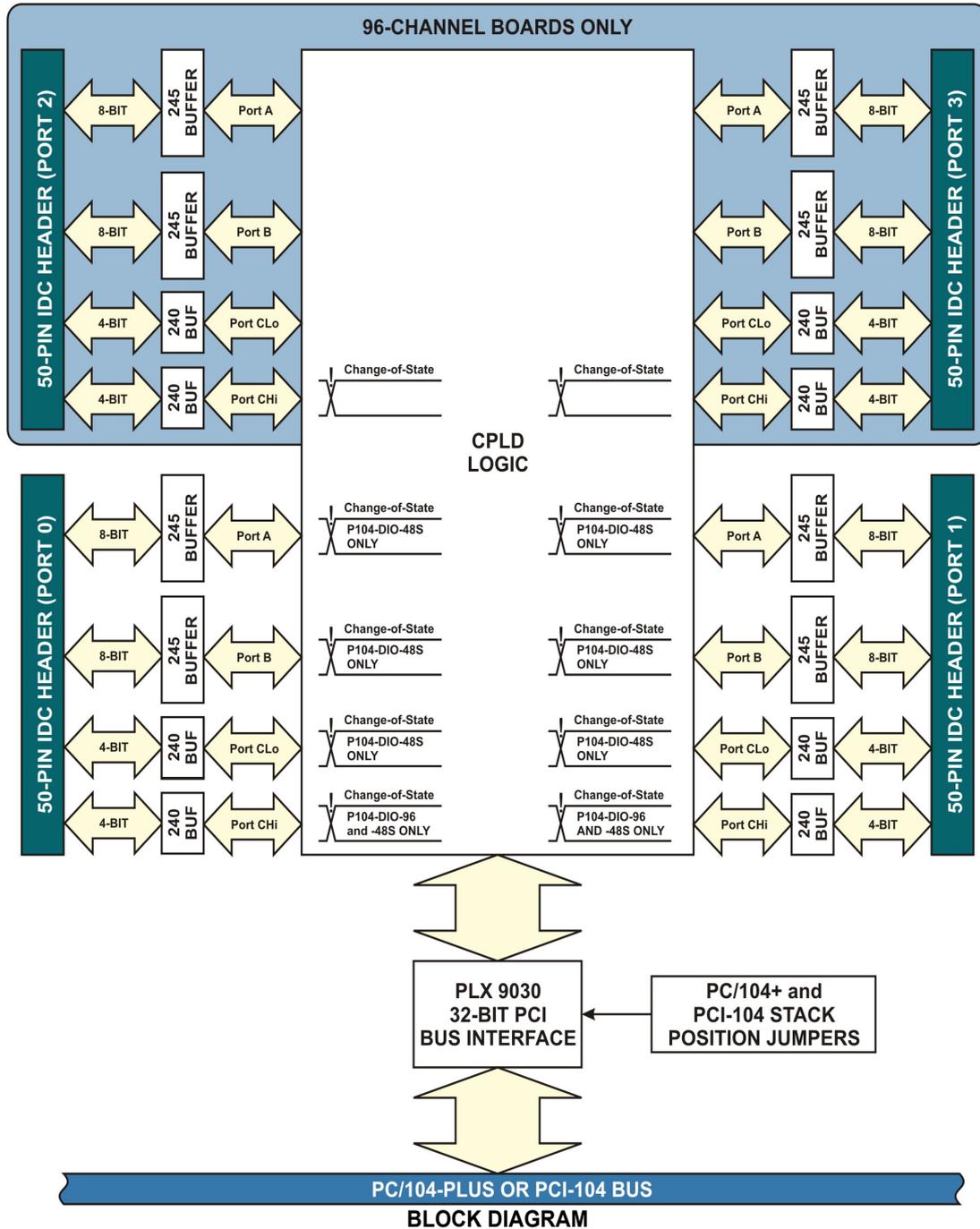
The P104-DIO-48S has 48 digital I/O lines, each of which has change-of-state detection.

ACCESSORIES

PCI-P104-ADAP	IIB-24	STB-96CH or STB-48CH	MP104-DIN	STB-50	DIN-SNAP-6
Develop & test software and hardware in a desktop PCI slot	Converts 24 TTL inputs into optically-isolated inputs	50-Pin Multi-Header Universal Screw Terminal Board for 96 or 48 I/O Channels w/T-BOX enclosure	Mounting adapter plate for affixing STB-96CH or STB-48CH to a DIN-rail	Screw terminal board, ships with standoffs but can also mount on SNAP-TRACK or DIN-SNAP	SNAP-TRACK for DIN-rail mounting one STB-50
					

SOFTWARE

This board is supported for use in most operating systems and includes a free Linux and Windows 2000/XP/2003 compatible software package. This package contains sample programs and source code in Visual Basic, Delphi and Visual C++ for Windows. Also incorporated is a graphical setup program in Windows. Third party support includes a Windows standard DLL interface usable from the most popular application programs and includes example LabView VIs. Embedded OS support includes Windows XPe.



BLOCK DIAGRAM

SPECIFICATIONS

Digital Inputs (TTL and CMOS Compatible)

- Logic High/Low: 2.0 to 5.0 VDC / -0.5 to +0.8 VDC
- Input Load (High): 10uA

Digital Outputs (TTL and CMOS)

- Logic High/Low: 2.5 VDC min., source 32 mA / 0.5 VDC max., sink 64 mA

Environmental

- Operating / Storage Temp: -20°C to +70°C / -50°C to +120°C
- Humidity: 5 to 90% RH, non-condensing
- Power Output: +5 VDC from bus (resettable 0.5A fuse) on each connector

Power Required

- 3.3V quiescent current for the '96, '48S, and '48 = 10mA
- 3.3V typical current for the '96 = 50mA
- 3.3V typical current for the '48S and '48 = 30mA
- 5V typical current with all outputs low for the '96 = 352mA
- 5V typical current with all outputs low for the '48s and '48 = 176mA
- 5V typical current with all outputs high for the '96, '48S, and '48 = < 50uA

• 5V typical current with all I/O set as inputs for the '96, '48S, and '48 = < 250uA

ORDERING GUIDE

- | | |
|--------------|--|
| P104-DIO-96 | 96 High-Speed Digital I/O's, 16 with Change-of-State |
| P104-DIO-48S | 48 High-Speed Digital I/O's, each with COS |
| P104-DIO-48 | 48 High-Speed Digital I/O bits |

Model Options

- -RoHS Compliant board
- -T Extended operating temperature -40°C to +85°C

Accessories

- | | |
|-----------|---|
| STB-50 | Screw terminal board |
| IIB-24 | 24-channel optical isolator board |
| CAB50F-6 | 6' flat ribbon cable female 50-pin connector |
| CAB50-6 | 6' flat ribbon cable female to edge connector |
| MP104-DIN | DIN rail mounting provision |

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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