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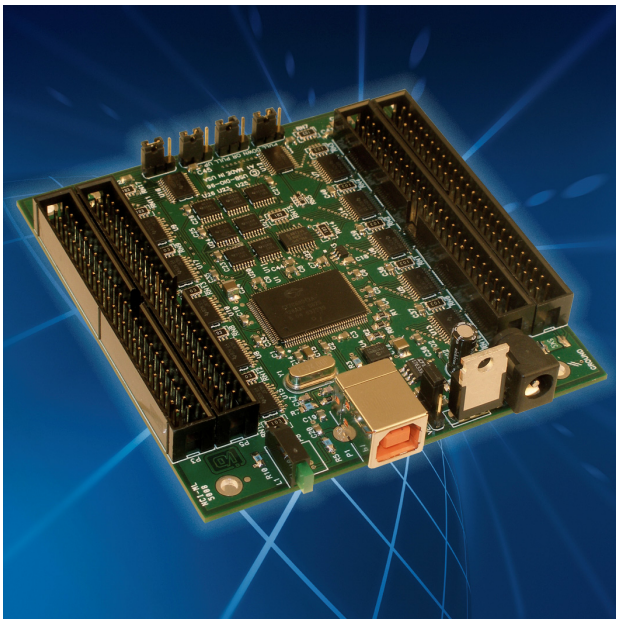
Find the *Acces USB-DIO-48-T-RA* at our website: ***Click HERE***

USB-DIO-96 & USB-DIO-48

96 or 48 Digital I/O's

FEATURES

- 96 or 48 lines of digital I/O
- High retention type B USB connector
- Mini USB header connector in parallel with type B for stacking and embedded applications
- High-speed USB 2.0 device, USB 1.1 backwards compatible
- Twelve (12) or Six (6) 8-bit ports independently selectable for inputs or outputs
- All I/O lines buffered with 32 mA source, 64mA sink current capabilities
- I/O Buffers can be enabled or tri-stated under program control
- Drivers and sample application provided
- Jumper selectable I/O pulled up to 5V for contact monitoring, pulled down to ground or floating
- Jumper selectable power provided via USB cable or external power supply for higher source current capabilities
- Resettable fused +5VDC outputs per 50-pin connector
- Standard 50-pin IDC-type shrouded connectors with key
- PC/104 size (3.550 by 3.775 in.)
- Rugged industrial enclosure
- Compatible with Industry-Standard I/O Racks such as Gordos, OPTO22, Potter & Brumfield, etc. with optional cable



FACTORY OPTIONS

- Board only version with no enclosure
- DIN rail mounting bracket industrial environments
- Extended operating temperature -40 to +85˚C
- On-board regulator, DC power jack and AC/DC adapter
- This product is available in a RoHS compliant version

FUNCTIONAL DESCRIPTION

This USB board is an ideal solution for adding portable, easy-to-install digital I/O capabilities to any computer with a USB port. The board is a USB 2.0 high speed device, offering the fastest speed available with the USB bus. It is fully compatible with both USB 1.1 and USB 2.0 ports. The card is plug-and-play allowing quick connect/disconnect whenever you need additional I/O on your USB port.

The board features 96 or 48 bits of TTL-compatible digital I/O with high-current capabilities. Each digital port can be programmed to accept inputs or to drive outputs in twelve or six 8-bit ports. Power is supplied to the card via the USB cable, or for higher source current capabilities, an external power option may be ordered. The I/O wiring connections are via two or four 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 74ABT543A tristate buffer transceiver capable of sourcing 32 mA or sinking 64 mA. The buffers are configured under program control for input or output. Jumper selected resistors permit configuration of each 24-bit / 50-pin connector group for pull-up (to +5 VDC), pull-down (to ground) or floating depending on the application requirement. Pull-ups are useful for contact monitoring and assure that there are no erroneous outputs at power-up until the card is initialized by system software.

Unlike most USB digital I/O products which primarily use a human interface device (HID) driver, we provide an easy to use, Windows/Linux-based, custom function driver capable of updating all 96-bits approximately 4000 times per second.

OEM USB/104 FORM FACTOR

The OEM (board only) version is perfect for a variety of embedded applications. What makes the OEM option unique is that its PCB size and pre-drilled mounting holes match the PC/104 form factor (without the bus connections). This ensures easy installation using standard standoffs inside most enclosures or systems. The board can be added to any PC/104, PCI-104, or PCI/104-Express stack by connecting it to a USB 2.0 port usually included on-board with embedded CPU form factors such as EBX, EPIC, and PC/104. This is especially important since many newer CPU chipsets do not support ISA and have plenty of USB ports. The USB-DIO-96 and USB-DIO-48 OEM board can also be installed using standoffs inside other enclosures or systems. For embedded OEM type applications, an additional miniature USB input header is provided in parallel with the type B connector.

ACCESSORIES

Available accessories include flat ribbon cables and DIN-rail mountable screw terminal boards. Also available is our low cost IIB-24 which will add optical isolation to any standard 24-channel digital I/O port on a 50 pin connector. To make use of the miniature embedded USB header connector, we offer a 6' type A to mini cable.

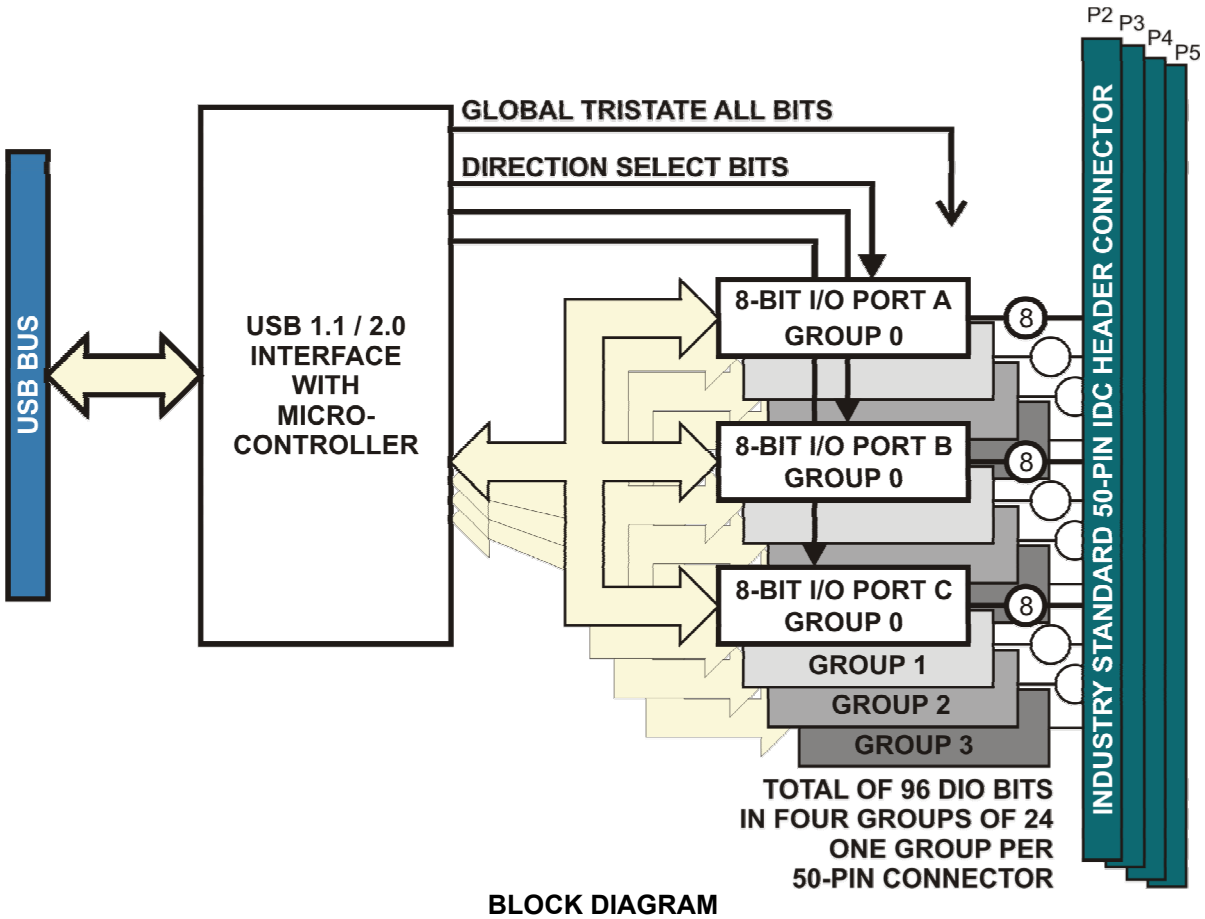
SOFTWARE

The USB-DIO-96 and USB-DIO-48 are plug-and-play which allows quick connect or disconnect whenever you need additional I/O on your USB port. The module utilizes a high-speed custom function driver optimized for a maximum data throughput that is 50-100 times faster than the USB human interface device (HID) driver used by many competing products. This approach maximizes the full functionality of the hardware along with capitalizing the advantage of high-speed USB 2.0. These boards are supported for use in most USB supported operating systems and includes a free Linux and Windows 98se/Me/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.

10623 Roselle Street, San Diego, CA 92121 • (858) 550-9559 • Fax (858) 550-7322 • contactus@accesio.com • www.accesio.com

June 19th 2009

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BLOCK DIAGRAM

SPECIFICATIONS

TTL Digital Input/Output Lines

Channels / Groups:	96 or 48 in 8-bit groups
Inputs:	
Logic High:	2.0 VDC minimum, 5.5 VDC max.
Logic Low:	-0.5 VDC min., +0.8 VDC max.
Outputs:	
Logic High:	2.0 VDC minimum, source 32 mA
Logic Low:	0.55 VDC maximum, sink 64 mA

Bus Type USB 2.0 high-speed

Environmental

Operating Temp.:	0˚C to 70˚C
Storage Temp.:	-40˚C to +85˚C
Humidity:	0%-90% RH, non-condensing
Board Dimension:	3.550 x 3.775 inches
Box Dimension:	4.00 x 4.00 x 1.4 inches

Power

Basic Unit:	318mA typical (no load)
Auxiliary Outputs:	+5VDC via 0.5A resettable fuse per 50 pin connector
Bus Powered:	+5VDC provided via USB bus up to 500mA
Externally Powered:	** Optional on-board external power circuitry and 5V AC/DC adapter can be ordered ("-PR" option) if current use is expected to be greater than what can be supplied by the USB bus.

ORDERING GUIDE

USB-DIO-96	96 High-Speed Digital I/O's in rugged enclosure
USB-DIO-48	48 High-Speed Digital I/O's in rugged enclosure

Model Options

• -PR	AC/DC adapter (power jack/regulator installed)
• -OEM	Board only (no enclosure)
• -RoHS	Compliant board
• -DIN	Includes MP104-DIN installed on enclosure
• -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
CUSB-EMB-6	6' USB Cable with Type A to mini connector

ACCES I/O PRODUCTS, INC.

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