

Digital Input/Output 24 Channel PCI Board

PCI236

Registered
ISO 9001
Company

- 24 bit flexible, programmable digital I/O.
- Provision for digital I/O conditioning
- Interrupt controlled operations, for interrupts to be generated from one external signal
- PCI Bus 2.1 plug & play interface
- Device driver software compatible with Windows NT, 95, 98 & 2000
- Visual Basic & Delphi example software



The PCI236 is a programmable peripheral interface board which uses an 82C55 to provide 24TTL compatible digital input/output lines arranged in three 8 bit ports. The board can be used on any PC that supports PCI bus v2.1. and is supplied with Windows NT, 95, 98 & 2000 compatible device drivers, plus VB and Delphi examples

The PCI236 is part of the Amplicon 200 Series of PC based data acquisition boards that provide very high performance, affordable hardware and easy to use software. The 200 Series is designed for fast or complex data I/O to the host PC and comprises a range of boards and software to handle most analog and digital signal types.

The PCI236 supports all relevant features of the earlier ISA bus product, the PC36AT/LP. The PCI236 includes provision for input/output signal conditioning modules to be mounted on the board.

Digital I/O

The digital I/O lines on ports A, B and C are TTL compatible. Programmable as two groups of 12 bits (group A, group B) and used in three modes of operation. Each control block (Group A and Group B) accepts "commands" from the read/write control logic, receives "control words" from the internal data bus and issues proper commands to its associated ports.

I/O Signal conditioning

Environments where digital I/O boards are used are often electrically noisy. Provision is therefore made for addition of I/O signal conditioning. This is made by way of holes for a 20 pin DIL Header of 0.3 to 0.9 inch pitch. Under normal conditions the I/O

DESCRIPTION	PRODUCT CODE
PCI236 24 channel DIO board for PCI with manual & software	909 936 63
Screened cable 600mm long 37 way D type female to female	919 020 54
C10-Mini 37 screw terminal cable	909 550 24
Connector 37way D type female	708 703 92
Software and manuals on CD-ROM	

signals pass straight through the header. Individual I/O signal paths may be broken across the header, to allow series elements to be inserted in the I/O port signal path. Tracks are easily broken by using clearly identified drill points for each I/O Port. Typical signal conditioning modules which could be incorporated onto the board are high current output, resistor capacitor filtered input, Schmitt input, opto-isolated input or opto-isolated output.

The PCI Interface

The PCI236 is a PCI bus slave card. Communication between the host PC and the PCI236 Digital input/output board is via the PCI bus. This bus provides data, address, interrupt and control lines together with the power supply for the PCI236.

The board base address and PC IRQ are set up by the PCI enumerator software during installation. Interrupt sources are classified by the position in an interrupt source register and each source is maskable by a bit in an interrupt mask register.

The PCI236 uses only the +5V supply from the host PC and this supply rail is also available for external use via the I/O connector. Subject to sufficient power being available from the PC the following PC bus voltages are available at the user I/O connector: +12 VDC at 100mA, +5

SPECIFICATION

Digital I/O ports	24 I/O lines arrange as three 8 bit ports (A, B and C)
Digital inputs	'Low' input voltage -0.3V to +0.8V. 'High' input voltage +2.2V to +5.3V. TTL compatible
Digital outputs	'Low' output voltage, +0.4V max at 2.5mA. 'High' output voltage, +3.7V min at -2.5mA
User I/O connector	37 way male D type. 24 digital I/O lines, power and ground
Address range	Plug & play
IRQ range	Plug & play Port C3 Interrupt
Power	+5 Volts from the host PC bus. 35mA or up to 95mA when all 24 digital output lines are fully loaded
I/O positions req.	One PCI bus version 2.1 I/O adaptor slot with room for half-length card
Board dimensions	Length 120 mm, height 95 mm
Temp. range	Operating 0°C to +60°C Storage -20 to +70°C
Humidity range	20% to 80% non-condensing @ 40°C
Power req.	5 VDC from host computer power supply 200 mA PCI236 typical operating
Dissipation	Each PCI236 will dissipate typically 1.0 Watts of heat
Compliance	CE EMC