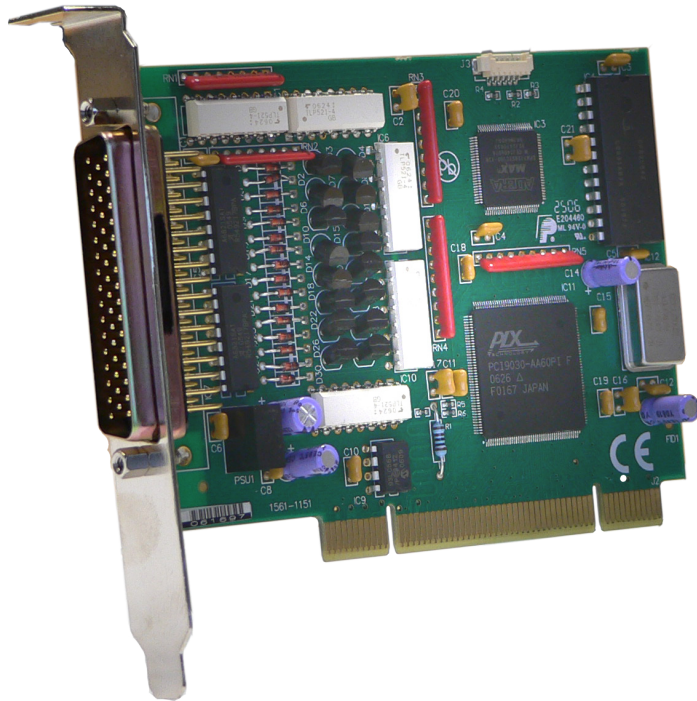




KEY FEATURES

- ▶ Wide input voltage range suitable for industrial applications up to 50VDC or peak AC
- ▶ 3 on-board 16 bit Counter Timers (8254 compatible)
- ▶ Individually opto-isolated inputs
- ▶ Opto-isolated outputs
- ▶ Individually opto-isolated counter timer inputs and outputs
- ▶ Software configurable
- ▶ Supplied with demonstration software examples






PCI-DIO DATA ACQUISITION CARD

The PCI-DIO is a PCI-compatible half-card which provides isolated digital inputs, outputs and counter/timers. There are 16 galvanically isolated, current-limited digital inputs available on the board, which will accept up to 50 volts DC or AC peak, and which switch at nominally 3.5 volts DC or AC peak. There are 16 open collector digital outputs which are isolated from the digital inputs and the host PC but share a common ground connection. There are also three programmable counter/timers, the enable and clock inputs being available, isolated externally, if required, and the outputs being accessible isolated, externally and as interrupt sources.

A 4Mhz crystal oscillator is available on board to allow the counter/timers to act as accurate timebases. All Input/Output lines are available at an industry standard 50 way D-type plug connector. One PCI interrupt line may be selectively driven by the five interrupt sources on the board, the interrupting source being readily identified by software interrogation of the on-board registers. The five interrupt sources are the three counter timer outputs and a change of state detector on each byte of the digital inputs.

OPTIONS

- ▶  1 metre cable with IDC and D type connector (P/N 1371 0071)
- ▶  50 way screw terminal adapter (P/N 1981-0004)
- ▶  Windows® 98/2000, NT® and XP® drivers

Input Channels

- ▶ 16 Input Channels
- ▶ Maximum input voltage ± 50 Volt DC or AC peak
- ▶ Input Threshold (V_{th}) 2.4 volts minimum. 4.4 volts maximum
- ▶ Input current 1mA ± 200 mA for $V_{th} < V_{in} < 50$ V DC, +5 mA (max) for -50 V DC $< V_{in} < V_{th}$
- ▶ Input bandwidth 10kHz

Output Channels

- ▶ 16 Output Channels
- ▶ Maximum ON state current 0mA
- ▶ ON state voltage 1.6 volts (max.) @ $I_{out} = 350$ mA
- ▶ Max board output dissipation 2 watts for each group of 8 outputs (Outputs 1 to 8 and 9 to 16)
- ▶ Maximum OFF state voltage 80 volts DC
- ▶ Output latency 2.4 mS max
- ▶ Maximum isolation voltage 350 volts DC or AC peak

Address Overhead

- ▶ 12 contiguous addresses in 12 byte block

Counters and Timers

- ▶ 3 x 16 Bit counter/timers, 0,1 and 2 may be cascaded to provide a single 48 bit counter/timer. All Counter/timers may be clocked externally at a maximum rate of 10 kHz
- ▶ Onboard Oscillator Frequency : 4MHz. Stability ± 100 ppm 0 - 70°C
- ▶ Interrupt Sources : Register selectable to 3 Counter/timer outputs, and 2 input change state detection groups
- ▶ Interrupt Levels Supported : All PCI interrupts

Mechanicals

- ▶ Board Power Requirement +3.3 Volts, 0.5 W maximum, +5 Volts, 0.4 W maximum
- ▶ 125 (L) x 91 (H) board only, 135 (L) x 122 (H) x 22 (W) including bracket
- ▶ Signal Connections 1 x 50 way male 'D-type' plug