# PCI-DIO96

## Specifications


Document Revision 1.2, February, 2010

# Specifications

**Typical for 25 °C unless otherwise specified.**

**Specifications in *italic text* are guaranteed by design.**

## Power consumption

Table 1. Power consumption specifications

| | |
|---|---|
| +5V quiescent | 150 mA max |

## Digital input/output

Table 2. Digital input/output specifications

| | |
|---|---|
| Digital type | Four 82C55 |
| Number of I/O | 96 |
| Configuration per 82C55 | 2 banks of 8 and 2 banks of 4 or<br>3 banks of 8 or<br>2 banks of 8 with handshake |
| *Output high* | *3.0 volts min @ -2.5 mA* |
| *Output low* | *0.4 volts max @ 2.5 mA* |
| *Input high* | *2.0 volts min, 5.5 volts absolute max* |
| *Input low* | *0.8 volts max, -0.5 volts absolute min* |
| Power-up / reset state | Input mode (high impedance) |
| Pull-up/pull-down resistors | User installed. Dual footprint allows pull-up or pull-down configuration |

## Counters

Table 3. Counters specifications

| | | |
|---|---|---|
| Counter type | 82C54 | |
| Configuration | 3 counters, 16 bits each | |
| Counter 1 | Source: | 2 MHz (xtal /8) |
| | Gate: | Tied to +5V |
| | Output: | Selectable Interrupt source |
| Counter 2 | Source: | Counter 1 OUT |
| | Gate: | Tied to +5V |
| | Output: | Selectable interrupt source |
| Counter 3 - Not used | Source | |
| | Gate | |
| | Output | |

## Interrupts

The interrupt control registers allow the four 82C55 devices and the 8254 counter timer to be used as interrupt sources.

Table 4. Interrupt specifications

| | |
|---|---|
| Interrupt | INTA# - mapped to IRQn via PCI BIOS at boot-time |
| PCI Interrupt enable | Programmable through PLX9052 INTCSR register (INTCSR 4Ch) |
| Interrupt polarity | High or low level. Programmable through PLX9052 |
| | Rising or falling edge. Programmable through PLX9052 |

| | |
|---|---|
| Interrupt sources | 82C55 in Mode 1 or Mode 2 interrupt configuration:<br>First Port C0<br>First Port C3<br>Second Port C0<br>Second Port C3<br>Third Port C0<br>Third Port C3<br>Fourth Port C0<br>Fourth Port C3<br>Note: Any interrupt source above may be individually enabled.<br><br>82C54 Counter<br>Counter 1 OUT<br>Counter 2 OUT<br>Note: Counter 1 and 2 interrupts are exclusive. Only one counter may be enabled as an interrupt source at one time. |

## Crystal oscillator

Table 5. Crystal oscillator specifications

| | |
|---|---|
| Oscillator type | AT-cut crystal |
| Frequency | 16 MHz |
| Frequency stability | ±100 ppm |

## Environmental

Table 6. Environmental specifications

| | |
|---|---|
| Operating temperature range | 0 to 70 °C |
| Storage temperature range | -40 to 70 °C |
| Humidity | 0 to 95% non-condensing |

## Mechanical

Table 7. Mechanical specifications

| | |
|---|---|
| Card dimensions | PCI short card: 136.0 mm (L) x 100.6 mm (W) x11.00 mm (H) |

## Main connector and pin out

Table 8. Board connectors, cables, and accessory equipment

| | |
|---|---|
| Connector type | 100 pin high-density Robinson-Nugent. |
| Compatibility | Pinout identical to PCI-DIO96H.<br>Compatible with CIO-DIO96H using C100FF-x. |
| Compatible cables | C100FF-x |
| Compatible accessory products | SCB50<br>CIO-MINI50<br>CIO-TERM100<br>CIO-SPADE50<br>CIO-ERB24<br>CIO-ERB48<br>SSR-RACK24<br>SSR-RACK48 |

Table 9. Main connector pin out

| Signal name | Pin | | Pin | Signal name |
|---|---|---|---|---|
| GND | 100 | • • | 50 | GND |
| +5V | 99 | • • | 49 | +5V |
| THIRDPORTC Bit 0 | 98 | • • | 48 | FIRSTPORTC Bit 0 |
| THIRDPORTC Bit 1 | 97 | • • | 47 | FIRSTPORTC Bit 1 |
| THIRDPORTC Bit 2 | 96 | • • | 46 | FIRSTPORTC Bit 2 |
| THIRDPORTC Bit 3 | 95 | • • | 45 | FIRSTPORTC Bit 3 |
| THIRDPORTC Bit 4 | 94 | • • | 44 | FIRSTPORTC Bit 4 |
| THIRDPORTC Bit 5 | 93 | • • | 43 | FIRSTPORTC Bit 5 |
| THIRDPORTC Bit 6 | 92 | • • | 42 | FIRSTPORTC Bit 6 |
| THIRDPORTC Bit 7 | 91 | • • | 41 | FIRSTPORTC Bit 7 |
| THIRDPORTB Bit 0 | 90 | • • | 40 | FIRSTPORTB Bit 0 |
| THIRDPORTB Bit 1 | 89 | • • | 39 | FIRSTPORTB Bit 1 |
| THIRDPORTB Bit 2 | 88 | • • | 38 | FIRSTPORTB Bit 2 |
| THIRDPORTB Bit 3 | 87 | • • | 37 | FIRSTPORTB Bit 3 |
| THIRDPORTB Bit 4 | 86 | • • | 36 | FIRSTPORTB Bit 4 |
| THIRDPORTB Bit 5 | 85 | • • | 35 | FIRSTPORTB Bit 5 |
| THIRDPORTB Bit 6 | 84 | • • | 34 | FIRSTPORTB Bit 6 |
| THIRDPORTB Bit 7 | 83 | • • | 33 | FIRSTPORTB Bit 7 |
| THIRDPORTA Bit 0 | 82 | • • | 32 | FIRSTPORTA Bit 0 |
| THIRDPORTA Bit 1 | 81 | • • | 31 | FIRSTPORTA Bit 1 |
| THIRDPORTA Bit 2 | 80 | • • | 30 | FIRSTPORTA Bit 2 |
| THIRDPORTA Bit 3 | 79 | • • | 29 | FIRSTPORTA Bit 3 |
| THIRDPORTA Bit 4 | 78 | • • | 28 | FIRSTPORTA Bit 4 |
| THIRDPORTA Bit 5 | 77 | • • | 27 | FIRSTPORTA Bit 5 |
| THIRDPORTA Bit 6 | 76 | • • | 26 | FIRSTPORTA Bit 6 |
| THIRDPORTA Bit 7 | 75 | • • | 25 | FIRSTPORTA Bit 7 |
| FOURTHPORTC Bit 0 | 74 | • • | 24 | SECONDPORTC Bit 0 |
| FOURTHPORTC Bit 1 | 73 | • • | 23 | SECONDPORTC Bit 1 |
| FOURTHPORTC Bit 2 | 72 | • • | 22 | SECONDPORTC Bit 2 |
| FOURTHPORTC Bit 3 | 71 | • • | 21 | SECONDPORTC Bit 3 |
| FOURTHPORTC Bit 4 | 70 | • • | 20 | SECONDPORTC Bit 4 |
| FOURTHPORTC Bit 5 | 69 | • • | 19 | SECONDPORTC Bit 5 |
| FOURTHPORTC Bit 6 | 68 | • • | 18 | SECONDPORTC Bit 6 |
| FOURTHPORTC Bit 7 | 67 | • • | 17 | SECONDPORTC Bit 7 |
| FOURTHPORTB Bit 0 | 66 | • • | 16 | SECONDPORTB Bit 0 |
| FOURTHPORTB Bit 1 | 65 | • • | 15 | SECONDPORTB Bit 1 |
| FOURTHPORTB Bit 2 | 64 | • • | 14 | SECONDPORTB Bit 2 |
| FOURTHPORTB Bit 3 | 63 | • • | 13 | SECONDPORTB Bit 3 |
| FOURTHPORTB Bit 4 | 62 | • • | 12 | SECONDPORTB Bit 4 |
| FOURTHPORTB Bit 5 | 61 | • • | 11 | SECONDPORTB Bit 5 |
| FOURTHPORTB Bit 6 | 60 | • • | 10 | SECONDPORTB Bit 6 |
| FOURTHPORTB Bit 7 | 59 | • • | 9 | SECONDPORTB Bit 7 |
| FOURTHPORTA Bit 0 | 58 | • • | 8 | SECONDPORTA Bit 0 |
| FOURTHPORTA Bit 1 | 57 | • • | 7 | SECONDPORTA Bit 1 |
| FOURTHPORTA Bit 2 | 56 | • • | 6 | SECONDPORTA Bit 2 |
| FOURTHPORTA Bit 3 | 55 | • • | 5 | SECONDPORTA Bit 3 |
| FOURTHPORTA Bit 4 | 54 | • • | 4 | SECONDPORTA Bit 4 |
| FOURTHPORTA Bit 5 | 53 | • • | 3 | SECONDPORTA Bit 5 |
| FOURTHPORTA Bit 6 | 52 | • • | 2 | SECONDPORTA Bit 6 |
| FOURTHPORTA Bit 7 | 51 | • • | 1 | SECONDPORTA Bit 7 |

PCI slot ↓

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