PCIe-DIO24

Specifications

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Specifications

All specifications are subject to change without notice.

Typical for 25 °C unless otherwise specified.

Digital input/output

Table 1. Digital I/O specifications

Parameter		Specification
Digital type		82C55 Emulation (mode 0 only)
Configuration		2 banks of 8, 2 banks of 4, programmable by bank as input or output
Output		Ports A and B: 74HC245A Port C: 74HC126
Input		Ports A and B: 74HC245A Port C: 74HC125
Number of channels		24 I/O
Switch state		Board silk screen reference: S1 – Default +5V
Output high	3.3 V	2.8 volts min @ -2.5 mA
Output low		0.3 volts max @ 2.5 mA
Input high		2.6 volts min, 3.6 volts absolute max
Input low		1.3 volts max, -0.5 volts absolute min
Output high	5 V	4.5 volts min @ -2.5 mA
Output low		0.3 volts max @ 2.5 mA
Input high		2.6 volts min, 5.5 volts absolute max
Input low		1.3 volts max, -0.5 volts absolute min
Power-up /reset state		Input mode (10 kΩ impedance from pull-up or pull-down)
Pull-up/pull-down resistors		EEPROM stored; software programmable driven by 74ACT244 through 10 kΩ bussed resistor networks (shipped in the pull-up state)
Interrupt enable		External (IRQ ENABLE, active low, disabled by default through internal resistor to TTL high) and programmable through PCI9030; 0 = disabled, 1 = enabled (default)
Interrupt sources		External source (IRQ INPUT), polarity programmable through PCI9030; 1 = active high, 0 = active low (default)

Power consumption

Table 2. Power consumption specifications

Parameter	Specification
+3.3 V operating	515 mA typ
+3.3 V with 5 V I/O	520 mA typ
+V_{DIO} User output	125 mA max @ +5V; 375 mA max @ +3.3 V
Fuses	+V_{DIO} User output and +12 V: Littelfuse 0.375A NANO^{2}® Slo-Blo® Subminiature Surface Mount Fuse; art number 0452.375

Environmental

Table 3. Environmental specifications

Parameter	Specification
Operating temperature range	0 °C to 50 °C
Storage temperature range	−20 °C to 70 °C
Humidity	0% to 90% non-condensing

Mechanical

Table 4. Environmental specifications

Parameter	Specification
Dimensions (L × W × H)	167.4 × 111.2 × 18.72 mm (6.60 × 4.38 × 0.74 in.)

Bus

Table 5. Bus specifications

Parameter	Specification
Bus Type	PCI Express 1.1
Bus Width	x1 lane PCI Express

Signal connector

Table 6. Main connector specifications

Parameter	Specification	
Connector type	37-pin D-type	
Compatible cables	C37FF-x unshielded ribbon cable. x = length in feet. C37FFS-x cable shielded round cable. x = length in feet.	
Compatible accessory products (with the C37FF-x or C37FFS-x cable)	SCB-37 CIO-MINI37 CIO-MINI37-VERT	
Compatible accessory products with S1 in the +5 V position (with the C37FF-x or C37FFS-x cable)	CIO-ERB08 CIO-SERB08 CIO-ERB24	SSR-RACK08 SSR-RACK24

Table 7. Signal connector pinout

Pin	Signal Name	Pin	Signal Name
1	IRQ INPUT	20	+V_{DIO} (Note 1)
2	IRQ ENABLE	21	GND
3	Port B7	22	Port C7
4	Port B6	23	Port C6
5	Port B5	24	Port C5
6	Port B4	25	Port C4
7	Port B3	26	Port C3
8	Port B2	27	Port C2
9	Port B1	28	Port C1
10	Port B0	29	Port C0
11	GND	30	Port A7
12	OPEN	31	Port A6
13	GND	32	Port A5
14	OPEN	33	Port A4
15	GND	34	Port A3
16	+12V (Note 1)	35	Port A2
17	GND	36	Port A1
18	+V_{DIO} (Note 1)	37	Port A0
19	GND		

Note 1: Protected by slow blow fuses rated at 0.375 A. One fuse protects pin 16 (+12V), and the second fuse protects pin 18 (+V_{DIO}) and pin 20 (+V_{DIO}).

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