

CIO-DDA06/16

Specifications



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Specifications

Typical for 25 °C unless otherwise specified.

Specifications in *italic* text are guaranteed by design.

Analog output

Table 1. Analog output specifications

D/A type	AD660BN (OP27 buffer)
Resolution	16 bits
Number of channels	6
Voltage ranges	Bipolar: ± 10 V, ± 5 V Unipolar: 0 to 10 V, 0 to 5 V
D/A pacing	Software polled
Throughput	System dependant
Offset error	Trimable by potentiometer to 0
Gain error	Trimable by potentiometer to 0
Differential nonlinearity	± 1 LSB max
Integral nonlinearity	± 1 LSB max
Monotonicity	Guaranteed monotonic to 15 bits over temperature
Gain drift	± 15 ppm/°C max
Offset drift	± 5 ppm/°C max
Slew rate	1.7V/ μ s min
Current drive	± 5 mA min
Output short-circuit duration	indefinite
Miscellaneous	▪ Double buffered output latches ▪ Update DACs individually or simultaneously (jumper selectable)

Digital input / output

Table 2. DIO specifications

<i>Digital type</i>	82C55
<i>Number of channels</i>	24 I/O
<i>Configuration</i>	2 banks of 8, 2 banks of 4, programmable by bank as input or output
<i>Output high</i>	3.0 volts min @ -2.5 mA
<i>Output low</i>	0.4 volts max @ 2.5 mA
<i>Input high</i>	2.0 volts min, 5.5 volts absolute max
<i>Input low</i>	0.8 volts max, -0.5 volts absolute min
<i>Power-up / reset state</i>	Input mode (high impedance)

Power consumption

Table 3. Power consumption specifications

+5 V supply	1 A typ, 1.3 A max
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Environmental

Table 4. Environmental specifications

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

Main connector and pin out

Table 5. Connector specifications

Connector type	37-pin male "D" connector
Compatible cables	C37FF-x C37FFS-x DFCON-37 (D-connector, D-shell, and termination pins to construct your own cable)
Compatible accessory products with the C37FF-x cable or C37FFS-x cable	CIO-MINI37 CIO-TERMINAL SCB-37 SSR-RACK24, CIO-ERB24, SSR-RACK08, CIO-ERB08 ENC-MINI37

Table 6. Connector pin out

Pin	Signal Name	Pin	Signal Name
1	D/A OUT 5	20	LLGND
2	D/A OUT 4	21	LLGND
3	FIRSTPORTB Bit 7	22	FIRSTPORTC Bit 7
4	FIRSTPORTB Bit 6	23	FIRSTPORTC Bit 6
5	FIRSTPORTB Bit 5	24	FIRSTPORTC Bit 5
6	FIRSTPORTB Bit 4	25	FIRSTPORTC Bit 4
7	FIRSTPORTB Bit 3	26	FIRSTPORTC Bit 3
8	FIRSTPORTB Bit 2	27	FIRSTPORTC Bit 2
9	FIRSTPORTB Bit 1	28	FIRSTPORTC Bit 1
10	FIRSTPORTB Bit 0	29	FIRSTPORTC Bit 0
11	DGND	30	FIRSTPORTA Bit 7
12	D/A OUT 3	31	FIRSTPORTA Bit 6
13	LLGND	32	FIRSTPORTA Bit 5
14	D/A OUT 2	33	FIRSTPORTA Bit 4
15	LLGND	34	FIRSTPORTA Bit 3
16	D/A OUT 1	35	FIRSTPORTA Bit 2
17	LLGND	36	FIRSTPORTA Bit 1
18	D/A OUT 0	37	FIRSTPORTA Bit 0
19	LLGND		

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