

CIO-DDA06/JR

Specifications



**MEASUREMENT
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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	AD7237KN
Resolution	12 bits
Number of channels	6 max, 2 installed
Voltage ranges	±5
Offset error	±3 LSB max
Gain error	±5 LSB max
Differential nonlinearity	±0.9 LSB max
Integral nonlinearity	±0.5 LSB
<i>Monotonicity</i>	<i>guaranteed</i>
Gain drift	±25 ppm/°C
Settling time (10V step to .01%)	10 µs max
Slew rate	3 V/µs
Current drive	±5 mA min
Output short-circuit current	80 mA typ
D/A pacing	Software paced
Data transfer	Programmed I/O
<i>Throughput</i>	<i>PC dependent</i>
Miscellaneous	<ul style="list-style-type: none">▪ Double buffered output latches▪ Update DACs individually or simultaneously (jumper selectable)

Digital input / output

Table 2. DIO specifications

Digital type	8255 emulation
Output	74S244
Input	74LS373
Number of channels	24 I/O
<i>Configuration</i>	<i>2 banks of 8, 2 banks of 4, programmable by bank as input or output</i>
Output high	2.4 volts min @ -15 mA
Output low	0.5 volts max @ 64 mA
Input high	2.0 volts min, 7 volts absolute max
Input low	0.8 volts max, -0.5 volts absolute min
Power-up / reset state	Input mode (high impedance)

Power consumption

Table 3. Power consumption specifications

+5 V	650 mA typ, 1196 mA max
+12 V	33 mA typ, 45 mA max (for each pair of D/A channels installed)
-12 V	9 mA typ, 15 mA max (for each pair of D/A channels installed)

Environmental

Table 4. Environmental specifications

Operating temperature range	0 to 70 °C
Storage temperature range	-40 to 100 °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 CIO-SPADE50 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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