CIO-DAC08

Specifications

MC MEASUREMENT COMPUTING™

Specifications

Typical for 25 °C unless otherwise specified.

Specifications in *italic* text are guaranteed by design.

Analog output

Table 1. Analog input specifications

Parameter	Conditions	Specification
D/A converter		AD7237
Resolution		12-bits
Number of channels		*8 voltage outputs*
Output ranges		±10 V, ±5 V, ±2.5 V, 0 to 10 V, 0 to 5 V, 0 to 2.5 V. Each channel independently switch selectable.
D/A pacing		Software paced
Data transfer		Software
Offset error		Adjustable to zero
Gain error		Adjustable to zero
Differential nonlinearity		*±½ LSB max*
Integral nonlinearity		*±½ LSB max*
Monotonicity		12-bits
Gain drift (DAC)		*±30 ppm/°C max*
Offset drift (DAC)		±3 ppm/°C max
Throughput		System dependant
Slew rate		0.3 V/µS typical
Settling time	*20 V step to .01%*	*70 µs*
Current drive		*±5 mA min*
Output short-circuit duration		*Indefinite*
Output coupling		*DC*
Output resistance (OP-07)		*0.1 ohm max*
Miscellaneous		▪ Double buffered output latches ▪ Update DACs individually or simultaneously (jumper selectable by pairs) ▪ Power up and reset option, jumper selectable (revision 3 and later): With jumper set to "ZERO", all DACs are cleared to 0 volts, ±32 mV, and DACs are set to simultaneous update mode until first read. With jumper set to "STD", DAC output on power-up is undefined.

Power consumption

Table 2. Power consumption specifications

Parameter	Conditions	Specification
Supply current	+5 V supply	435 mA typical, 525 mA max
	+12 V supply	75 mA typical, 98 mA max
	-12 V supply	52 mA typical, 68 mA max

Environmental

Table 3. 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 4. 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

Table 5. Connector pin out

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

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