

PCI-9111 Series



	Analog Input 100K S/s at 12/16-bit (16 SE)
	Analog Output single 12-bit channel
	Digital I/O 16-bit TTL
	Timer/Counter 16-bit

100 KHz A/D Multifunction Card Analog I/O, Digital I/O and Programmable Counter

Analog Input (A/D)

Converter
16-bit ADS7805 or equivalent for PCI-9111HR
12-bit ADS7804 or equivalent for PCI-9111DG

Input Channel
16 single-ended

Resolution
12-bit and 16-bit

Input Range
software controlled
Bipolar -> +10V, +5V, +2.5V, +1.25V, +0.625V

Conversion Time
8 µsec

Overvoltage Protection
continuous ±35 V max

Accuracy

GAIN	Accuracy
1, 2 or 4	0.01 % of FSR ±1 LSB
8 or 16	0.02 % of FSR ±1 LSB

Input Impedance
10 MΩ

Trigger Mode
software, timer pacer and external trigger

Data Transfer
Polling, Interrupt, FIFO half-full interrupt, FIFO polling

Programmable Counter

Device
8254

A/D Pacer
32-bit timer (two 16-bit counter cascaded together) with a 2 MHz time base

Counter
one 16-bit counter with a 2 MHz time base

Pacer Output
0.00046 Hz ~ 100 MHz

Analog Output (D/A)

Output Channel
one

Resolution
12-bit

Output Range
Unipolar -> 0 ~ 10 V
Bipolar -> -10 V ~ +10 V

Converter
AD DAC7541 or equivalent, monolithic multiplexer

Settling Time
30 µsec

Output Driving
±5 mA max.

Digital I/O (DIO)

Channel
16 TTL compatible inputs and outputs

Physical / Environmental

Connector
37-pin D-type connector

Operating Temperature
0 ~ 60°C

Storage Temperature
-20 ~ 80°C

Humidity
5~95%, non-condensing

Power Consumption
+5 V @ 570 mA max.

Dimensions
173 (L) x 102 (H) mm

Termination Boards

ACLD-9881 : General Purpose Termination Board with 32-CH Signal Conditioning (includes ACL-10137-1)

ACLD-8125 : Termination Board with Cold-Junction Temperature Sensor

ACLD-9137 : Screw Termination Board with male DB-37 Connector

ACLD-9182A : Termination Board with 16-Channel Opto-Isolated Digital Inputs

ACLD-9185 : 16-Channel Output Termination Board

ACLD-9188 : Industrial Termination Board

DIN-50S : DIN Rail Screw Termination Board

Pin Assignment

AIO	1	○	20	AI8
AI1	2	○	21	AI9
AI2	3	○	22	AI10
AI3	4	○	23	AI11
AI4	5	○	24	AI12
AI5	6	○	25	AI13
AI6	7	○	26	AI14
AI7	8	○	27	AI15
A.GND	9	○	28	A.GND
A.GND	10	○	29	A.GND
Vref	11	○	30	DA Out
ExtRef2	12	○	31	EDIO
+12 V	13	○	32	EDI1
A.GND	14	○	33	EDI2
D.GND	15	○	34	EDI3
Cout0	16	○	35	EDO0
ExtTrg	17	○	36	EDO2
NC	18	○	37	NC
+5 V	19	○		

Ordering Information

PCI-9111DG :
100 KHz Low Cost 12-bit DAS Card

PCI-9111HR
100 KHz Low Cost 16-bit DAS Card

