



The PC-166 is a family of high accuracy analog output boards with waveform generation capabilities. PC-167 boards have the additional feature of 16bit programmable reference voltages for analog output channels. This allows the output range to be set accurately or for the output waveform to be modulated in real time.

Features

- ◆ Up to 16 Analog voltage O/P channels
- ◆ Output current boosting easily added with no sacrifice in accuracy
- ◆ Programmable reference voltages
- ◆ Outputs fully short circuit protected
- ◆ 3 x Independent timer/counters
- ◆ 20V full-scale output ranges
- ◆ Double-buffered data inputs
- ◆ Remote sensing on all D/A

Ordering Information

Supplied with EDR Software

PC-166	16 Channel D/A (No programmable reference)
PC-166B	8 Channel D/A (No programmable reference)
PC-167	16 Channel D/A with four programmable reference
PC-167A	16 Channel D/A with one programmable reference
PC-167B	8 Channel D/A with one programmable reference

View connector pinouts in Reference Section

Optional Accessories

Refer to System Diagram in Reference Section
ADPT-5050 via IDC50 (Analog O/P)

Specifications

ANALOG OUTPUTS

Number of channels:	16 (PC-166, PC-167, PC-167A) 8 (PC-166B, PC-167B)	
Resolution:	12bit, 1 part in 4096	
Full Scale Ranges:	±5V, ±10V, bipolar; 0-5V, 0-13.5V unipolar(PC-166) Programmable to any value in the range ±10V bipolar and 0-13.5V unipolar (PC-167)	
Settling Time:	Max 10 Sec into a load of 500pF 2k Ohm, <1mSec for small steps	
Data Throughput:	800kHz @ 50 kHz nominal/channel	
Output Current:	±5mA max	
External Reference:	Up to 4, ±10V	
Accuracy:	Typical	Maximum
Uni-polar Offset:	±1/4 LSB	±1 LSB
Bi-polar Zero:	±1/2 LSB	±2 LSB
Linearity Error:	±1/4 LSB	±1/2 LSB
Linearity over temp:	±1/2 LSB	±1/4 LSB
Diff Non-Linearity:	±1/2 LSB	
Gain Error:	±2 LSB	±5 LSB
Temperature Drift:	10ppm/°C max of full-scale range	
Short Circuit Current:	Limited to 40mA to 0V or any power supply to ±15V	

Reference Voltages (PC-167)

Number:	4(PC-167); 1(PC-167A,PC-167B)
Resolution:	16bits
Settling Time:	7 Sec to ±4 LSB, 9 Sec to ±2 LSBs<1 Sec for small steps
Throughput:	200kHz @ 50 kHz typical/channel
Full-Scale Range:	±10V
Differential Non-Linearity:	±1/2LSB
Gain/Offset Temp. Drift:	2ppm/°C of full-scale range
Output Load:	2k Ohm min, 1000pF max
Short Circuit Current:	Limited to 25mA to 0V or any power rail to ±15V

DIGITAL I/O

Digital Lines:	3 TTL Inputs
Clock Oscillator:	2 MHz
Timers:	3x 16bit programmable counter/timers

Environment / Physical

Bus Interface:	16bit PC/AT interface
Interrupts:	2 Independent; D/A buffer empty and timing trigger
Power Requirements:	+5V @ 1.5A