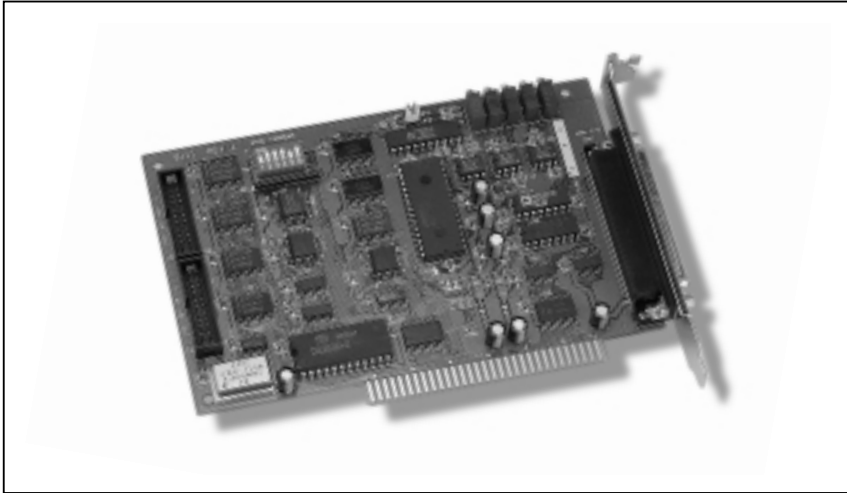


# A-8111

## 30 KS/s 12-bit Analog and Digital I/O Board



### Functional Description

The A-8111 is 12-bit multifunction analog and digital I/O board for the PC/AT compatible computer. The A-8111 provides 8 single-ended input, plus one channel analog output with 12-bits resolution. In addition, the A-8111 has 16 digital input, 16 digital output, and one timer/counter channel. The sampling rate of A-8111 is 30K samples/s.

### Features

- 12-bit A/D converter
- 12-bit D/A converter
- 8 single-ended
- 30 KS/s sampling rate
- Bipolar analog input
- One 12-bit analog output channel
- Software programmable input range:  
+/-5V, +/-2.5V, +/-1.25V, +/-0.625V and +/-0.3125V
- Interrupt handling
- A/D Trigger modes:  
Software Trigger, Pacer Trigger
- A/D data transfer modes:  
polling, interrupt.
- 16 digital inputs & 16 digital outputs
- register compatible to PCL-711B
- 37-pin D-Sub connector

### Applications

- Laboratory automation
- Sensor interface
- Production test

### Specifications

- **Analog Input Specifications**  
Channels: 8 single-ended  
Resolution: 12 bits  
Conversion rate: 30KS/s max  
Input Impedance: 10 M $\Omega$  6pF  
Over voltage Protection: +/-35V  
Accuracy: 0.01% of reading  
Linearity: +/- 1 bit  
On chip sample & hold  
Zero drift : +/-25ppm/ $^{\circ}$ C of FS max
- **Input Range**  
Bipolar: +/-5V, +/-2.5V, +/-1.25V, +/-0.625V, +/-0.3125V
- **D/A Outputs**  
Channels: 1 independent  
Type: 12-bit double buffered (AD-7948)  
Linearity:  $\pm$ 1/2 bit  
Output range: 0~5V or 0~10V jumper selected  
External reference max. +10V or -10V  
Output Driving:  $\pm$  5mA
- **Digital I/O**  
Inputs (LSTTL): 16  
Input low VIL = 0.8 Vmax;  
IIL = -0.4mAmax  
Input high VIH = 2.0 Vmin;  
IIH = 20 $\mu$ Amax.

Outputs (LSTTL): 16  
Output low VOL = 0.5 Vmax;  
@IOL = 8 mA max.  
Output high VOH = 2.7 Vmin  
@IOH = -400 $\mu$ A max.

- Programmable Pacer Timer (0.00046Hz~0.5MHz)  
Type: 82c54  
A/D pacer: 32 bit (cascaded pacer timer)
- Interrupt channel: 2,3,4,5,6,7 software selectable
- Power Requirements:  
+5V; 200mA max.
- General Environmental  
Operating temp.: 0-50 $^{\circ}$ C  
Storage temp.: -20 $^{\circ}$ C to 70 $^{\circ}$ C  
Humidity: 0 to 90%; non-condensing  
Dimensions: 157mm X 106mm

### Software

- A-8111 Development Toolkit for DOS
- A-8111 Development Toolkit for Win95
- A-8111 Development Toolkit for WinNT

### Order Description

- A-8111: 30KS/s 12-bit Analog and Digital I/O Board

### Options

- DB-8125: Screw Terminal Board, Filter Circuitry can be added
- DB-16P: 16 Channel isolated digital input Board
- DB-16R: 16 Channel SPDT Relay Board
- DB-37: Directly connect signals to the back of A-8111
- DN-37: I/O Connector Block with DIN Rail Mounting and 37-PIN D-SUB Connector
- DN-20: I/O Connector Block with DIN Rail mounting and 20-PIN Header
- ADP-20: 20-pin Extender
- A-8111 LabVIEW Development Toolkit for Win95
- A-8111 LabVIEW Development Toolkit for WinNT