



REAL-TIME CONTROL & DATA ACQUISITION



- ✓ **USB 2.0 full-speed interface, USB 3.0 compatible**
- ✓ **MATLAB/Simulink Desktop Real Time Libraries**
- ✓ **Up to 1 KHz control loop frequency**
- ✓ **Compatible with Windows 7, 8, 8.1 and 10**
- ✓ **USB bus powered**
- ✓ **External power input option for motor driver (6 - 48V)**
- ✓ **All inputs and outputs are protected from ESD, reverse/over voltage and over current**
- ✓ **For more info visit www.v-daq.com**



Quadrature Encoder Inputs

Number of Inputs : 2
Sensor Supply : 5V
Counter Size : 32 bits
Max. Count Freq. : 1 MHz

PWM Outputs

Number of Outputs : 4
Resolution : 16 bits (depends on freq.)
Voltage Level : Selectable 3.3V / 5V
Max. Freq. : 65 KHz

Digital Inputs

Number of Inputs : 8
Voltage Level : Selectable 3.3V / 5V
Leakage Current : $\pm 2 \mu\text{A}$

Digital Outputs

Number of Outputs : 8
Voltage Level : Selectable 3.3V / 5V
Max. Drive Current : 4 mA (per channel)

Analog Inputs

Number of Inputs : 4 Single-Ended or 2 Differential
Input Range : $\pm 12\text{V}$, $\pm 6\text{V}$, $\pm 3\text{V}$ (Single-Ended)
 $\pm 24\text{V}$, $\pm 12\text{V}$, $\pm 6\text{V}$ (Differential)
Resolution : 16 bits
SNR + Distortion : 91 dB ($\pm 24\text{V}$ Differential)
83 dB ($\pm 3\text{V}$ Single-Ended)
INL : ± 1 LSB (Typ)
Offset Error : ± 2 mV (Typ)
Gain Error : ± 1 %FSR (Max)

Analog Outputs

Number of Outputs : 4
Output Range : 0-5V, 0-10V, 0-10.8V
 $\pm 5\text{V}$, $\pm 10\text{V}$, $\pm 10.8\text{V}$
Resolution : 16 bits
INL : ± 16 LSB (Max)
Offset Error : ± 6 mV (Max)
Gain Error : ± 0.08 %FSR (Max)
DC Output Impedance : 0.5 Ω
Capacitive Load Stability : 4000 pF
Max. Load : 2 k Ω
Short-Circuit Current : 20 mA
Slew Rate : 3.5 V/ μs
Output Noise : 80 μV RMS (@100 kHz)

Integrated Motor Driver

Number of Drivers : 2 Brushed DC or 1 Stepper
Voltage Range : 6-48 V Wide Input Range
Max. Drive Current : 2A (per driver)

Relay Output (Solid State)

Number of Outputs : 2
Blocking Voltage : 60 V (Max.)
Max. Load Current : 700 mA
Isolation : 1500 Vrms Input/Output

