

Introducing the GAMOTO Motor Controller Board

Powerful...

- 16-bit Kp, Ki, Kd, and iL constants, with 24-bit position registers
- Current sense feedback, for active detection of torque, collisions etc.
- 10-bit PWM resolution for motor output power/speed control, with sign-magnitude or locked anti-phase options
- High-speed encoder captures logic, encoder pulses as short as 3us wide). For an encoder with 500 counts/revolution, speeds up to 9,000 rpm are possible
- Trapezoidal Trajectory Profile processing (acceleration ramp, constant velocity cruise, then deceleration ramp down)
- Storage of up to 8 trajectory profiles in flash EEPROM
- Fast PID engine with a calculation rate of 2 kHz



Connected...

- Two I²C connectors in parallel for easy daisy-chaining
- Cricket Bus connector with pigtail for multi-drop plug-in to the Handy Cricket system
- Serial port connector for serial control at 9,600 or 19,200 baud, with multi-drop serial possible
- Expansion connector with four general purpose analog input lines
- Two limit switch inputs, upper limit and lower limit switches, for applications where travel limits are important (CNC mill, etc)

Easy to Use...

- Easily removable fuse for the motor power, with an LED indicator when it blows
- Encoder connector has on-board pull-up resistors and signal conditioning.
- On-board flash memory stores PID constants, configuration, and motion trajectories.
- Separate motor power and logic power for clean logic signals
- LEDs for Over-temp of H-bridge, fuse failure, and power-on indication
- Analog reading of motor current, available via software commands, allows control of motor torque, sensing of obstacles / force feedback etc.
- Programming port connector for easy firmware updates

Specifications...

- Dimensions: 2.75" x 2.1"
- Power Requirements: +7-16VDC for logic power, 12-55 VDC Motor power (Can jumper to run logic off of motor power)
- Motor Current: 3A continuous, 6A peak
- Components: PIC16F876 @ 20MHz, with LMD18200 H bridge motor driver, quad encoder decode circuit
- Price: \$99.00