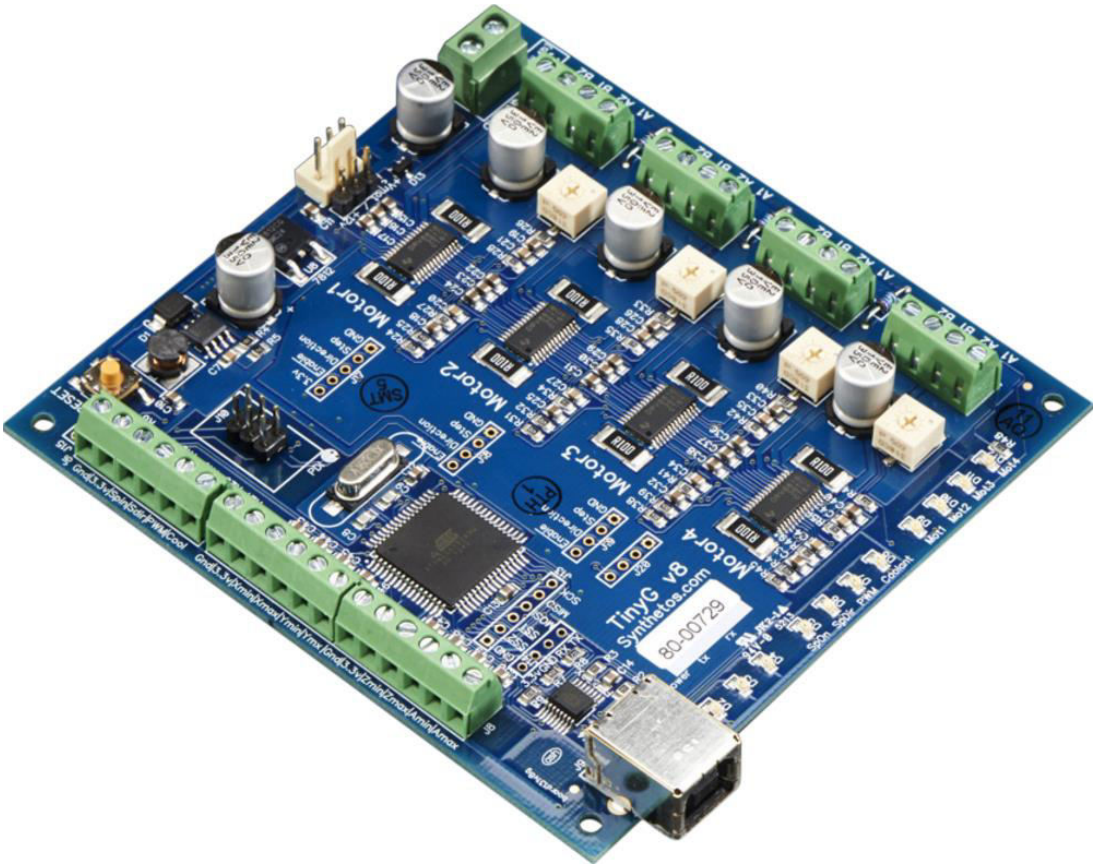

The TinyG project is a high performance, USB based CNC 6-axis controller that supports XYZ linear and ABC rotary axes with 4 motor outputs. It is designed for small CNC applications and other applications that require highly controllable motion control. TinyG is meant to be a complete embedded solution for small or medium motor control.

Main Features:

- Full, integrated motion control system with embedded microcontroller (Atmel ATxmega192) and 4 stepper motor drivers (TI DRV8811) integrated on a ~4 inch square board
- Four stepper motor drivers

- Accepts G-code from USB port and interprets it locally on the board
- Axis/motor mapping to support dual gantry and other configurations (e.g. XYYZ, XYZA, XYZC...) of a 6-axis control (XYZ + ABC rotary axes) setup
- Acceleration planning performed using constant jerk motion equations (3rd order S curves) for very smooth and fast motion transitions for lines and arcs
- Very smooth step pulse generation using phase-optimized, smart oversampling, fractional step DDA running at 50 KHz with very low jitter (<<1uSec)
- Networkable via RS485 to support motion peripherals and for networking multiple boards for multi-axis systems and for really interesting projects (up to 1000 stepper axes)
- Stepper drivers handle 2.5 amps per winding which will handle most motors up thru NEMA23 and some NEMA34 motors.
- Micro-stepping up to 1/8 (optimized DDA makes this smoother than many 1/16 implementations)

Technical details

- Dimensions: 105mm x 102mm / 4.1" x 4.0"
- Board Thickness: 2mm / .08"
- Weight: 76g