



**HONEYBEE ROBOTICS**  
Motion Control

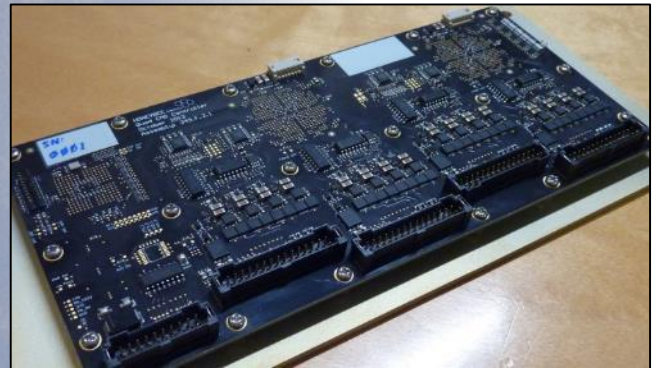
# 8 Axis Motor Controller

## Description

Honeybee's 8 axis motor controller has been developed for our control moment gyroscope product and can be extended to any high degree of freedom control system. The controller is capable of driving 8 motors concurrently. A digital signal processor accommodates computationally complex control laws and synthesizes individual motor commands.

### Features:

- FPGA incorporating triple module redundancy
- DSP to execute complex control laws for robotic arms, attitude control systems, etc.
- Sensor-less control of BLDC motors
- Supports Analog and digital shaft feedback components



Specification	Data
Mass, including enclosure	700 g
Size *	215 x 115 x 20 mm
Axes	8
Power	
Standby	< 1.0 W
Maximum	75 W
Shaft Feedback	Optical Encoder Potentiometer Hall Sensors
Rates	Commandable up to 20krpm
Radiation	10krad
Interface	RS422
Operating Temperature Range	-40 to +85 °C
Control	Full Step Block, Sinusoidal Commutation Microstepping to 64x Sensorless (BEMF)
Status	TRL6 2015 Test Flight

\* CubeSat Compatible Option Available

## Contact

Honeybee is ISO9001:2000 and AS9100C certified.

**Honeybee Robotics**  
**Spacecraft Mechanisms Corp.**

Erik Mumm, VP – Director of Flight Systems  
[mumm@HoneybeeRobotics.com](mailto:mumm@HoneybeeRobotics.com) ph. 720-491-5555

