

Universal Motor Controller

Description

Honeybee's Universal Electronic Control Unit is a flexible design configurable to accommodate a range of motors common to spaceflight mechanisms.

- FPGA-based design with onboard memory for rapid configurability
- Closed loop current/torque control
- Flexible command interface, serial RS-422 or discrete step/direction/enable
- EEE-INST-002 Level 1 components
- Drives 2 Phase (uni/bipolar) or 3 phase (wye/delta) stepper motors
- Micro-stepping up to 64x



Contact

Honeybee is ISO9001:2000 and AS9100C certified.

Honeybee Robotics
Spacecraft Mechanisms Corp.

Erik Mumm, VP – Director of Flight Systems
mumm@HoneybeeRobotics.com ph. 720-340-4491



Specification	Data
Input Voltage	22-36 VDC
Communication	RS-422
Serial	Opto-isolated full duplex RS-422
Discrete	Opto-isolated Step/Enable/Dir
Standby Power	<1 W
Max Motor Current	2.0 A
I/O	
Potentiometer	2 channels
Aux. analog input	2x 12 bit ADC
Encoder	Quad A/B/X
Radiation Tolerance	100krad
Temperature Range	-55 to +75 °C
Size	190 x 127 x 50 mm
Mass (incl Chassis)	900 g
Features	
Configurability	2 (uni/bipolar) or 3 Phase Steppers BLDC, sinusoidal commutation
Step Modes	
Full Step	Voltage Mode (unregulated)
Full Step	Current Mode Adjustable via RS422 or jumper
Microstepping	Up to 1/64 resolution
Channels	Stackable construction to easily accommodate multiple channels for independent or redundantly wound motors