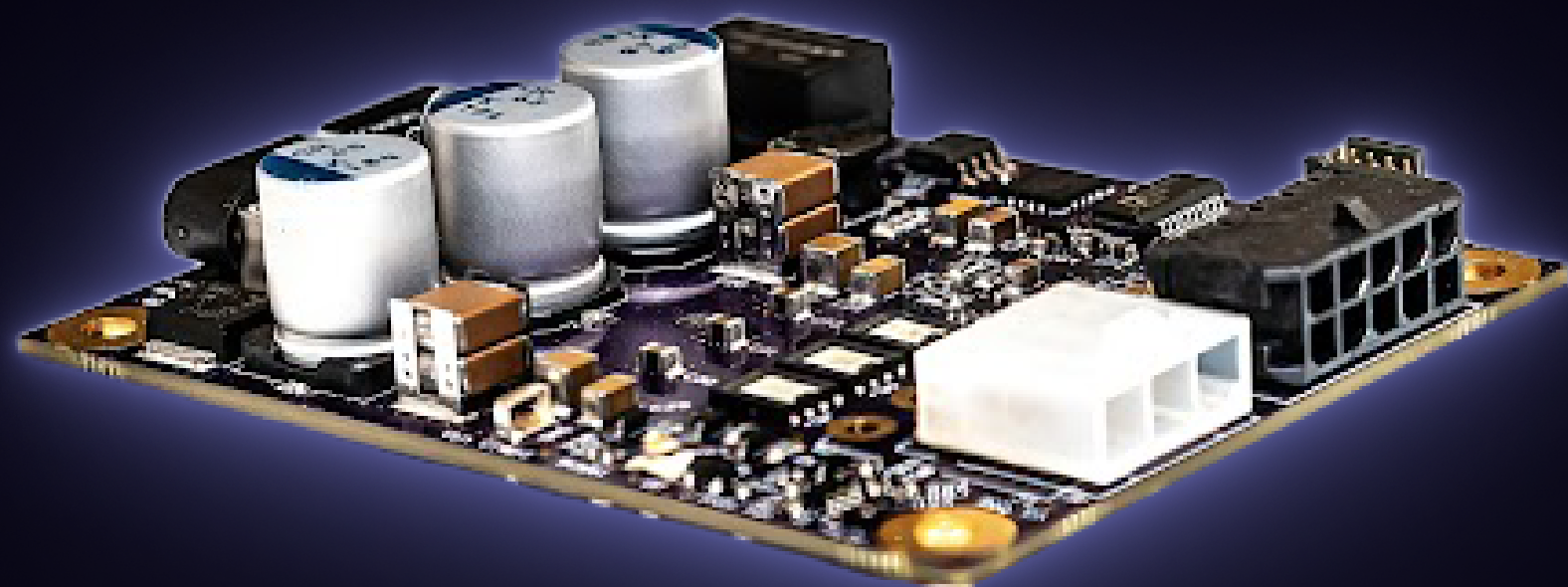


Finally, an ESC that speaks your language!



The Taurus AE (Actuator Edition) is a medium power, high efficiency BLDC motor controller that speaks in more than just pulses! This controller implements full FOC/SVPWM for highly efficient operation up to 2kW peak power and provides isolated CAN 2.0 and RS-485 communications, giving you more feedback and control of your propulsion system. The AE supports Hall or Quadrature sensor inputs for more accurate positioning.

 *Available with DroneCAN Support!*

Efficient High Power

The Taurus implements full four quadrant Field Oriented Control (FOC) through Space Vector Pulse Width Modulation (SVPWM) to achieve exceptional motor controller efficiency in the nominal operating range. The controller also supports overmodulation to maximize peak power output of the motor drive. The AE is a bare PCBA with the following performance capabilities:

- Up to 14S (58.8V) operation
- +/-35A Peak Operation with adequate heatsinking

Highly Flexible Design

The Taurus supports various hardware interfaces for communication as well as commutation and alignment support. These interfaces can be used for simple comms, or configurations with pitch control servos, etc. The entire software stack for the Taurus is built on the available source licensed allocore SDK, allowing fully tailored applications for customer control, comms, and other needs.

- Isolated CAN 2.0 Comms
- Isolated RS-485 Comms
- Hall/QEP Sensor interfaces
- General Purpose Input/Output for index, homing, and other sensors

Customization Available

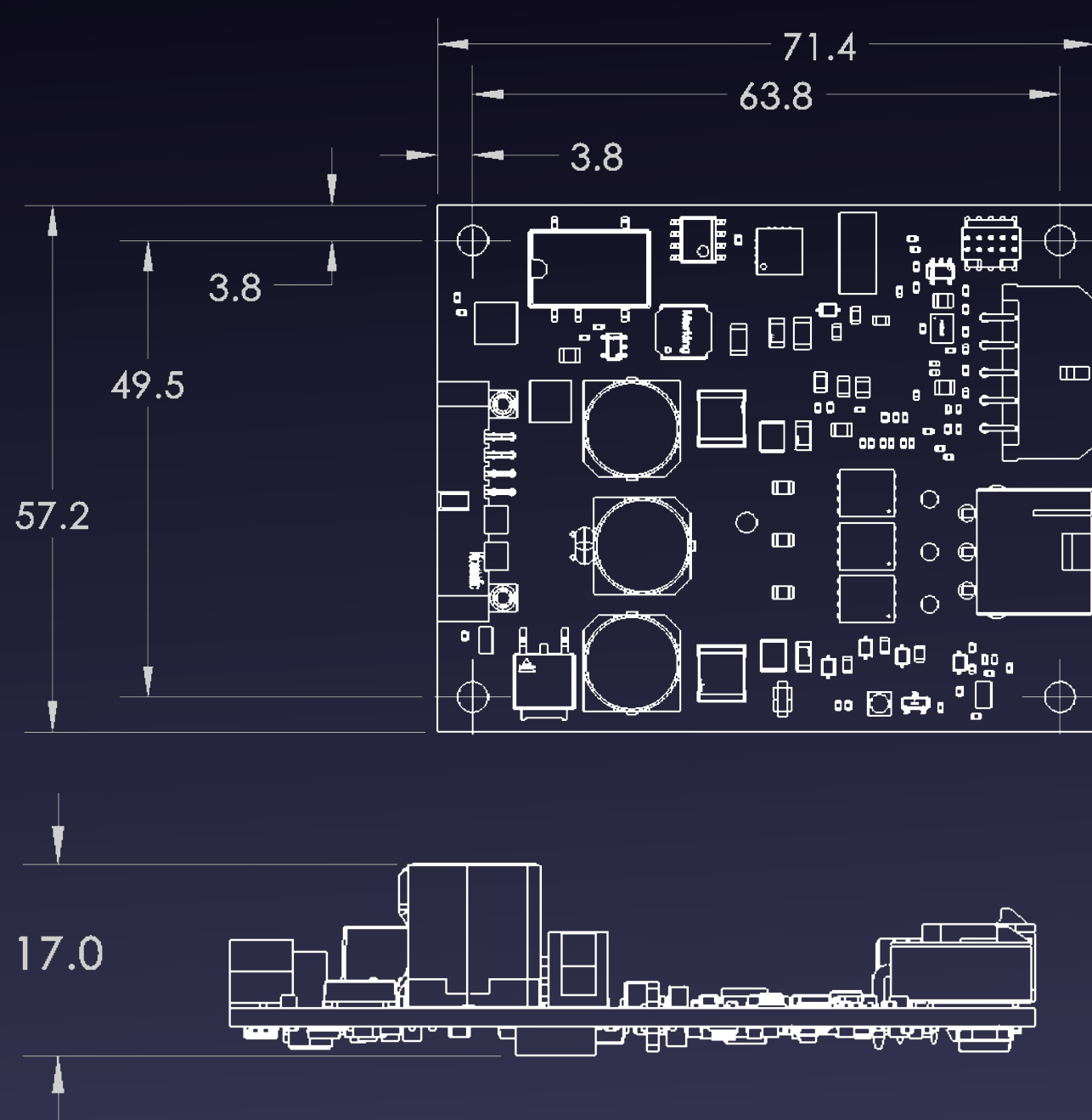
The Taurus hardware IP has been tailored to various custom packages, including winglets, booms, etc. Additionally, implementations for lower voltage/power have also been realized. Contact allocortech to get more information on customization.

Advanced Control

Four quadrant control around a 40KHz current control loop allows custom fast closed-loop control on speed, torque, voltage, power, or other more advanced modes.

Specifications

Input Voltage	18 - 60V
Current Rating (DC)	35A Peak 30A Continuous
Weight	37g
Connectors	
Power+Comms	Nicomatic 221V08F26-0200-3400CMM
Sensors	Molex 10-pin Microfit(TM) 43045-1000
Motor Power	Molex 3-pin Minifit(TM) 39-30-3037 (13A) or Megafit 200241-1223 (26A)
Recommended Max RPM	
12 Pole Pairs	10,000RPM
10 Pole Pairs	12,000RPM
7 Pole Pairs	17,000RPM
CAN 2.0 Interface	
Max Bitrate	1Mbps
Isolation Voltage*	±400V
RS-485 Interface	
Max Bitrate	3Mbps
Isolation Voltage*	±400V
RS-232 Interface	
Max Bitrate	1Mbps
Isolation Voltage*	±400V
Update Rate	Up to 1KHz



Make Your Motors Smarter

Fixed mapping sensorless open-loop PWM throttle based ESCs are a thing of the past. The Taurus motor controller enables customized control loops and tuning, along with bi-directional communications to give your system more advanced control and monitoring. Taurus adds in sensed motor capabilities for slow-speed and alignment/parking support.

Taurus Based Hybrid Generators

Four quadrant control means the Taurus controller supports full regen capabilities. Not only does this mean active regenerative braking, but moreover, the Taurus AE can be mated with a generator system to provide the basis of a hybrid electric powertrain.

