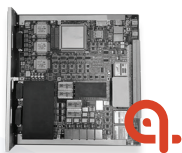
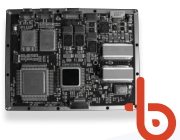


Motor Controller Specifications



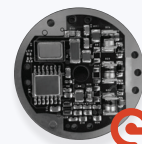
ALPHA-II



BRAVO



DELTA



ECHO



DEEDS

AXIS	Single	Dual	Single	Single	Single
MOTOR SUPPORT	3-Phase BLDC or Stepper	3-Phase BLDC or Stepper	BLDC Motors and Stepper Motors	Drive for Center Tapped WYE Wound BLDC Motor	1x 3-phase BLDC Motor and 2x Electromagnetic Brakes
STEPPER MODES	Full & Half	Full & Half	—	—	—
BLDC CONTROL	Brake, Current, Position & Velocity	Current, Position & Velocity	Current, Velocity, & Position	Motor direction changes with reversal of input voltage polarity or with optional logical inputs	Current, Velocity & Position
COMMUTATION	Halls, Resolver, Absolute Encoder	Hall Sensor	Hall Sensor, Encoder, or Resolver	Hall Sensor	Hall Sensor or Field Director
FEEDBACK	Resolvers, Inductosyns, Quadrature Encoders, Temperature Sensors, Strain Gauges, Contact Switches	Quadrature Encoders	Absolute Encoder, Multi-Speed Resolver Sensing, Inductosyns	Velocity Indicator Pulse Output; Current Sense Output	Temperature Sensors, Strain Gauge, Dual-Speed Resolver, Field Director
OPERATIONAL TEMP	-45°C to 80°C	-55°C to 125°C	-45°C to 60°C	-45°C to 80°C	-180°C to 80°C
IO PORT	✓	✓	✓	×	×
RADIATION TOLERANCE	100kRad	100kRad	Up to 100kRad	100kRad	100kRad
COMMUNICATION	RS-485/RS422	RS-422	RS-422	—	2x RS-422
TELEMETRY	Motor Current, Bus Voltage, Board Temp, 8+ Channels of User Defined	Motor Current, Bus Voltage, Board Temp, 8 Channels of User Defined	Motor Current, Bus Voltage, Board Temperature, User Defined Telemetry	Velocity Indicator Pulse Output; Current Sense Output	—
SIZE	23.6 cm x 24.8 cm	7.5 x 10 cm	7.5 cm x 7.5 cm	4.3 cm diameter	215 mm x 212 mm
WEIGHT	1.89 kg	185g	130 g	17 g	—
CURRENT CAPACITY	6A Continuous 10A Peak	1.3A Per Channel, 2.6A Max	28V Operations, 3A Continuous - 6A Peak	22V-36V, 1.3A Continuous	6V-158V, 15A Continuous 20A Peak
SAMPLE APPLICATIONS	Single Axis Robotic Brushless Drive PID Velocity/Position Control, Current Control, Open Loop PWM Drive, Output Sensing Interfaces, Brake Control	Instrument Controls, Filter Wheels, High Torque Latch Systems, Mechanism Controls, Planetary Manipulators	Integrated Robotic Joint Controller, On-Orbit Manufacturing, On-Orbit-Assembly	Deployments, Hinges, Doors, Protective Covers	Wheel Drive Systems, Cargo Off-Load Systems, Lifting & Hoisting Mechanisms, Positioning Systems, Robotics

EXPORT RESTRICTIONS

Export of the Alpha-II, Bravo, Delta, Echo, and DEEDS Motor Controllers is controlled under Export Control Classification Number (ECCN) 9A515.x and is available for sale in the countries listed in Group A:5.

