

150W Rad Hard Single Axis Stepper & BLDC Controller

Rocket Lab's DELTA Controller line is its most flexible and configurable product option. The DELTA2 serves complex pointing applications or unique mechanism profiling moves. Tailored to interface with a wide variety of sensor options, the DELTA2 well suits an evolving new space landscape focusing on future imaging or ISAM related capabilities.

The DELTA2 also boasts wide support for different mission pedigree needs. This makes the DELTA2 an ideal high reliability solution for 15 year GEO missions to <1 year LEO demonstrators. The DELTA architecture derives its flexibility with modular construction and FPGA resources made available to tailor control functions which reduce burden on host computer operations. All Rocket Lab motor control platforms utilize extensive fault protection features including motor winding faults, temperature monitoring, and radiation effects. If an application does not fit within the standard capabilities, the DELTA2 architecture is designed to be adaptable to meet the needs of any application. Expansion to multiple axis configurations also available upon request.

For requests or questions send to: info@motivss.com



DELTA2 Controller Model

PERFORMANCE	VALUES
Input Voltage Range	28V (22-34V)
Motor Continuous Current	5A rms / axis
Motor Peak Current	10A
Quiescent Power	<5W
Commutation Sensing	Hall Effect Sensor, Resolver, Encoder
Sensing	- Potentiometer - Temperature - Limit Switches - Resolver
Motor Speed Support	500-10,000 RPM (typical)
Communication Bus Options	Standard: RS-422/485, CAN Option: 1553, Spacewire, Ethernet
Control Modes	Brushless / Servo: - Position - Velocity - Current - Torque Stepper: - Microstepping - Full Step (1k PPS, max)
Applications	- Filter Wheels - Reaction Wheels - Array Deployment - Instrument Alignment and Pointing - Coordinated Robotics - Antenna Positioning - Precision Mechanisms - Gimbals

ENVIRONMENTAL	VALUES
Operating Temperature	-55C° to +70C°
Non-Operating Temperature	-55C° to +125C°
Random/Sine Vibration	GEVS Standard
Radiation Tolerance TID	>30 kRad (>37 MeV-cm2/mg)
SEU LET Threshold	>100 kRad (>60 MeV-cm2/mg) option
Orbit/Mission Support	LEO, GEO, MEO, Lunar, Deep Space
EMI/EMC Filter Included	MIL-STD-461
PHYSICAL	VALUES
Dimensions (packaged)	6" x 7.5" x 3" 15.25cm x 19cm x 7.6cm
Mass/Weight	4.40 lbs 2.00 Kg
Available EEE Classes	Level 2/3/COTS per EEE-INST-002
Available Hardware Models	EDU/EM/FM

EXPORT RESTRICTIONS

Export of Rocket Lab Motor Controllers is controlled under Export Control Classification Number (ECCN) 9A515.x and is available for sales in the countries listed in Group A:5.

