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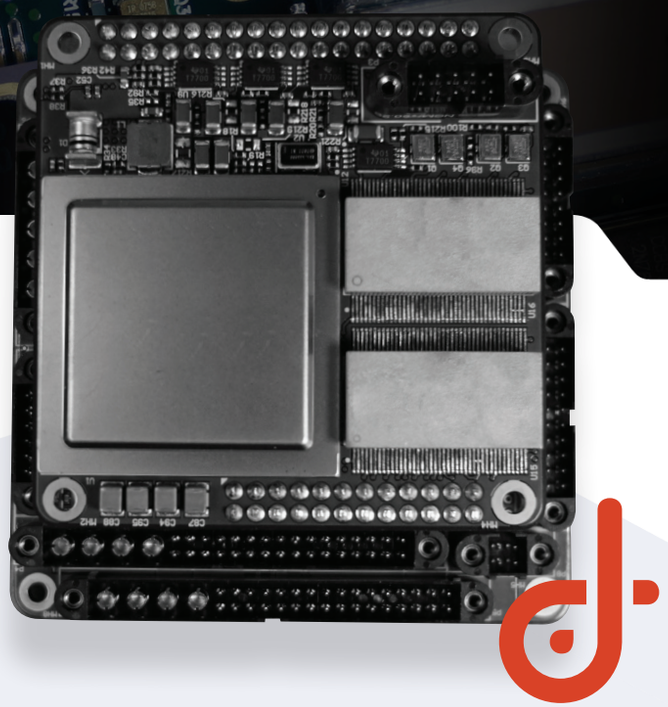
Delta Motor Controller



Brushless DC Motor Controller

Motiv's Delta motor controller is a small form factor motor controller with the widest application space in the portfolio. With its unique mother-daughter board configuration, the Delta can be configured for practically any power output scenario with a wide variety of I/O making it adaptable to almost any application.

FEATURES

- **Single Axis Motor Controller**
- **Supports BLDC Motors and Stepper Motors**
- **BLDC Control:** Current, Velocity, & Position
- **I/O port for configurable digital interfaces**
- **Radiation Tolerance:** Total Ionizing Dose 30kRad, (100kRad available)
- **Commutation:** Hall Sensor, Encoder, or Resolver
- **Feedback:** Absolute Encoder, Multi-Speed Resolver Sensing, Inductosyns
- **Voltage/Power Handling:** 28V Operations, 3A continuous – 6A Peak
- **Communication:** RS-485/422
- **Physical Dimension:** 76.2mm x 76.2mm
- **Telemetry:** Motor Current, Bus Voltage, Board Temperature, User Defined Telemetry
- **Operational Temperature Range:** -55°C to +125°C

SAMPLE APPLICATIONS

- **Gimbals**
- **Robotics**
- **Instrument Mechanisms**
- **Filter Wheels**
- **Capture Devices**
- **Positioners**
- **Cryo Coolers, etc**

EXPORT RESTRICTIONS

Export of the Delta Motor Controller is controlled under Export Control Classification Number (ECCN) 9A515.x and is available for sale in the countries listed in Group A:5.

About Motor Controllers

Motiv designs and delivers advanced motion control solutions for the extreme environments of space. From earth orbit, to deep space, to the cryogenic temperatures of the moon we have solutions to get you moving. Motiv's innovative motor controllers drive everything from robots to deployment mechanisms. In most cases the controllers can be tailored for your specific environment for radiation and parts pedigree to allow you to rapidly move from the lab to flight with the same architecture – saving you time and money.

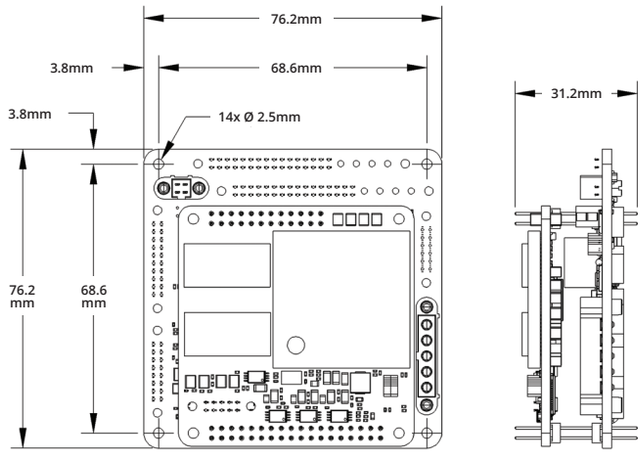
PHYSICAL SPECIFICATIONS

Mass:
130g

Dimensions:
76.2mm x 76.2mm

Temperature:
-55°C to +125°C

System Interfaces:
- **Input Power**
- **RS-485/422 Communication**
- **E-STOP**



ELECTRICAL SPECIFICATIONS

Input Voltage	28V (Motor Bus) 12V (Logic Bus)
Current Capability	3A (Continuous) 6A (Peak)
Quiescent Power	~2W
Commutation Interface	Halls, Resolver, Absolute/ Relative Encoder
Sensory Interfaces	Resolver, Strain Gauge, Temperature Sensing, Potentiometer, Contact Switches, SSI/UART Sensors
Radiation Tolerance	>30kRad (100kRad option available)

PERFORMANCE DATA

Primary Functions:
Single Axis Distributed Robotic Brushless Drive
PID Velocity/Positon Control, Current Control, Open Loop
PWM Drive, Current Control, Torque Control, Output Sensing
Interfaces, Brake Control

Primary Applications:
Integrated Robotic Joint Controller, On-Orbit Manufacturing, On-Orbit-Assembly

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