Motion Controller Product Specification

# Introduction

This document presents the product specifications and marketing details for a Motion Control PCB, integrating the DRV8243 motor driver and LS7366R encoder reader for feedback control of DC motors. Designed for high performance and reliability, this PCB offers an ideal solution for robotics, and industrial automation systems.

# Product Specifications

## DRV8243 Motor Driver

* - AEC-Q100 qualified for automotive applications, supporting temperatures from –40°C to +125°C.
* - Operating voltage range from 4.5V to 35V, with a maximum output current of 3A\*\*.
* - PWM frequency operation up to 25 KHz, with configurable slew rate and spread spectrum clocking for low EMI.
* - Integrated current sense, eliminating the need for external shunt resistors.
* - Extensive protection features including overcurrent, overtemperature, and voltage monitoring.

## LS7366R Encoder Reader

* - Operating voltage from 3V to 5.5V, with a count frequency up to 40MHz at 5V.
* - 32-bit counter with quadrature clock decoder and filter for high precision.
* - Supports x1, x2, and x4 modes of quadrature counting, along with non-quadrature up/down counting.
* - SPI/MICROWIRE compatible interface for easy integration with microcontrollers.
* - Programmable configuration for versatile counting modes and applications.

The Motion Control PCB is engineered for sophisticated control systems requiring precise motor movement and position feedback. It's an optimal choice for developers looking to enhance the efficiency and reliability of their systems, with easy integration, robust protection features, and versatile application across various industries.

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12A current limited to 3A on PCB