

Multi-Channel Stepper Motor Controller Precision Micro-stepping Motion Control

Design Note #114



Precision motion control is an essential component of many manufacturing and scientific endeavors. Low Cost, micro-stepping motion controllers from Orchid complete the picture.



"Orchid's selection of the STM32F4xx processor was the critical insight we needed. Well done."

- Drive Systems Manager

Multi-channel Stepper Motor Controller

This four channel micro-stepping motor controller board supplies precision motion control processing for a variety of precision operations. Applied as dual x-y motion tables or a single x - y - z motion system. Micro-stepping controllers supply precision drive, lock and breaking currents to a series of stepper motors.

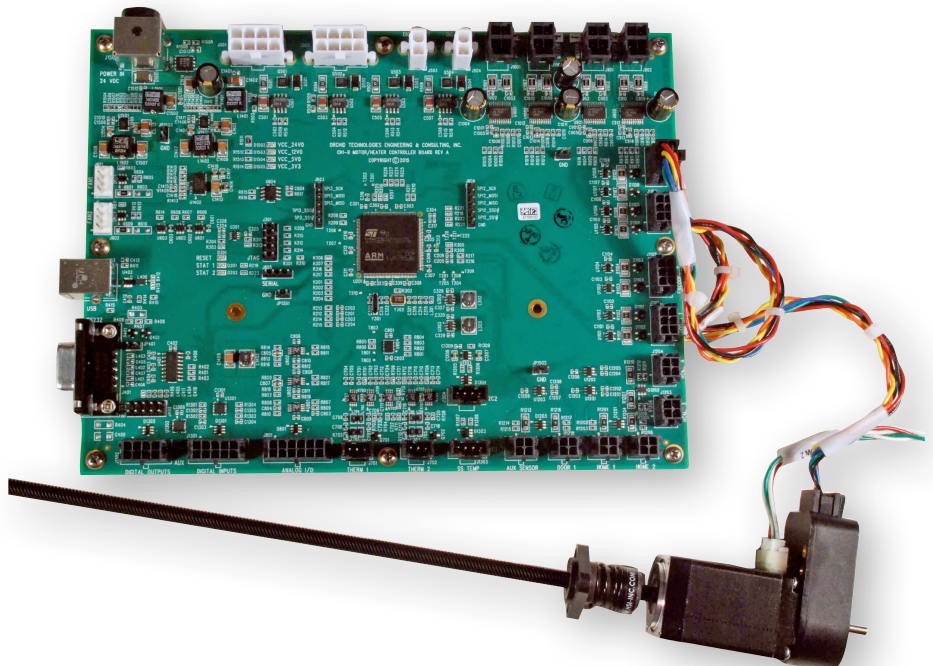
STM32F415 ARM Cortex-M4 Processor

Powered by an STM32F415 microcontroller, this controller board performs complex floating point calculations significantly faster than similar Cortex-M3 devices. Single instruction floating point instructions improves motion algorithm performance and flexibility. Motion control development and execution is easier on such a platform. This motion controller includes the following features.

- Serial FRAM Memory
- Four Stepper Motor Channels
- Four Quadrature Encoder Inputs
- USB 2.0 Host Ports
- 24V Input Power
- USB 2.0 OTG Port
- Fast Ethernet Ports
- Four Temperature Sensors
- CAN Bus Interfaces
- UART, IIC, SPI, Ports

Orchid Technologies: Stepper Motor Control

The development of custom electronic products for our OEM clients is Orchid's entire business. The design of stepper motor controllers with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



**ORCHID TECHNOLOGIES
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Custom Engineering From Concept to Production

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