

Hamburg, Germany 25 Oct. 2017

Trinamic launches cost efficient stepper motor servo controller module

The TCM-1111-StepRocker-Servo extends the successful StepRocker™ family by a closed-loop stepper motor servo controller.

TRINAMIC Motion Control extends its portfolio of TCM embedded motor control modules. Following to the success of the TCM-1110-StepRocker single axis board, the TCM-1111-StepRocker-Servo is designed to be as easy to use as its sibling, but with additional closed-loop stepper motor servo functionality.

The new board drives 2-phase bipolar stepper motors from 500mA to 1.0A RMS or from 1.1A to 2.8A RMS selectable by jumpers. Utilizing Trinamic's highest performance stepper motor driver IC for external MOSFETs TMC262 and the dedicated closed-loop motion controller TMC4361, the TCM-1111 is a cost- and energy-efficient stepper motor servo controller for stepper motors with a/b/n quadrature encoders. Ideal for liquid handling and handling sensitive goods, the S-ramp controller allows for precise and fast positioning.

"If you are looking for an energy efficient drive you are typically looking at servo drives. But, as stepper motors have a considerably higher torque than servo motors of comparable size at low speeds, they often are the solution to get rid of a costly and likewise inefficient gearbox." Explains Trinamic's CEO Michael Randt. "With our new stepper motor servo drives, you get the best of both worlds. The efficiency of a servo at the cost of a stepper motor."

The TCM-1111 can be controlled via RS485 or USB serial interfaces (CAN retro-fit option) and is designed as open source hardware – schematics and layout are available for download. A simplified code project for the NXP Kinetis microcontroller including Trinamic's TMCL protocol can be downloaded as well.

The TCM-1111 is priced at USD 90 in single quantities. The credit card-sized board has dimensions of 85mm x 55mm. The board is available for shipment from November 2017.

Features and benefits:

- Supply voltage +10...30V
- Up to 2.8A RMS motor current
- S-shaped ramps
- Closed-loop stepper operation
- TMCL protocol
- Open source hardware and software

About TRINAMIC Motion Control

TRINAMIC Motion Control develops the world's most sophisticated technology for motion and motor control applications. Our state-of-the-art ICs, modules, and mechatronic systems enable today's software engineers to quickly and reliably develop highly precise drives that work efficiently, smoothly, and quietly. Trinamic is headquartered in Hamburg, Germany with subsidiaries in Tallinn, Estonia, and Chicago, IL, USA.

www.trinamic.com/motioncontrol

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Images

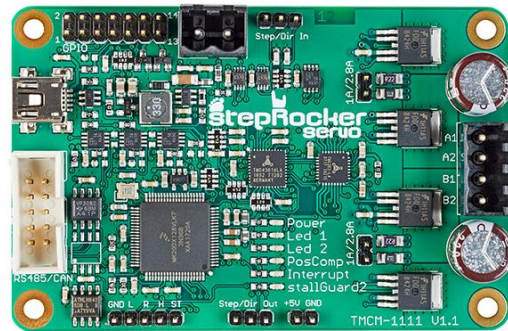


Fig. 1 TMC8461-BA –EtherCAT slave controller IC with advanced peripherals.

Links

Product Page:

<https://www.trinamic.com/products/modules/details/tmcm-1111/>

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