

SINGLE AXIS

Servo controller module with CAN and CANopen

The TMCM-1617 from Trinamic is a miniaturized single-axis servo drive for 3-phase BLDC motors with up to 18 A power measurement and +24 V supply. Customization and different casing options are possible. It supports CiA 301 and CiA 402.



The product measures 36,8 mm x 26,8 mm x 11,1 mm (Source: Trinamic)

Designed for servo drives with 18 A root mean square and 8 V_{DC} to 28 V_{DC}, the servo controller module it's equipped with CAN, TMCL, Ethercat, and EIA-485 interfaces. The aluminum housing, which is conform to DIN EN 60529 makes the product suitable for medical, aerospace, and robotics. The device features CANopen implementation. It supports the CANopen protocols CiA 301 version 4.1 and CiA 402.

Capable of loop frequencies to keep the current ripple low, the module enables electric drives. It supports a range of encoders for position feedback, including incremental encoders, analog encoders, and digital hall sensors as position feedback. This, together with the integrated field-oriented control in hardware and customization options, makes it a solution for rugged servo drives across the board.

The servo controller module executed a highly accelerated life test (Halt) with ambient temperature from -40 °C up to +85 °C operational temperature and mechanical vibrations up to 30 root mean square acceleration.

Available through The company's distribution channels, the drive is configured to be soldered on the TMCM-1617-BB baseboard. Trinamic also offers customization of the TMCM-1617 carrier board or integration services to meet application-specific designs.

The company's founder and CEO Michael Randt explained the idea behind the product: "Technology is changing at an increasing pace. New applications and markets like cobots and new space have risen over the past few years, driven by miniaturization and higher accessibility of components. To push innovation further, engineers need to have access to master keys. Small building blocks providing easy access to industry-leading features and sophisticated functions already embedded in hardware. Our TMCM-1617 is such a master key. Designed especially for medical, robotics and logistics systems in need of smaller and lighter drives, the potted module features our hardware-based field oriented control, supporting low-inductance, and highly dynamic motors."

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