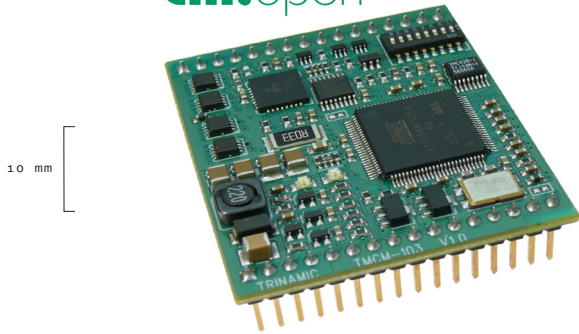# TMCM-**103**
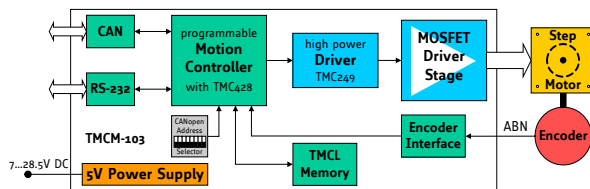
**1-Axis
Controller / Driver
2.0A / 28.5V
with Encoder Inf.**

10 mm

INFO The TMCM-103 is a single axis 2-phase stepper motor controller and driver module. The built in encoder feedback makes it an optimum solution for high-reliability drives. It provides a complete motion control solution at a very small size for embedded applications. The board can be connected to a baseboard or customized electronics with its pin connectors. The TMCM-103 comes with the PC based software development environment TMCL-IDE for the Trinamic Motion Control Language (TMCL). Using predefined TMCL high level commands like „move to position" or „constant rotation" rapid and fast development of motion control applications is guaranteed. In addition CANopen is available for this product. The TMCM-103 can be controlled via RS-232 and via CAN. Communication traffic is kept very low since all time critical operations, e.g. ramp calculation, are performed on board. The TMCL program can be stored in the on-board EEPROM for stand-alone operation. The firmware of the module can be updated via the RS-232 or the CAN interface. With the StallGuard™ feature it is possible to detect motor overload or motor stall.

MAIN CHARACTERISTICS

ELECTRICAL DATA	· up to 2.0A coil current RMS (2.8A peak)
	· 7V to 28.5V motor supply voltage
SUPPORTED MOTORS	· two-phase bipolar motors with 1A to 2.0A coil current
	· incremental encoder (2 or 3 channel)
INTERFACE	· RS232 and CAN 2.0b host interface
	· inputs for reference and stop switches
	· general purpose analog and digital I/Os
FEATURES	· dip-switches to adjust CAN-ID
	· 64 times microstepping
	· memory for 2048 TMCL commands
	· ready for CANopen
	· automatic ramp generation in hardware
	· on the fly alteration of motion parameters (e.g. position, velocity, acceleration)
	· closed loop for highly dependable drives possible
	· stallGuard™ for sensorless motor stall detection
	· chopSync™ for high motor velocity
OTHER	· 2 x 16 pin connectors carry all signals
	· RoHS compliant
	· size: 43x49.53 mm²

ORDER CODE	DESCRIPTION
TMCM-103 (-option)	1-axis controller / driver 2.8A, 28.5V
Related products:	*BB-103*
OPTIONS	
TMCL	TMCL firmware
CANopen	CANopen firmware