

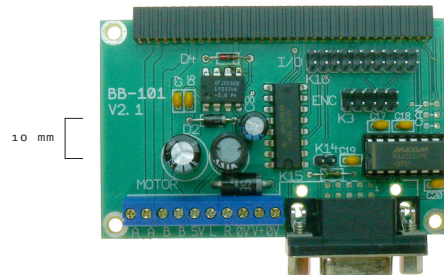
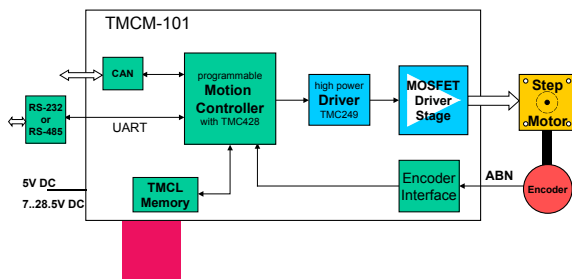
# TMCM-101

**1-Axis  
Controller / Driver  
3A / 28.5V  
with Encoder Inf.**

**INFO** The TCMC-101 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 a pin connector. The TCMC-101 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. The TCMC-101 can be controlled via the serial UART interface (e.g. using a RS-232 or RS-485 level shifter) or 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 serial interface. With the stallGuard™ feature it is possible to detect motor overload or motor stall. The TCMC-101 is compatible to the TCMC-series of credit card sized module, but has an increased height of 70 mm.

### MAIN CHARACTERISTICS

- ELECTRICAL DATA**
  - up to 3A coil current RMS (4.2A peak)
  - 7V to 28.5V motor supply voltage
  - 5V DC logic supply voltage
- SUPPORTED MOTORS**
  - two-phase bipolar motors with 1A to 3A coil current
  - incremental encoder (2 or 3 channel)
- INTERFACE**
  - RS232, RS485 or CAN 2.0b host interface
  - inputs for reference and stop switches
  - general purpose analog and digital I/Os
- FEATURES**
  - 64 times microstepping
  - memory for 2048 TMCL commands
  - automatic ramp generation in hardware
  - on the fly alteration of motion parameters (e.g. position, velocity, acceleration)
  - closed loop for highly dependable drives
  - stallGuard™ for sensorless motor stall detection
- OTHER**
  - 68 pin connector carries all signals
  - RoHS compliant
  - size: 80x70 mm²



ORDER CODE	DESCRIPTION
<b>TMCM-101 (-option)</b>	1-axis controller / driver 3A, 28.5V
<b>Related products:</b>	BB-101
<b>OPTIONS</b>	
<b>H</b>	Horizontal pin connector (standard)
<b>V</b>	Vertical pin connector (on request)