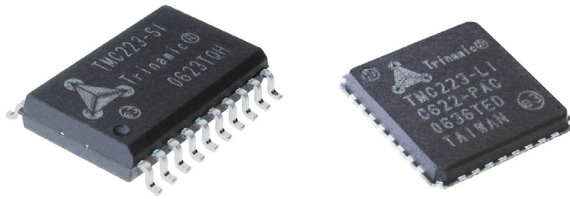


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INFO The TMC223 is a single chip micro stepping motor driver and motion controller with integrated sequencer, bipolar stepper motor driver and two wire serial slave interface (IIC). It is compatible to the TMC222, but features an additional sensorless stall detection, eliminating the need for mechanical reference switches. The TMC223 is specially intended for de-centralized mechatronic functions. A user-programmable OTP memory is integrated to store motor parameters and configuration settings. The TMC223 allows up to four bit of micro stepping and is capable of driving a phase current of up to 800 mA peak. After initialization, it performs all time critical tasks autonomously based on target positions and velocity parameters. Together with an inexpensive microcontroller the TMC223 forms a complete motion control system.

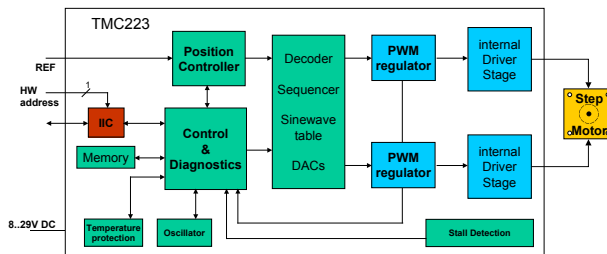
For using the evaluation board together with the PC software a USB-2-X interface is needed.

TMC223

**Microstep
Controller / Driver
for up to 0.8A
with IIC Interface
and Stall Detection**

MAIN CHARACTERISTICS

- sensorless stall detection
 - build-in ramp generator for autonomous positioning
 - programmable speed and acceleration
 - on-the-fly alteration of target position
 - up to 16 times microstepping
 - reference switch input read out
 - full protection and diagnostics
 - automatic fast decay and slow decay
 - low power stand-by mode
- INTERFACE**
- two wire serial interface (IIC bus)
 - field programmable node addresses (32)
- ELECTRICAL DATA**
- up to 800 mA coil current (peak)
 - supply voltage 8V to 29V
- PACKAGE**
- standard SO20 package
 - chip size QFN32 7x7 mm² package
 - RoHS compliant



ORDER CODE	DESCRIPTION
TMC223-SI	Stepper IC with LIN in SO20 package
TMC223-LI	Stepper IC with I2C in QFN32 package
TMC223-EVAL	Evaluation board for TMC223
Related product:	USB-2-X V2 interface converter, TCM-Motor