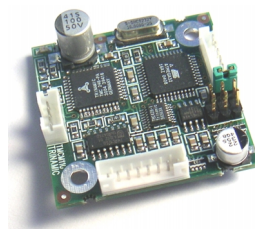


StallGuard demo board

StallGuard test and demonstration board with
TMC110 stepper motor controller and driver



You will need

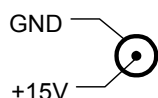
- Your StallGuard demo board
- Power supply for +15V DC
- Optional: PC and TMCL-IDE program
- Optional: RS232 interface with (null modem) cable.

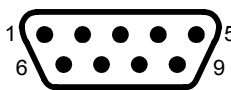
Precautions

- Do not connect / disconnect motor while powered-up
- Do not exchange any wires or short-circuit pins
- Avoid bundling IO wires with motor or power wires, as this may cause noise pickup.
- Do not exceed the maximum power supply of 15V.

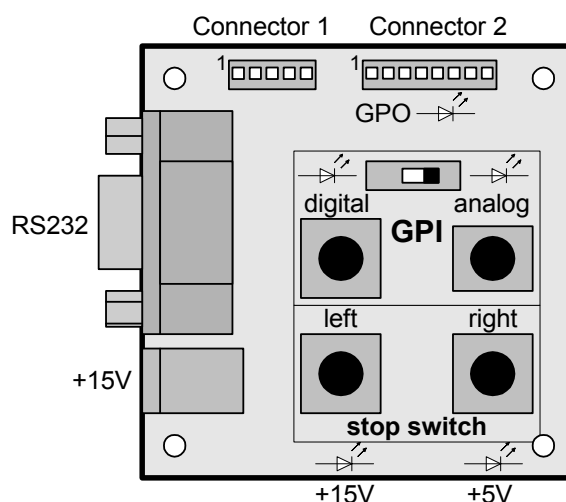
Pinning / Controls:

Power supply:



RS232 interface:		Pin	Function
	1	2	RxD
	6	3	TxD
	5	5	Ground
	9		
Connector 1		1	Ground
	1	2	+VDD (+15V)
		3	Ground
		4	RS232 TxD
		5	RS232 RxD
Connector 2		1	Stop switch left
	1	2	Stop switch right
		3	Ground
		4	GPO
		5	+VDD (+15V)
		6	Ground
		7	GPI (analog/digital)
		8	+5V
LED on	Function		
GPO	GPO of TMC110 is on		
GPI digital	Push-button connected to GPI		
GPI analog	Potentiometer connected to GPI		
+15V	Sufficient power supply for motion		
+5V	Sufficient power for programming		

Switch	Function
Mode_Sel	Switches between digital or analog input signal - indicated by LED.
GPI_digital	Push button for digital high signal
GPI_analog	Analog voltage controlled by potentiometer
Stop_left	Left limit switch (push button to activate)
Stop_right	Right limit switch (push button to activate)



StallGuard™ - Sensorless Motor Stall Detection:

The integrated StallGuard™ feature gives a simple means to detect mechanical blocking of the motor. This can be used for precise absolute referencing, when no reference switches are available. The load value can be read-out using TMCL commands or the module can be programmed so that the motor will be stopped automatically when the load exceeds a predefined limit.

The

functionality

of the StallGuard demo depends on the software loaded to the TMC110 board. Using the default demo software the motor can be stopped by hand using StallGuard™. It will then start moving again in the reverse direction. The potentiometer can be used in order to change velocity.

Functionality: