

TB6612FNG

Motor Drivers / Low-loss driver

Efficient dual motor control with an essential standby pin.

01 Connections

Logic / motor

VCC 2.7-5.5 V; VM operating range 2.5-13.5 V. Join grounds.

Channel A

AIN1, AIN2, PWMA -> AO1, AO2 motor terminals.

Channel B

BIN1, BIN2, PWMB -> BO1, BO2 motor terminals.

STBY

HIGH enables operation; LOW puts outputs in high-impedance standby.

02 Truth table / STBY HIGH

PWM HIGH, IN = 10 / 01

Rotate in opposite directions.

PWM HIGH, IN = 00

Stop: outputs high impedance.

IN = 11

Short brake.

PWM LOW

Short brake for directional inputs; use STBY LOW for guaranteed high impedance.

03 Good practice

Power

Decouple VCC and VM near the board; size current and cooling for the actual carrier.

Logic

Use 3.3 V VCC with a 3.3 V MCU. A 5 V VCC can require a HIGH level above 3.3 V.

Startup

Set direction and PWM before taking STBY HIGH.

Before you power on

The 3.2 A figure is a brief peak rating, not continuous drive current. Check thermal and pulse conditions.

TB6612FNG / continued

Motor Drivers / Low-loss driver

Datasheets & further reading

Toshiba TB6612FNG datasheet

<https://www.pololu.com/file/0J86/TB6612FNG.pdf>