

Digilent PmodHB2™ 1A H-Bridge Board Reference Manual

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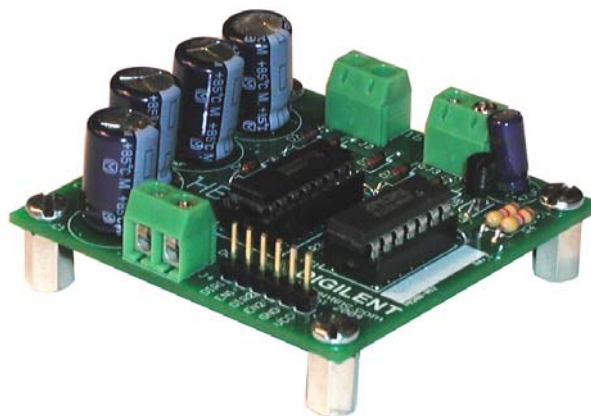
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Overview

The Digilent PmodHB2 1A H-Bridge Board (the HB2™) can drive two motors independently with up to 1A of current and voltage from 4.5V to 12V.

Features include:

- dual 1A H-bridges
- 4.5V to 12V supply voltage
- screw terminal blocks for power supply and motor connections
- logic level inputs
- industry standard TI SN754410 motor driver chips
- a 6-pin header.



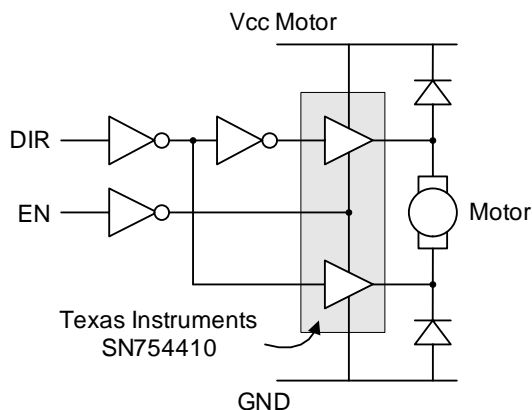
Functional Description

The HB2 is based on the Texas Instruments SN754410, a dual H-bridge driver with bi-directional drive currents.

Screw terminal blocks provide easy connections to motor leads and power supplies. All control input signals are compatible with TTL and CMOS logic levels, so the HB2 can be driven from any system board.

The HB2 has ample capacitance to minimize voltage drop when motor phases are switched on. This allows motors to use power from the same 6-pin cable that carries motor control signals.

The HB2 has a 6-pin header for easy connection to a Digilent system board. Some system boards, like the Digilent Pegasus board, have a 6-pin header that can connect to the HB2 with a 6-pin cable. To connect the HB2 to other Digilent system boards, a Digilent



HB2 Circuit Diagram

Modular Interface Board (MIB) and a 6-pin cable may be needed. The MIB plugs into the system board, and the cable connects the MIB to the HB2.

Digilent also produces an H-bridge board that handles higher current and voltage, the Digilent PmodHB1™ 5A H-Bridge Board. For more information see, www.digilentinc.com.

For more information about the TI SN754410 motor chip, see the corresponding Texas Instruments data sheet at www.ti.com.