

Launchpad Proto Shield v1.0

Last modified January 1, 2014

Absolute Maximum Ratings

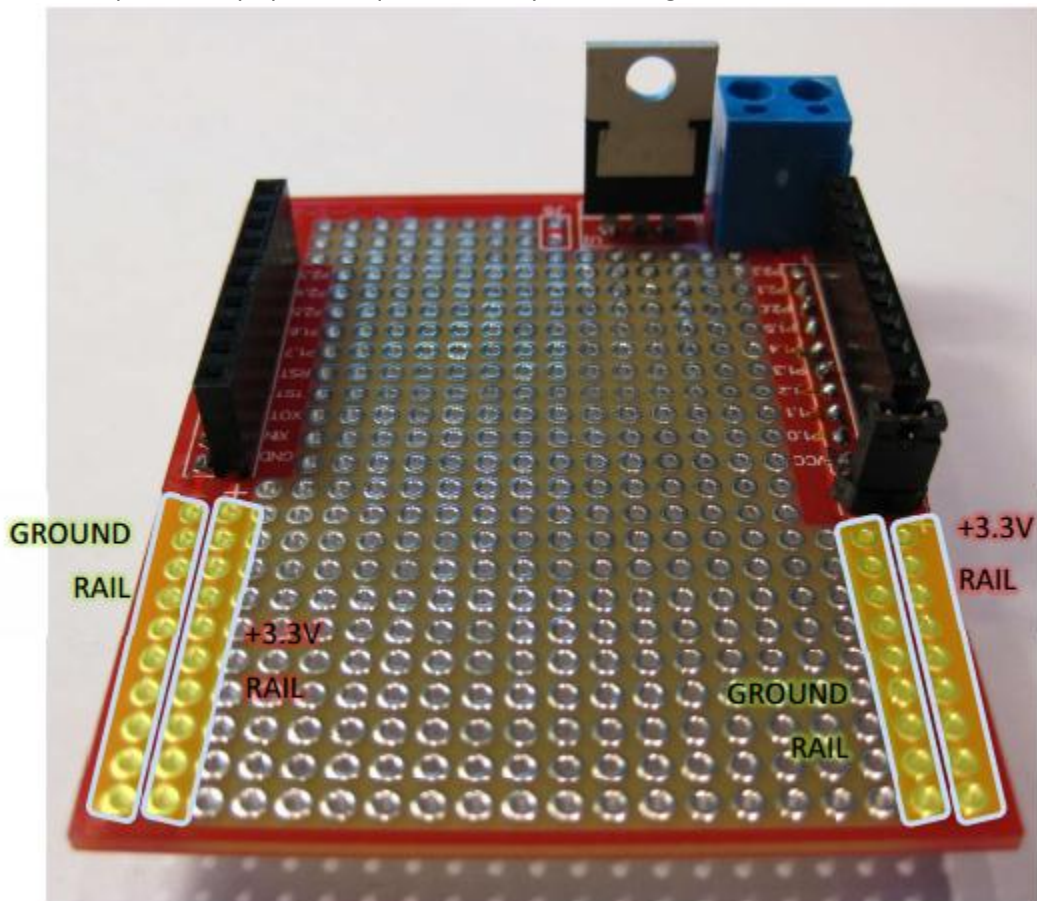
Minimum V_{in} Voltage = 7VDC

Maximum Continuous V_{in} Voltage = 25VDC Maximum Short Duration V_{in} Voltage = 35VDC

Theory of Operation

Simply supply 7-24VDC to the convenient screw terminals and the rest is up to you! With the built-in voltage regulator, there is no need to worry about a regulated power supply to the Launchpad. Prototype anything you want.

The built-in power strips provide quick and easy access to ground and +3.3V



Parts List & Description

C1: 0.1uF Ceramic Capacitor, Marked '104'

C2: 0.33uF Ceramic Capacitor, Marked '334'. It is the smaller of the two capacitors.

- C1-2 are used to smooth input and output voltages of voltage regulators U1

J1 & J2: 10-position standard square header, 0.100" pitch

Note – Please make sure of the header orientation on your Launchpad first! If you have male headers on your Launchpad, the female headers should be soldered on the underside.

- J1 and J2 male headers mounted on the underside provide the interconnection between the Launchpad and the expander board

- The female headers mounted on the top side provide a connection point for custom circuits OR to connect to more expansion boards

J3: 2-position standard square jumper, 0.100" pitch

- J3 jumper connects the 3.3VDC power from the voltage regulator U3 to the Launchpad below. Remove this jumper when powering the Launchpad via a USB cable and / or during programming

Screw Terminal Strip (J4): 2-position leaf spring screw terminal

- Connection point for the battery / power supply inputs and two DC motor outputs

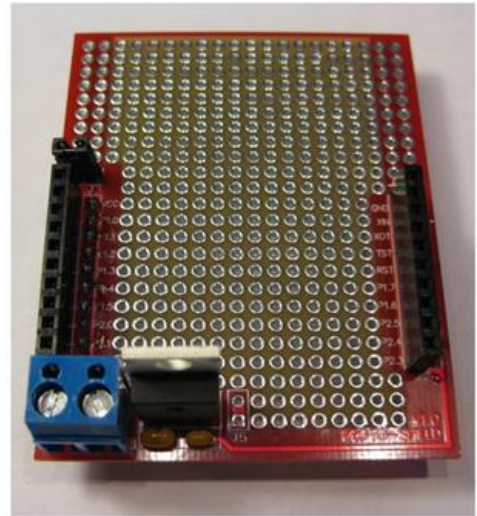
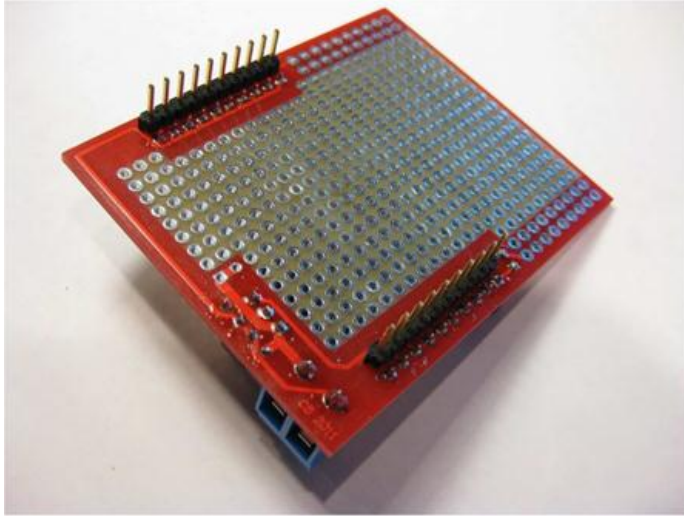
J5: (No part)

- Provides a convenient connection location to connect the input voltage directly from the screw terminal (J4) to custom circuits in the prototyping section of the board

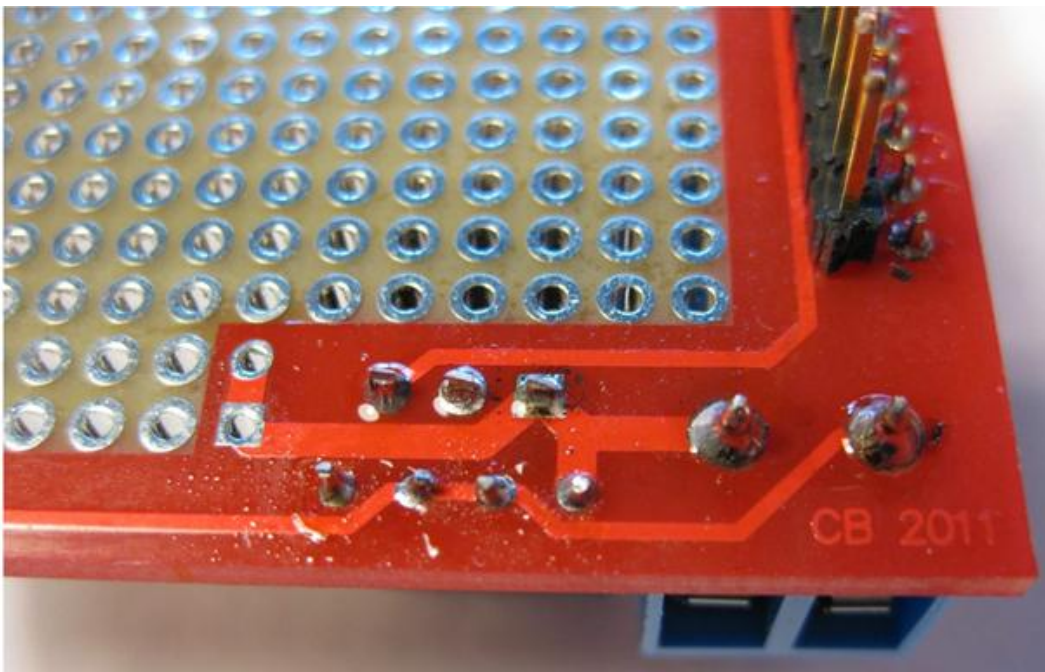
U1: 3.3-Volt Linear Voltage Regulator

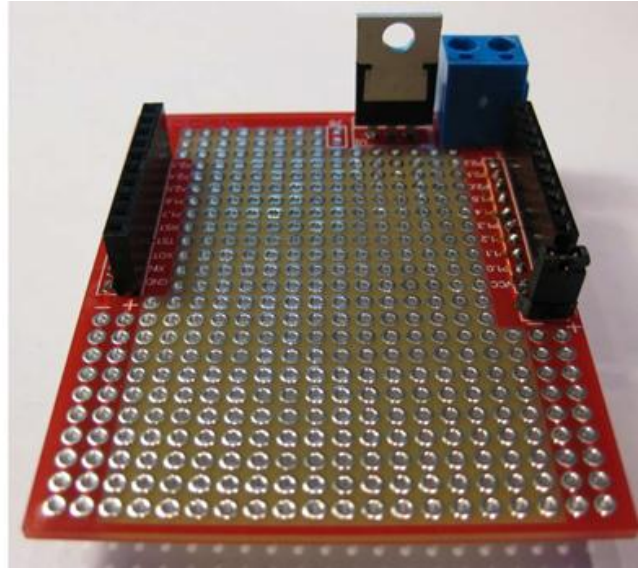
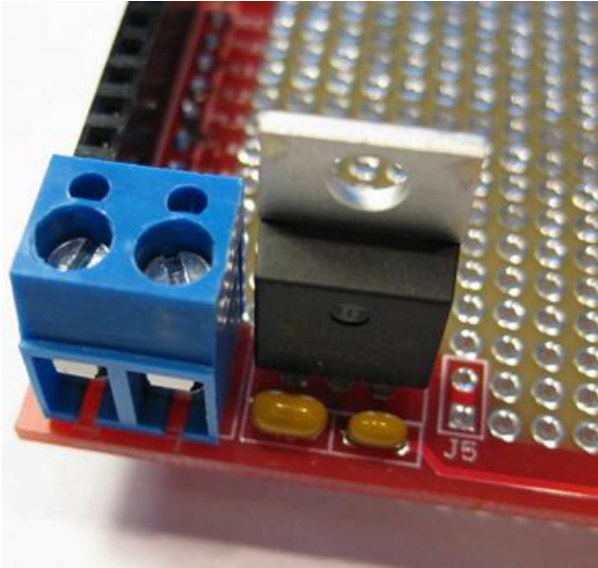
- Uses the Vin input voltage and regulates it to 3.3VDC to supply power to the Launchpad

Assembly Tips and Pictures



Be sure to clip the protruding pins on the capacitor and voltage regulator are trimmed short enough to not interfere with the board below





Schematic

