# Using Snap-Lock PCB Supports

OVERVIEW

The RDBKMEG1 breakout board for the Arduino MEGA2560 comes with nylon PCB supports that may be used to lock the MEGA2560 and the RDBKMEG1 together. In many cases this is not necessary – especially since the MEGA2560 has so many I/O pins -- but there may be situations in which this is needed (e.g., application in which vibration is a concern).

There are 6 holes in the RDBKMEG1 which may be used for locking the Arduino MEGA2560 in place, but typically only 4 would be used. Additionally, there are 5 holes which may be used to lock a shield in place.

In general, it is recommended to only use the locking PCB supports if it is necessary for the application. If a MEGA2560 or a shield develops a problem and needs to be removed, the removal process can be somewhat difficult and tedious if the supports have been installed.


PROCEDURE: Installing a MEGA2560, with Locking Supports

First, install the PCB supports in the Arduino MEGA2560, as shown below.
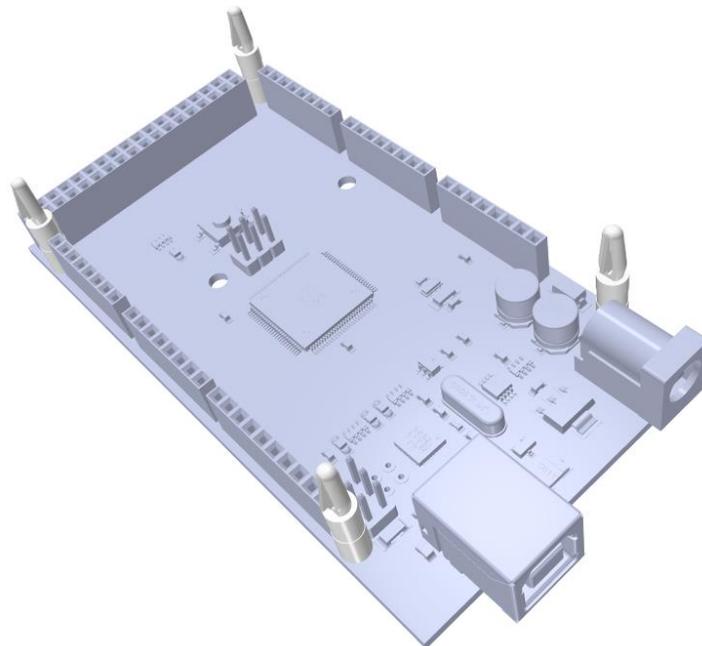
In particular, note that the shorter locking end snaps into the Arduino MEGA2560, and the longer locking end (bayonet style) will interface with the RDBKMEG1 breakout board.

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The MEGA2560 board can now be assembled onto the RDBKMEG1 breakout board. Turn over the RDBKMEG1 breakout board, and note the 4 holes (circled in red the picture below). Assemble the MEGA2560 onto the breakout board by lining up the locking PCB supports with these 4 holes. Also, be sure that the pin headers on the breakout board are properly lining up with the socket headers on the MEGA2560. (The 2 holes circled in blue could also be used, but generally this is not necessary.)
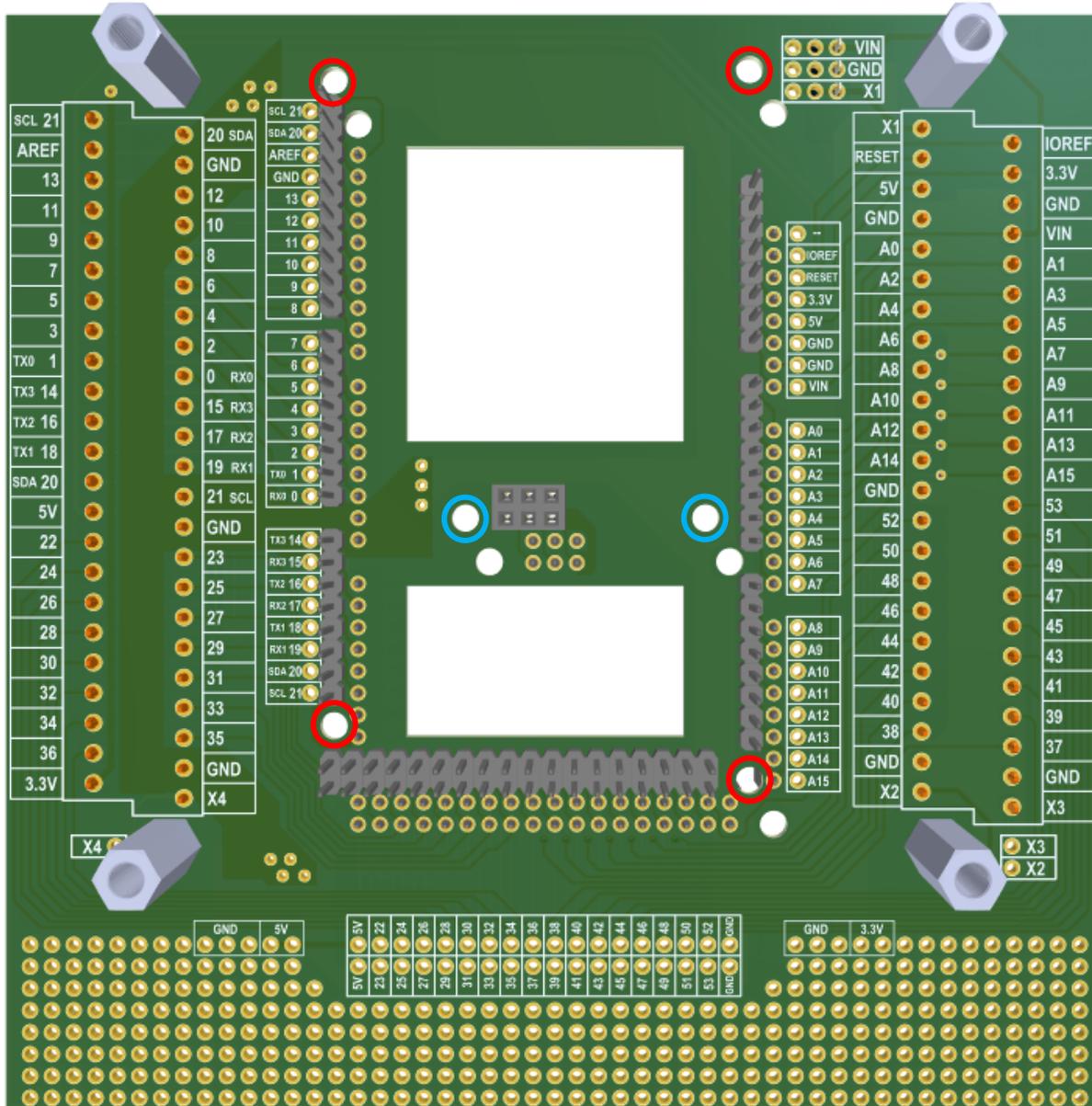
Press the boards together. By design, it will take some force to get the MEGA2560 snapped into place. Work carefully, ensuring that the MEGA2560 board in particular does not get significantly bent.
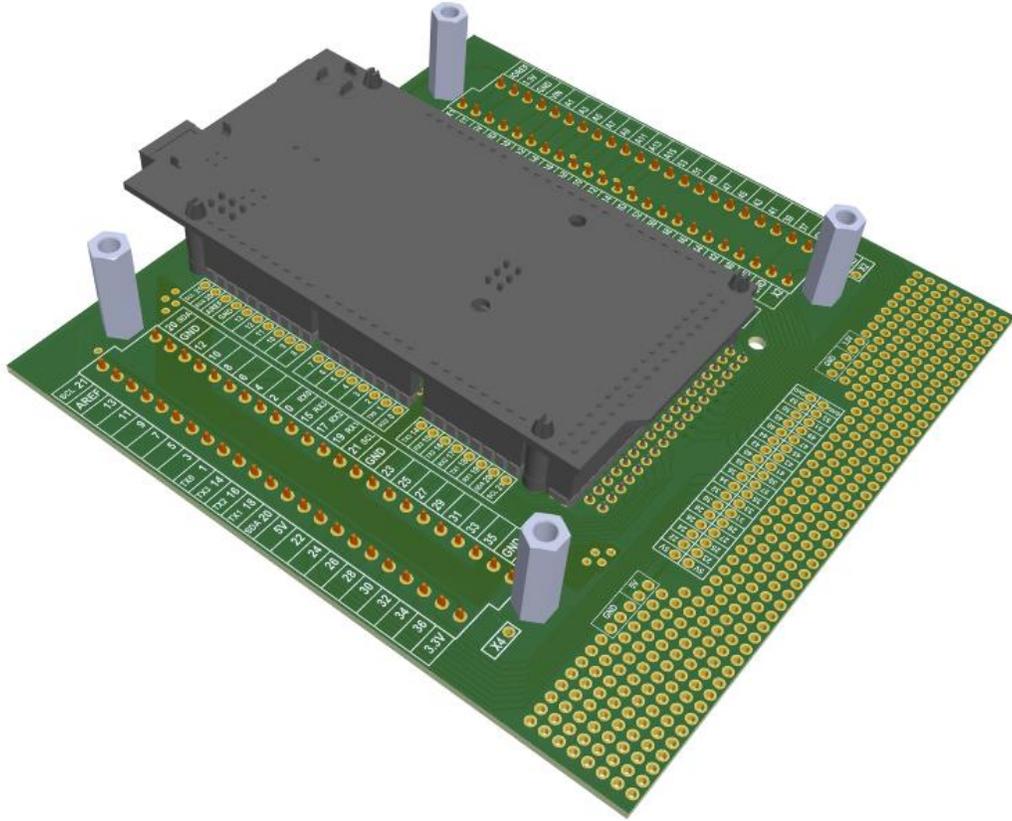
The final assembly (Arduino MEGA2560, RDBKMEG1 Breakout, and Locking PCB Supports) is shown in the figure below.

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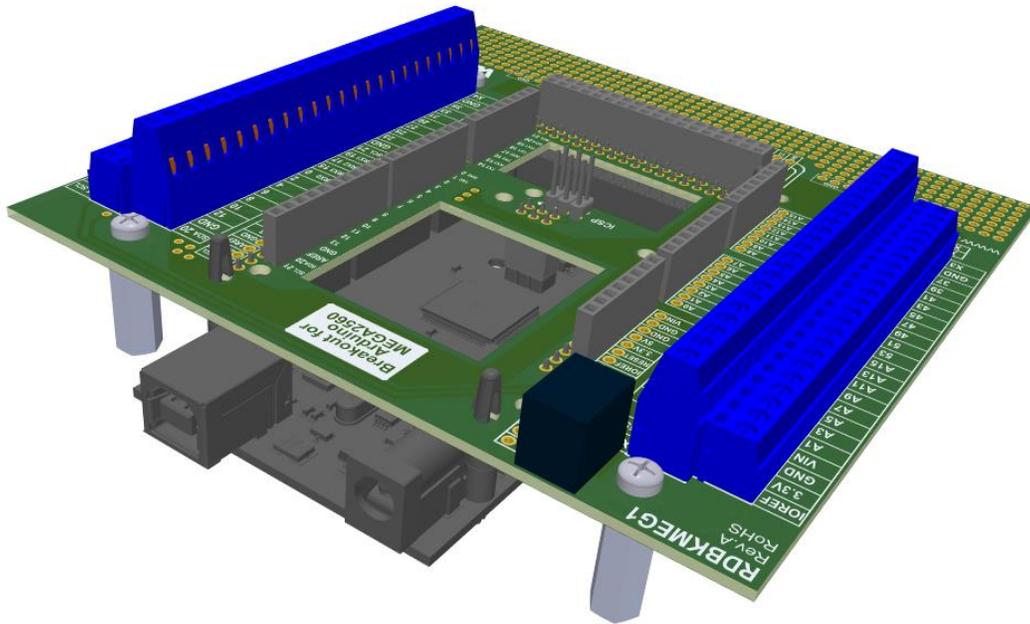
PROCEDURE: Installing a Shield

The procedure is similar for using locking supports with a shield. However, note that there is a wide variety of shields, with various pin lengths. Thus, the nylon supports that are used to lock the MEGA2560 in place may not be appropriate for a given shield.

Regardless of the particular method, the 5 mounting holes indicated by arrows in the picture below can be used to lock a shield in place, although using all 5 will generally not be necessary.