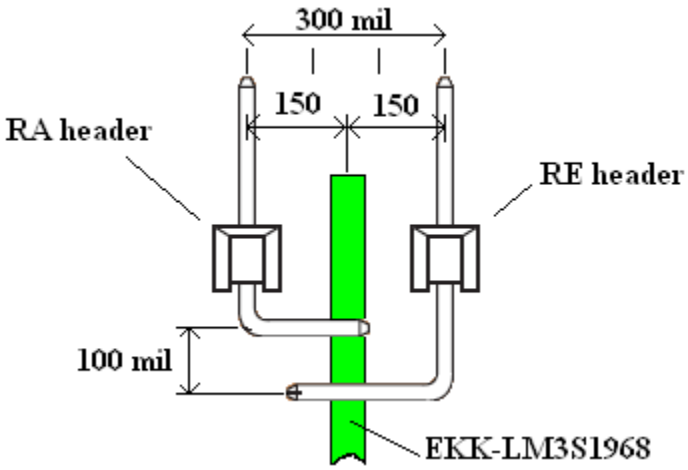
Kit bundle

1) book, Embedded Systems: Real-Time Interfacing to the Arm Cortex M3
   ISBN-13: 978-1463590154
2) Texas Instruments EKK-LM3S1968
3) One Twin industries TW-E40-1020 solderless breadboard
   Digikey: 438-1045-ND
   Allied Electronics: 237-0015
   Mouser: 589-TW-E40-1020
4) headers (soldered onto board so the combination fits into a solderless breadboard)
   Samtec TSW-133-09-L-S-RE, (the long one)
   Samtec TSW-133-08-L-S-RA, (the short one)

or

   Samtec TSW-133-09-F-S-RE, (the long one)
   Samtec TSW-133-08-F-S-RA, (the short one)



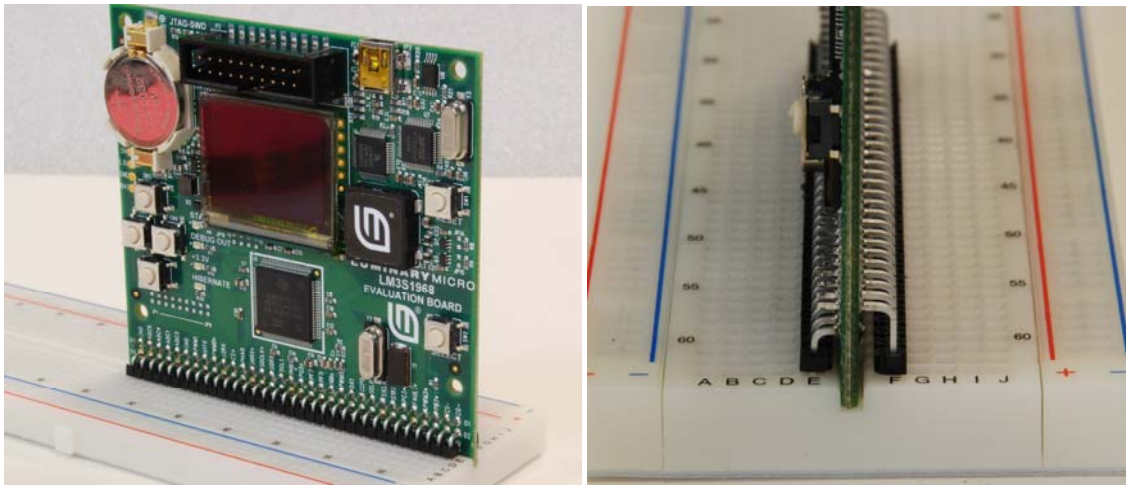
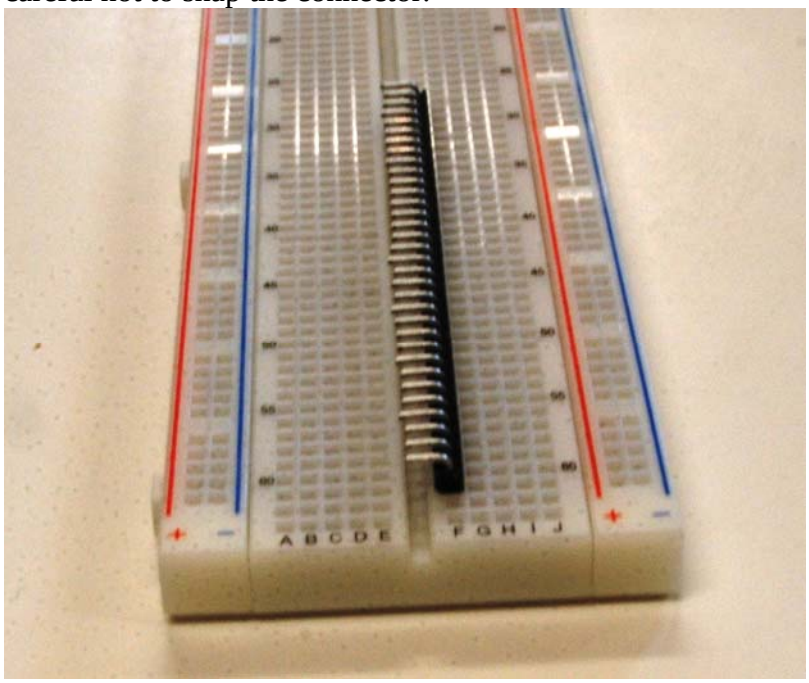
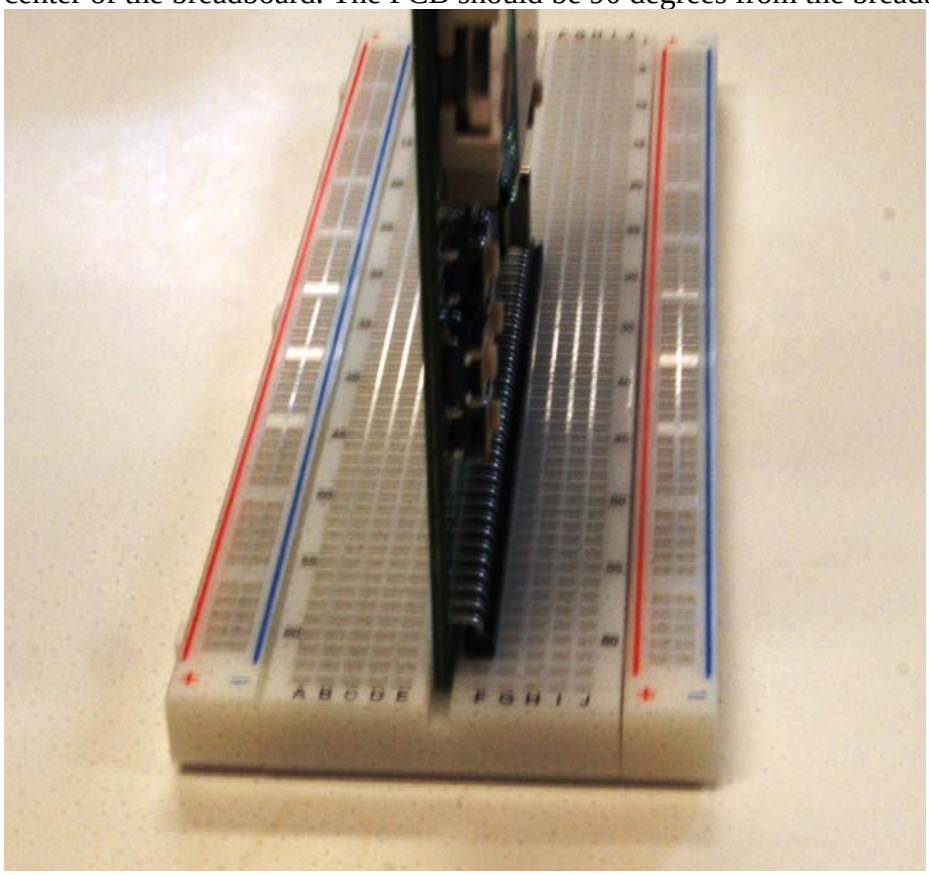


Figure 2.9. Evaluation kit for the LM3S1968 microcontroller. The protoboard interface was built using Samtec TSW-133-09-L-S-RE, TSW-133-08-L-S-RA connectors.

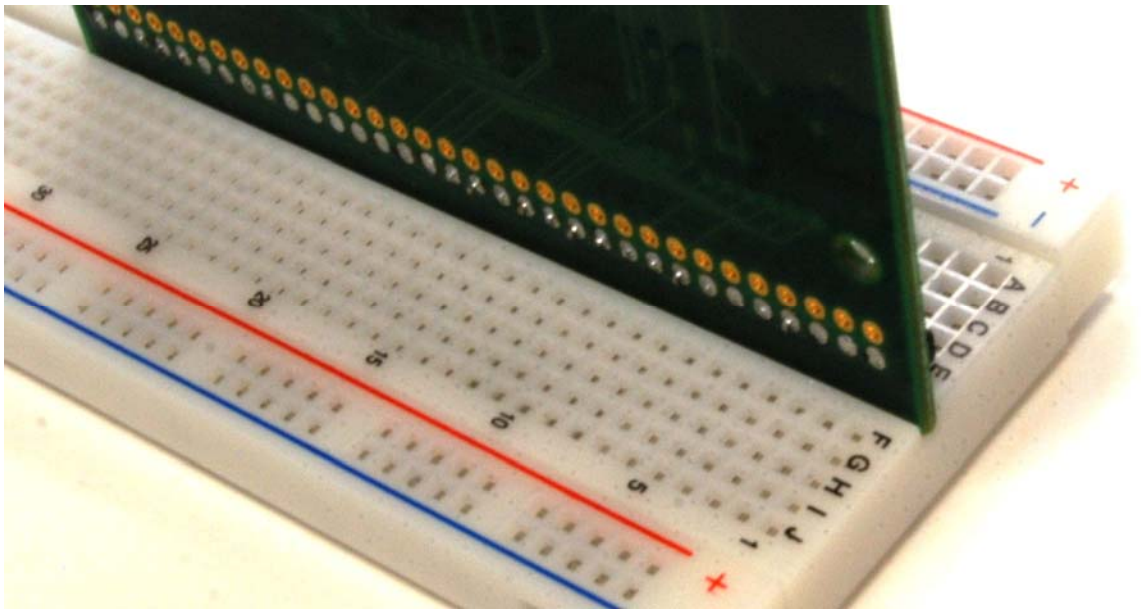
Step 1. Plug the RA header into a breadboard (the short one). Push it straight down, being careful not to snap the connector.



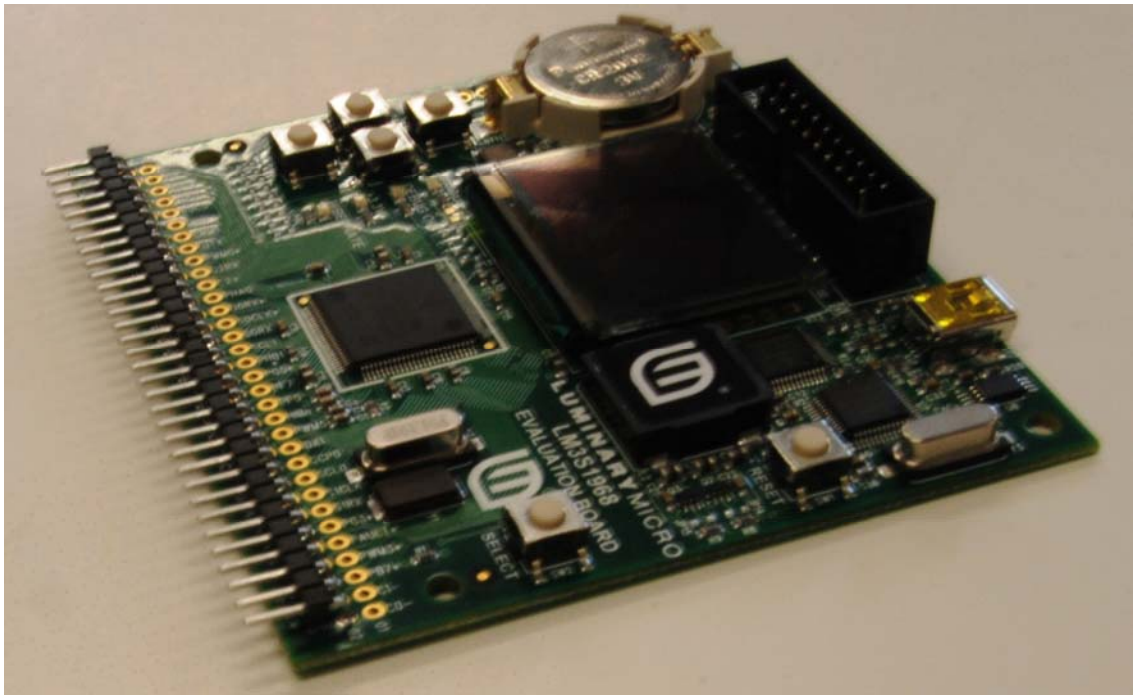
Step 2. Slip the EKK-LM3S1968 onto the RA header with the component side of the PCB being the same side as most of the RA header. Align the PCB so it fits into the center of the breadboard. The PCB should be 90 degrees from the breadboard.



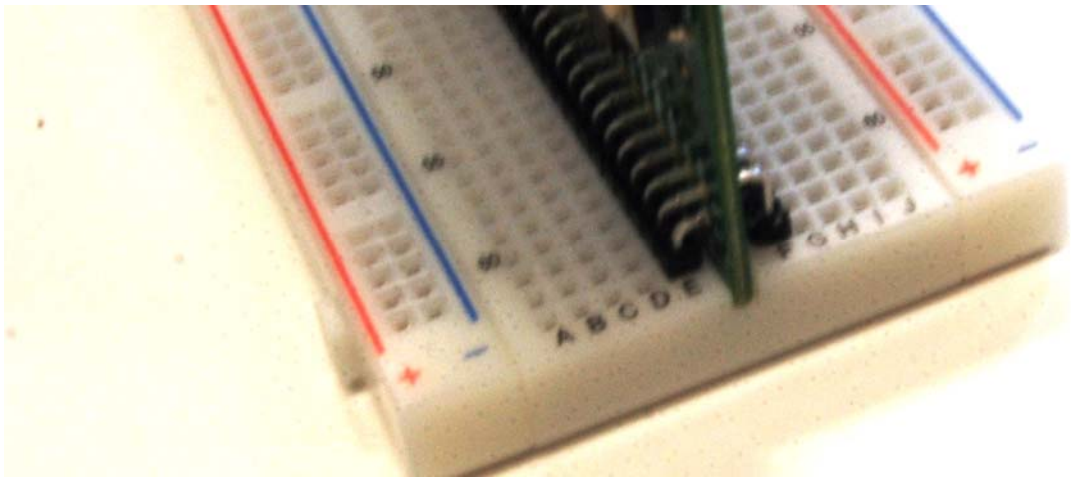
Step 3. Solder the 33 pins of the RA header to the PCB. Notice you are soldering on the bottom row, and on the side without components. Notice also the PCB fits into the slot down the middle of the breadboard.



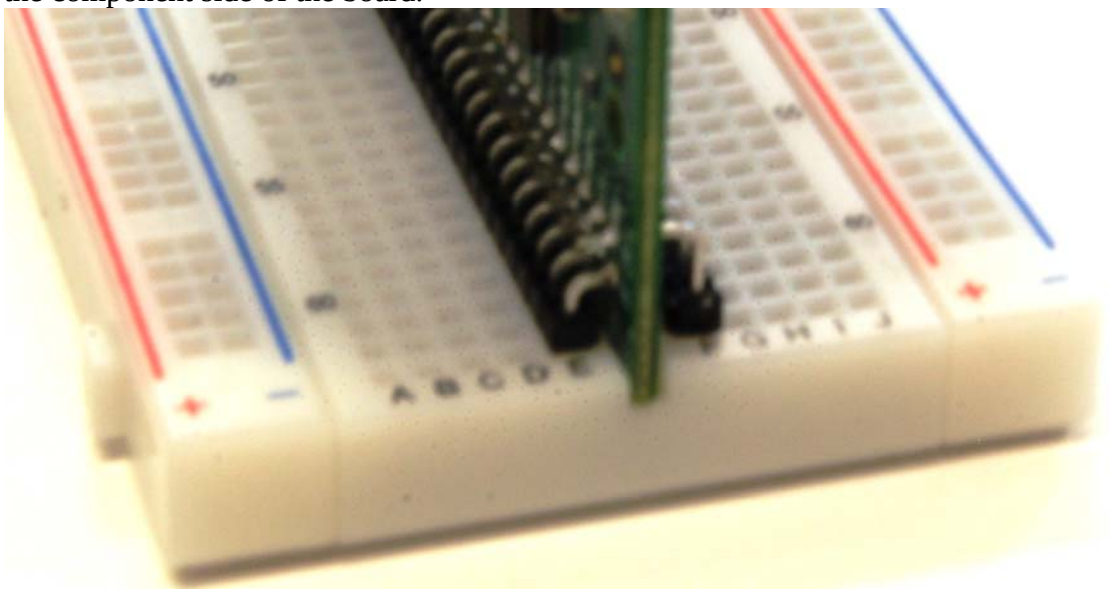
Step 4. Remove the RA-PCB combination from the breadboard. When inserting and removing the combination, try to reduce any twisting motion. One method that works well is to pry it a tiny amount on one side with a small screw driver, then pry it a tiny amount on the other side.



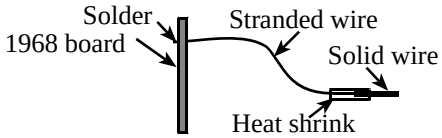
Step 5. Insert the RE header on the other side from the RA header, and insert the combination back into the breadboard. (The PCB should still be aligned into the center of the breadboard, and the PCB should still be 90 degrees from the breadboard, as achieved in step 2).



Step 6. Solder the 33 pins of the RE header to the PCB. This time you are soldering on the component side of the board.



Step 7. Solder individual wires to +3.3V and +5V as needed. The length should allow the other end to plug into the protoboard. 22-gauge solid wire is ok, but a better solution is use stranded wire with a ½ inch piece of solid wire attached to the end.



Step 8. Cut out this outline and place the paper between the pins and the protoboard (***bold italics*** mean this pin has hardware connections on the board).