

## Kit

- 1) EK-TM4C1294-XL (list \$19.99 + \$4.99 for headers)
- 2) One Twin industries TW-E40-1020 solderless breadboard  
Digikey: 438-1045-ND  
Allied Electronics: 237-0015  
Mouser: 589-TW-E40-1020
- 3) headers (soldered onto board so the combination fits into a solderless breadboard)  
Samtec 49 by 1, right angle pin headers  
TSW-149-09-L-S-RE and TSW-149-08-L-S-RA or  
TSW-149-09-F-S-RE and TSW-149-08-F-S-RA

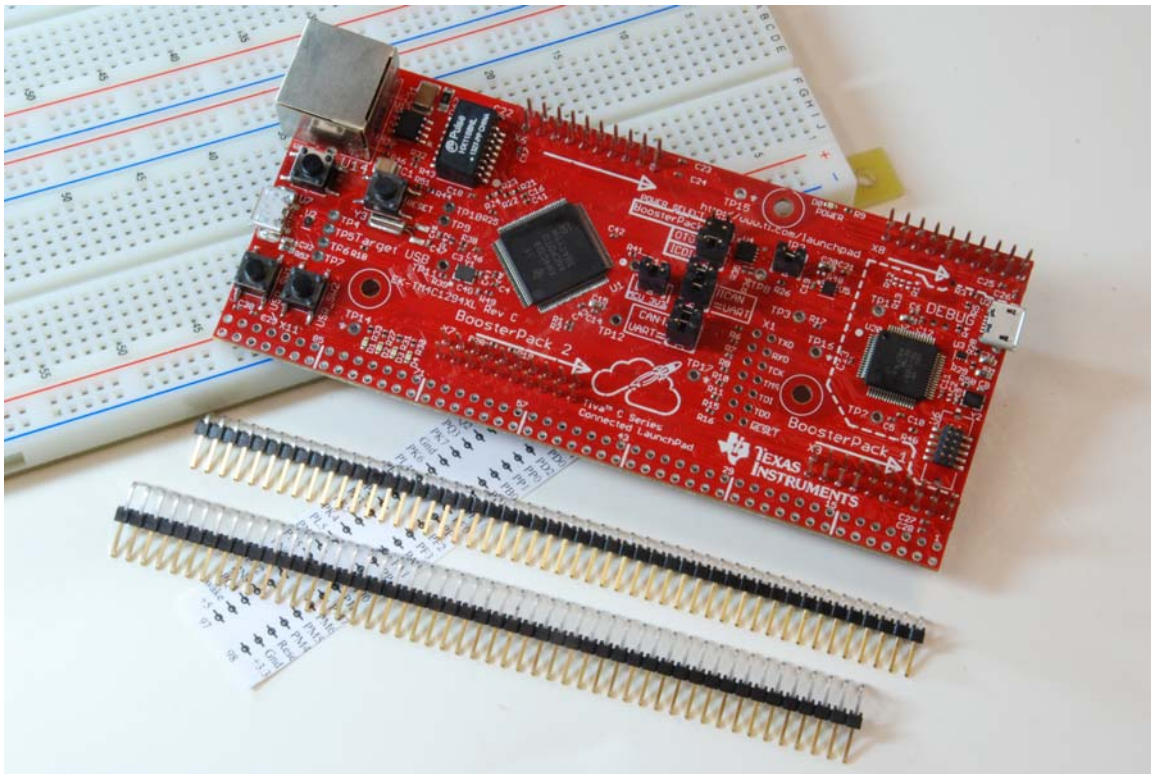
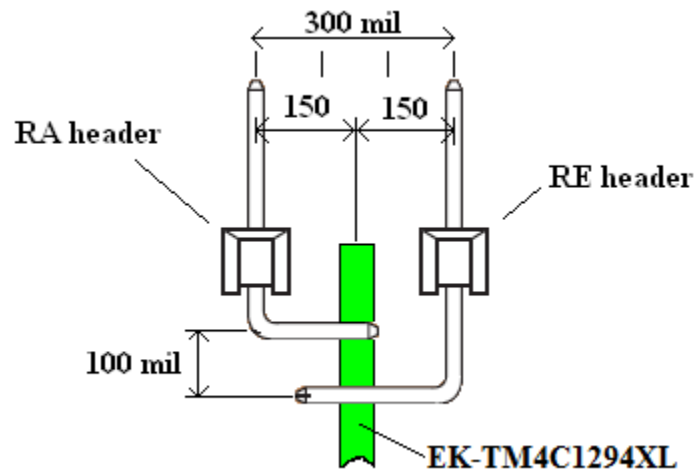
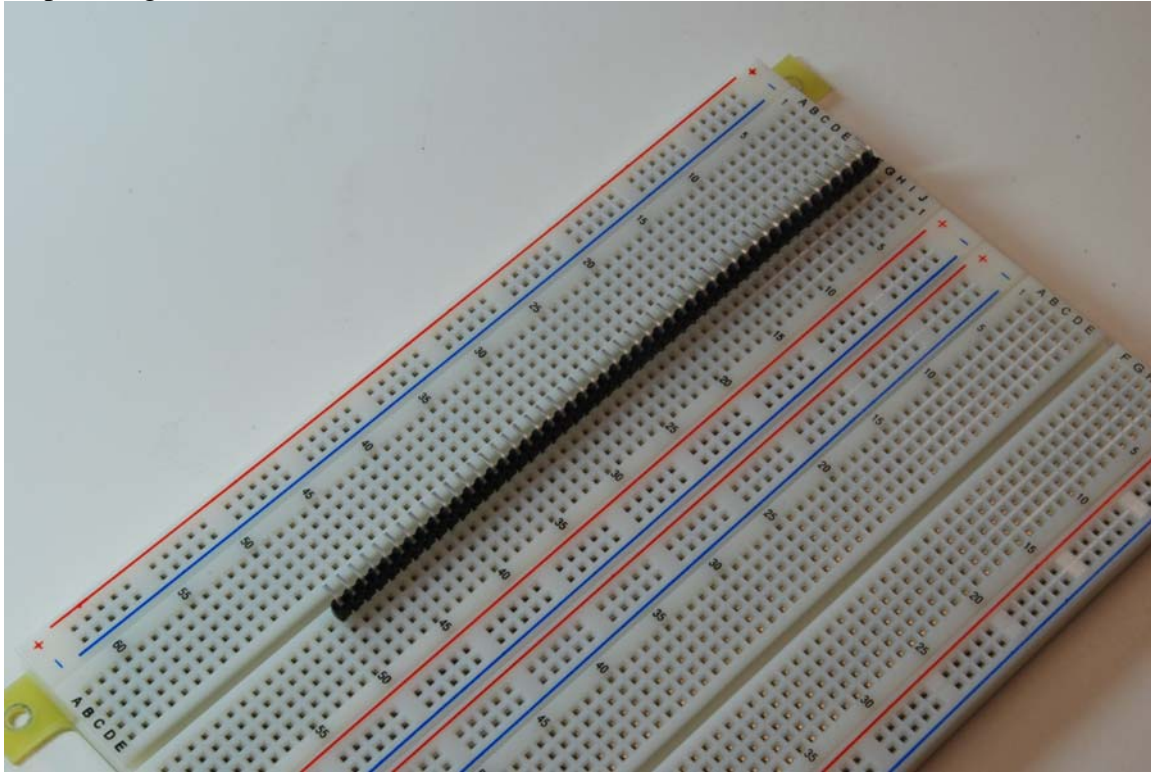
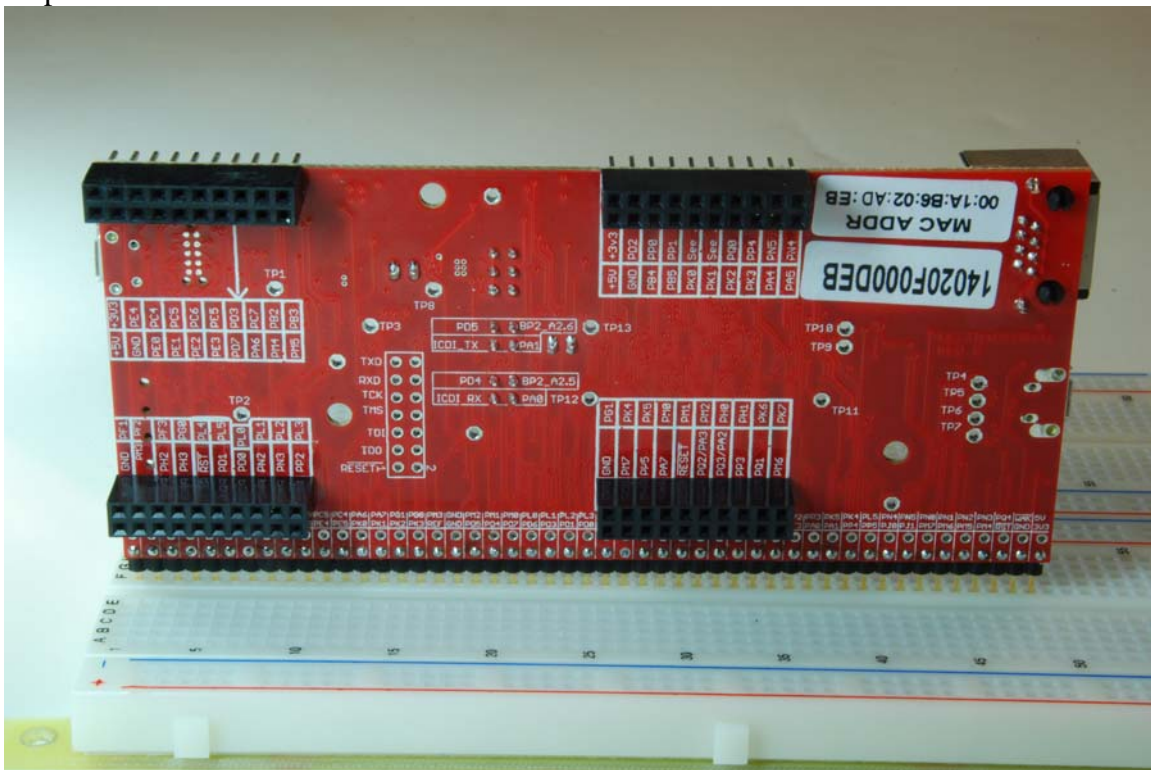


Figure 1. Evaluation kit for the TM4C1294 microcontroller. The protoboard interface was built using Samtec TSW-149-09-L-S-RE and TSW-149-08-L-S-RA connectors.

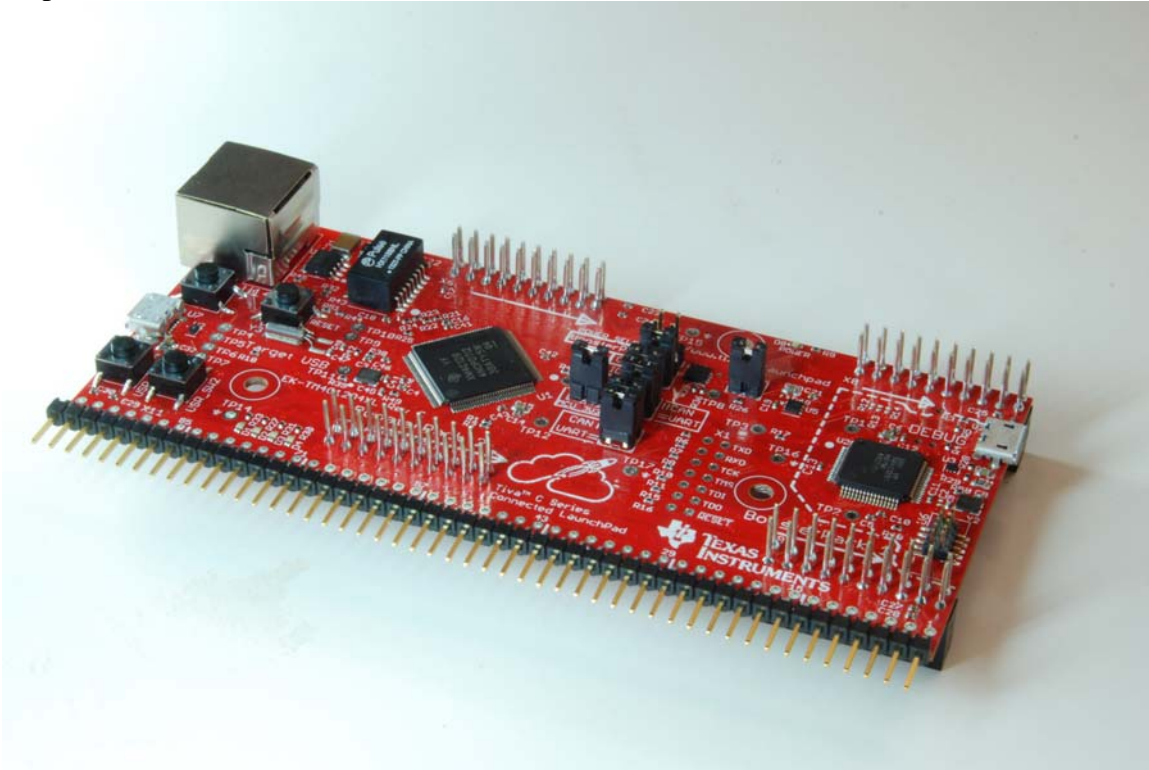
Step 1. Plug the RA header into a breadboard



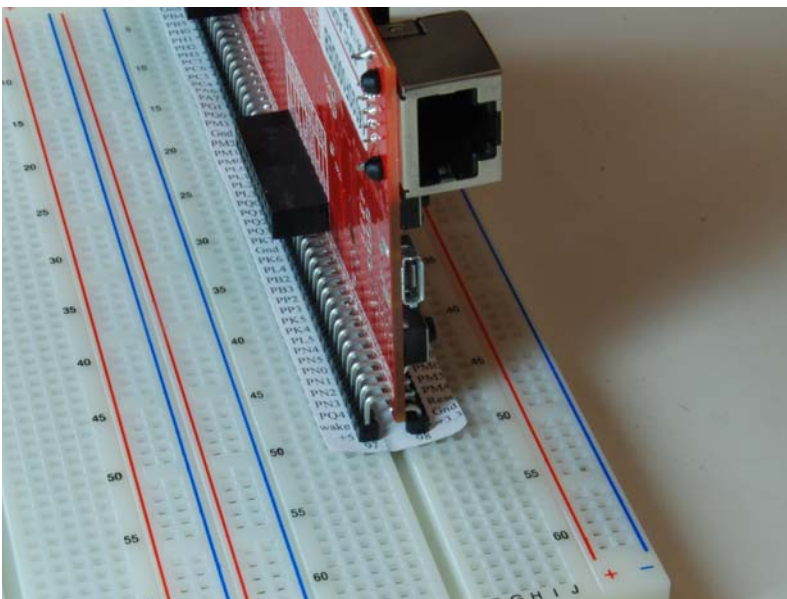
Step 2. Slip the EK-TM4C1294XL onto the RA header with the component side of the PCB being the same side as most of the RA header. Align the PCB so it fits into the center of the breadboard. The PCB should be 90 degrees from the breadboard. Solder the 49 pins of the RA header to the PCB.



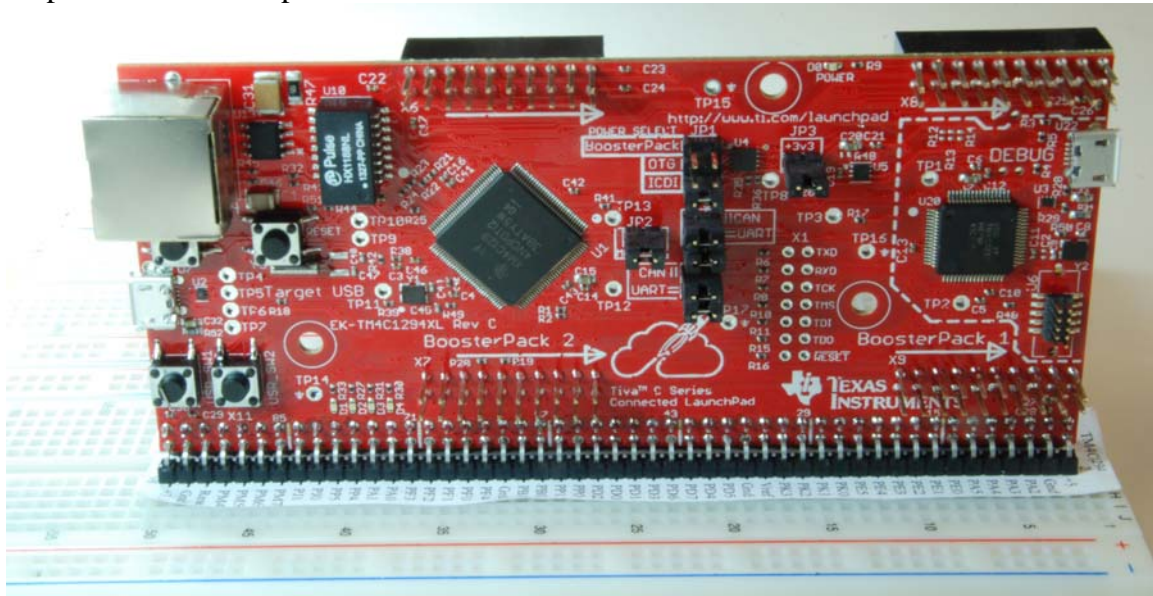
Step 3. Remove the RA-PCB combination from the breadboard



Step 4. Insert the RE header on the other side from the RE header, and insert the combination 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 5. Solder the 49 pins of the RE header to the PCB.



Step 6. *PRINT THIS PAGE AT 100% SCALE.* 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). *Only use the “backwards version if you reversed the board at step 2.*

TM4C1294		TM4C1294		TM4C1294		TM4C1294		Backwards TM4C1294		
1	2	1	2	1	2	1	2	1	2	
+3.3	↔	+5	↔	+3.3	↔	+5	↔	+5	↔	+3.3
Gnd	↔	Gnd	↔	Gnd	↔	Gnd	↔	Gnd	↔	Gnd
PB4	↔	PA2	↔	PB4	↔	PA2	↔	PA2	↔	PB4
PB5	↔	PA3	↔	PB5	↔	PA3	↔	PA3	↔	PB5
PH0	↔	PA4	↔	PH0	↔	PA4	↔	PA4	↔	PH0
PH1	↔	PA5	↔	PH1	↔	PA5	↔	PA5	↔	PH1
PH2	↔	PE0	↔	PH2	↔	PE0	↔	PE0	↔	PH2
PH3	↔	PE1	↔	PH3	↔	PE1	↔	PE1	↔	PH3
PC7	↔	PE2	↔	PC7	↔	PE2	↔	PE2	↔	PC7
PC6	↔	PE3	↔	PC6	↔	PE3	↔	PE3	↔	PC6
PC5	↔	PE4	↔	PC5	↔	PE4	↔	PE4	↔	PC5
PC4	↔	PE5	↔	PC4	↔	PE5	↔	PE5	↔	PC4
PA6	↔	PK0	↔	PA6	↔	PK0	↔	PK0	↔	PA6
PA7	↔	PK1	↔	PA7	↔	PK1	↔	PK1	↔	PA7
PG1	↔	PK2	↔	PG1	↔	PK2	↔	PK2	↔	PG1
PG0	↔	PK3	↔	PG0	↔	PK3	↔	PK3	↔	PG0
PM3	↔	Vref	↔	PM3	↔	Vref	↔	Vref	↔	PM3
Gnd	↔	Gnd	↔	Gnd	↔	Gnd	↔	Gnd	↔	Gnd
PM2	↔	PD5	↔	PM2	↔	PD5	↔	PD5	↔	PM2
PM1	↔	PD4	↔	PM1	↔	PD4	↔	PD4	↔	PM1
PM0	↔	PD7	↔	PM0	↔	PD7	↔	PD7	↔	PM0
PL0	↔	PD6	↔	PL0	↔	PD6	↔	PD6	↔	PL0
PL1	↔	PD3	↔	PL1	↔	PD3	↔	PD3	↔	PL1
PL2	↔	PD1	↔	PL2	↔	PD1	↔	PD1	↔	PL2
PL3	↔	PD0	↔	PL3	↔	PD0	↔	PD0	↔	PL3
PQ0	↔	PD2	↔	PQ0	↔	PD2	↔	PD2	↔	PQ0
PQ1	↔	PP0	↔	PQ1	↔	PP0	↔	PP0	↔	PQ1
PQ2	↔	PP1	↔	PQ2	↔	PP1	↔	PP1	↔	PQ2
PQ3	↔	PB0	↔	PQ3	↔	PB0	↔	PB0	↔	PQ3
PK7	↔	PB1	↔	PK7	↔	PB1	↔	PB1	↔	PK7
Gnd	↔	Gnd	↔	Gnd	↔	Gnd	↔	Gnd	↔	Gnd
PK6	↔	PF4	↔	PK6	↔	PF4	↔	PF4	↔	PK6
PL4	↔	PF0	↔	PL4	↔	PF0	↔	PF0	↔	PL4
PB2	↔	PF1	↔	PB2	↔	PF1	↔	PF1	↔	PB2
PB3	↔	PF2	↔	PB3	↔	PF2	↔	PF2	↔	PB3
PP2	↔	PF3	↔	PP2	↔	PF3	↔	PF3	↔	PP2
PP3	↔	PA0	↔	PP3	↔	PA0	↔	PA0	↔	PP3
PK5	↔	PA1	↔	PK5	↔	PA1	↔	PA1	↔	PK5
PK4	↔	PP4	↔	PK4	↔	PP4	↔	PP4	↔	PK4
PL5	↔	PP5	↔	PL5	↔	PP5	↔	PP5	↔	PL5
PN4	↔	PJ0	↔	PN4	↔	PJ0	↔	PJ0	↔	PN4
PN5	↔	PJ1	↔	PN5	↔	PJ1	↔	PJ1	↔	PN5
PN0	↔	PM7	↔	PN0	↔	PM7	↔	PM7	↔	PN0
PN1	↔	PM6	↔	PN1	↔	PM6	↔	PM6	↔	PN1
PN2	↔	PM5	↔	PN2	↔	PM5	↔	PM5	↔	PN2
PN3	↔	PM4	↔	PN3	↔	PM4	↔	PM4	↔	PN3
PQ4	↔	Reset	↔	PQ4	↔	Reset	↔	Reset	↔	PQ4
wake	↔	Gnd	↔	wake	↔	Gnd	↔	Gnd	↔	wake
+5	↔	+3.3	↔	+5	↔	+3.3	↔	+3.3	↔	+5
97		98		97		98		97		98