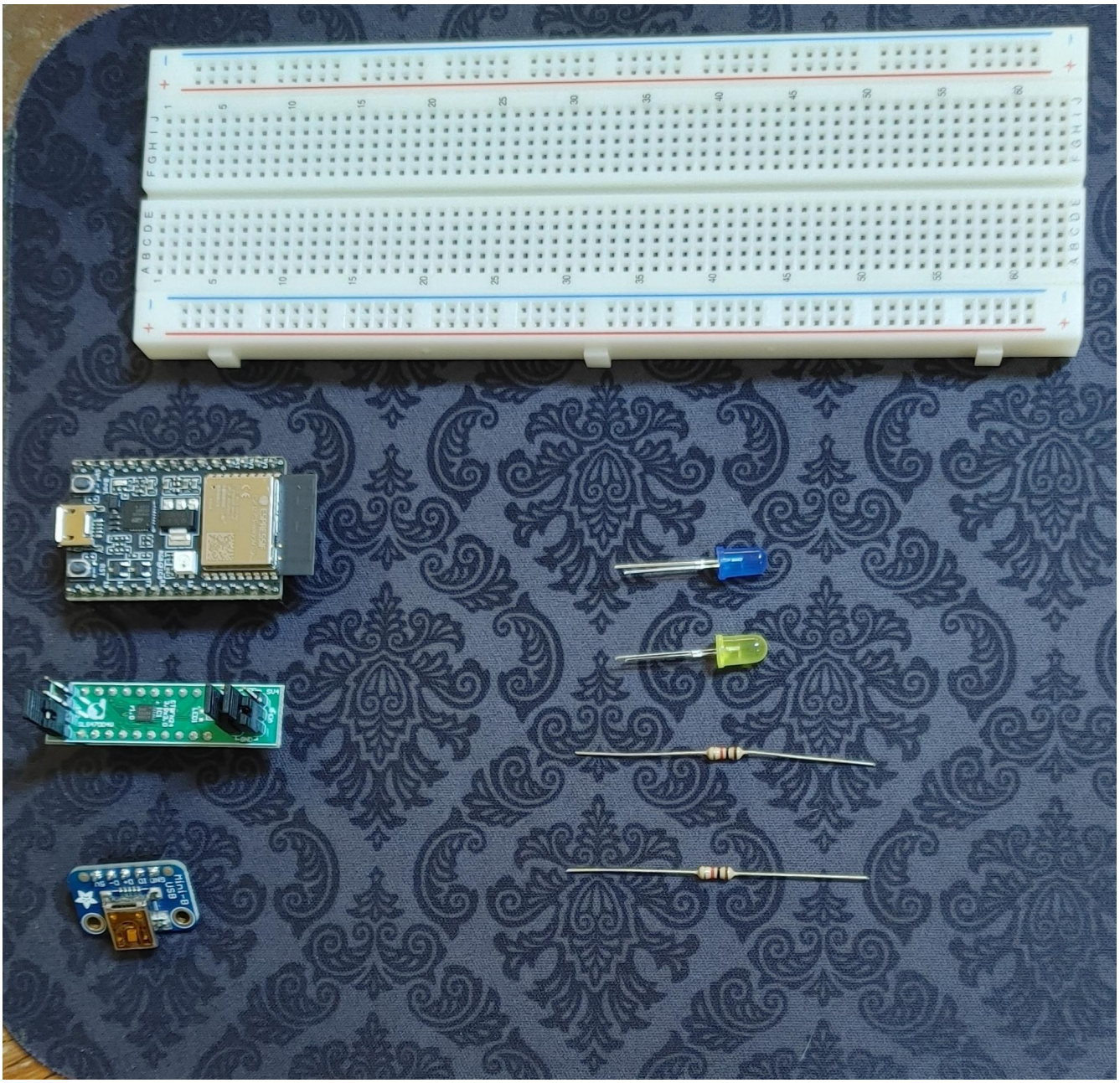
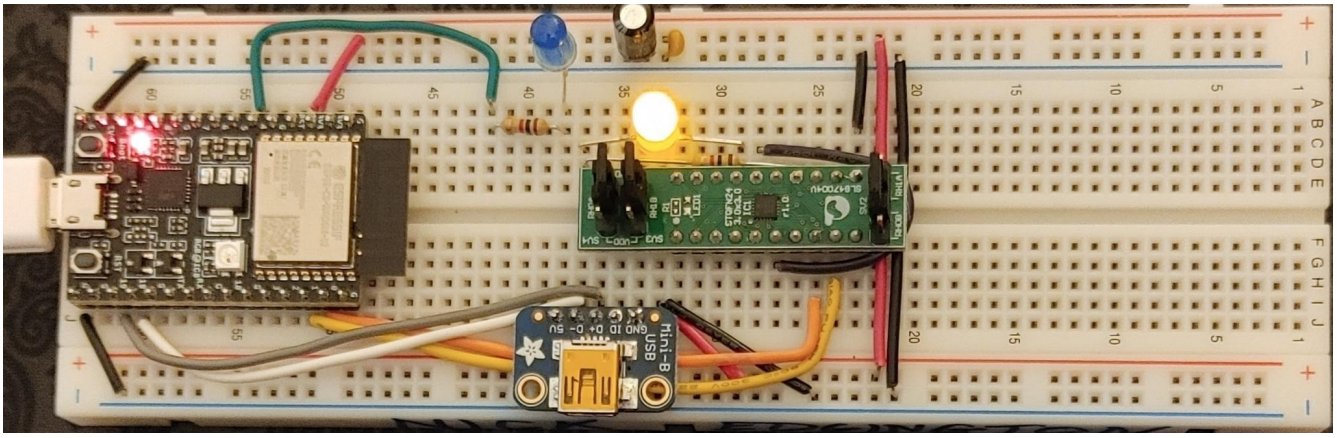
Rev 2 Edger white board wiring rev 0.54 11082022



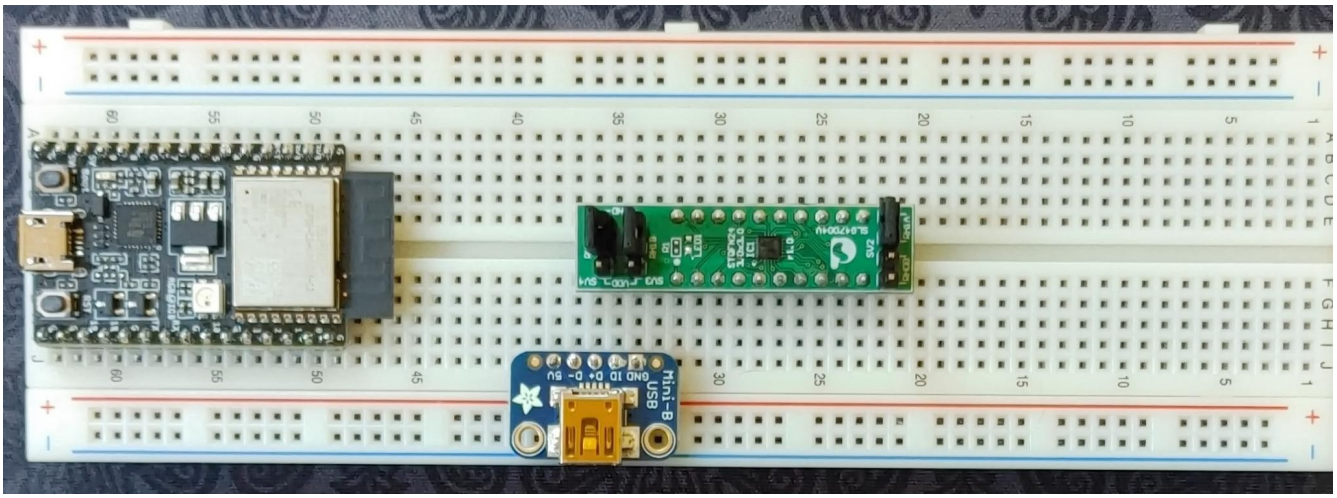
CAPACITORS MISSING WIRES MISSING

Examine all the photos first to understand part orientations. Notice how wires are dressed out away from the Espressif board thing on left side)so the unused breadboard positions can be accessed with jumper wires.

Completed board:



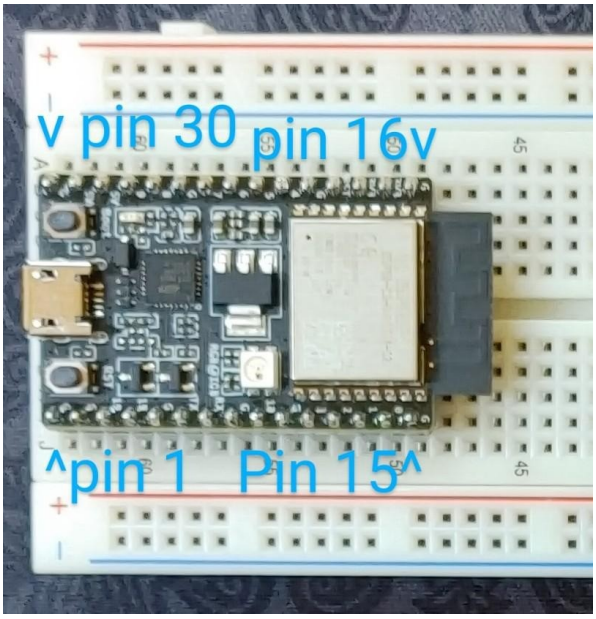
Step One: Where things go on the solderless breadboard. Notice the red line on the top, blue on the bottom. Parts must be placed exactly. Have your neighbor double check your placement.



Parts Placement:

Breadboard column number	Device	Pin number
63	Espressif ESP32-C3-DEVKITC-02	1
38	Adafruit 1764 JTAG USB breakout	“5V”
32	Renesas ForgeFPGA SLG47004V-DIP	1
40	Blue LED	Anode (long lead)
40	1k resistor	-
37	Yellow LED	Anode (long lead)
37	1K resistor	-

Step two: Wiring related to Espressif ESP32-C3-DEVKITC-02 board PHYSICAL PINS:

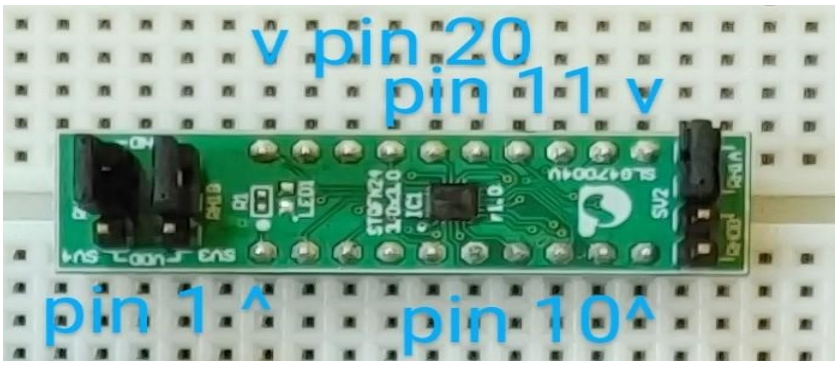


Length (cm)	Color	From	To
2.5	Blk	30 “G”	Breadboard ground rail (blue line)
2.5	Red	18 “3.3V”	Breadboard power rail (red line)
8.0	Org	14 “0”	FPGA physical pin 8 “SCL”
8.1	Ylw	13 “1”	FPGA physcial pin 9 “SDA”
7.7	Wht	4 “18” JTAG	JTAG USB D- (Adafruit breakout)
8.3	Gry	5 “19”	JTAG USB D+ (Adafruit)
2.5	Blk	15 “G”	Ground rail (blue line)
6.3	Grn	21 “4”	Breadboard column 42

Step three: Wiring related to the Adafruit 1764 USB Breakout board:

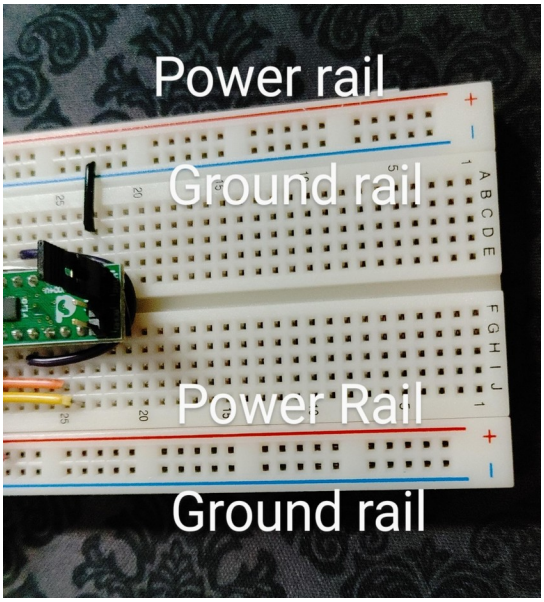
5.0	Blk	Ground rail (blue line) to JTAG USB Gnd

Step 4: Wiring related to Renesas ForgeFPGA SLG47004V-DIP PHYSICAL PINS:



2.5	Red	Power rail (red line) to FPGA pin 1 “VDD”
2.5	Blk	Ground rail (blue line) to FPGA pin 11 “GND”
5.9	Vio	FPGA pin 6 “GPIO 15” to FPGA pin 16 “GPIO 16”
-	resistor	FPGA pin 11 “GND” to breadboard column 37
-	ylw LED LONG	FPGA pin 17 “GPIO 18” to (short) breadboard column 37

Step 5: Wires related to solderless breadboard:



5.8	Red	Power rail 1 (red line) to	Power rail 2 (red line)
5.8	Blk	Ground rail 1 (blue line) to	Ground rail 2 (blue line)
-	Big black cap	Power rail 1 to	Ground rail 1
-	Little ylw cap	Power rail 1 to	Ground rail 1
-	Blu LED LONG	breadboard column 38 to	Breadboard ground rail 1 (blue line)
-	resistor	breadboard column 38 to	Breadboard column 42