

Explorer Board HAT Assembly

Patrick Kelly
Jack Kelly
Jan 18, 2018

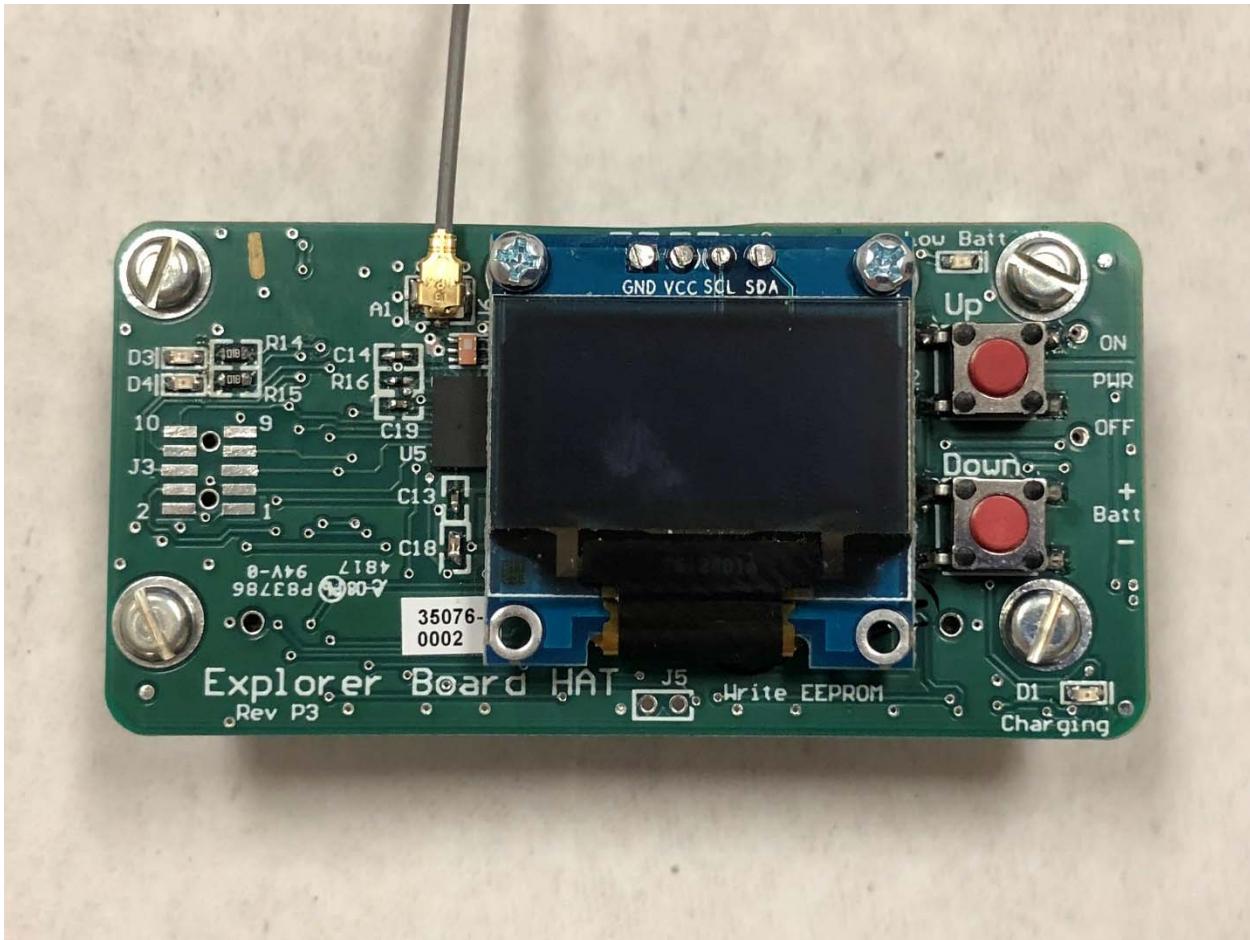
Change History

Rev	Date	Comments
0.1	Jan 18, 2018	Initial Draft

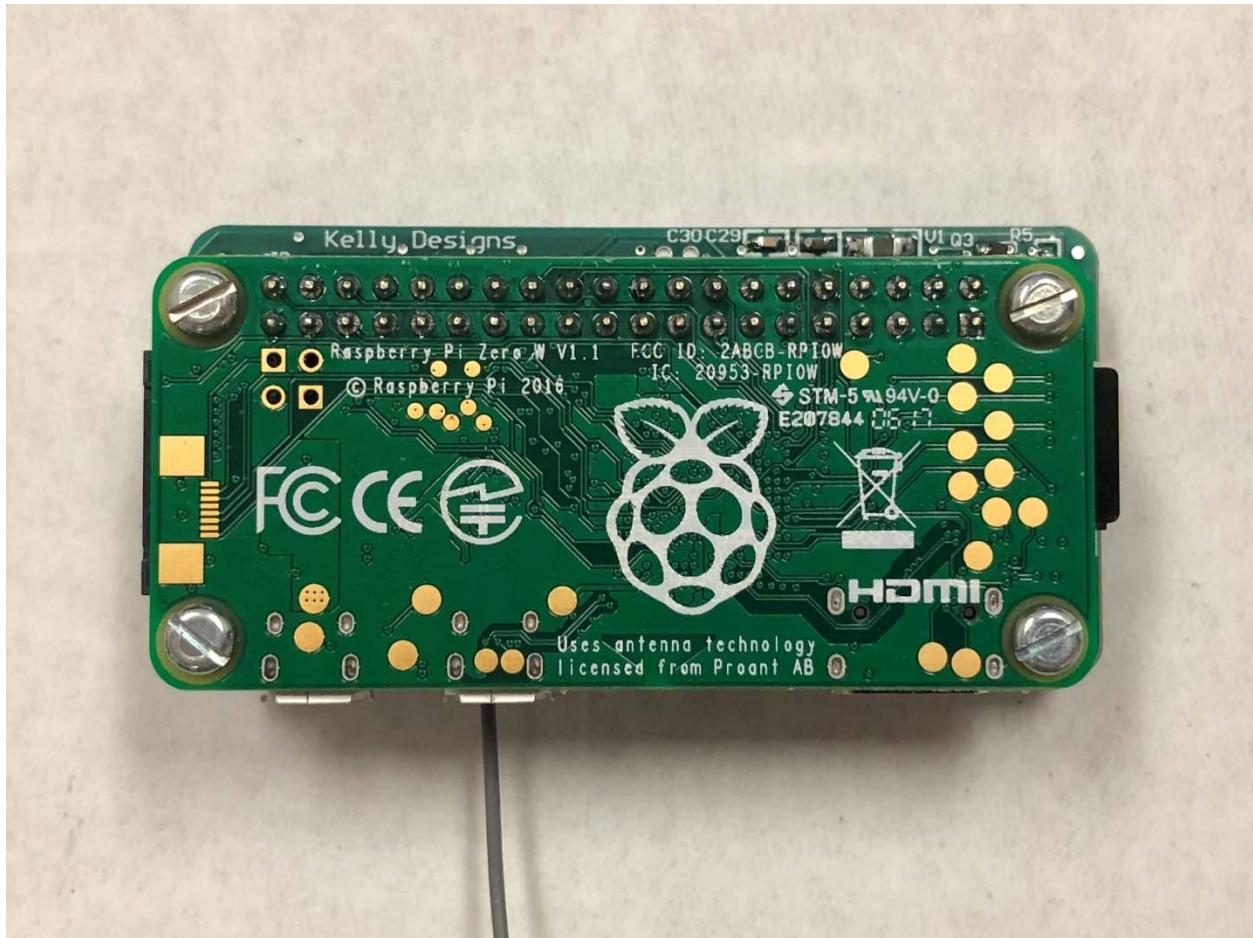
Explorer Board HAT Assembly

Rev 0.1

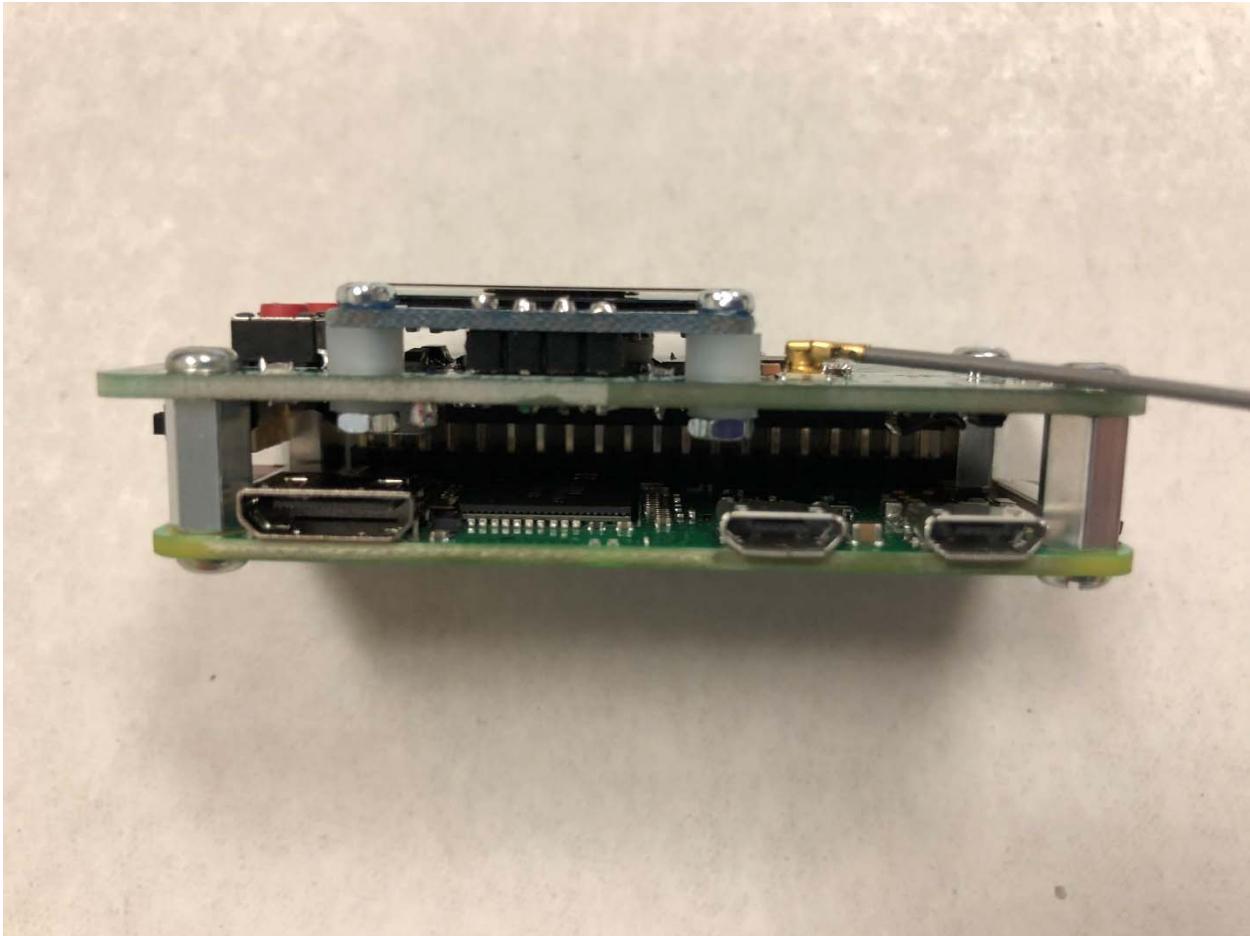
Picture of Raspberry Pi Zero W with Explorer Board HAT
Top View



Picture of Raspberry Pi Zero W with Explorer Board HAT
Bottom View



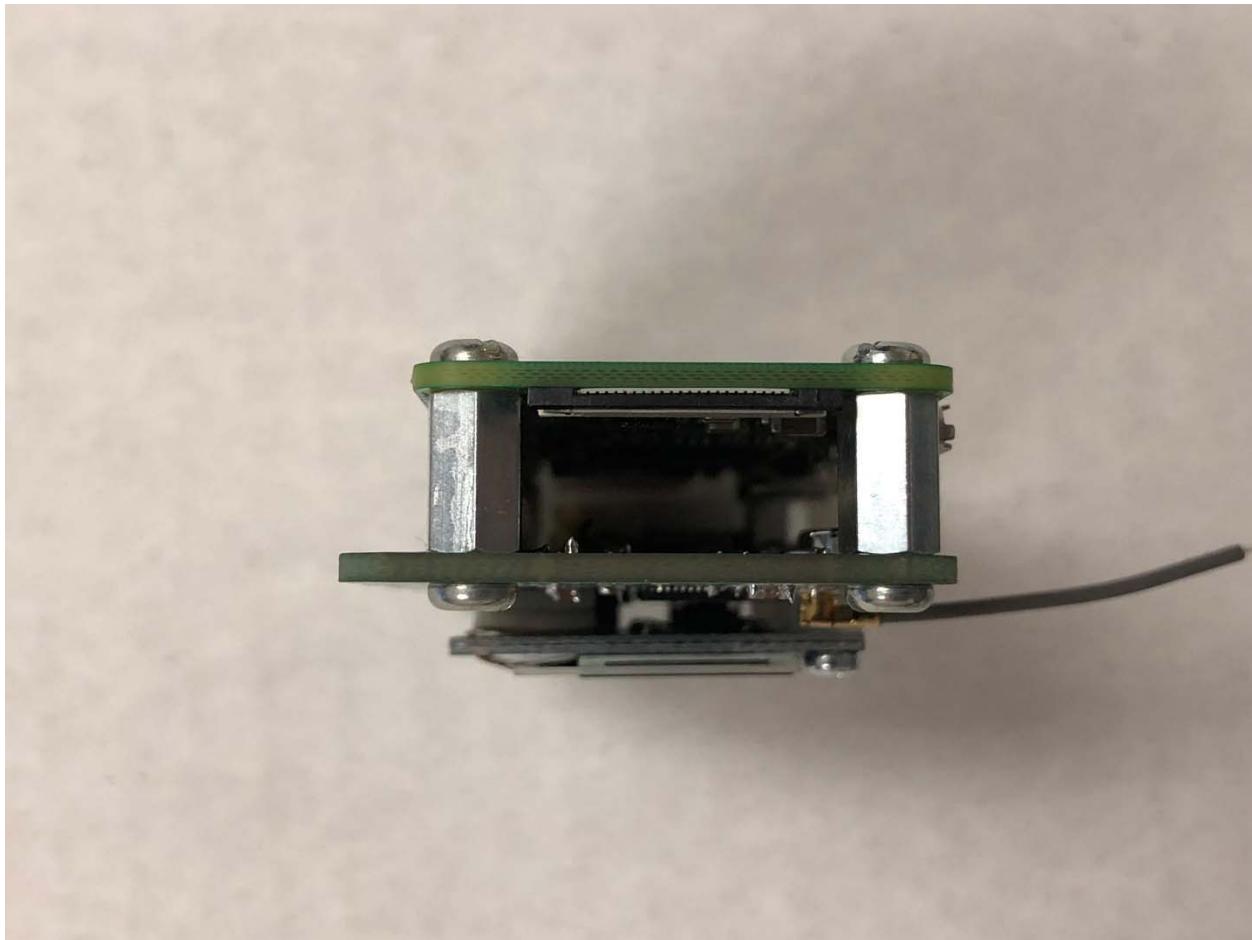
Picture of Raspberry Pi Zero W with Explorer Board HAT
Side Top View



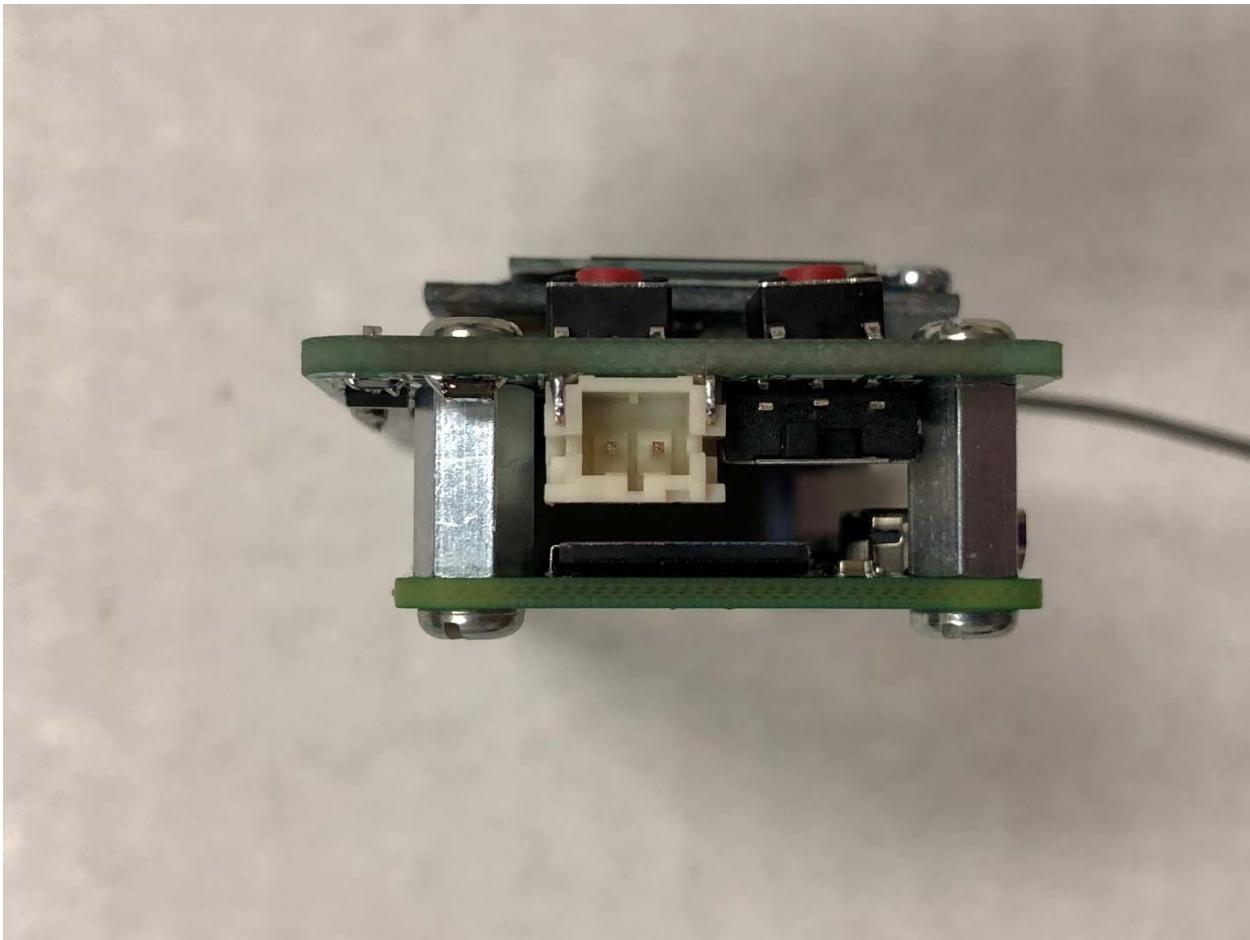
Picture of Raspberry Pi Zero W with Explorer Board HAT
Side Bottom View



Picture of Raspberry Pi Zero W with Explorer Board HAT
End View



Picture of Raspberry Pi Zero W with Explorer Board HAT
Other End View



Mounting Display to Explorer Board HAT

Step 1



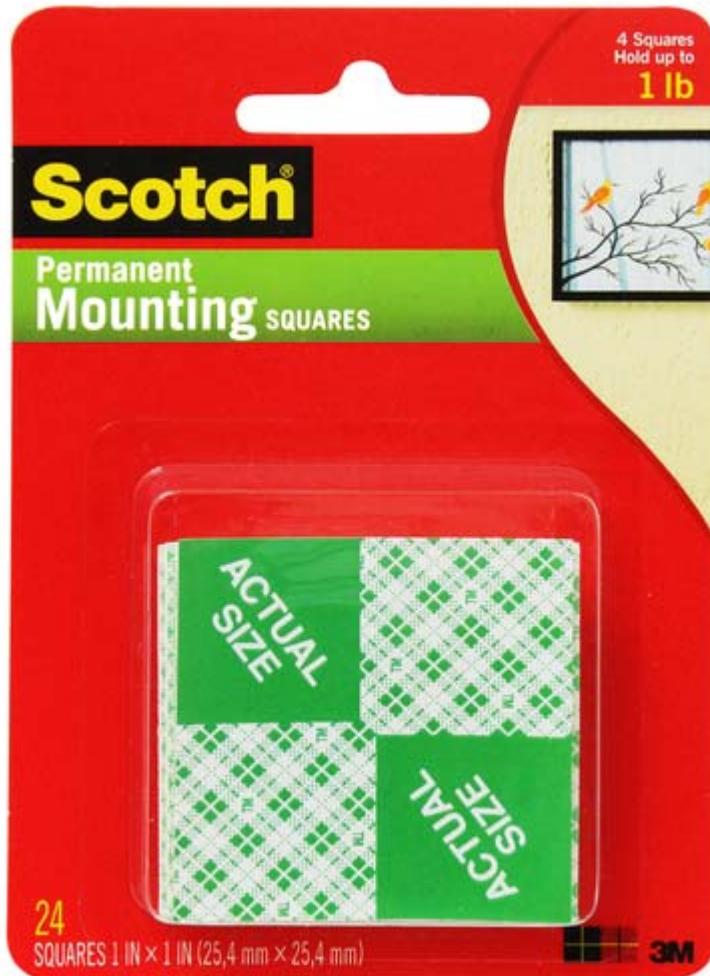
1. If you have the above display then: install R28 and R31, do not install R29 and R30
Res 0 Ohm 0402



2. If you have the above display then: install R29 and R30, do not install R28 and R31
Res 0 Ohm 0402

Mounting Display to Explorer Board HAT

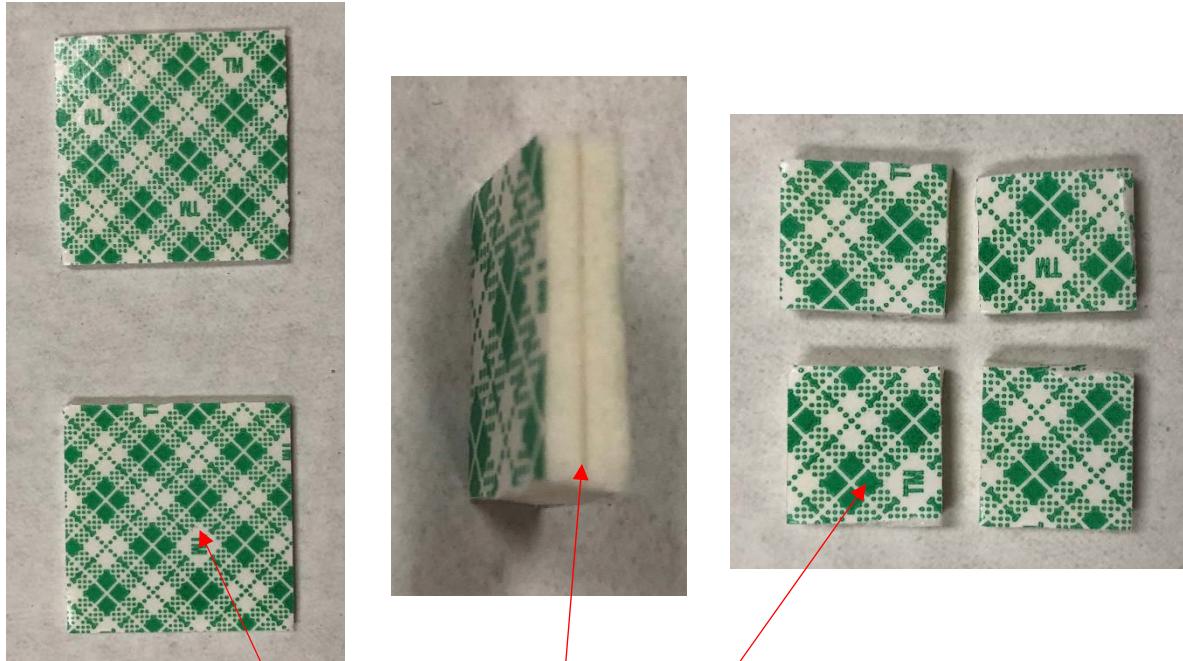
Step 2



1. Use these to mount the Display

Mounting Display to Explorer Board HAT

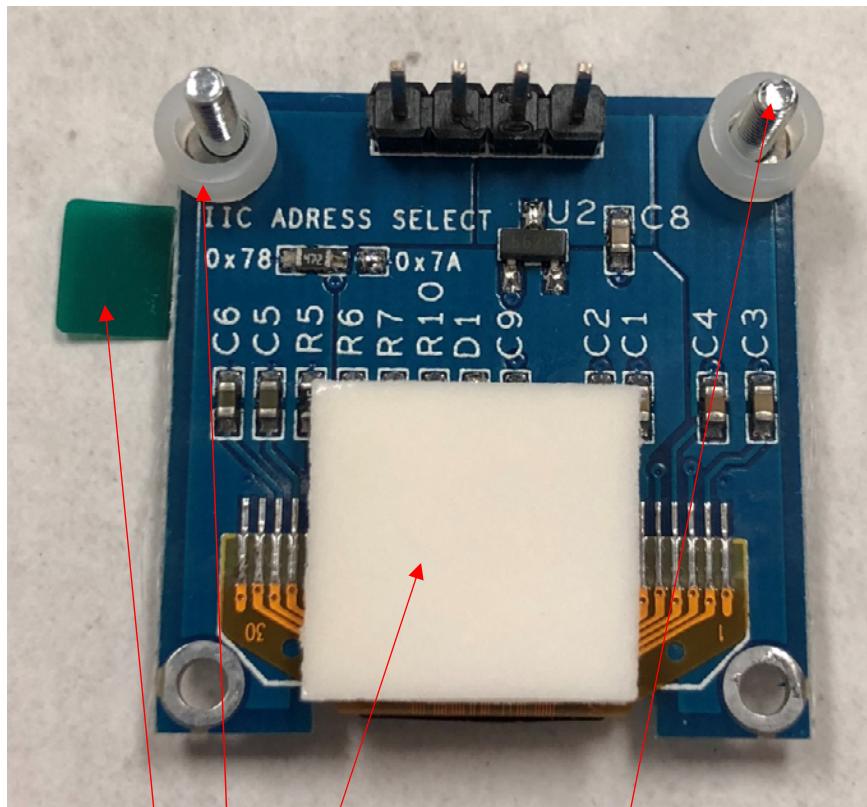
Step 3



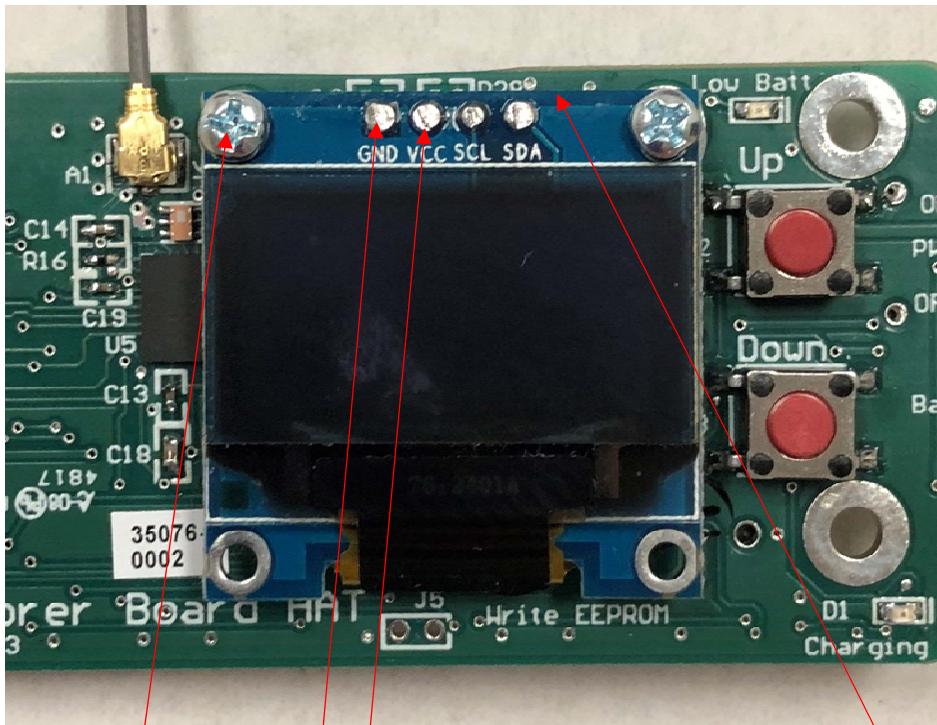
1. Stick two 1-inch squares together back to back.
2. Then cut the two stacked 1-inch squares in quarters.

Mounting Display to Explorer Board HAT

Step 4



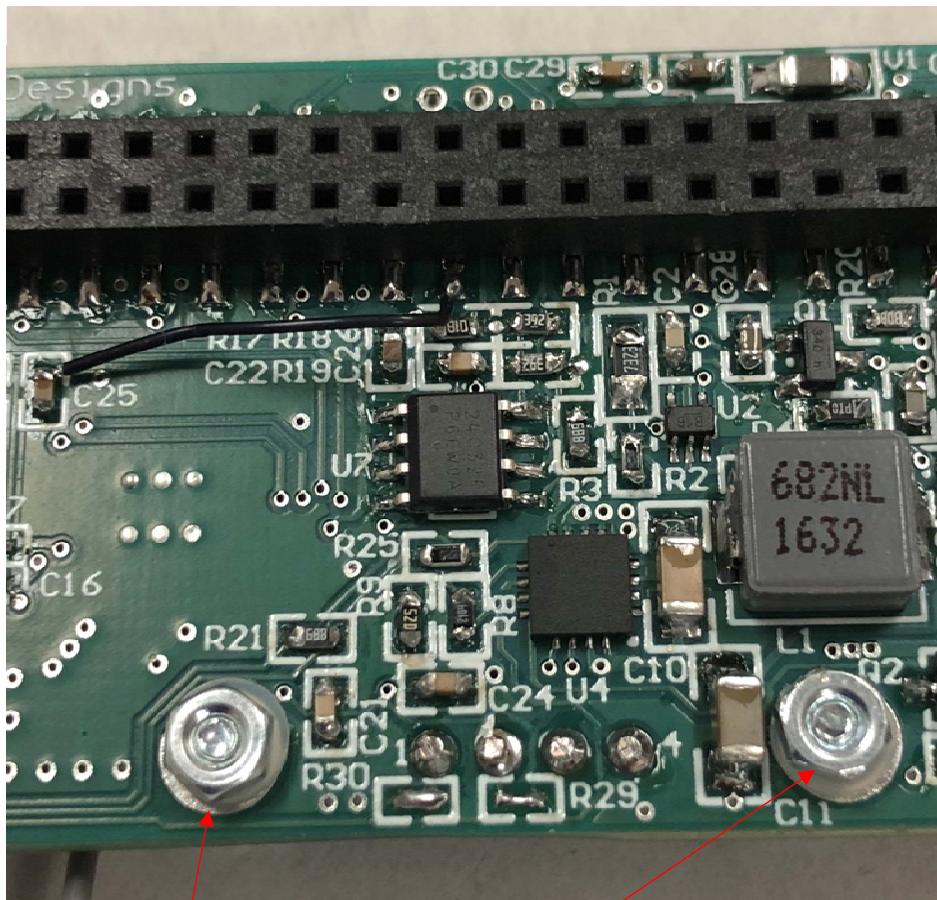
1. Remove the green protecting paper from the mounting squares.
2. Stick quartered cut mounting square on the backside of the Display.
3. Place the two 3 mm nylon standoffs and two M2 x 8 screws into the top two holes of the Display.
4. Display screen protection cover.

Mounting Display to Explorer Board HAT**Step 5**

1. As the two screws and four pins go into the PCB, line the Display horizontal to the PCB.
2. Press the Display to the PCB.
3. See sheet 14
4. Solder the four Display pins.
5. Cut the four Display pins flush. Both top and bottom sides.
6. Remove the Display screen protection cover.

Mounting Display to Explorer Board HAT

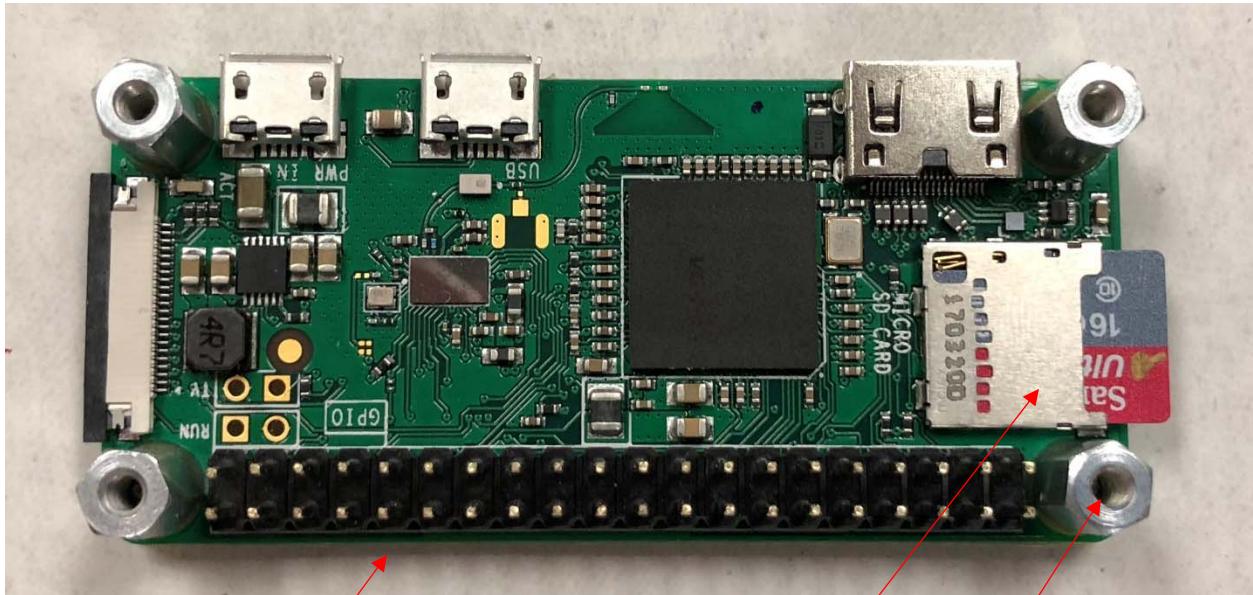
Step 6



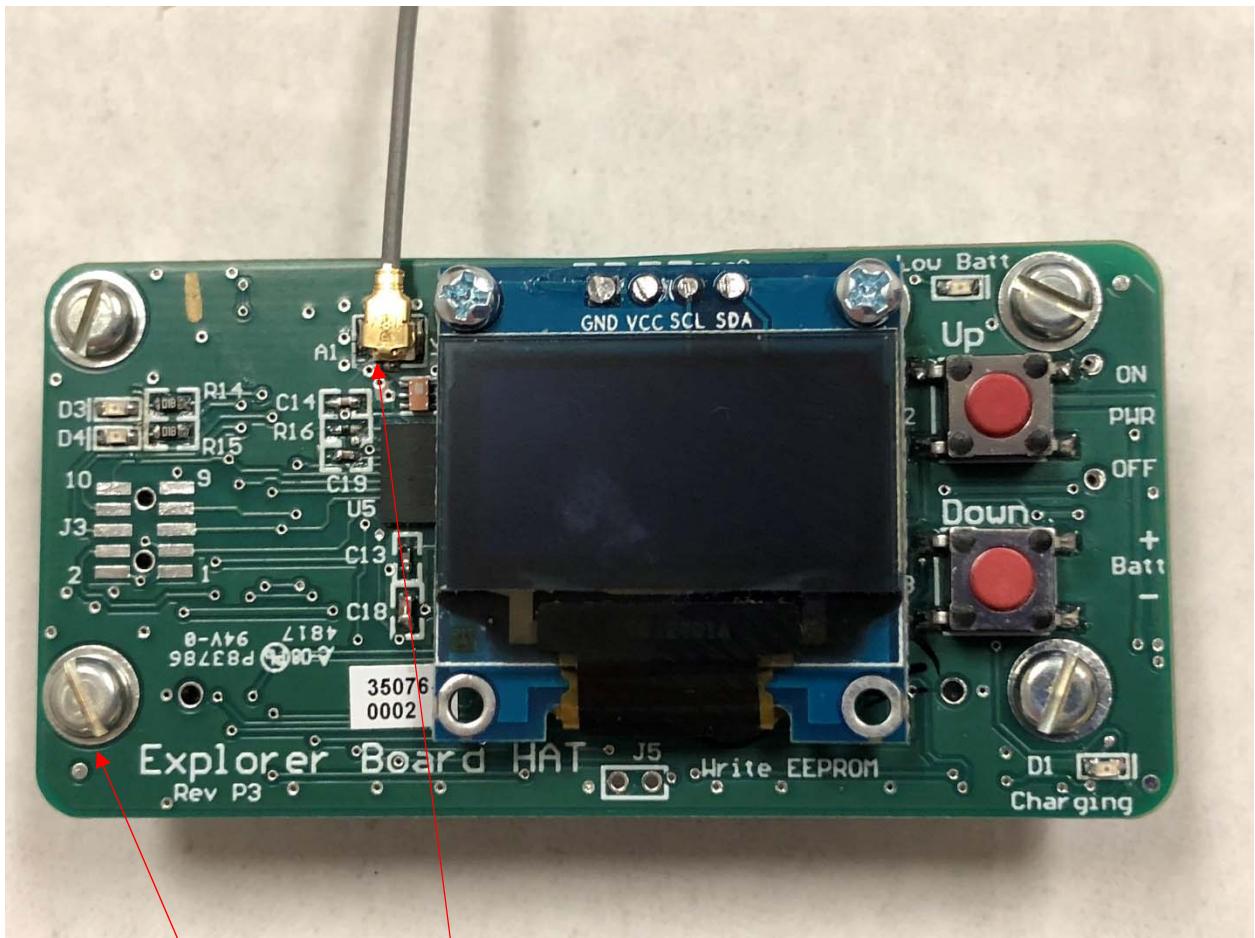
1. Use two nylon washers and two M2 nuts to secure the Display.
2. Go back to sheet 13 number 4

Mounting Raspberry Pi Zero W to Explorer Board HAT

Step 1



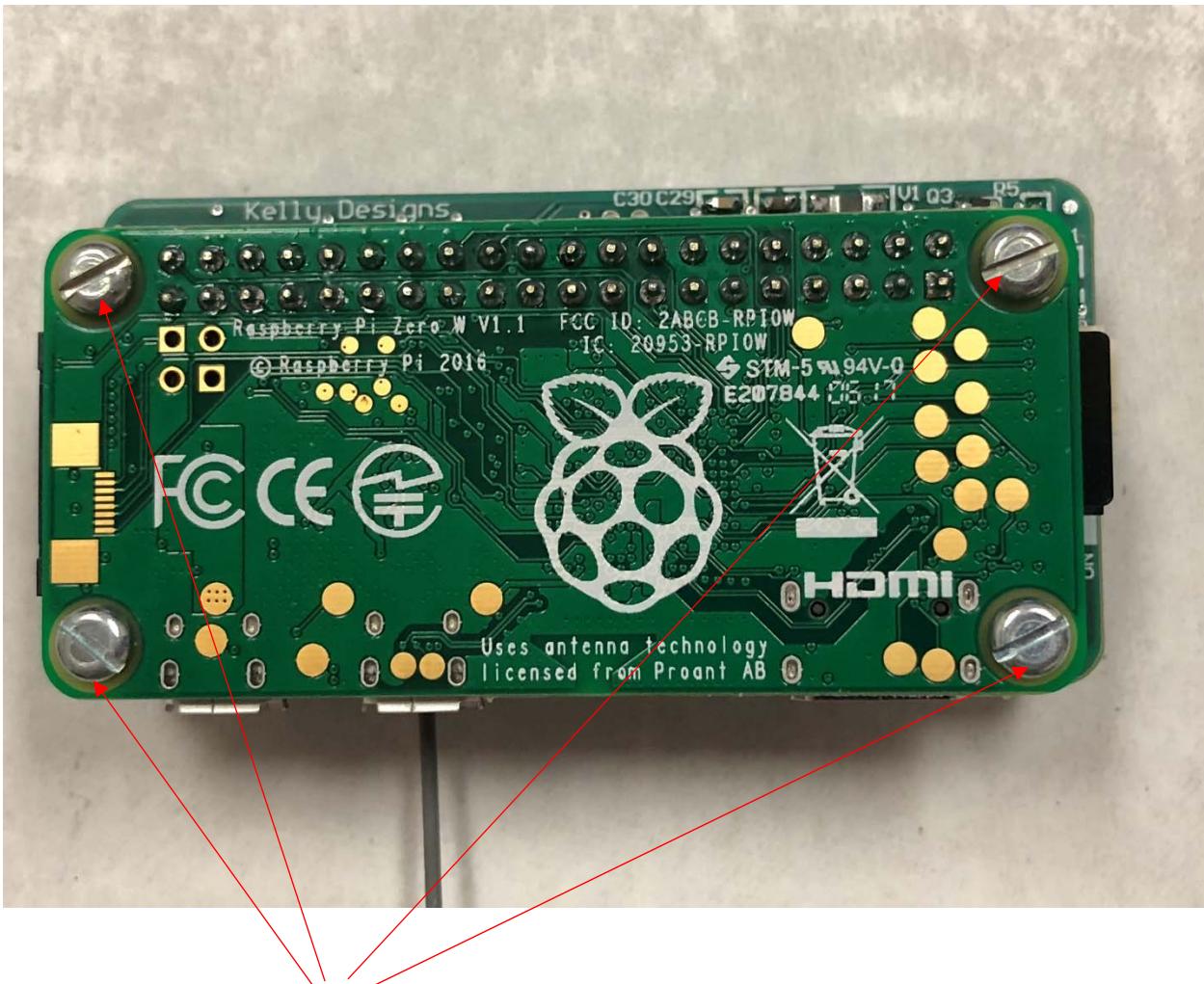
1. Solder the 40-pin header on Raspberry Pi Zero W.
2. Insert an imaged Micro SD Card in “Micro SD Card connector”
3. Using four M2.5 x 4 mm screws, loosely screw the four 9 mm standoffs to the PCB

Mounting Raspberry Pi Zero W to Explorer Board HAT**Step 2**

1. Plug the Raspberry Pi Zero W to the Explorer Board HAT using the 40-pin header.
2. Using four M2.5 x 4 mm screws, loosely screw to the four 9 mm standoffs to the PCB
3. Tighten the four M2.5 x 4 screws.
4. Plug the wire antenna into the A1 connector.

Mounting Raspberry Pi Zero W to Explorer Board HAT

Step 3



1. Tighten the four M2.5 x 4 screws.

Programming Raspberry Pi Zero W and Explorer Board HAT

Step 3

1. Program the TI chip (CC1110F32RHHT) using a Bit Banging program.
2. Program the On Semi EEPROM chip (CAT24C32WI-G) to load the HAT configuration data.