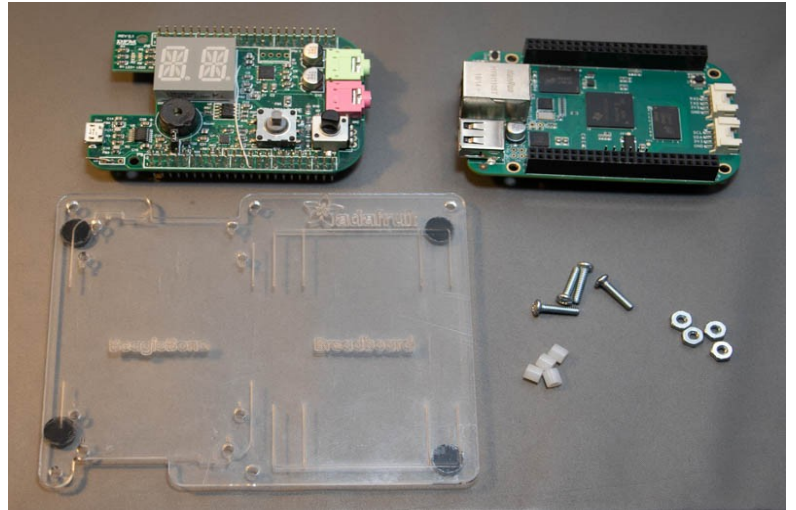# Assembly Guide for BeagleBone, Zen and Ada Fruit Mounting Plate

Parts Needed
- Zen cape (top left; may be green or red)
- BeagleBone Green (BBG) (top right)
- Mounting plate (from Ada Fruit)
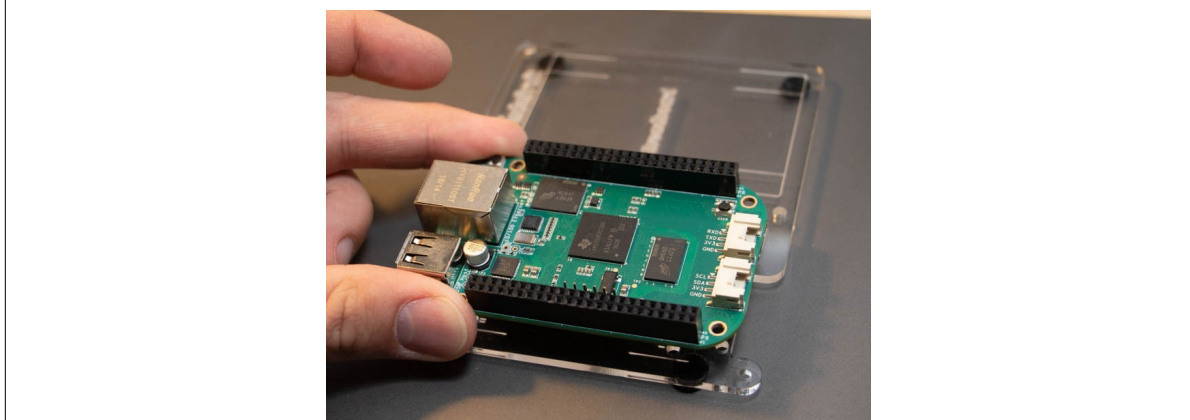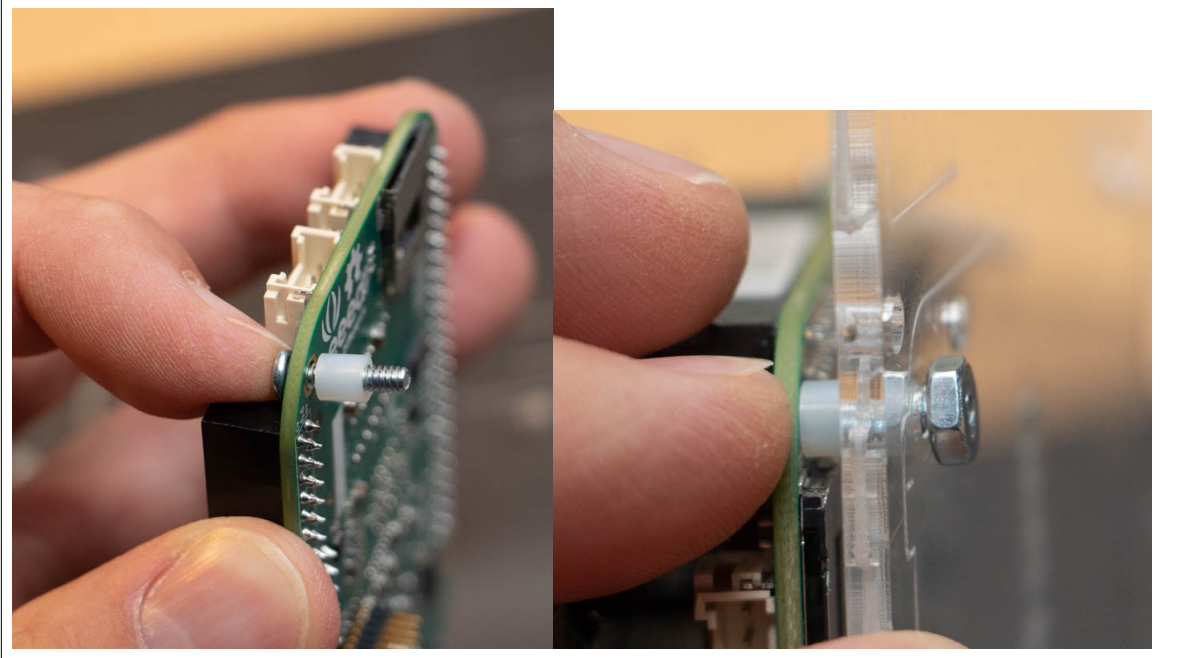- 4x plastic stand-offs, 4x nuts, 4x bolts

Directions

1. Peel the thin plastic film (may be clear or brown) off the back of the mounting plate. May already be removed.
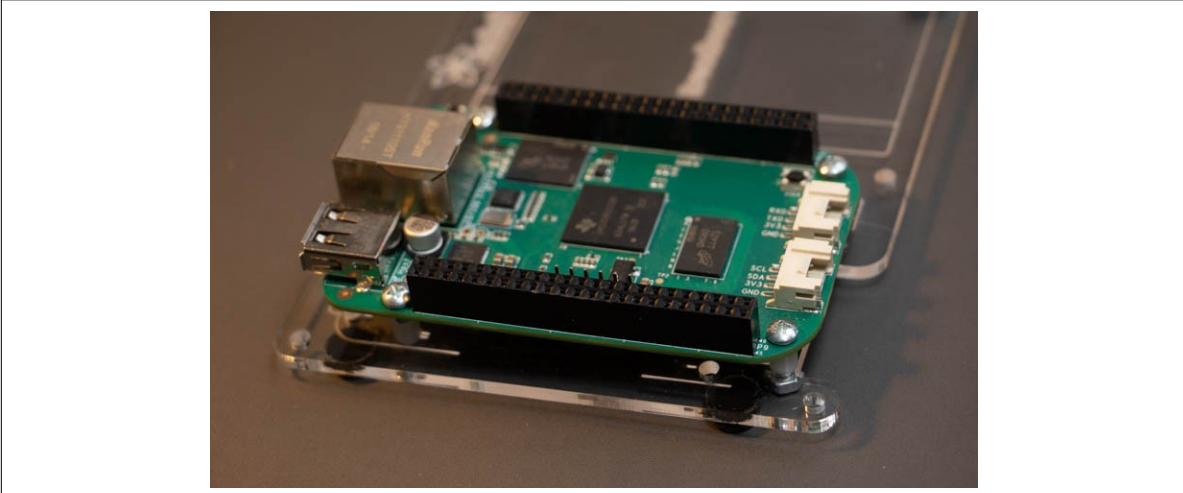

2. Layout BBG over mounting plate to identify desired orientation and correct mounting holes.

3. Insert bolt through BBG from top. Press your finger on the top of the bolt and slide the plastic standoff on bottom. Hold screw horizontally and then move plastic mounting plate into position over bolt and lightly tighten nut onto bolt. **Leave nut very loose so you have room to work with other three bolts!**
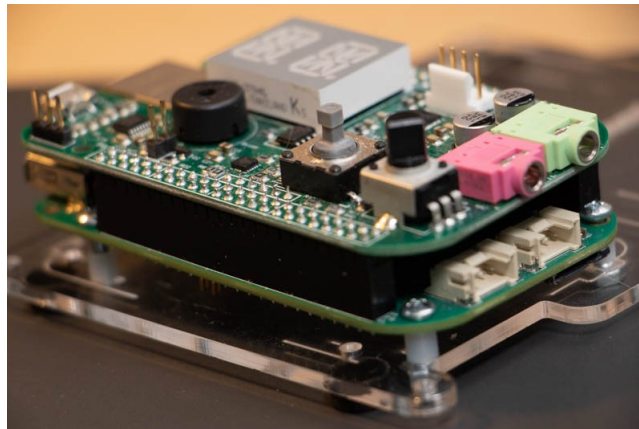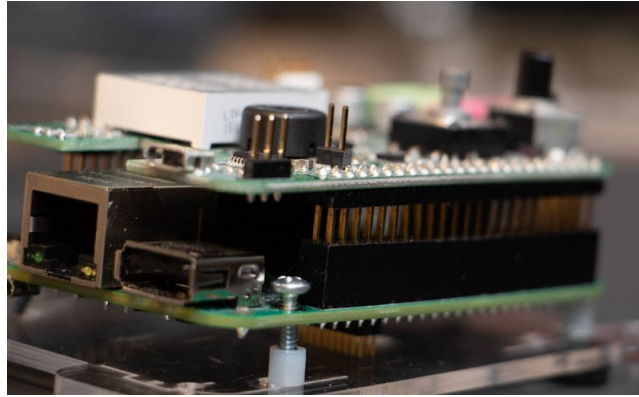

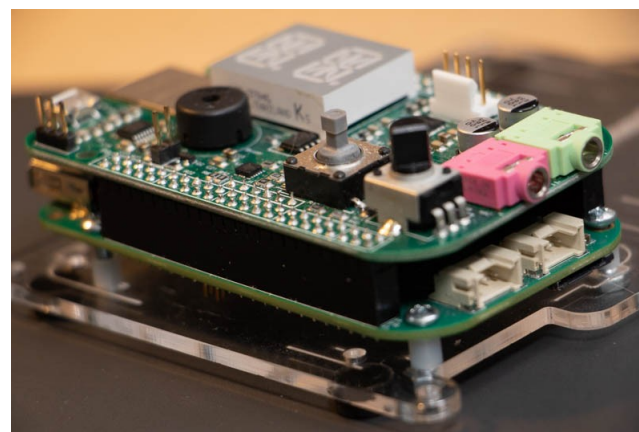4. Repeat for remaining 3 bolts, then tighten lightly each.

5. Affix stick-on rubber feet in corners on bottom of the mounting plate. Feet may be clear or black.
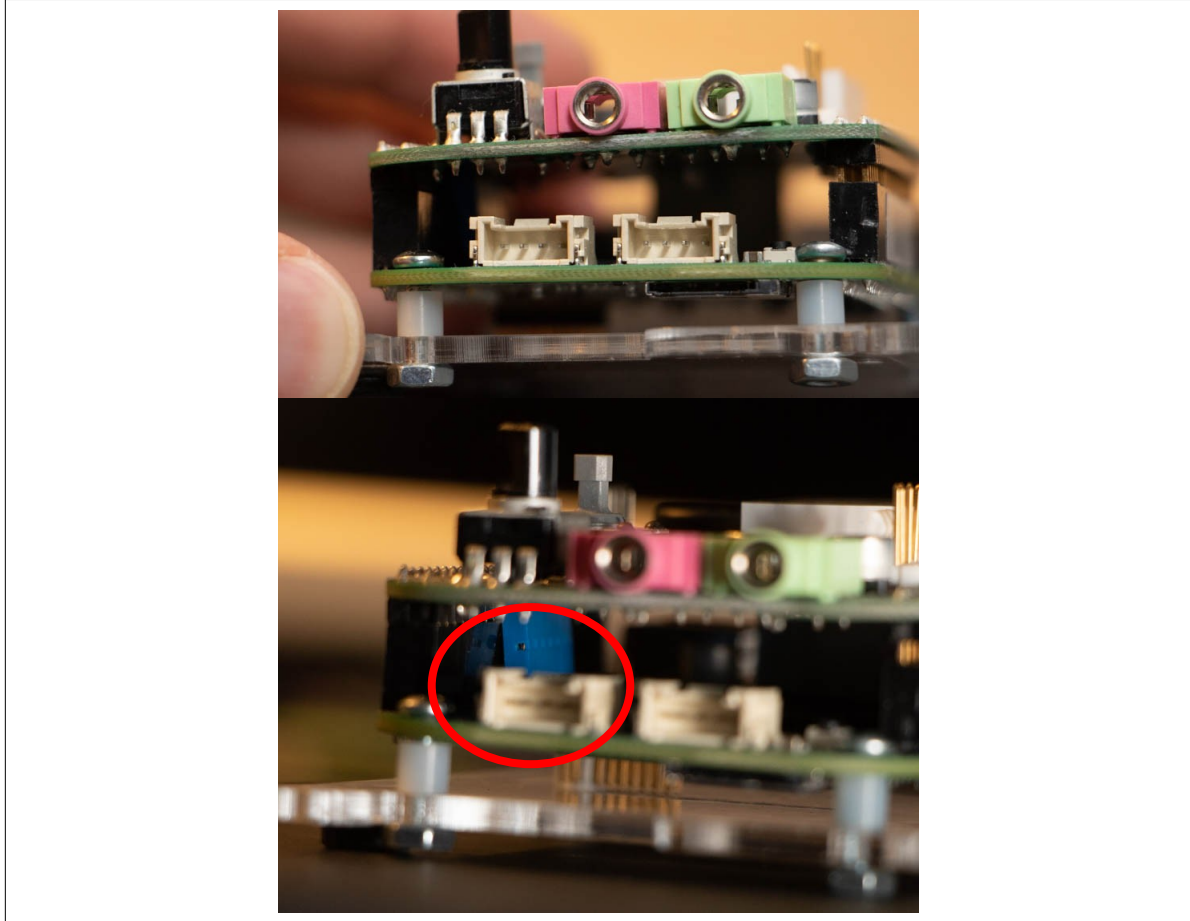
6. Attach the Zen cape by carefully lining up the pins with the large P8 and P9 headers. Ensure all pins line up correctly. Then double check that the pins on the underside of the Zen cape correctly line up with the blue socket on the BeagleBone. Then push down firmly on the Zen cape to have **all the pins slide in**. You may need to wiggle it a little by pushing a little at one end and then the other.

7. Ensure the Zen cape is fully seated on the BBG. **You should at most ~1mm of the Zen cape's header pins once fully inserted into the P8 and P9 headers.**

8. If the Zen cape is not fully seated on the BBG, you may see see some part of the pins in the P8 or P9 header, as shown on the right-hand side of the top image. Also look between the boards and ensure that the blue serial header on the Zen cape is connecting to the serial header from the BBG (bottom image). If there is a problem, see the instructor for help reseating the board.

9. If desired, stick on 1/2 size breadboard onto other half of mounting plate.

10. When transporting the board, or when storing the board, place the assembled system back into the anti-static bag to protect.

   You should not need to take the Zen cape off the BeagleBone. Doing so has a high risk of bending pins on the Zen cape.

   If you must remove the Zen, you'll need to go around the boards slowly pulling them apart a little at a time, corner by corner, side by side. You'll slowly work the boards more and more apart. Finally, the pins will come free of the sockets. Be very careful not to pull unevenly and torque the Zen as it comes off the BeagleBone because this will likely bend the pins on the Zen.