

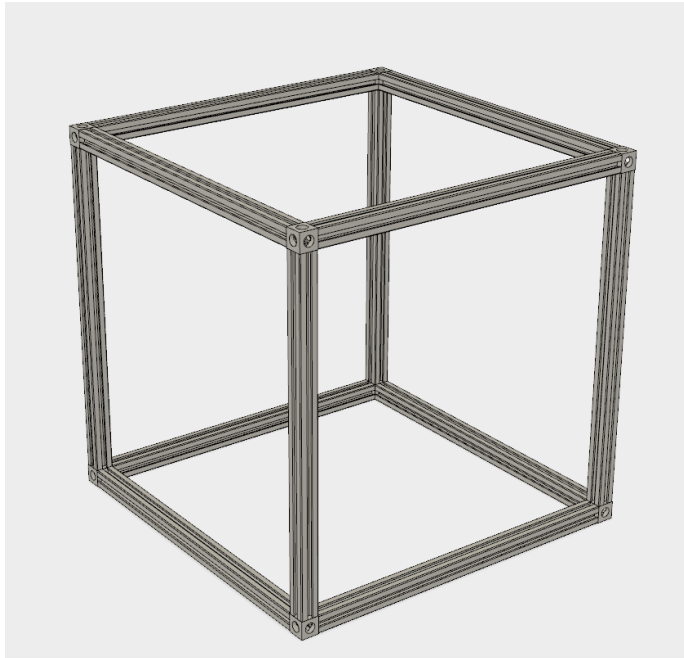


VORON B

The Manual

DRAFT

SECTION1 : FRAME



Items required:

- 370mm 2020 Aluminum extrusions
- Cube Corner Connectors
- Self Tapping Torx Screws
- T Slot Nuts (M5)

We'll be building 2 squares and joining them together. Each length of 2020 extrusion needs to have the T nuts inserted during indicated step as they will be sealed inside the structure afterwards. For the purpose of preserving sanity let's label these as follows:

TR Top Right
TL Top Left
TF Top Front
TB Top Back

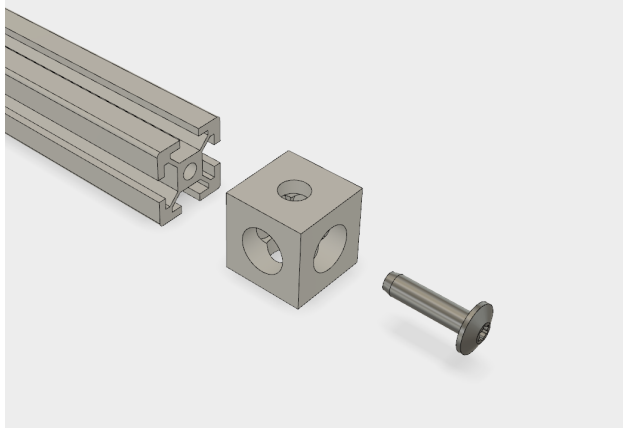
Bottom frame pieces are labeled in a similar way.

Verticals are labeled as follows:

FR Front Right
FL Front Left
RR Rear Right (to avoid confusion with Bottom Right)
RL Rear Left

TIP: Put a piece of tape with a label on the top of each extrusion for easier orientation. Put the tape on the front of the verticals.

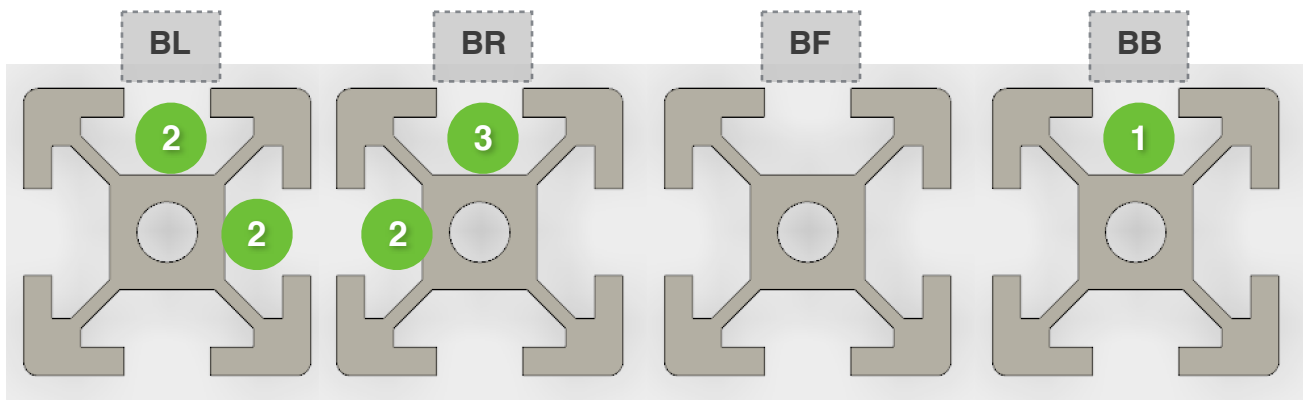
Step 1: Pre-assemble 4 lengths of bottom square



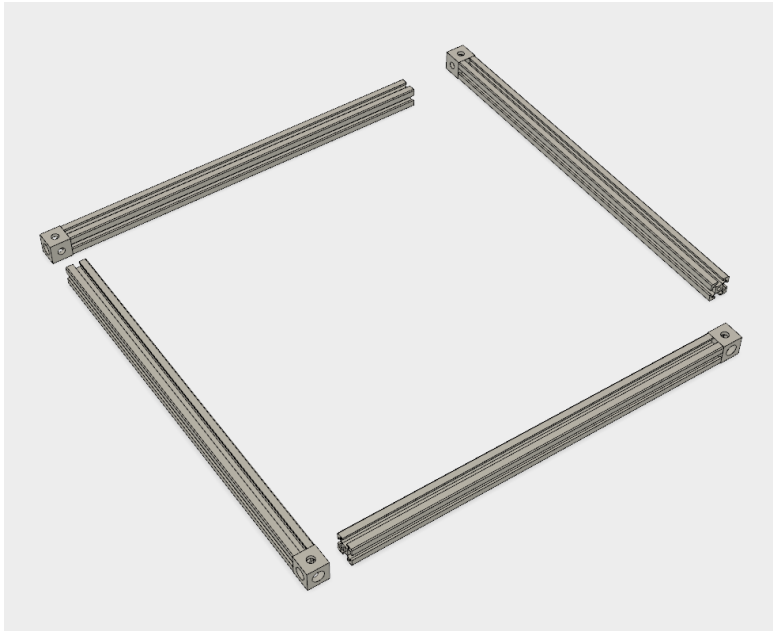
Start with the bottom square. Take one of the extrusions and secure a corner connector on it using the self tapping screw. Make sure the smaller hole on the cube is facing up. Tighten it slightly, and back it out 1/8 of a turn so it can rotate. Repeat for the remaining 3 bottom extrusions.

Step 2: Insert bottom T nuts according to the diagram below:

↑TOP



Step 3: Join the 4 pieces into a square.

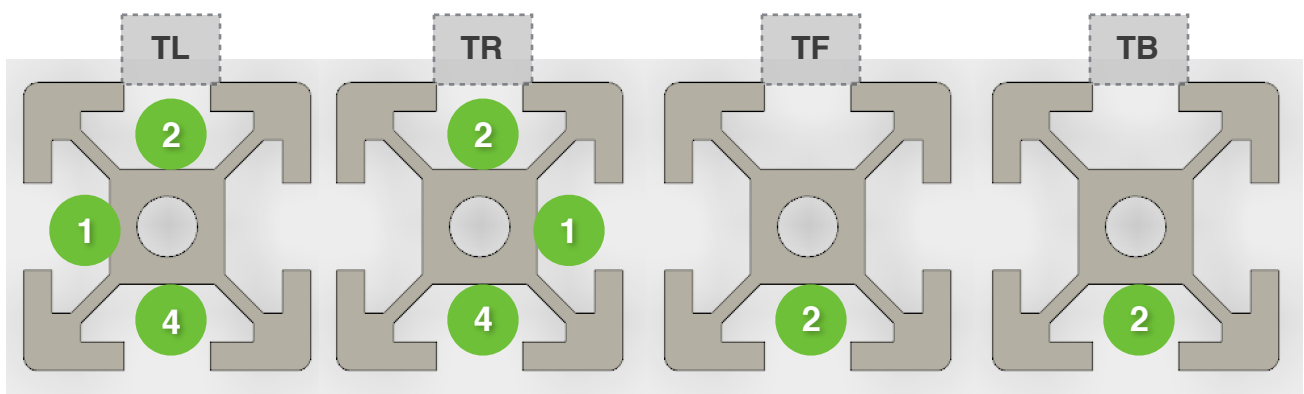


You'll have to apply some force to get the screws to go in all the way. It's a really tight fit inside the cube. Don't worry, it'll connect. Just go slow and make sure the screws are all the way in. You can then back them out 1/8 of a turn. Make sure you are applying ample thrust so the torx drive doesn't slip.

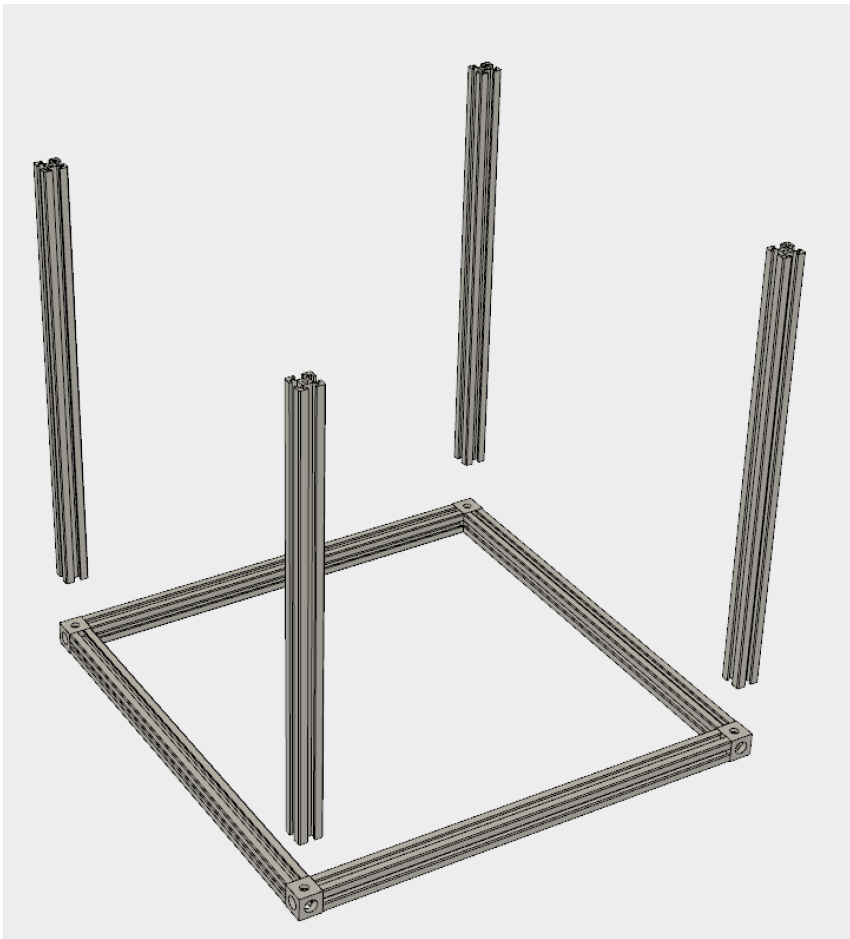
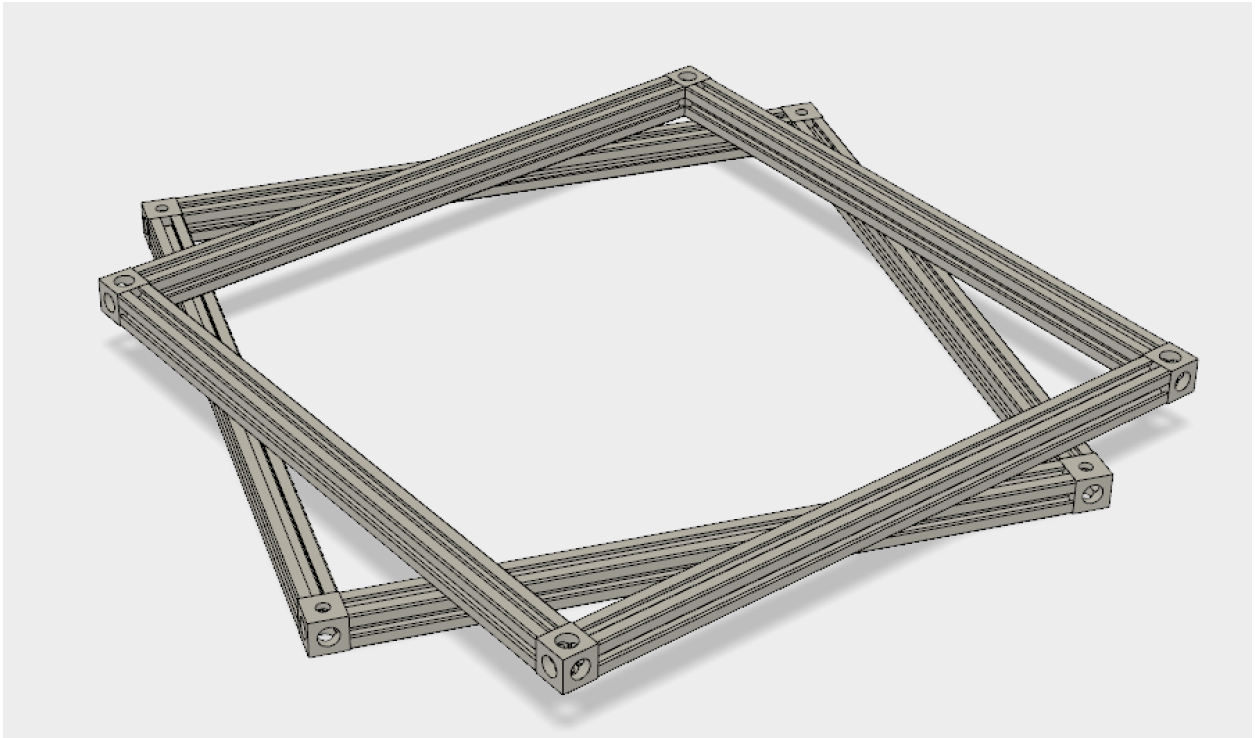
Find a flat surface, and applying pressure to the top of it, tighten all of the screws. This will ensure the square is flat (or flat enough).

Step 4: Repeat Step 1 for the top 4 extrusions, making sure the smaller holes on the cubes are facing the bottom this time. Then insert the T nuts according to the diagram below:

⬆️ TOP

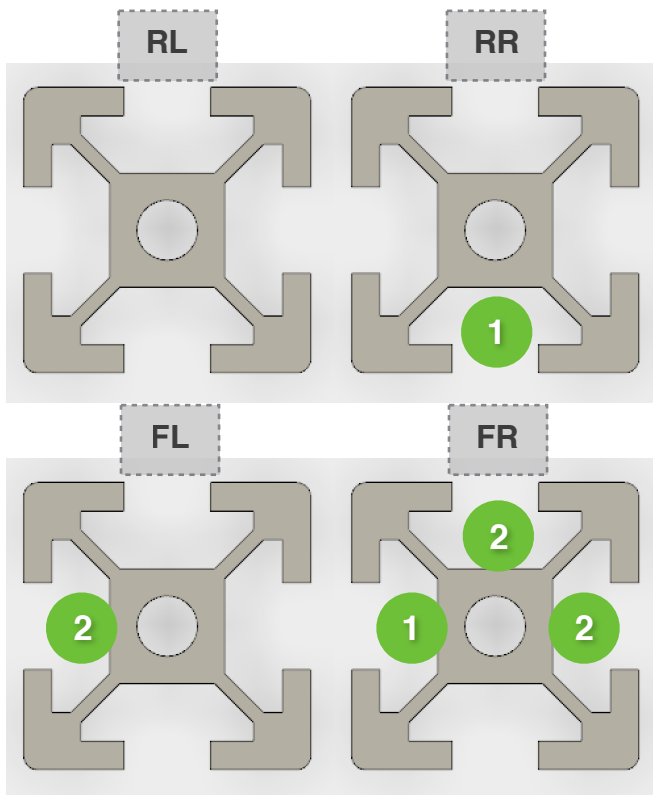


Step 5: Join the top rails same way you did the bottom ones. You should now have 2 squares full of T nuts.



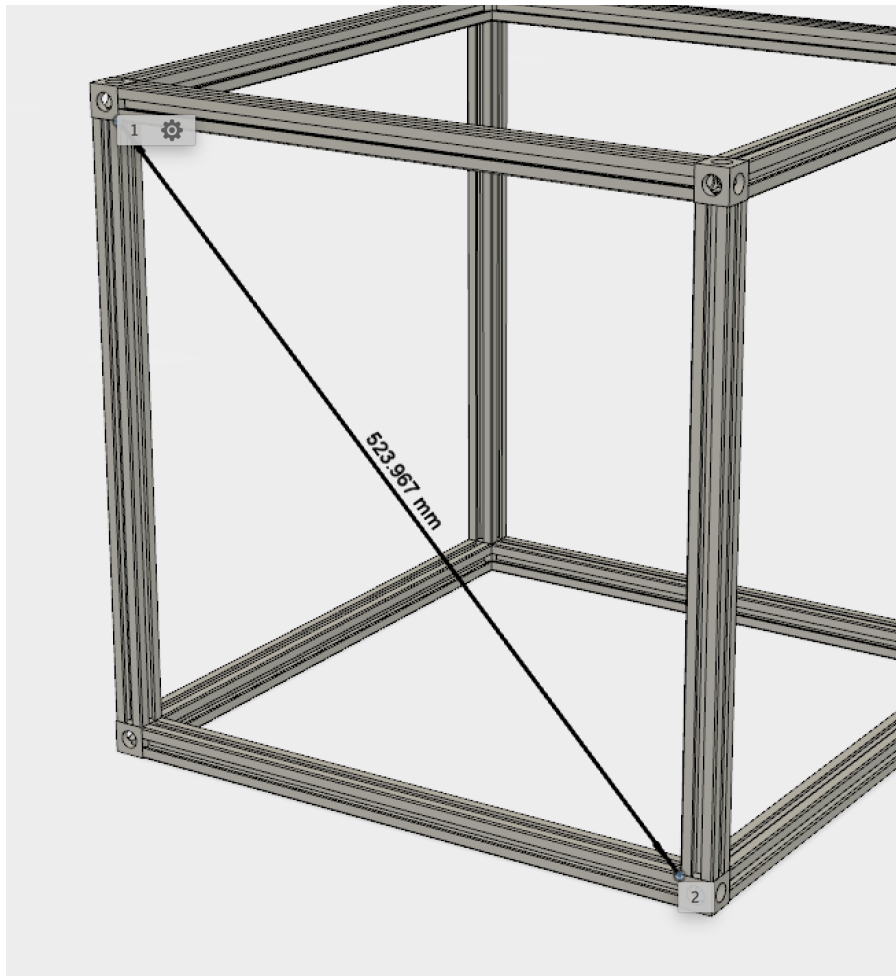
Step 6: Screw in the verticals. Make sure they don't look rotated after you've tightened them. This will throw off some dimensions later on.

Step 7: Inset the remaining T nuts into the verticals:



↓FRONT

Step 8: Attach the top square to the verticals. Tighten everything and check the diagonals with a ruler. The diagonals need to be as close to 524mm as possible. If they are off too much, you'll need to loosen some screws and



re-tighten them on a flat surface. If they are still tweaked, you can gently guide them into true with some strategically applied pressure. Having a square frame will save you a lot of calibration headaches in the future.

Congrats! You now have a solid frame to build your printer on. On to the more fun bits.