



## 6. Assemble Duet Controller

Assembling the Duet 3D Controller with Fans and Mounts.

Written By: Robert





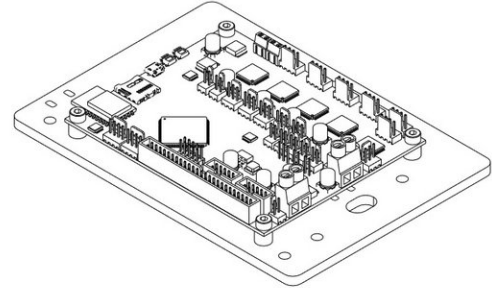
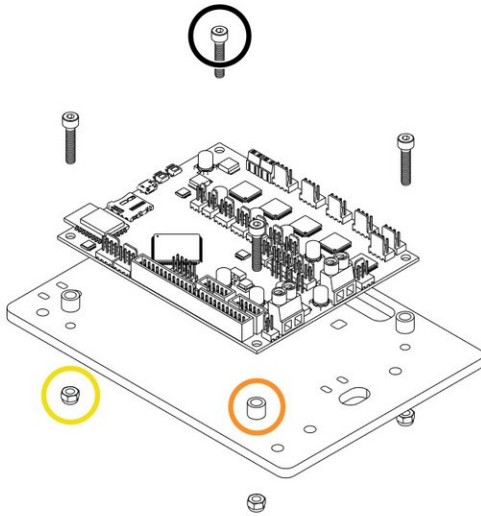
## Step 1 — Fixing the Cable Ties into position



⚠ Making sure the board is orientated in the correct way as displayed in the image.

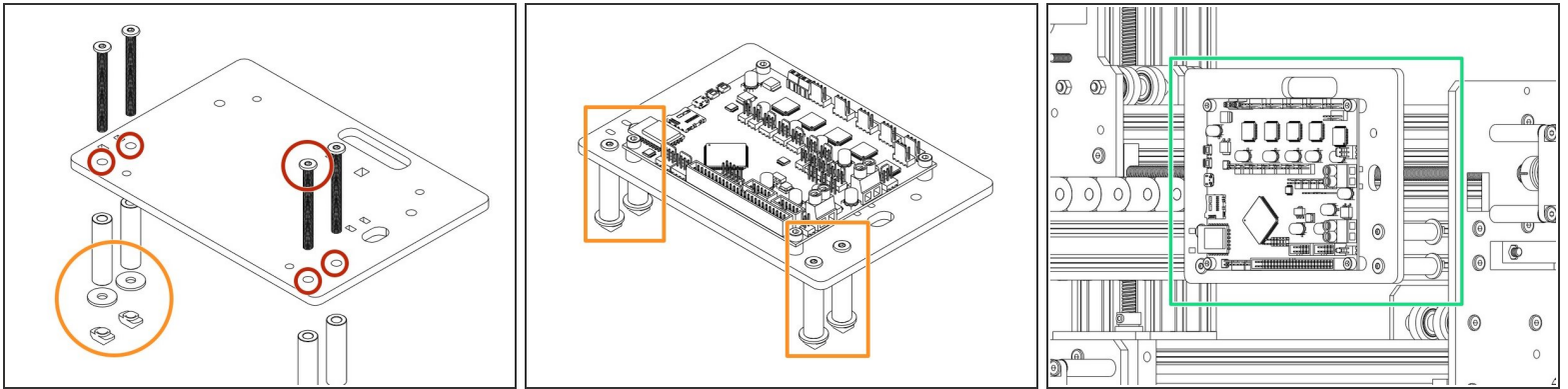
- The Large Cable Tie highlighted in Orange is for the 4 Stepper Motor Cables and the Limit Switches.
- The Small Cable Tie highlighted in Red is for the power cable.
- The Small Cable Tie highlighted in Yellow is only needed if you have the Ethernet Version, and is to secure the Ethernet Cable.

## Step 2 — Mounting the Controller to the Duet Mount



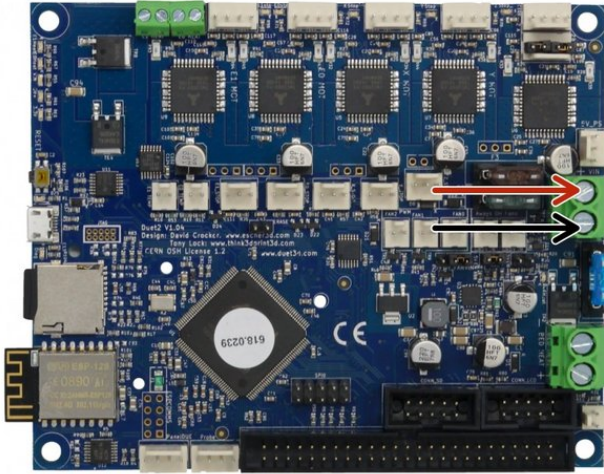
- Insert a M4 Cap Head Bolt 20mm through each hole on all 4 corners on the Duet 3D Controller.
  - Onto each bolt slide a 1/4" Nylon Spacer.
  - Now it is time to join the Duet to the Duet Mount. Insert the bolts into the holes on the Duet Mount and secure using 4 x M4 Nyloc Nuts.

### Step 3 — Mounting the Controller to the Machine



- Insert 4 x M5 Low Profile Bolts through the holes indicated in the image.
- Place a 1-1/2" Aluminium Spacers over each bolt followed by a Slot Washer and finally a M5 Drop in Tee Nut.
- Once assembled line up with the 2040 Extrusion on the right hand side of the machine and fix into place tightening the M5 Bolts until the Tee Nuts engage

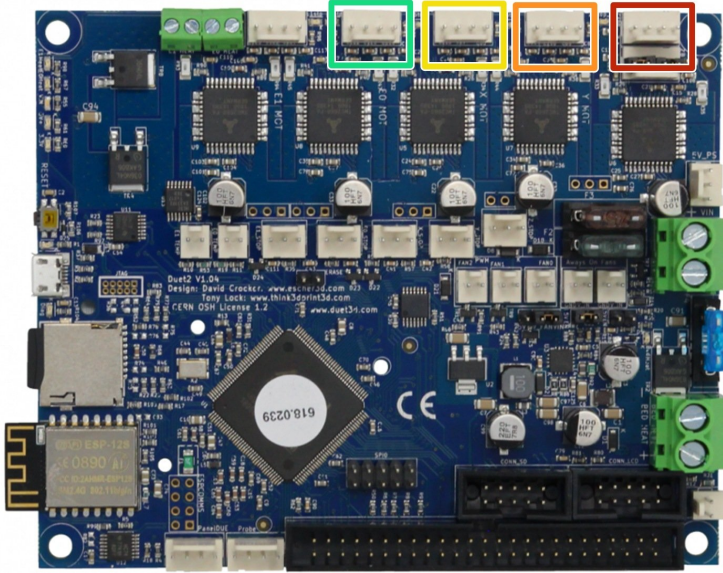
## Step 4 — Connecting the PSU Input Cable



- ❗ The connectors for the Duet controller are keyed, so there is only one way which they can plug in.
- ✦ For 750x1000mm Screw Drive Machines and 1000x1000mm Screw Drive machines, the Right Y-Axis motor wire may have different wire colors to the other motor wires. This is normal, connect the wires as normal.
- ⚠ The Mains Power should remain off during all wiring of the Duet Controller.
- PSU Cable from Power Supply - Connect Red Positive Wire into the Top Screw Terminal and Black into Bottom Screw Terminal.

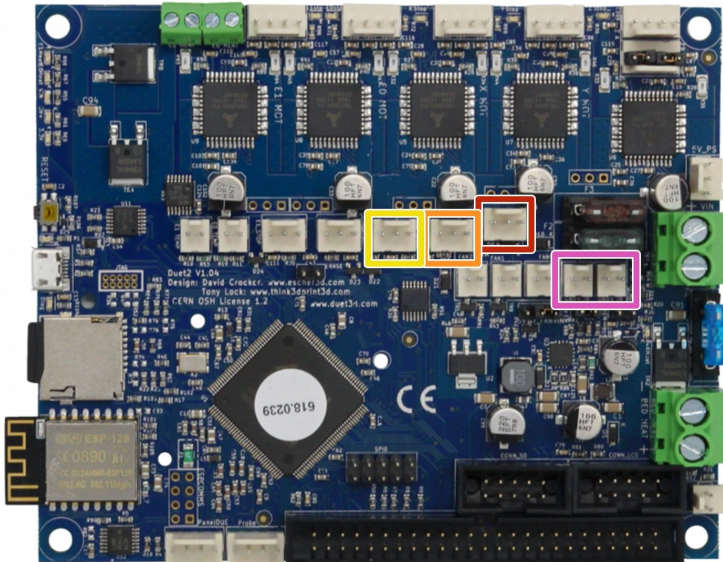


## Step 5 — Stepper Motor Connectors



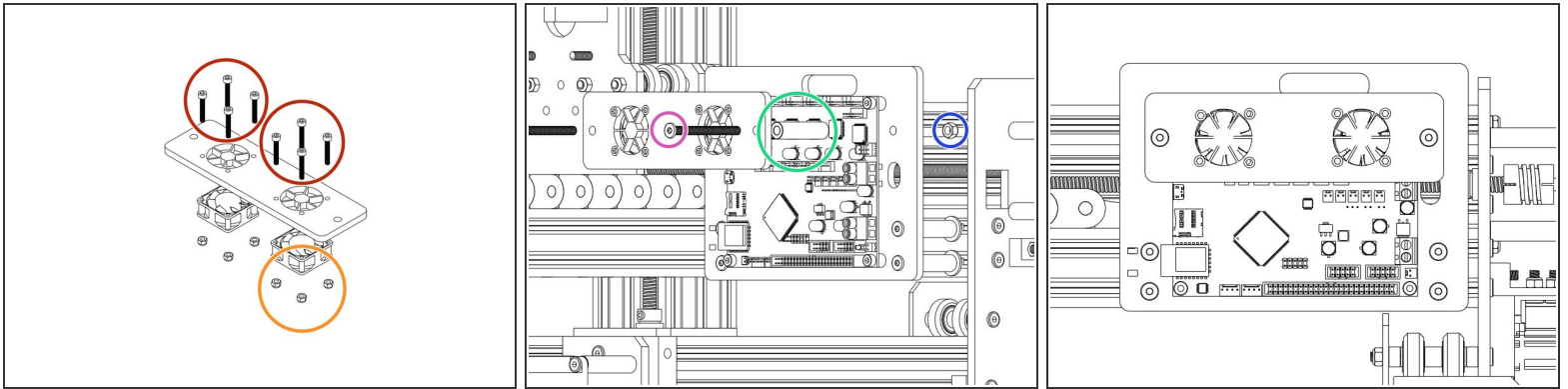
- Z-Axis Stepper Motor Wire.
- Left Y-Axis Stepper Motor Wire.
- X-Axis Stepper Motor Wire.
- Right Y-Axis Stepper Motor Wire.

## Step 6 — Limit Switches & Fans



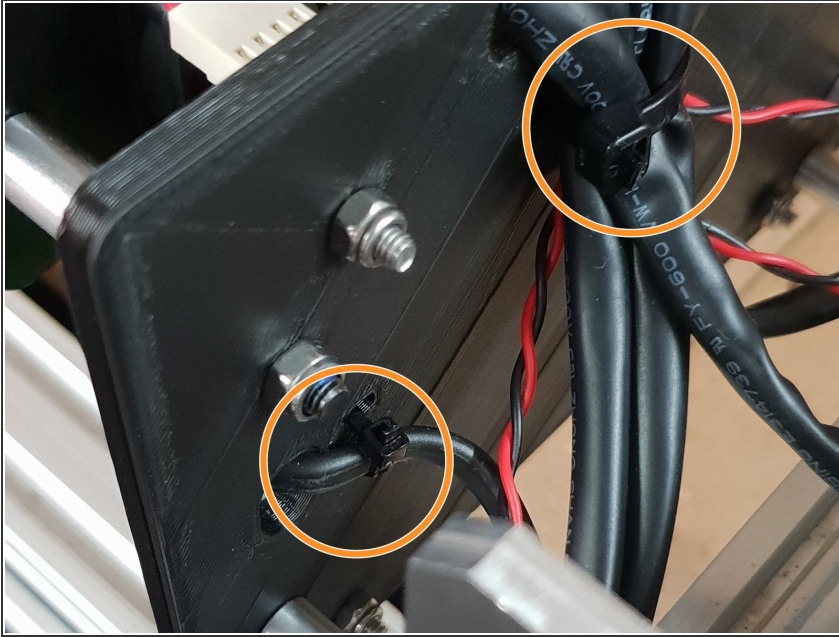
- Z-Axis Limit Switch
- Y-Axis Limit Switch
- X-Axis Limit Switch
- Fans connected to either of the Always on Fan Terminals.

## Step 7 — Mounting the Fans to the Board



- Use 8 x M3 Cap Head 20mms to fix the fans highlighted in Yellow onto the Mount with the Fan label facing outward.
  - Secure the M3 Cap Head 20mm's using 8 x M3 Nyloc Nuts.
  - Thread 2 x M5 55mm Low Profile Bolts through the fan mount.
  - Slide the Aluminium Spacers highlighted in Green over the bolts.
  - Now attach to the Main Board mount using 2 x M5 Nyloc Nuts.
- ⚠ Remember to connect the fans to 'Always On' Fan connection of your Duet Controller before tightening the M5 Nyloc Nuts.

## Step 8 — Tidying your Wires



- Using the already inserted cable ties fix the wires into place securely to prevent any unnecessary movement and to keep the machine looking neat!
- ⓘ If you have the Ethernet version also secure that.

Thanks for following the guide. Any issues, please contact us!