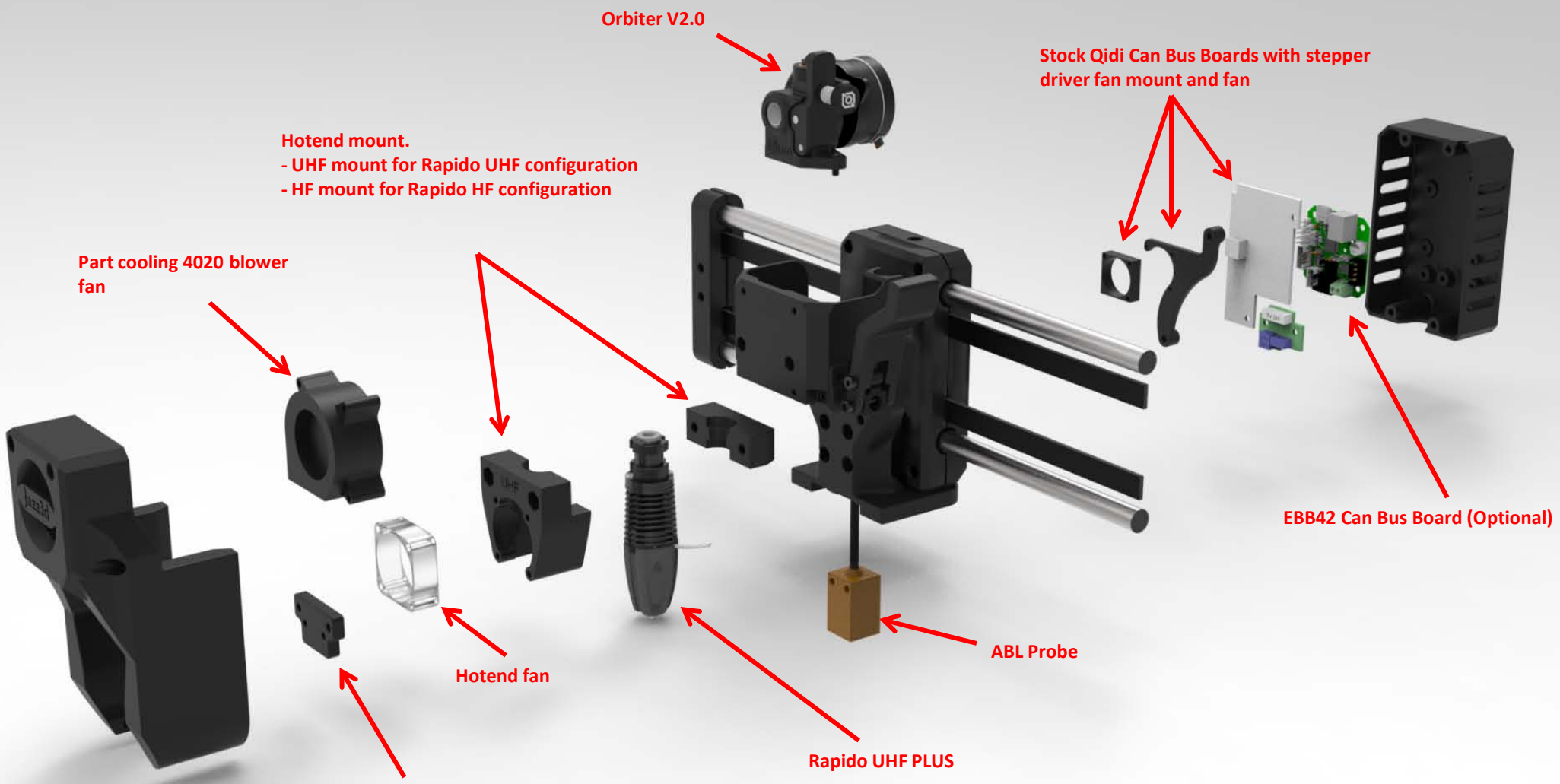
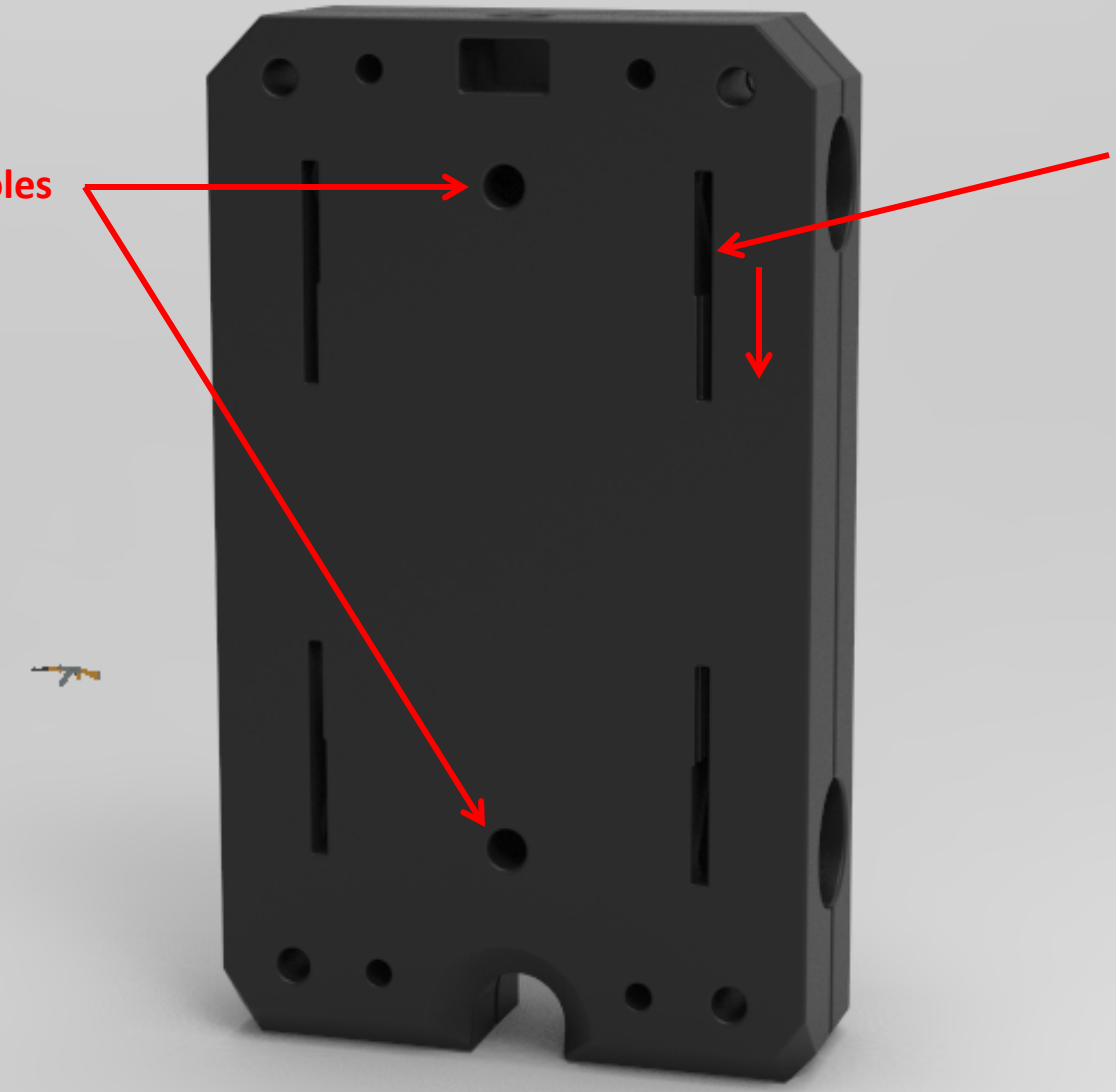
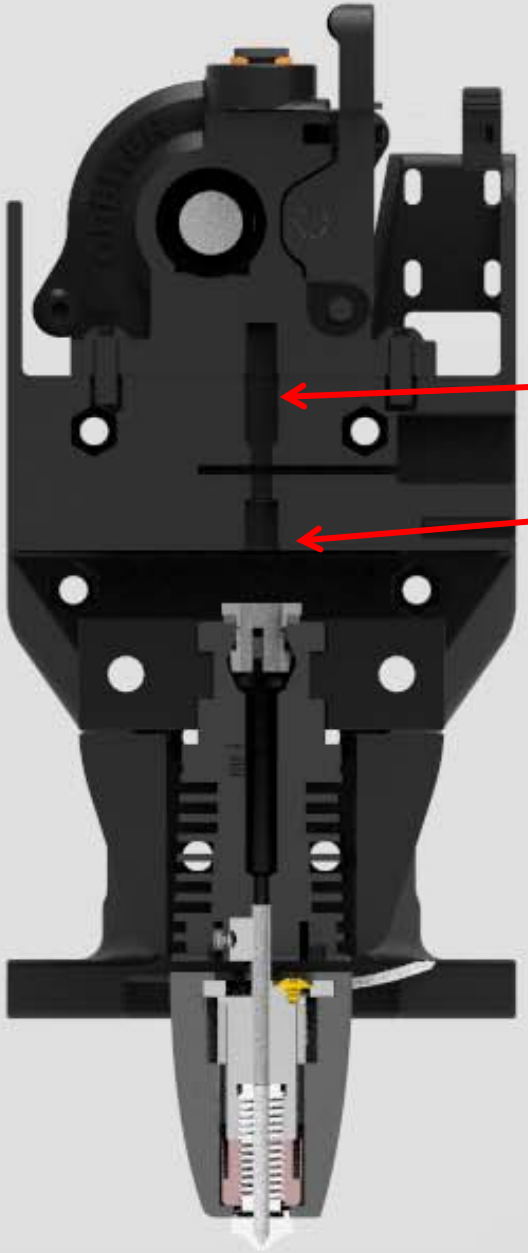

Orbiter V2.0
Stock Qidi Can Bus Boards with stepper driver fan mount and fan
Hotend mount.
- UHF mount for Rapido UHF configuration
- HF mount for Rapido HF configuration
Part cooling 4020 blower fan
EBB42 Can Bus Board (Optional)
ABL Probe
Hotend fan
Rapido UHF PLUS
ADXL345 Accelerometer Mount
Mounts to the front bottom holes of the hotend fan
Only attach when resonance testing.
Remove when printing.

After the two halves of the block are screwed together, lightly tighten the screws in heat inserts in these two holes until the block does not wobble anymore on the rods/bearings.



Slide each end of the belts into these slots from the inside, then slide the belts down into the narrower slot to lock them in place before screwing the two halves of the block together.



16mm long

46mm long
(UHF configuration)

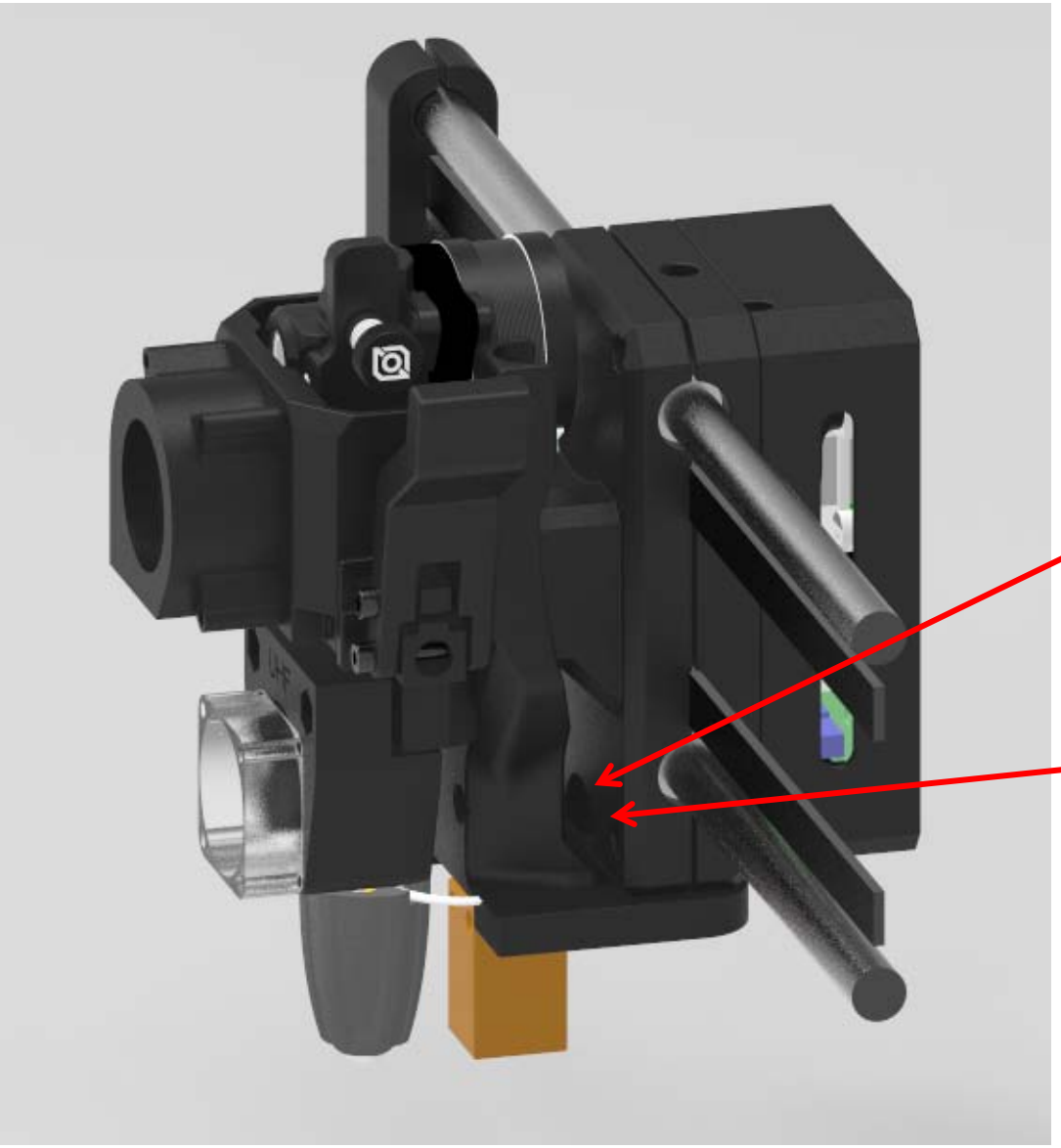
56mm long
(HF configuration)

Cut 2 pieces of PTFE 4mm OD x 2mm ID tubing , one 16mm long and the other 46mm long.

Bevel the inside edge of the top of each tube slightly to form a funnel shape.

Insert the the tubes between the carriage back plate and the Orbiter and Rapido.

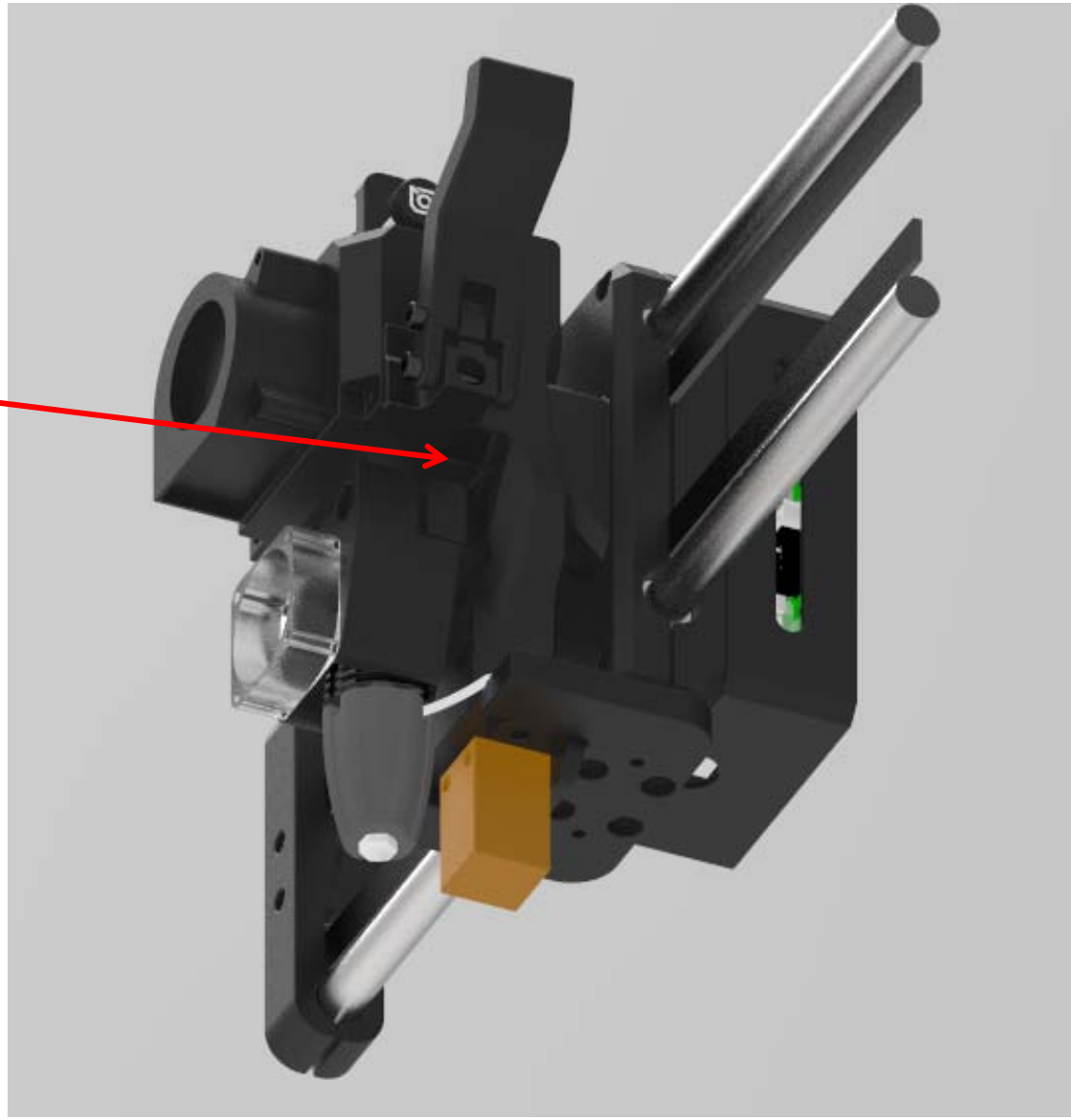
Move the print head all the way to the left as far as it will go. Now mount the X Stop Block on the rods, as shown, up against the print head.



Wire Routing Options

1. Up through this hole and down through this hole

2. Around the side of the Carriage Back Plate and through this hole



Config Changes for X Max 3 / X Plus 3 (for stock controls boards)

Extruder
- Rotation_distance: 6.250 (SPX); 4.637 (Orbiter)
- Sensor_type: Change to match the sensor you have
- Comment out the gear_ratio line

*Make sure to PID tune the hotend and run Pressure Advance calibrations

TMC2209 Extruder
- Run_current: 0.650 (Orbiter)
- Run_current: 0.750 (SPX)

ADXL345
- Axes_map: x, -z, y (must be lower case letters)

Stepper_X
- Position_min: 0
- Position_endstop: 0
- Position_max: 305 (XM3); 260 (XP3)

Stepper_Y
- Position_min: 0
- Position_endstop: 290/250 (XM3; match below value); 245/205 (XP3; match below value)
- Position_max: 290 (XM3 without RCS); 250 (XM3 with RCS)
  245 (XP3 without RCS); 205 (XP3 with RCS)
- Homing_positive_dir: True

Stepper_Z
- Position_max: 295 (XM3); 250 (XP3)

Probe
- X_offset: 0.0
- Y_offset: 26.0
- Z_offset: 3.25

Probe Wiring
- Brown (+) wire goes to any 3-24v power source
- Blue (-) wire goes to any ground
- Black (signal) wire goes to the sensor signal pin

Homing Override
- SET_TMC_CURRENT STEPPER=stepper_x CURRENT={HOME_CUR*0.5}
- SET_TMC_CURRENT STEPPER=stepper_y CURRENT={HOME_CUR*0.5}
- Change G1 Y10 F1200 => G1 Y150 F1200 for XM3; G1 Y122 F1200 for XP3

Bed_Mesh
- XM3
- Mesh_min: 5, 26
- Mesh_max: 300, 260 (No RCS); 300, 220 (RCS)

-XP3
- Mesh_min: 5, 26
- Mesh_max: 300, 215 (No RCS); 300, 185 (RCS)

IMPORTANT!!!

MAKE SURE TO CHECK FAN POLARITY BEFORE PLUGGING THE FANS IN AND TURNING ON THE PRINTER.