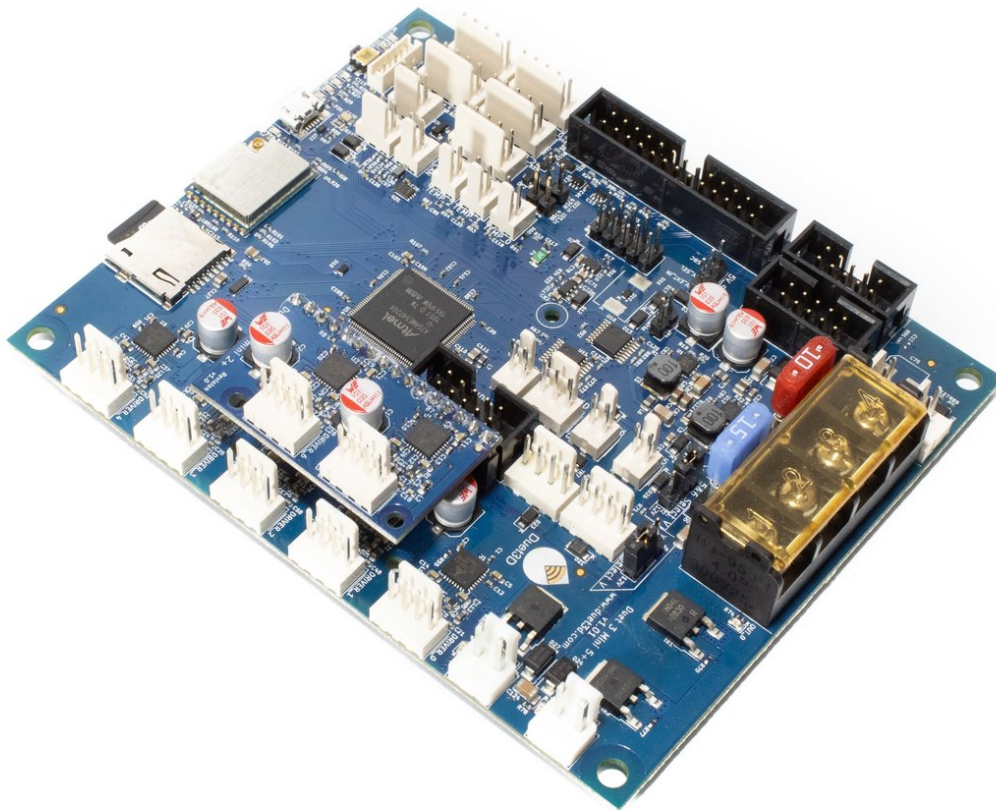


# railcore

## P) Electronics

Written By: Ben Withem





## PARTS:

- [Duet 3 Mini 5+ WiFi](#) (1)
- [Duet 3 Mini Expansion 2+](#) (1)
- [5mm Nylon Spacer](#) (4)
- [M3 x 16 Socket Head Screw](#) (4)
- [M3 Washer](#) (20)
- [M3 Nut](#) (20)
- [M3 x 20 Socket Head Screw](#) (8)
- [M3 x 12 Socket Head Screw](#) (8)
- [M2.5 x 6 Self Tapping Screw](#) (2)

## Step 1 — Safety



⚠ The RailCore Mini is a "DIY" project, build safe, build smart, and be responsible.

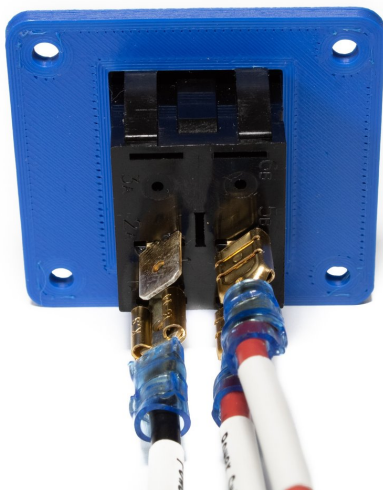
⚠ Build at your own risk.

⚠ When in doubt, double check things.

⚠ 3D Printers can get very hot, use common sense and quality components.

❗ If you need help, find us at the RailCore Facebook page or RailCore Discord channel. Both are linked from RailCore.org.

## Step 2 — Power Switch Reference



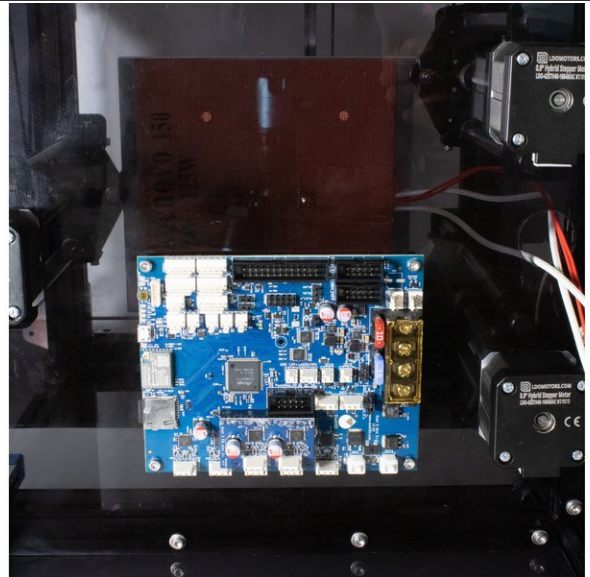
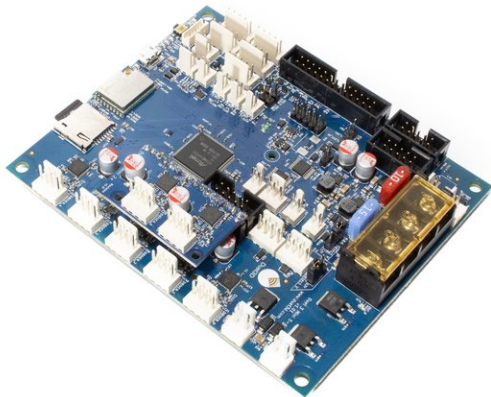
- The power switch in your kit should come pre-wired. Below is a cable reference, and also serves as a way to double check it.
- Pin 1A -> Black, Wago (6 Port) / 150mm
- Pin 4B -> Red, Wago (3 Port) / 150mm
- Pin 5B -> Red, Duet VIN (24v) / 250mm

### Step 3 — Power Input Reference



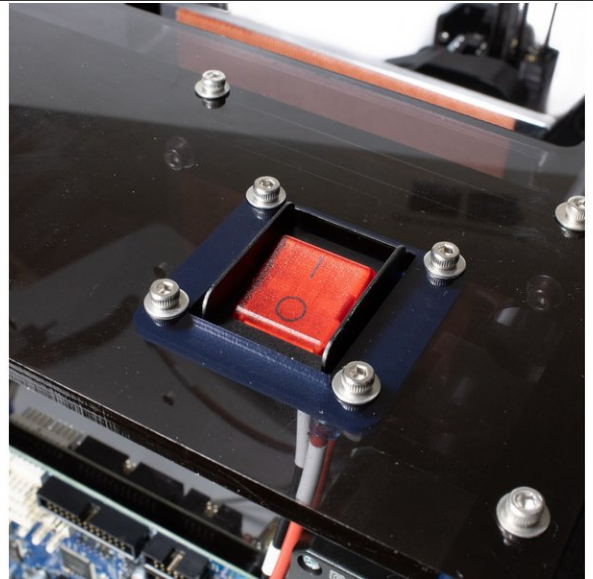
- The power input plug in your kit should come pre-wired. Below is a cable reference, and also serves as a way to double check it.
- Pin 1 -> Black, Wago (6 Port) / 120mm
- Pin 2 -> Red, Wago (3 Port) / 120mm
- Pin 3 -> Red, Wago (3 Port) / 120mm
- Pin 4 -> Black, Wago (6 Port) / 120mm

### Step 4 — Install Duet 3 Mini 5+



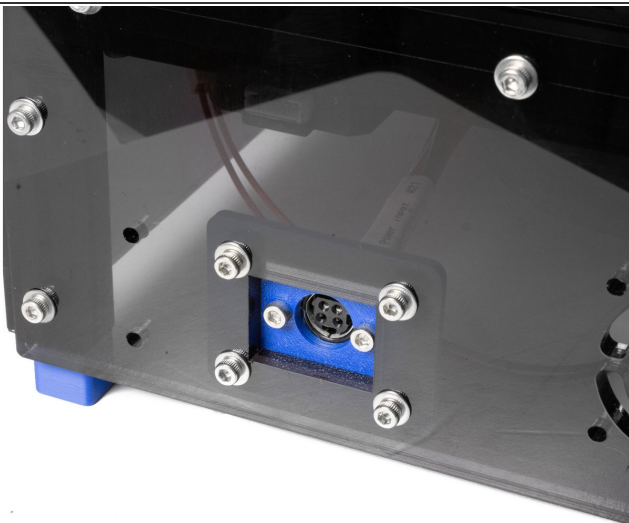
- Install the Duet +2 expansion board on the Duet board as shown in the image.
- Using (4) nylon standoffs, M3 x 16 socket head screws, and M3 washers, attach the Duet to the base of the printer.

## Step 5 — Install Power Switch



- Using (4) M3 x 12 socket head screws, M3 washers, and M3 nuts, install the power switch under the panel.
- ⓘ Off position should be towards the top of the printer.

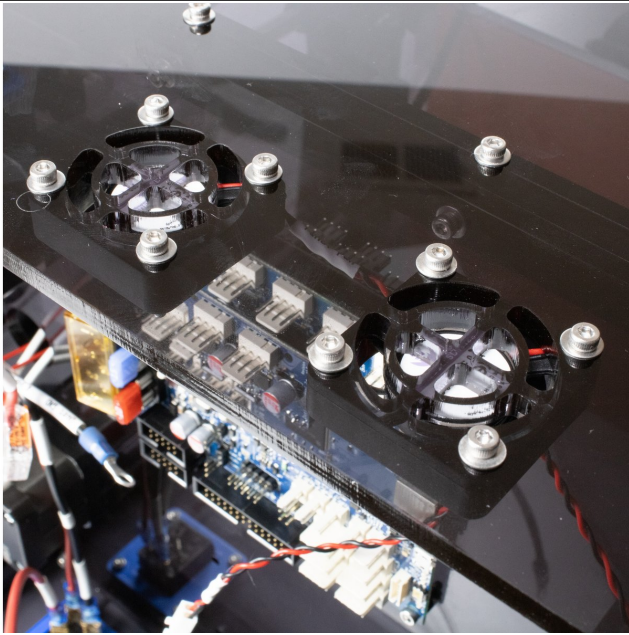
## Step 6 — Install Power Plug



- Using (2) M3 x 10 self tapping screws, attach the power plug to the printed mount.
- ⓘ The material the plug is made out of can also be tapped for M3.
- Using (4) M3 x 12 socket head screws, M3 washers, and M3 nuts, install the power plug under the panel.



## Step 7 — Install Panel Fans



- Using (4) M3 x 20 socket head screws, M3 washers, and M3 nuts, install the (2) panel fans under the rear panel.