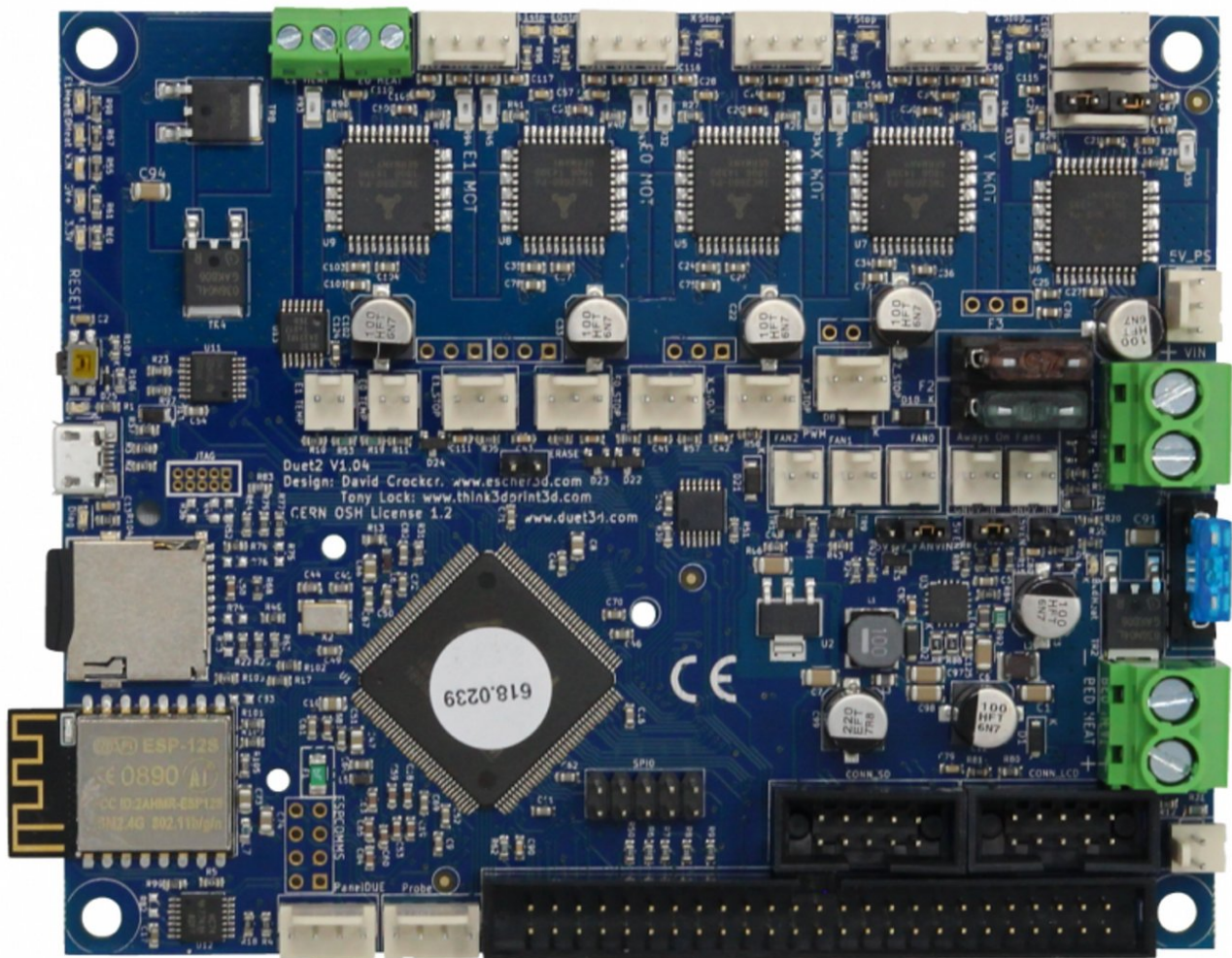# caribou3d

20. CaribouDuet2Wifi/LAN Wiring Guide

This is the wiring guide for CariboDuet2Wifi/LAN. Please note that this wiring is only compatible with the config.g for CariboDuet2Wifi/LAN.

Written By: Caribou3d

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Step 1 — Preparation

⚠ It is your responsibility to read, understand, and adhere to the applicable documentation for this controller board and any other devices that are to be attached to it.

⚠ Lack of adherence / compliance to the equipment manufacturer's documentation and warnings can result in equipment, personnel, and property damage.

⚠ Do not use any power supply while wiring the board unless you're asked to do so.

## Step 2 — Tools for Crimping

- High quality crimping tool for mini crimps (e.g. PA-20 or PA-21)

- Insulation stripping pliers

- Ferrule crimping pliers

- and of course some cutting pliers

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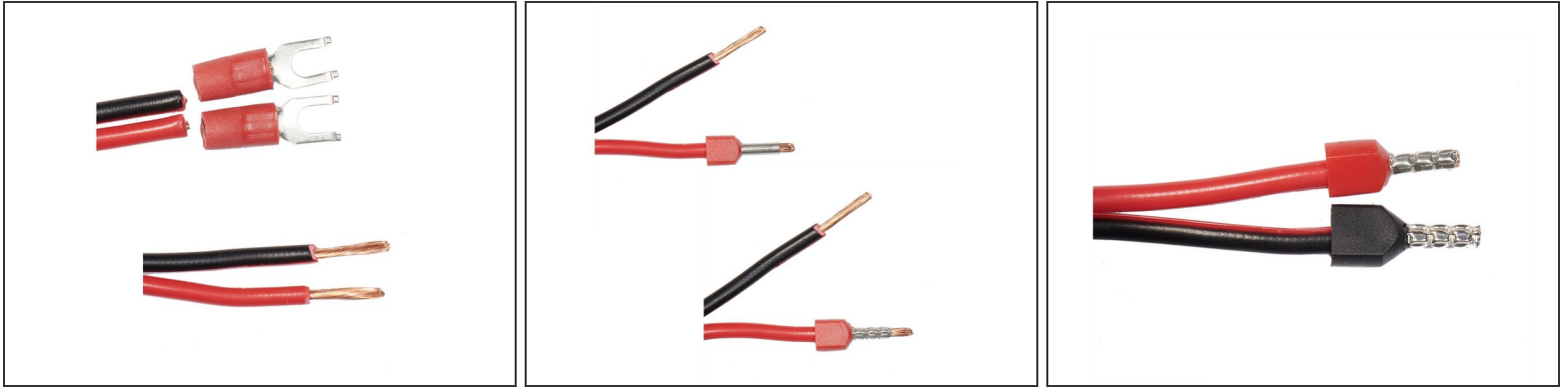## Step 3 — Crimping Wires for Duet Connectors

- cut-off the old Dupont connectors and unisolate 5mm off the cable.

- use the 1.9mm slot of the PA-21 to first crimp the wires to the front of the crimping contact.

⚠ make sure it's fully crimped so that wires are held in place

- use the 1.9mm slot of the PA-21 to crimp the isolated wire to the back of the crimping contact.

⚠ make sure it's fully crimped so that cable is held in place

- Before inserting the cables in the housing check the position and the orientation

- Make sure the little "hooks" show up in the litte windows

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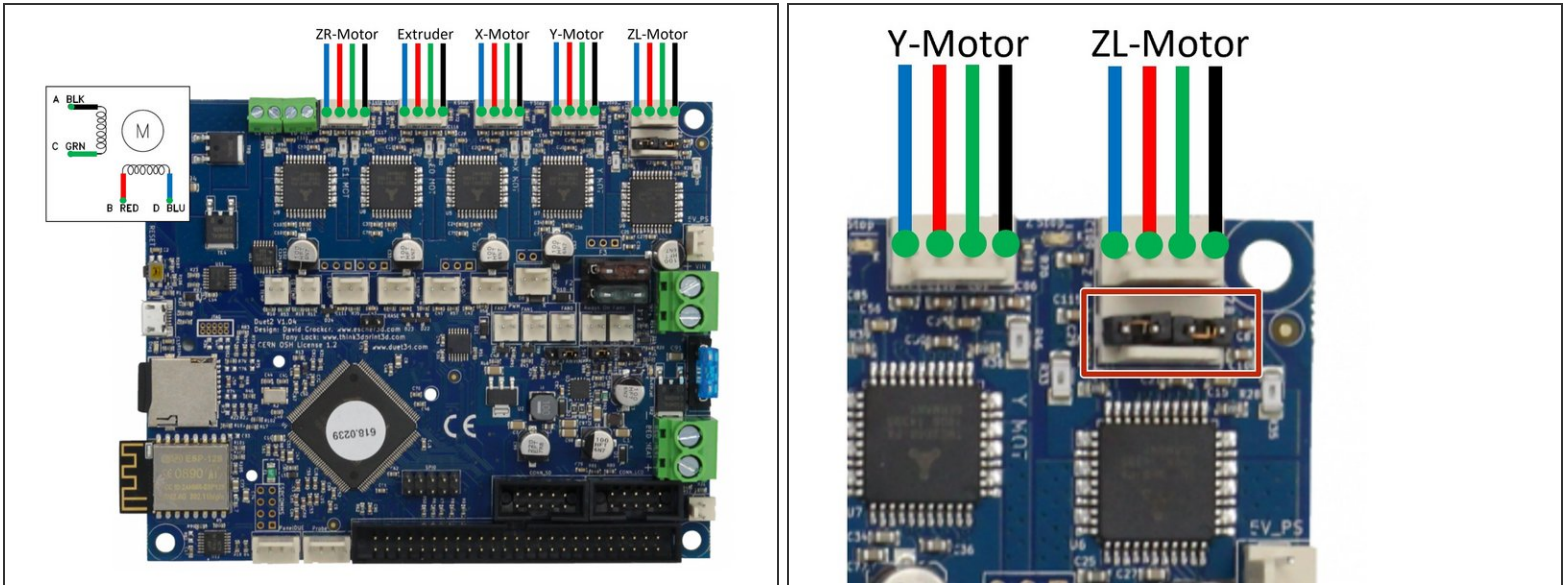## Step 4 — Crimping Wires for Dupont Connectors
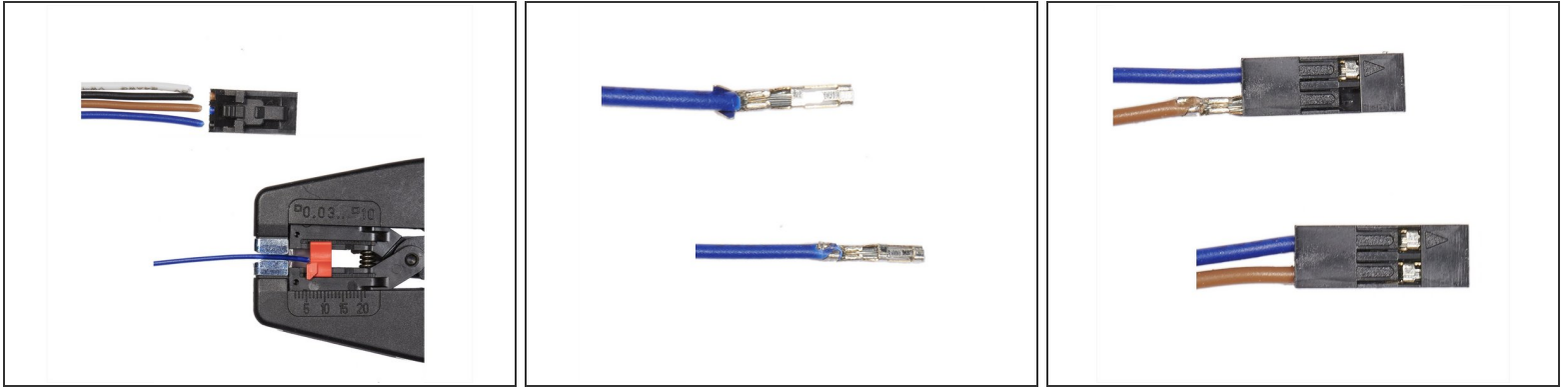
- cut-off the old Dupont connectors and unisolate 5mm off the cable.

- use the 1.6mm slot of the PA-21 to first crimp the wires to from the crimping contact.

⚠ make sure it's fully crimped so that wires are held in place

- use the 1.6mm slot of the PA-21 to crimp the isolated wire to the back of the crimping contact.

- Before inserting the cables in the housing check the position and the orientation

⚠ Make sure the little "hooks" show up in the litte windows

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Step 5 — Crimping Ferrules to the PSU, heat bed, and heater cable

- cut-off the old Y-connector and unisolate 12mm off the cable.

- twist the wires a bit to make slide easier into the ferrules.

- Insert the cable into the ferrule and make sure the wires come out at the end

- use the ferrule crimping tool to crimp the ferrule

- cut-off the wires at the end and repeat the last step for the second cable

- final crimped cable

- (i) for the heat bed cable use the large grey ferrules

- (i) for the heater cable use the small grey ferrules. You have to cut-off 2mm of the ferrules after crimping to fit the green housing

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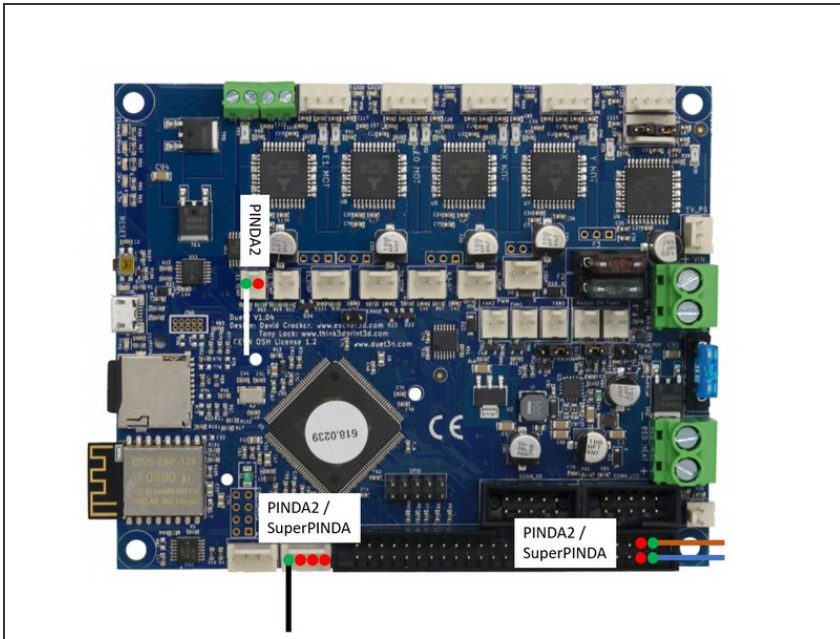
Step 6 — Stepper Motors

⚠ Never attach / detach motors when the board is powered!!

⚠ Never blindly trust stepper motors' wiring colors, always check phases. Mixing the phases up on the 4-pin connector can and often does result in damage to the stepper driver. Be especially careful when using stepper motors with detachable cables!

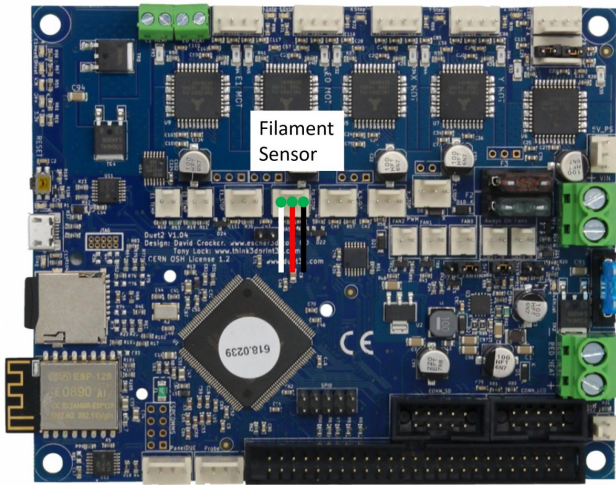- ZR is the right z-motor

- ZL is the left z-motor

⚠ Make sure both jumpers are installed.

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## Step 7 — PINDA2 / SuperPINDA Probe

- The PINDA2 probe cable needs to be split into three connections:
  - WHITE for temperature sense,
  - BLACK for probe trigger,
  - ⚠ and power as BROWN +5v & BLUE GND. Make sure to crimp the cables to a 2 pin Dupont housing.

- The SuperPINDA probe cable needs to be split into two connections:
  - BLACK for probe trigger,
  - and power as BROWN +5v & BLUE GND. Make sure to crimp the cables to a 2 pin Dupont housing.

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Step 8 — Filament Sensor

● Crimp the cables and use a three pin Duet connector housing.

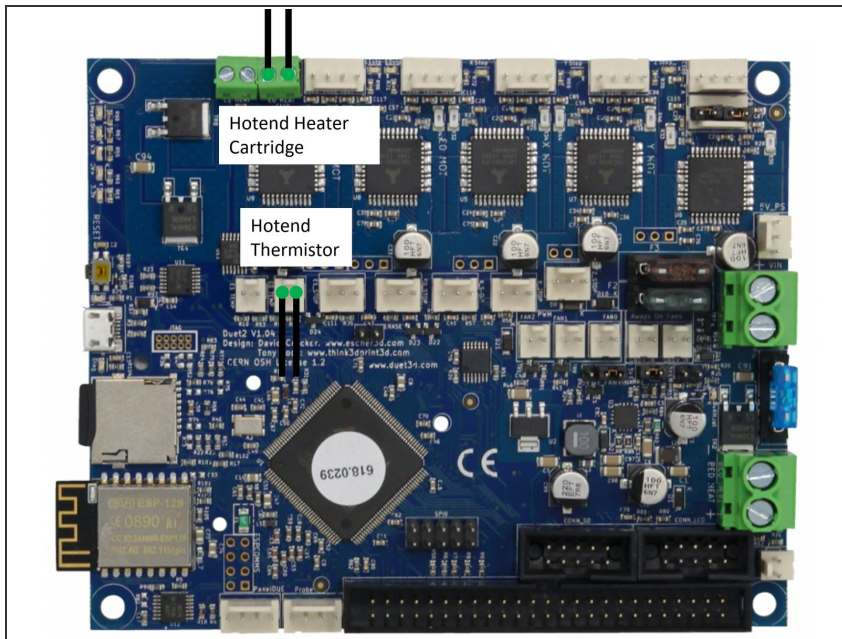## Step 9 — Extruder Fan, Part Cooling Fan
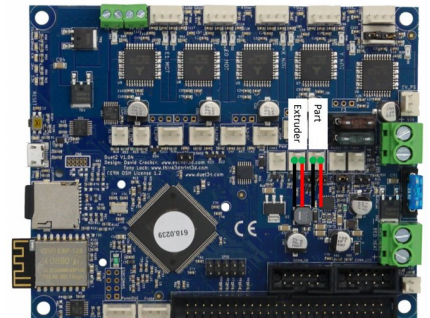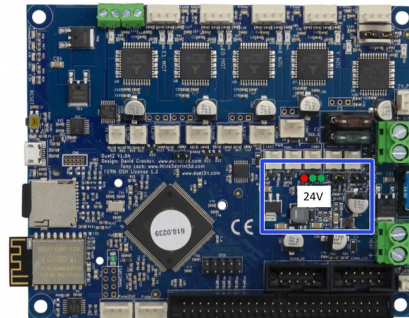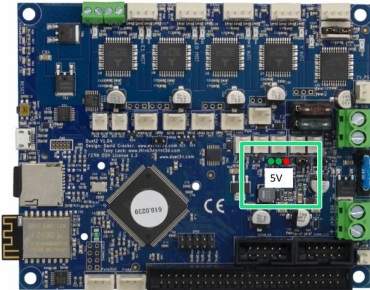
⚠ Make sure that the jumper is set according to the voltage of your fans!!!

● 5V position

● 24V position

⚠ Make sure the polarity of the fans is correct!

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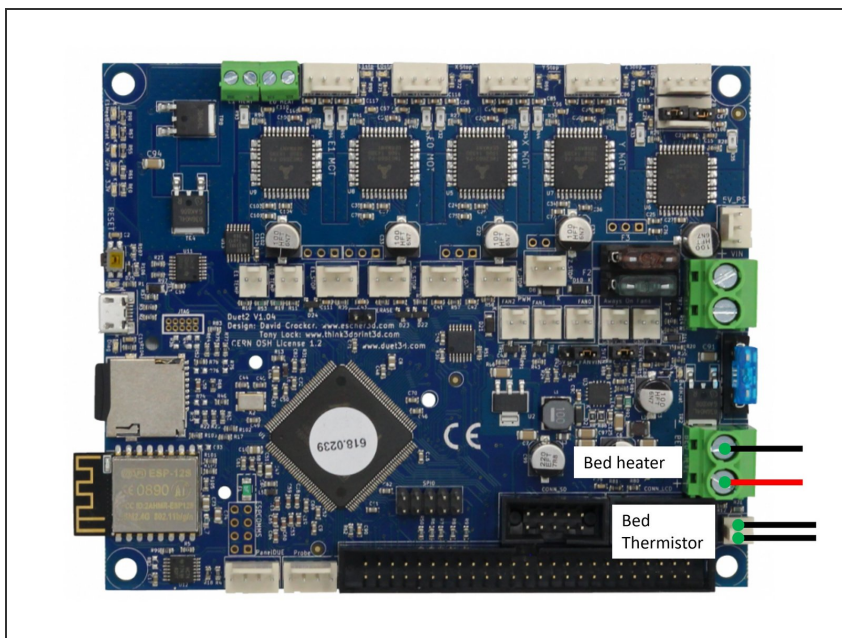
Step 10 — Hotend Power and Thermistor

⚠ Make sure that you crimp the provided ferrules to the hotend power cables.

● Polarity of the hotend cartridge does not matter.

● Polarity of the hotend thermistor does not matter.

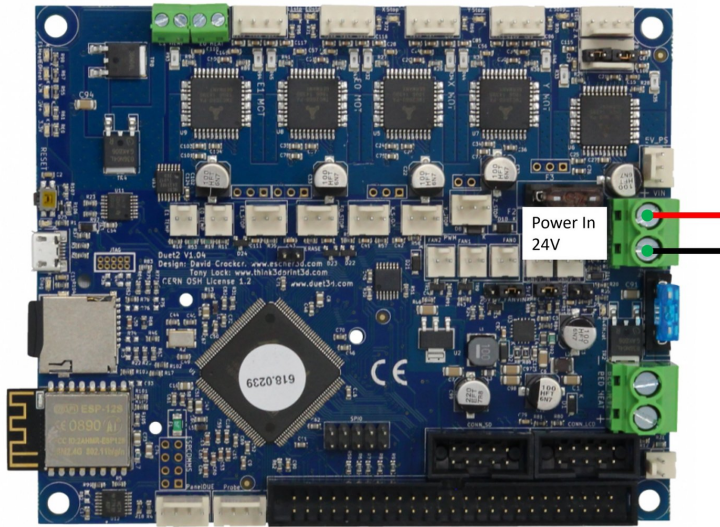## Step 11 — Heat bed power and Thermistor

⚠ Make sure that you crimp the provided ferrules to the heat bed cables.

⚠ Pay attention to the polarity of the heated bed. If it's wrong the integrated LED on the bed wil not work.

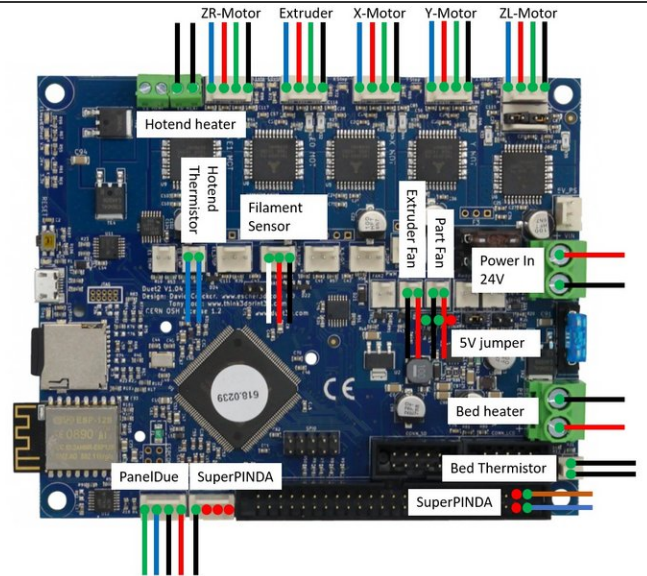● The polarity of the thermistor does not play a role.

Step 12 — Power In - 24V

⚠ The Duet 2 Wifi board requires only one pair of power cables. If your PSU has two pairs installed remove one pair from the PSU.

⚠ Make sure that you crimp the provided ferules to the power cables.

⚠ Pay attention to the polarity. Wrong polarity of the power in cables will destroy the board.

Step 13 — PanelDue Connection
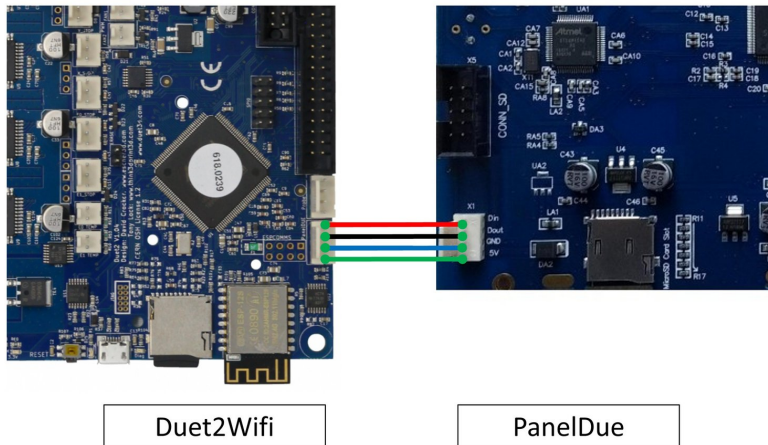
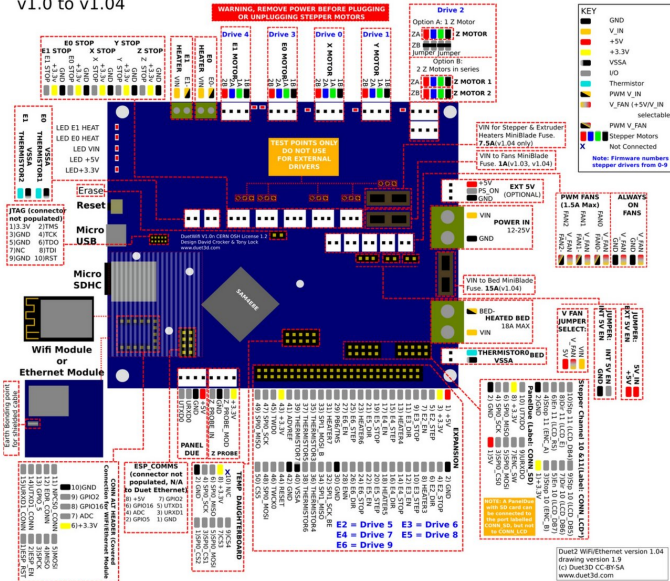● Use the 4-wire cable that comes with the PanelDue to connect the PanelDue to your controller board

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for the serial and power
connections.

Step 14 — Overview Wiring Diagram

(i) In case the extruder turns in the wrong direction mirror the cables, i.e. (blue,redgreen,black) -> (black,green,red,blue)

Step 15 — Additional Information - Wiring Diagram

● Insert wisdom here.

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