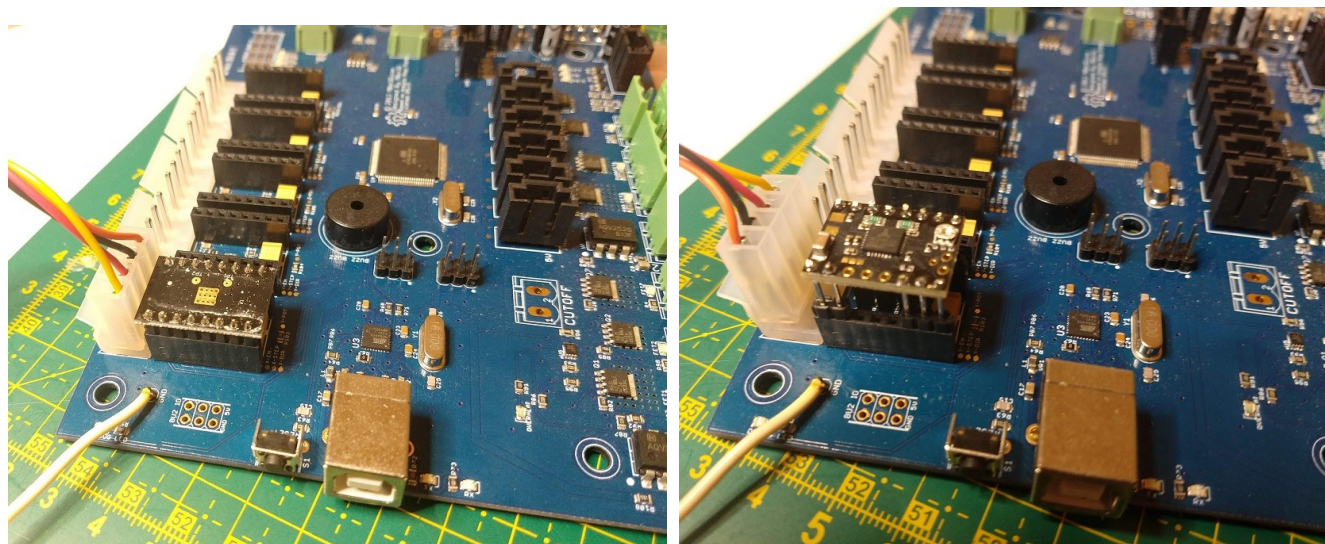


## ZYYX TMC2209 Upgrade Instruction

**Installation:** Power down the printer and remove the power cable. Remove bottom lid by 2 screws inside printer and 2 on the bottom side.

Then make sure you have prepared an ESD safe environment including suitable tools so you do not damage the electronics.

When this is done, locate and remove the old stepper boards and the cable to the stepper motors. Mark the cables if needed. This is shown in the first picture below to the left.



**IMPORTANT:** the 3 missing pins are to be installed in the direction of the USB port and that all other pins are correctly positioned and attached to the sockets.

If you mount the drivers incorrectly, you may fry them when powering up, so please be careful. This is not covered by warranty.

**IMPORTANT2:** when attaching the stepper cables rotate the connectors 180 degrees and put them back backwards otherwise the motors will rotate in the opposite direction to what they are supposed to. This is normally with the orange wire closest to the USB port.

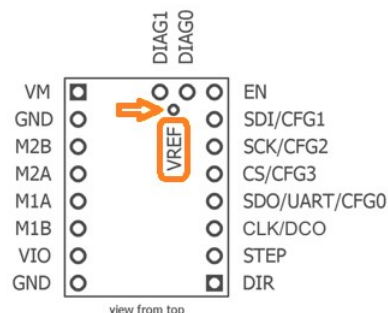
The board closest to the USB port may be difficult to fit, since it sits under the metal frame. If needed take off the top cooling fins before mounting.

Reassemble the printer in reverse order as described above.

**TEST & VERIFY:** Test the motor functionality by using the menu function *Jog mode* for all motors.

**NOTE:** All the individual stepper drivers are tested and calibrated before delivery. If you adjust the trimmer pot they may overheat. It should normally be set in "half past one" position, which corresponds to a 600 mA drive current. You can also verify this by the VREF pin on the board (as shown right) that should be close to 0.85 V.

**NOTE2:** With the new driver, the stepper motors will become warmer.



### Dokumenthistorik/Doc history

Utgåva Issue	Giltig från Date	Utförd av Done by	Gjord ändring Change
A	2019-10-05	TB	First issue of TMC2209 assembly instruction.