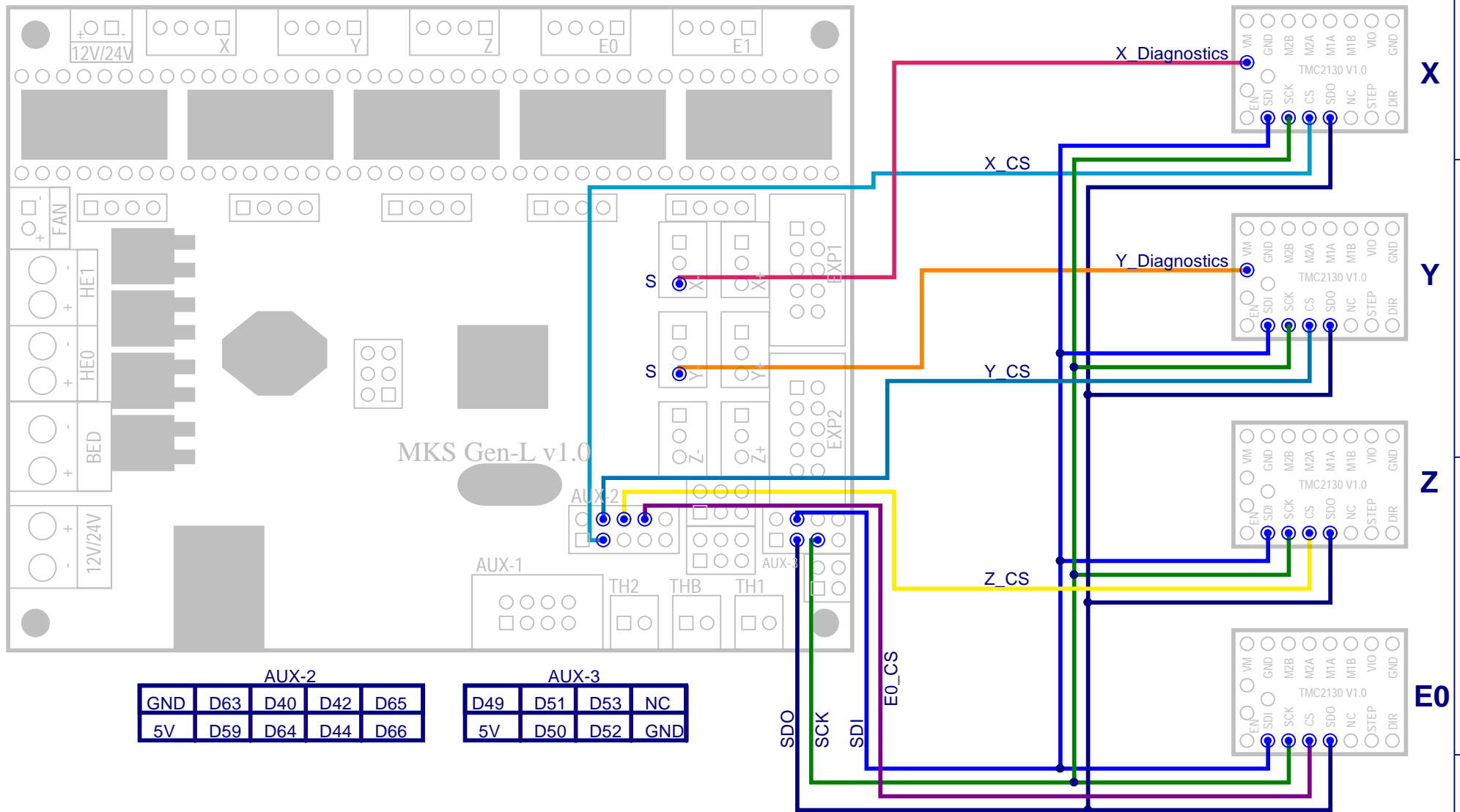


# MKS Gen-L v1.0 & TMC2130 Drivers Wiring for SPI and Sensor-less Homing



- When upgrading from stock controller board/LCD, the LCD modules connectors (EXP1 & EXP2) must be connected rotated 180° for it to work. The connector's key must be removed.
- These connections were tested with the latest version of Marlin at the time (1.1.8) configured for a Tevo Tornado.
- Only X and Y get sensor-less homing, The Z axis still needs an endstop switch.
- For dual extruders, duplicate setup for E0 as E1, but connect E1\_CS to D44 in AUX-2.
- By default, Marlin uses pins D53 and D49 for X\_CS and Y\_CS. However, this conflicts with the control lines of the RepRap Discount LCD/SD Card Reader; therefore, pins D59 and D63 are remapped in the pins\_RAMPS.h file to be X\_CS and Y\_CS respectively.
- For this setup to work, the TMC2130 modules must be configured in SPI mode by bridging the appropriate solder pads on the underside of the driver module. Gerson Ramos - 02/03/18