

MLM Version 1.2

Bill of materials and other informations

Note. This document deals with what is necessary to carry out the project as originally conceived with the standard BLV frame 310x310x365 (print area)

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Bill of materials

Components

Quantity	Product name	Type / Aliexpress choice	Link 1	Link 2
1	BLV MGN Cube blind joint frame kit	365 Dual Z axis	Link	
3	Linear rails MGN12	400mm - MGN12H(black)	Link	
1	Additional rail block (U Axis)	H Block Only - MGN12H(black)	Link	
1	D20 L25 Couplers 5x8x25mm	2pcs	Link	
1	Build Plate	300x300 - 310x310	Link	Link
1	Magnetic bed	310x310	Link	Link
2	GT2 20T Pulley Bore 5mm	For 10mm	Link	
2	GT2 20T Idler Bore 5mm toothless	W 11mm without teeth	Link	
4	GT2 20T Idler Bore 5mm with teeth	W 11mm with teeth	Link	
1	2PCS GT2 Pulley 16T Bore 5mm with teeth	16 teeth	Link	
2	GT2 20T Idler Bore 3mm with teeth	20T With teeth	Link	
1	Gates GT2 timing belt 9mm	4M-9MM-2GT	Link	
1	Gates GT2 timing belt 6mm	4M-6MM-2GT	Link	
2	Hotend MASP MK8-R		Link	
1	Silicon 500°C resistant (nozzle purge system)	150x150x3mm	Link	Link
1	Build plate silicon spacers	4pcs 16ymm – color black	Link	Link
1	Thermal Insulant for Heatbed	300x300x10MM	Link	Link
2	High quality nozzle 0.4mm E3D V6	0.4	Link	
1	Ball bearings	635ZZ	Link	

Extruders options

Quantity	Product name	Type / Aliexpress choice	Link 1	Link 2
BMG				
2	BMG Direct Drive base kit	Diy Basic Kit	Link	
Sherpa Mini				
2	Fysetc sherpa mini SLS PA12		Link	
Orbiter 1.5				
2	Fysetc Orbiter 1.5 SLS PA12		Link	

Z-Probes options

Quantity	Product name	Type / Aliexpress choice	Link 1	Link 2
BL-Touch				
1	Antclabs BLTouch Probe		Link	
1	BLTouch SM-DU extension cable	1.5mt	Link	
Inductive				
1	LJ12A3-4-Z/BX		Link	

Z axis options

Quantity	Product name	Type / Aliexpress choice	Link 1	Link 2
2 screws based z axis				
2	Fysetc T8 POM leadscrew	Lead2mm 400	Link	
2	Linear rails MGN12	400mm - MGN12H(black)	Link	
3 screws based z axis				
3	Fysetc T8 POM leadscrew	Lead2mm 400	Link	
3	GT2 Pulleys 20T + Pulley 40T Kit	Option 1: 20T(6mm)-40T(8mm) Option 2: For belt width 6mm	Link	
3	GT2 Belts 200mm	Option 1: 6mm Option 2: 200-2GT-6 RF Option 3: 1 pcs	Link	
3	Linear rails MGN12	400mm - MGN12H(black)	Link	

Main Electronics options

Quantity	Product name	Type / Aliexpress choice	Link 1	Link 2
Duet 2 + Duet5				
1	Duet2 Wifi V1.04 32bit		Link	
1	Duet5 DueX expansion board with TMC2660		Link	
Duet 3 Based				
1	Duet 3 6HC + Duet 3 3HC kit		Link	
Optional: Toolboard				
2	Duet Toolboard 1LC 1.0 (1.1 it's ok as well)		Link	
1	Duet Distribution board		Link	

Electronics

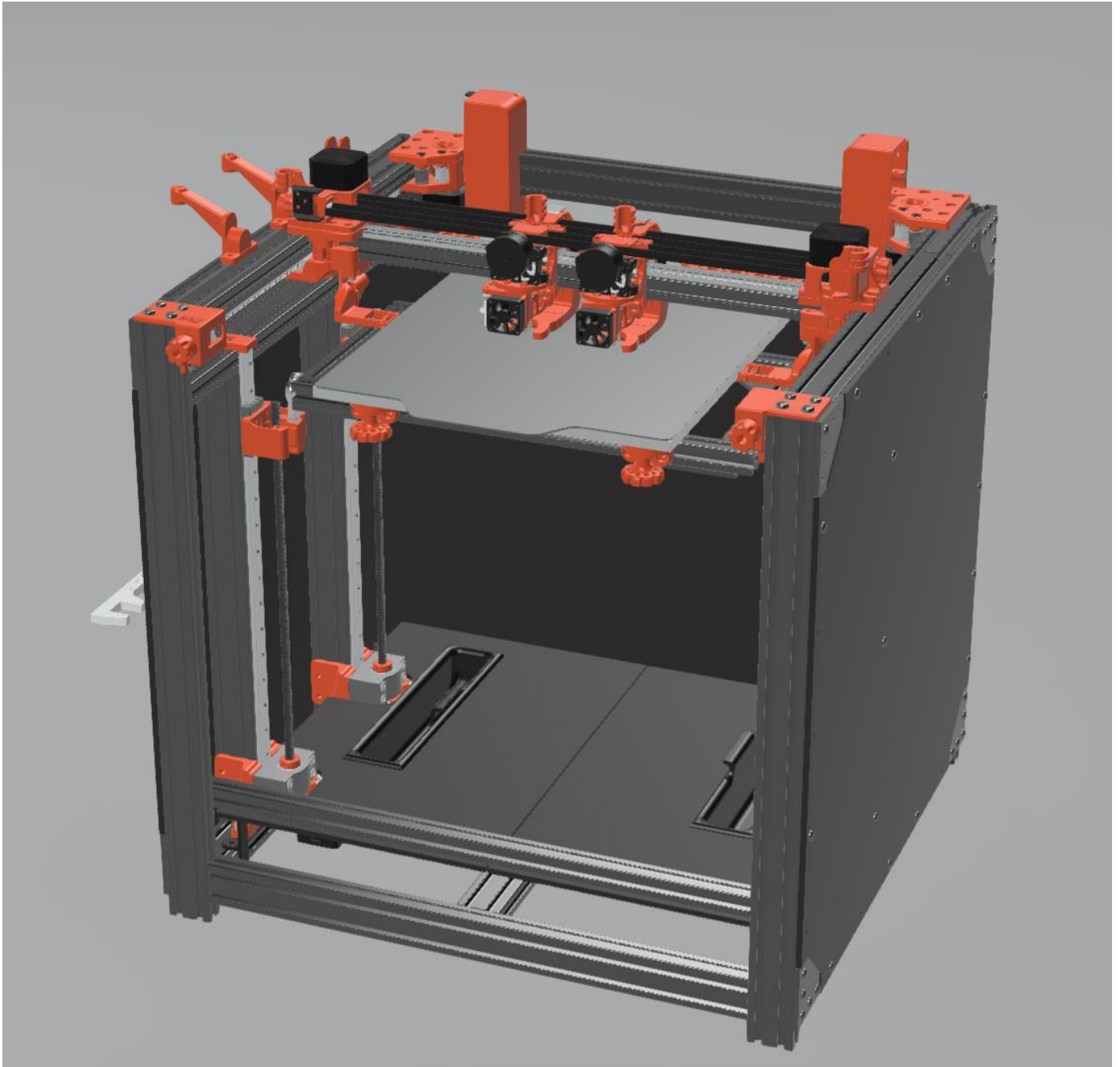
Quantity	Product name	Type / Aliexpress choice	Link 1	Link 2
1	MeanWell LRS-350-24 PSU PSU 24V 350w		Link	
1	SSR-25DA		Link	
1	SSR-40DA		Link	
1	Heated silicon bed 310x310	220v 750watt	Link	Link
1	Thermal fuse 10A 250V - 172 °c	5 Pieces – 15A – 165C	Link	Link
1	2PCS Blower Gdstime 5015 50mm DC 24V	24V Ball 5000RPM	Link	
1	5PCS Fan Gdstime DC 24V 3cm 30x30x10mm	0.06A3010B24V2P2.54	Link	
1	Display PanelDue 5i / 7i		Link	
1	Wantai 3 PCS Stepper Nema17 42BYGHM810 0.9°	3PCS-42BYGHM810	Link	
1	Wantai 5 PCS Stepper Nema17 42BYGHW811 1.8°		Link	
4	LDO Stepper Nema17 0.9 LDO-42STH25-1404MAC		Link	
1	Power button 16mm	220V Self-reset Momentary	Link	
2	Ceramic Cartridge Heater	24V 50W 2M	Link	
2	Termistore E3D-E-SEMITEC-50-MOLEX-INC-CABLE		Link	Link
1	MicroSD Memory (for the board)	1gb min.	Link	Link
1	AC Power switch with fuse	1PC witch cable	Link	Link
1	Limit Switch Roller		Link	

Hardware

Quantità	Nome articolo	Tipologia / Opzione Aliexpress	Link 1	Link 2
100	M3x8	Screw		
20	M3x10	Screw		
20	M3x12	Screw		
20	M3x16	Screw		
20	M3x20	Screw		
20	M3x25	Screw		
20	M3x30	Screw		
10	M3x35	Screw		
12	M3x40	Screw		
4	M3x45	Screw		
2	M3x50	Screw		
12	M4x10	Screw		
6	M4x25	Screw		
50	M5x8	Screw		
4	M5x20	Screw		
6	M5x30	Screw		
6	M5x35	Screw		
100	M3 T-Nut	T-Nut		
50	M5 T-Nut	T-Nut		
30	M3 Nut	Nut		
30	M4 Nut	Nut		
20	M5 Nut	Nut		
4	M3x35	Flat head screw		
50	M3 Washers	Washers		
50	M4 Washers	Washers		
50	M5 Washers	Washers		

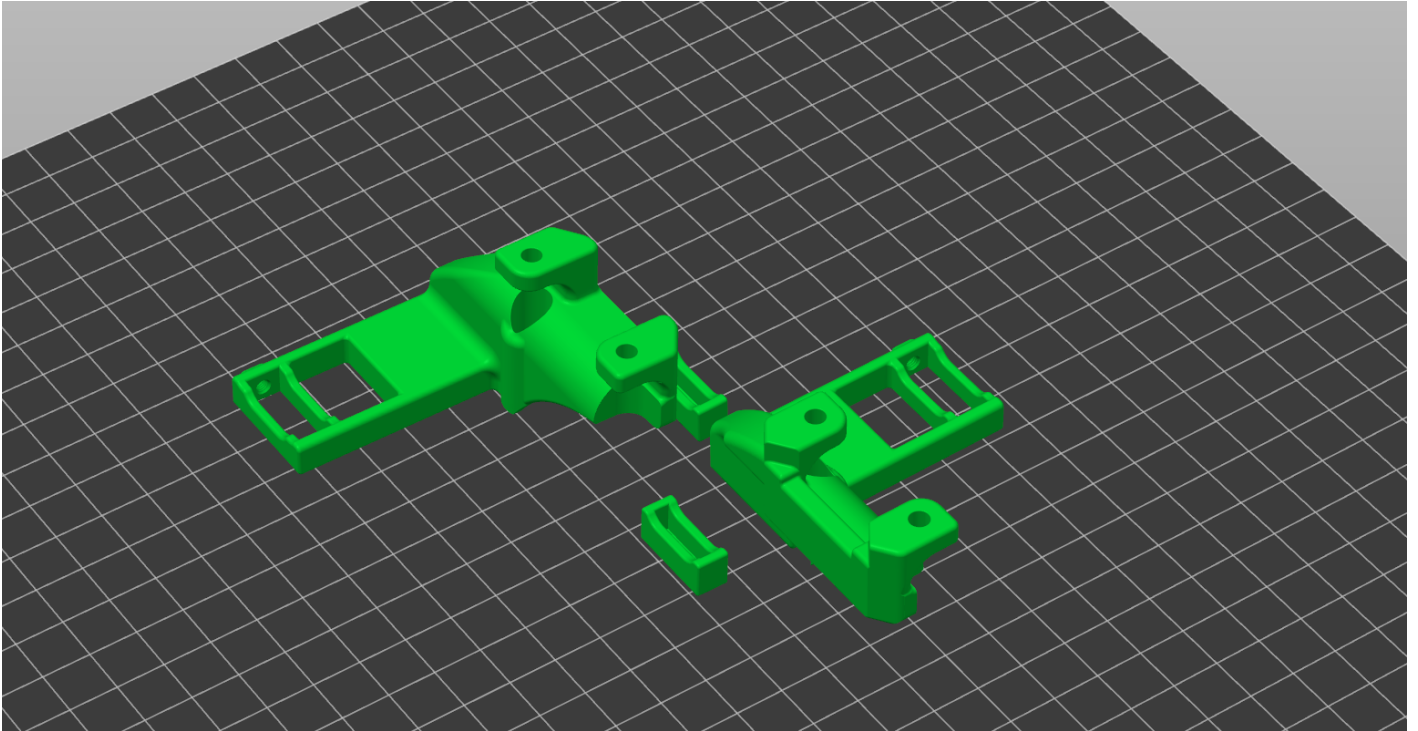
3D project realtime view

In order to see every single detail about this project, click here: <https://a360.co/3cTrbso>

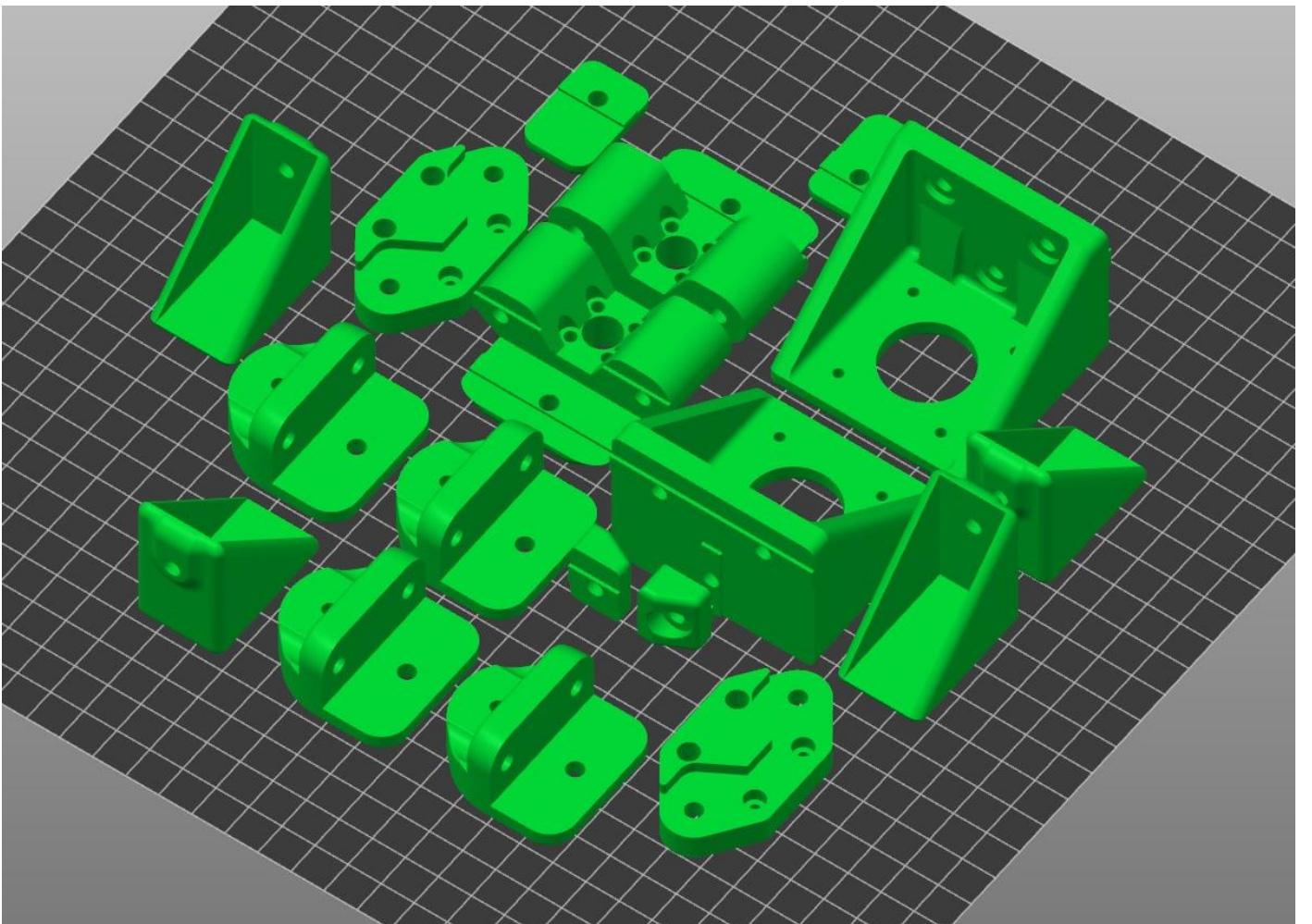


Printed parts placement

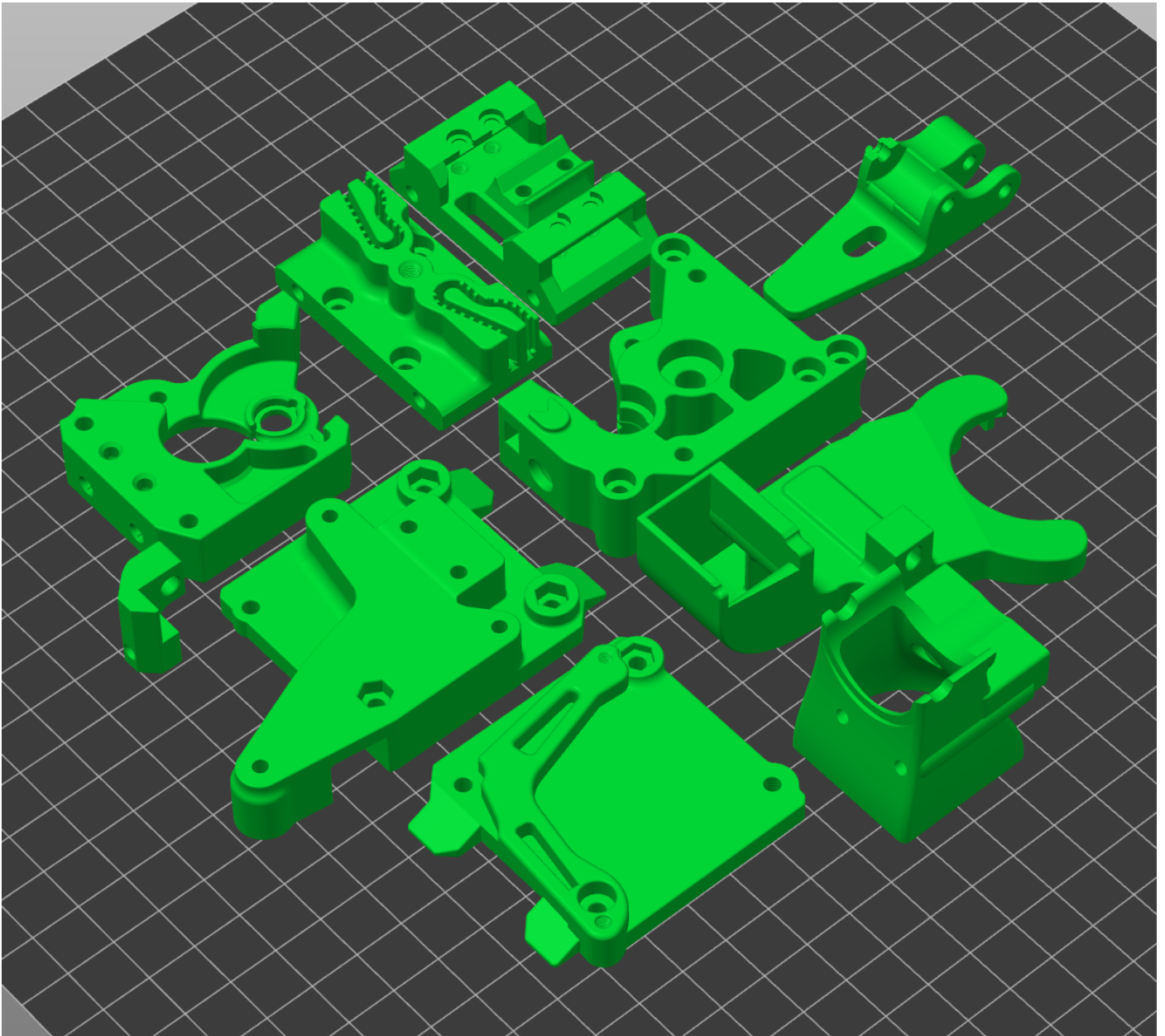
Nozzle purge system (left & right)



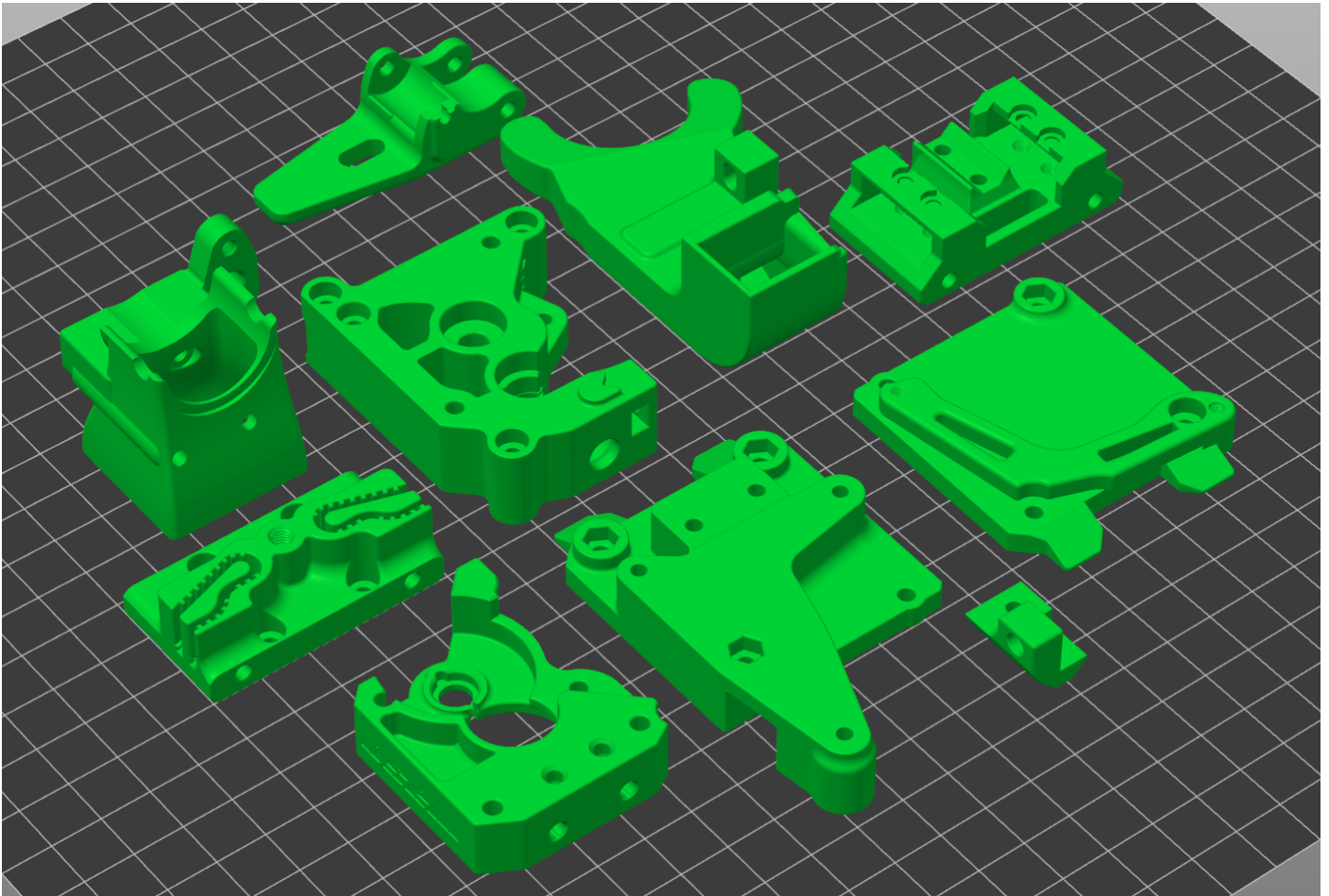
Z axis set



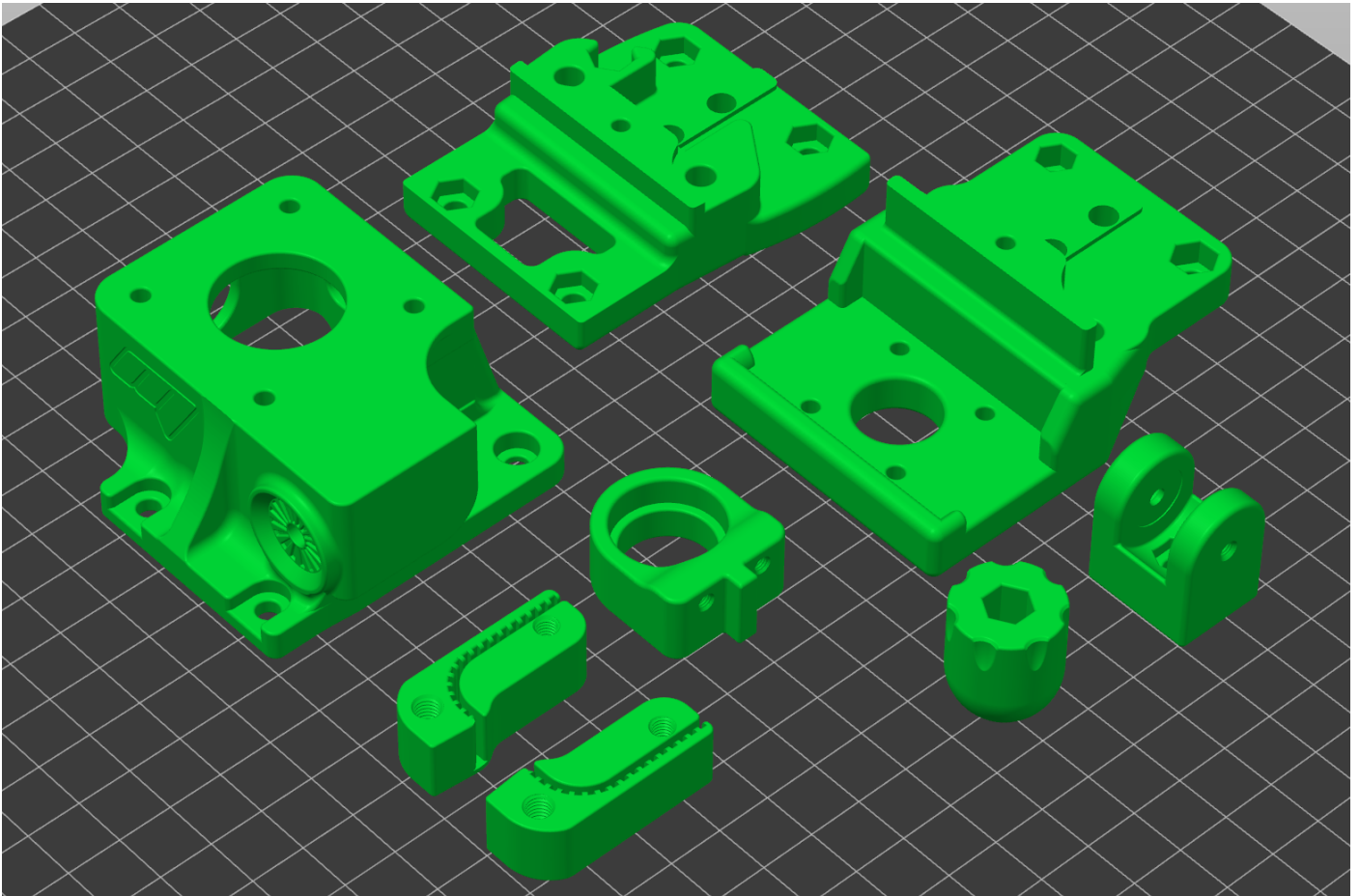
Right extruder set (U axis)



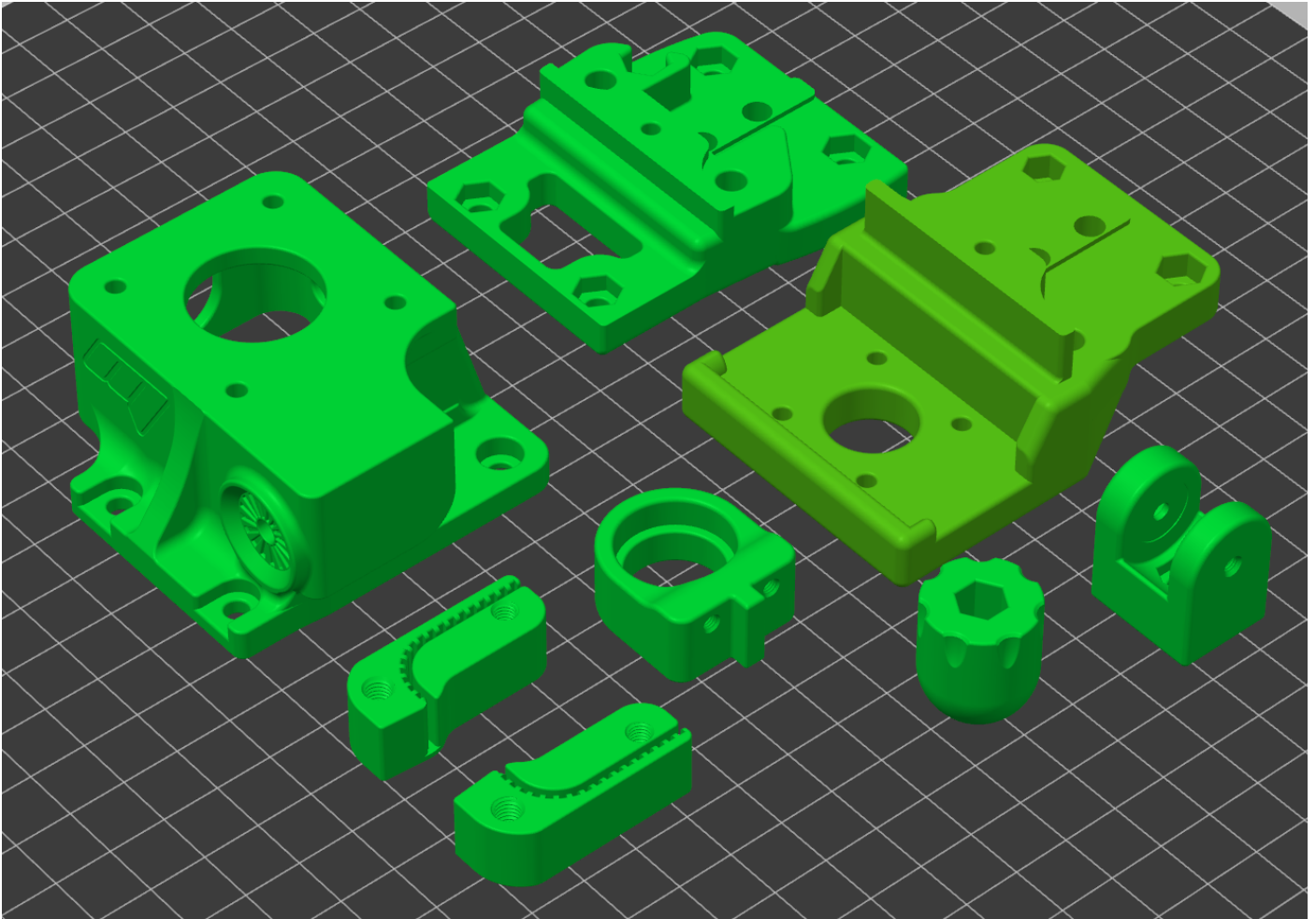
Left extruder set (X axis)



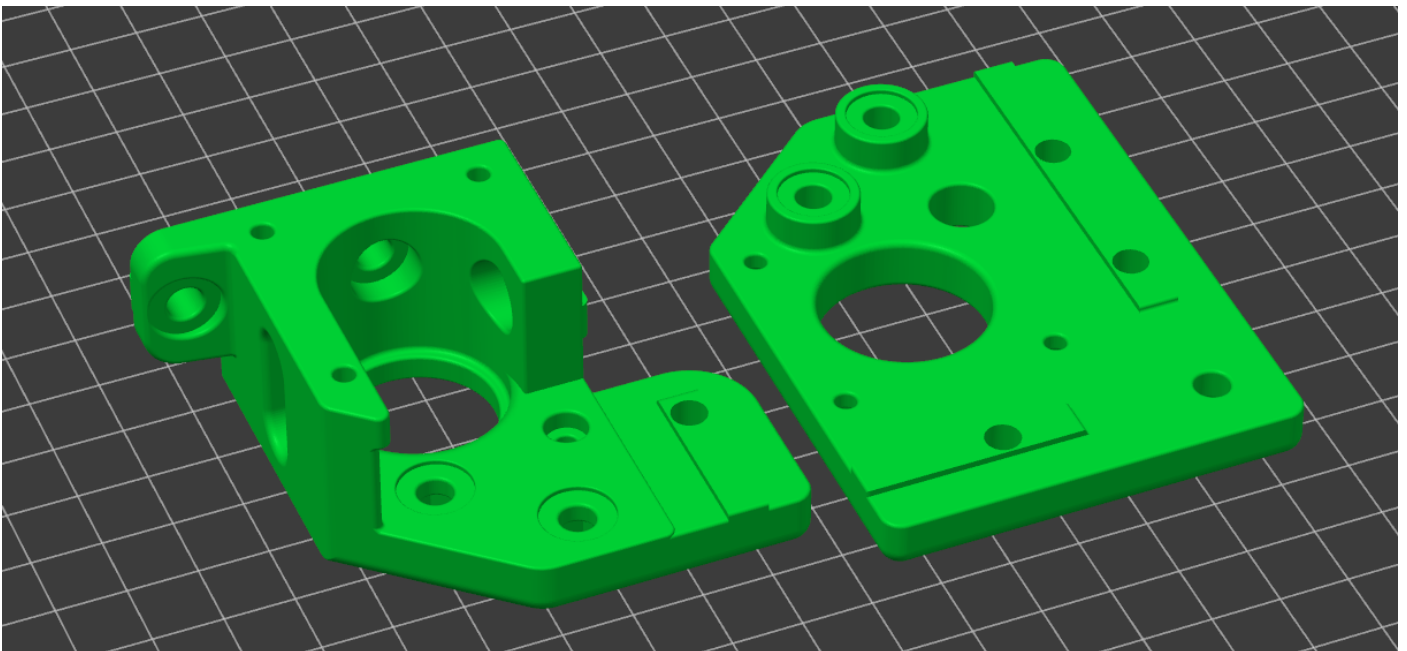
X axis set



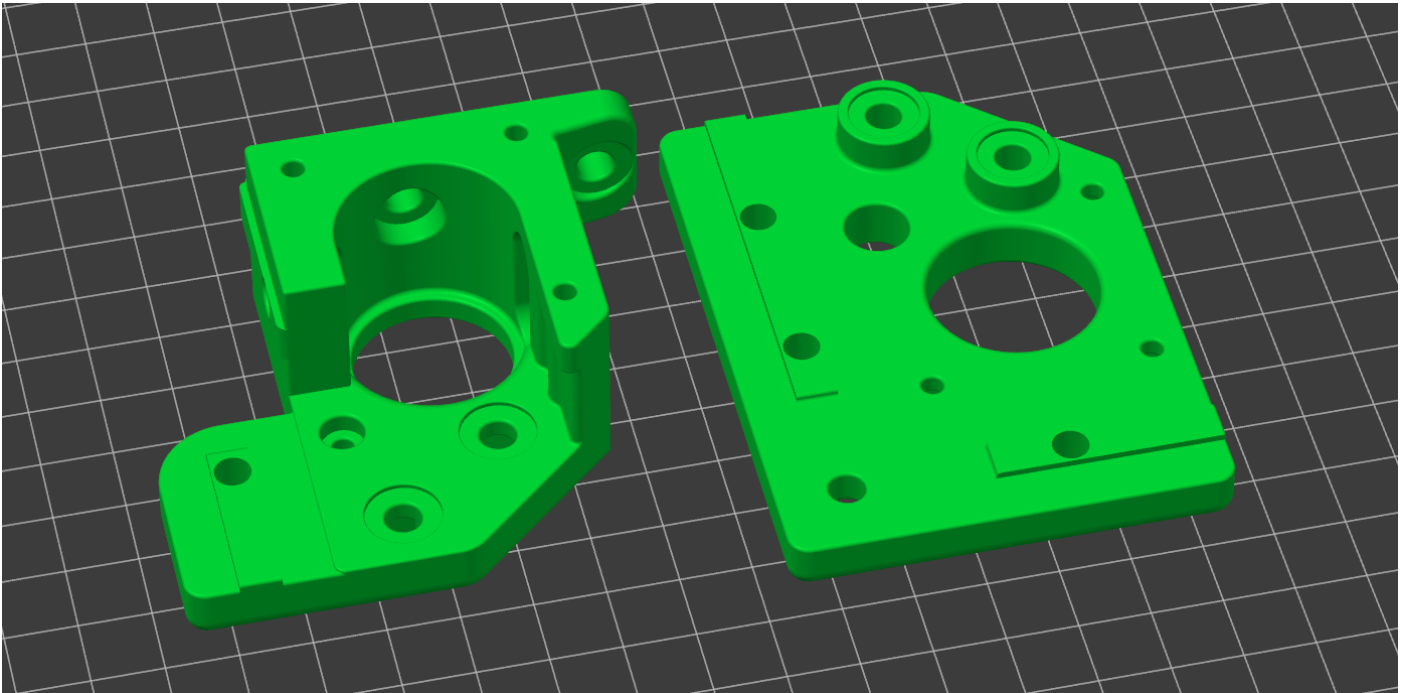
U axis set



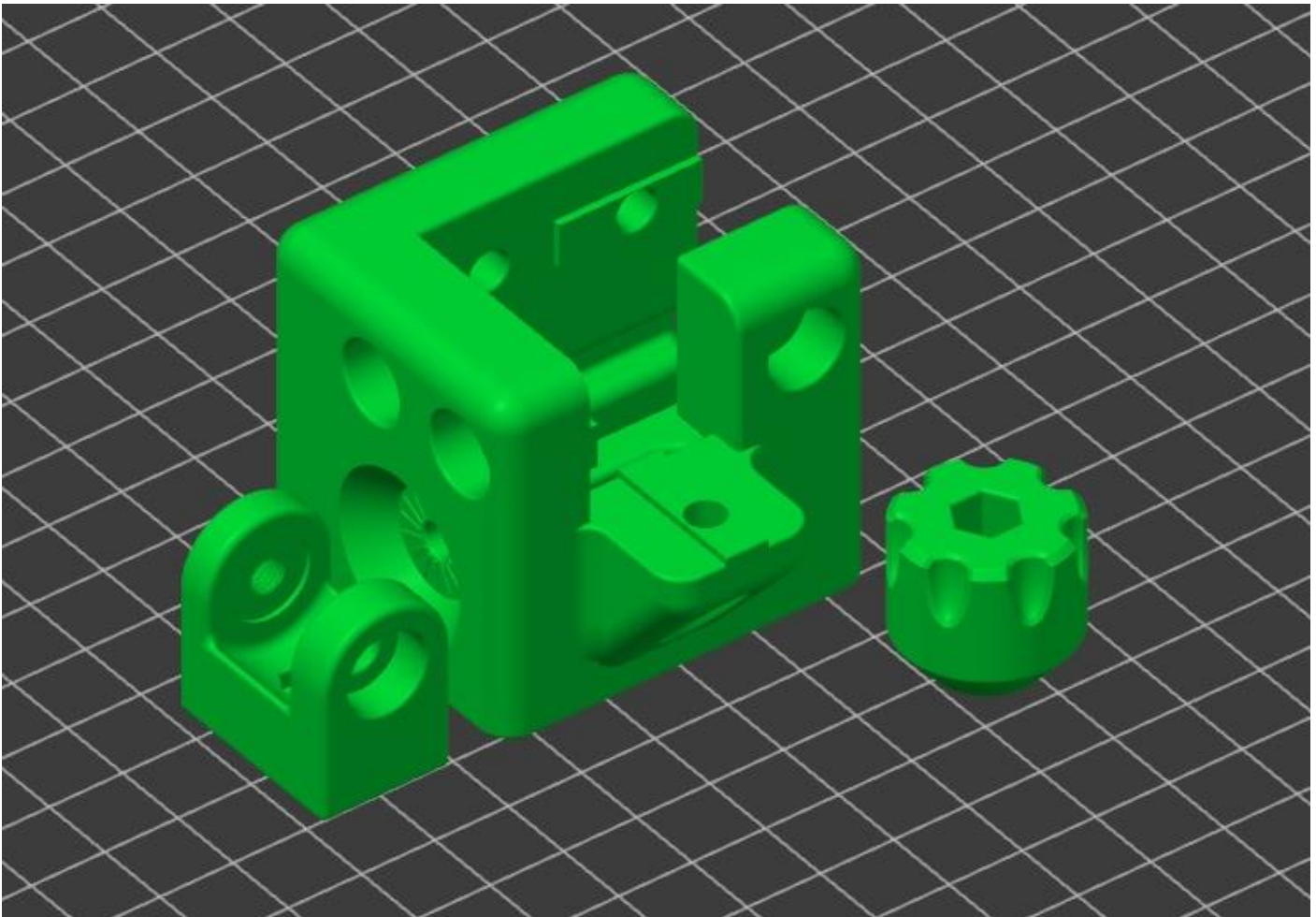
Y axis set (right side)



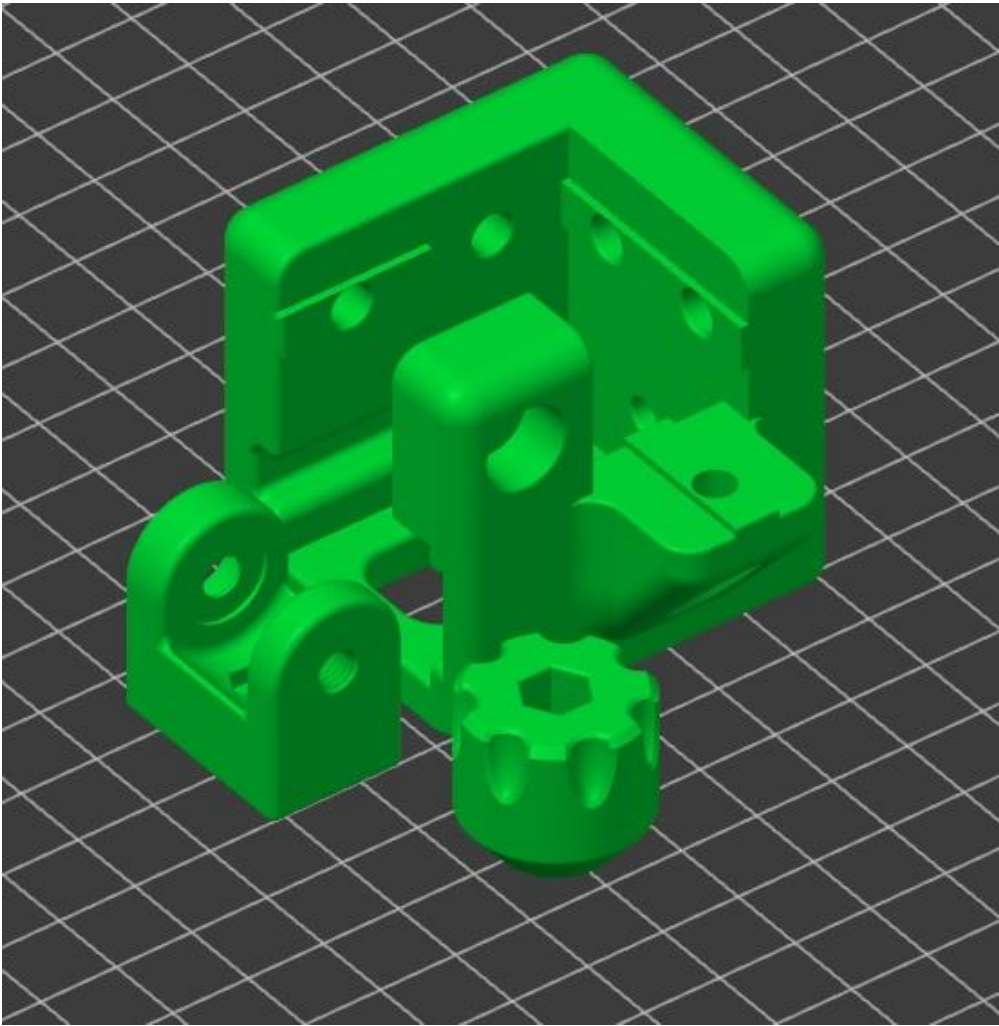
Y axis set (left side)



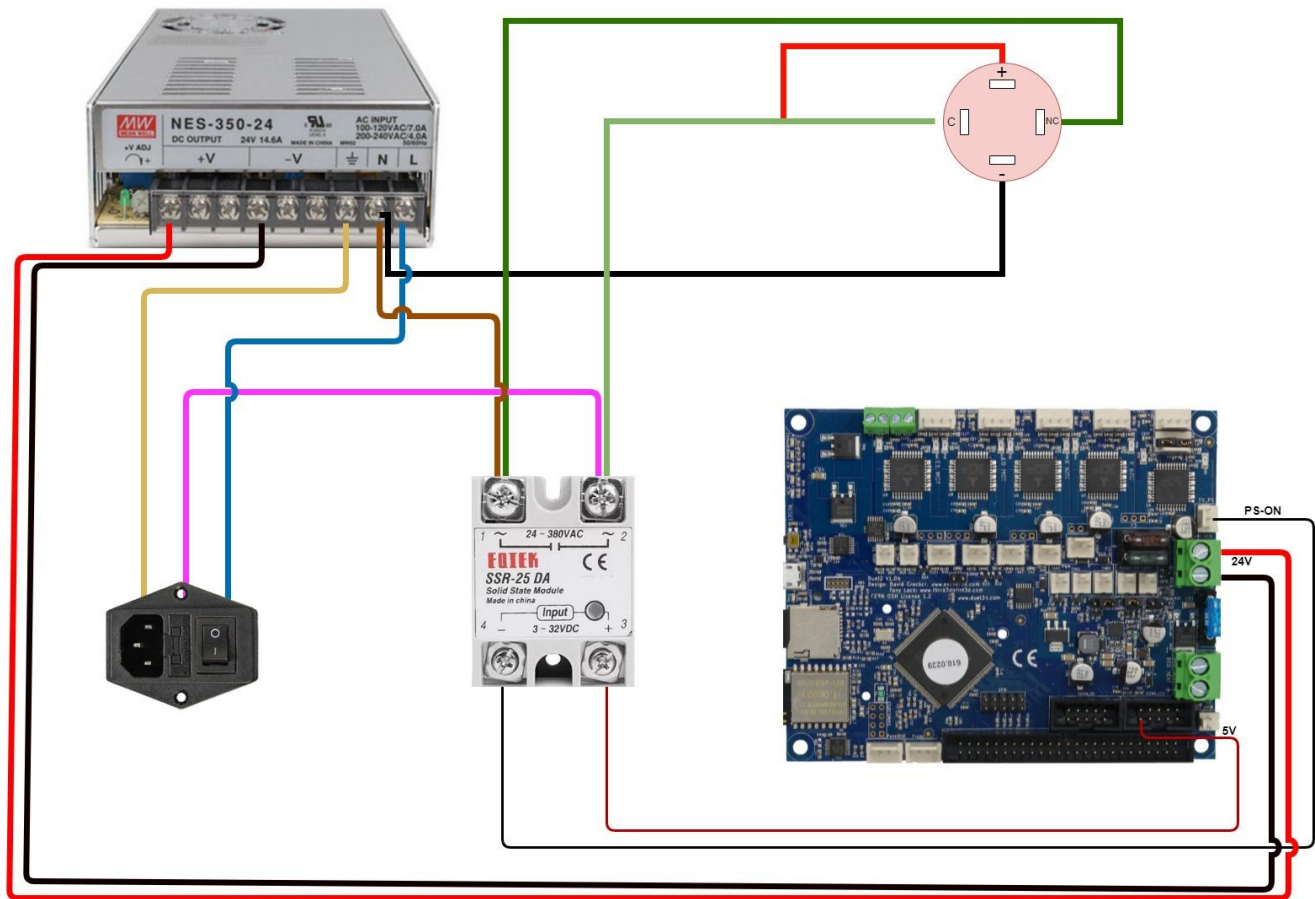
Y axis belt tensioner (right side)



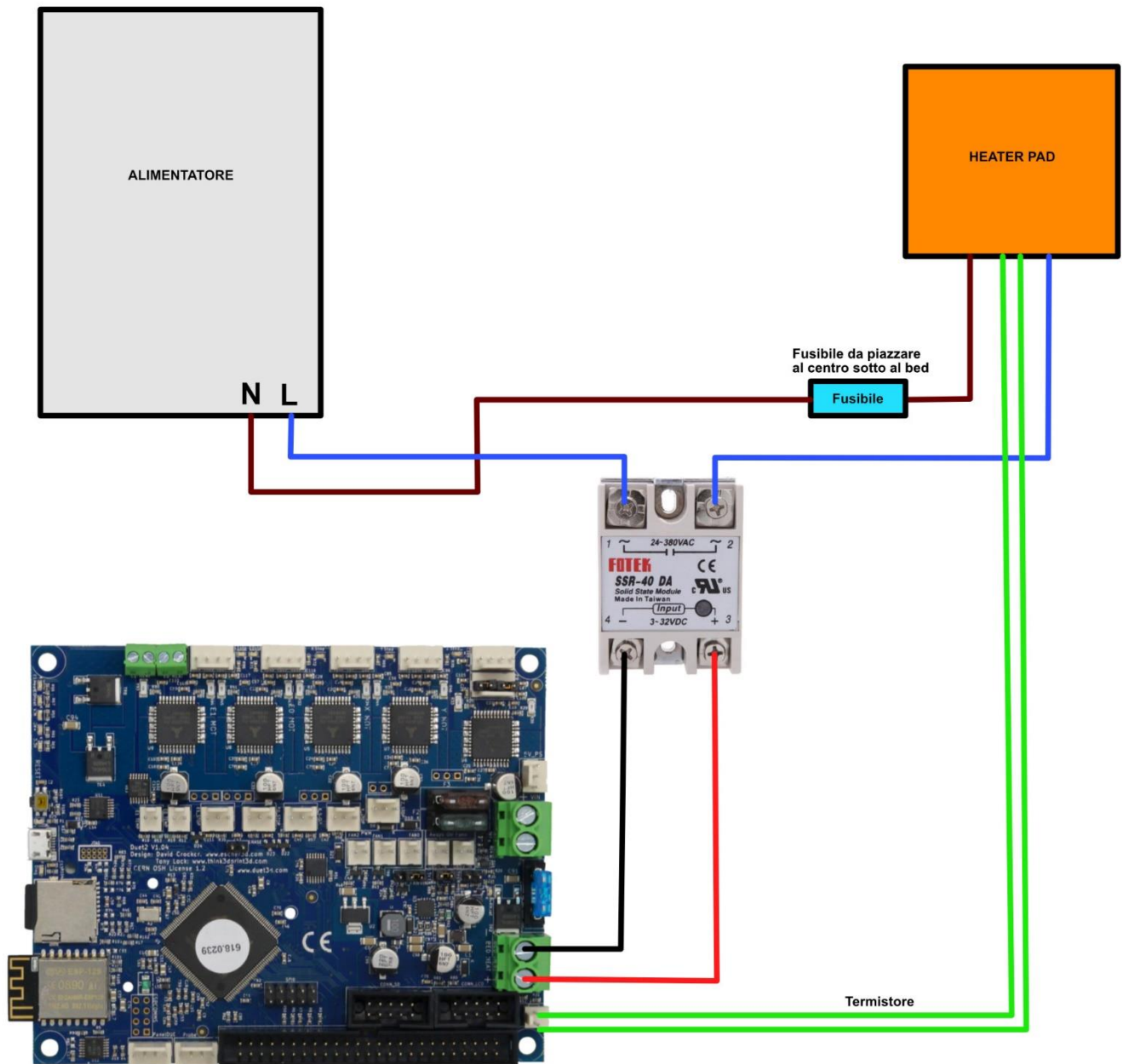
Y axis belt tensioner (left side)



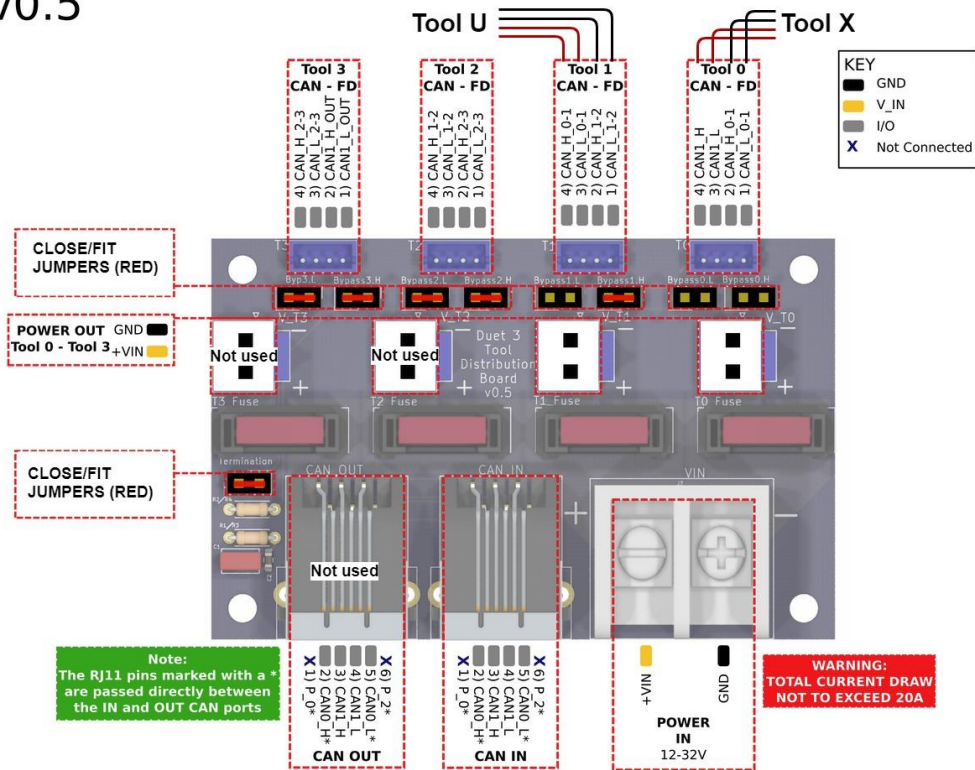
Power – Wiring diagram

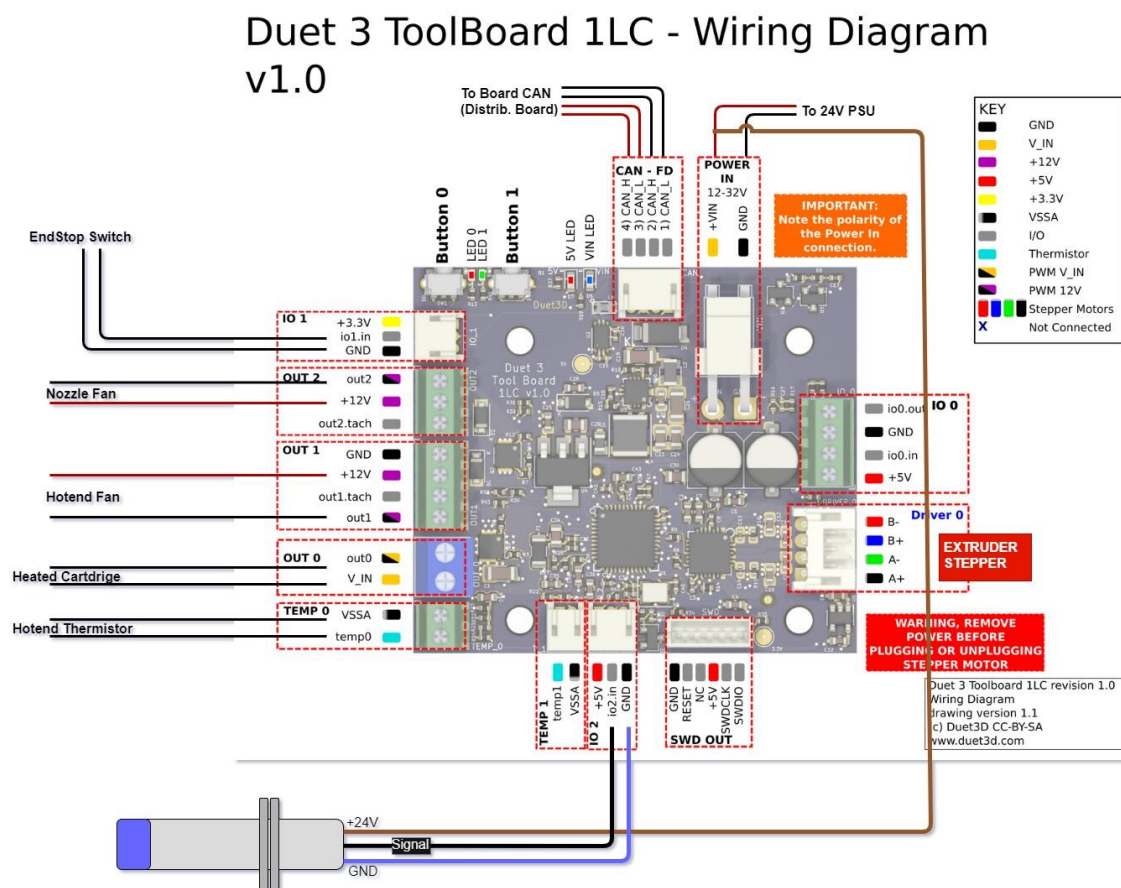


Heated bed – Wiring diagram



Duet 3 Tool Distribution Board - Wiring Diagram v0.5





Duet Toolboard 1LC 1.1 (optional) – Wiring diagram

