Technical Data

Hardware revision v1.0

General/dimensions/weights

Housing	aluminum-profile framework acrylic glass integrated LED lighting	
Positioning system	extruder head mounted on belt driven H-frame (X/Y-axis) screw driven print table (Z-axis)	
3D printing technology Fused Filament Fabrication (FFF)		
Length	800 mm	
Width	600 mm	
Height	800 mm	
Weight	49 kg (empty)	
Connection cable	1.000 mm	

Temperatures

Extrusion temperature	max. +300 °C
Print bed temperature	max. +130 °C
Print chamber temperature	max. +70 °C

Hot ends

Nozzle sizes included in delivery	Bore diameter [mm]	Recommended layer height First layer / following
	2×0.25	0.25 / 0.10 - 0.20
	2×0.35 ¹	0.35 / 0.10 - 0.28
	1×0.50 ²	0.50 / 0.20 - 0.40
	1×0.75	0.60 / 0.25 - 0.60

¹ Installed on the left hot end at delivery and preset in the Slic3r profiles available at the **GitHub repository** for single and dual extruder prints.

Print

Print volume	200 x 185 x 280 mm (10.4 liter)
Extruder head	dual extruder with two separate extruder nozzles for multi-colored and/or multi-material printing
Extruder nozzle diameters	0.25 / 0.35 / 0.5 / 0.75 mm
Print bed	exchangeable 210 x 210 mm PEI/glass fabric/carbon composite sheet
Layer height	min. 0.1 mm
Reproduction accuracy	±0.1 mm
Tolerance	±0.1 mm

² Installed on the right hot end at delivery and preset in the Slic3r profiles available at the **GitHub repository** for support material in dual extruder prints.

	X=0.028 mm
Positioning step-width axes	Y=0.019 mm
	Z=0.003 mm

Electronics

Drives	3 x 1.2 A stepper motor (XYZ positioning drives) 2 x 1.2 A planetary gear drive stepper motor (extruder drives)	
Stand-alone operating module	integrated capacitive 10" touchscreen controller	
Integrated computer	BeagleBone Black	
Machine control	RUMBA microprocessor board	
Load switching	5 x 15 A MOSFET board	
Power supply unit	1000 W with DC connector panel, power plug and main switch 110 230 V AC, 13-6.5 A, 50/60 Hz	
Fans	3 x 119x119x25 mm, 12 V, 140 m³/h axial fan (heat chamber circulation and cooling system) 1 x 80x80x25, 12 V, 33 m³/h axial fan (air filter)	
Network	Ethernet 10/100, RJ45	

Sensor technology

Limit switch H-frame (X/Y) and print table (Z)	magnetic hall endstops
Filament end recognition	mechanic limit switch
Temperature sensors extruder nozzle, print table, print chamber	300 °C thermistors

Material

Printable materials	ABS, PLA, HIPS, PVA, PC, PA12, PET
Filament diameter	2.85±0.1mm
Available filament qty.	0.75kg spool (200x55mm) 2.30kg spool (296x100mm)

Closed loop water cooling system

Pump	12V(DC) circulation pump with integrated compensation reservoir
Throughput	approx. 210l/h
Radiator	120mm full copper radiator
Fan	see electronics
Hose diameter G1/4"	
Coolant	Innovatek Protect IP ready-to-use
Coolant qty.	approx. 250ml

Air filter

Air filter	fan duct with exchangeable activated charcoal container
Fan	see electronics
Filling	10g, Ø4mm activated charcoal granule

Ambient conditions

Operating temperature	+18°C +27°C
Storage temperature	+5°C +35°C
Rel. air humidity	max. 70%
TSellin Sile	no excessive formation of dust (e.g. near woodworks, CNC machining centers)