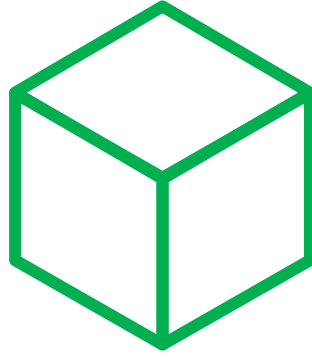
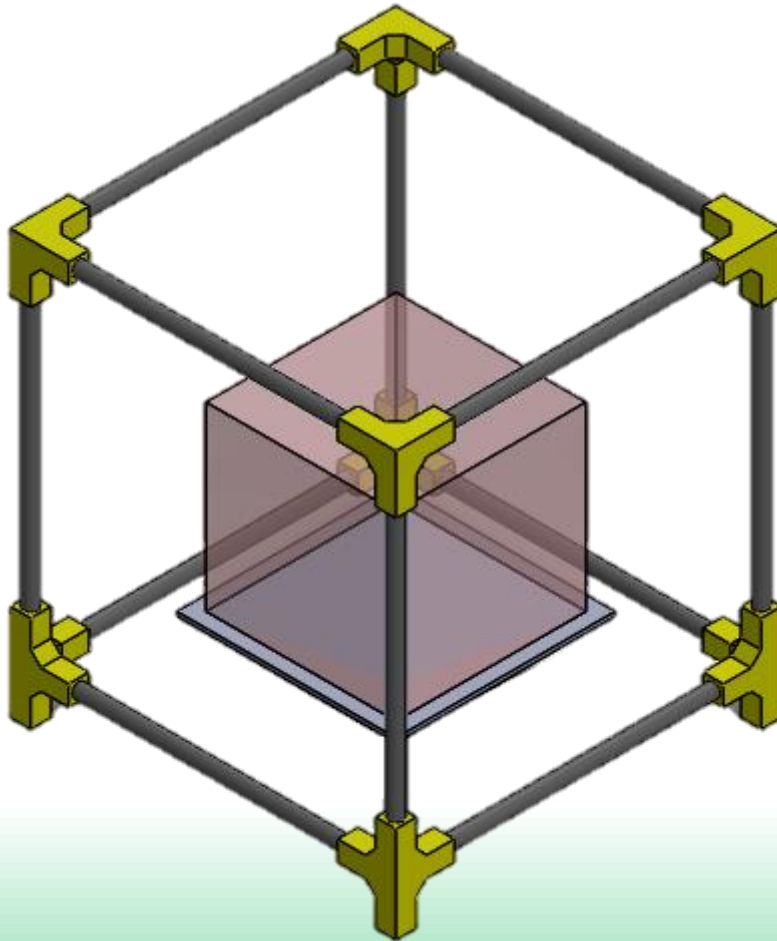


# BETAmini

Printing a better Future



## *Product Brief*



# *BETAmini 3D Printer*

## **Reduce the bias of assessing new technologies.**

Nowadays, it is possible to buy a 3d printer around US\$100 on Internet. However, this price can double according import and shipping taxes.

The main purpose of this project is to build a low cost and easily assembly 3d printer to provide equal opportunities for kids and students living in low income regions, mainly the ones in developing countries.

In the last years, new technologic devices, such as Arduino, drones and 3d printers have been included in education as pedagogic tools to teach STEM (science, technology, engineering, and math). However, due to the high cost associated a significant amount of kids doesn't have access to that these technologies yet.

## **First contact with 3D printer technology.**

To build BETAmini 3D Printer will be employed aluminum tubes, printed parts, stepper motors, Arduino controller, and other low cost parts. An estimated cost for this project is around US\$50. This value can be enough to provide a quality 3d printer and give children the first contact with such technology. Demonstrate cost viability is one of project outcomes.

# *Characteristics*

<b>BETAmini</b>	<b>Characteristics</b>
<b>Technology</b>	<b>FDM</b>
<b>Printing Volume</b>	<b>10 x 10 x 10 cm</b>
<b>Nozzle Numbers</b>	<b>1</b>
<b>Nozzle Diameter</b>	<b>0.4 mm</b>
<b>Filament Material</b>	<b>PLA</b>
<b>Filament Diameter</b>	<b>1.75 mm</b>
<b>Layer resolution</b>	<b>0.1 mm</b>
<b>Extrusion head</b>	<b>E3D</b>
<b>Extruder tipe</b>	<b>Bowden</b>
<b>Speed</b>	<b>30 mm/s</b>

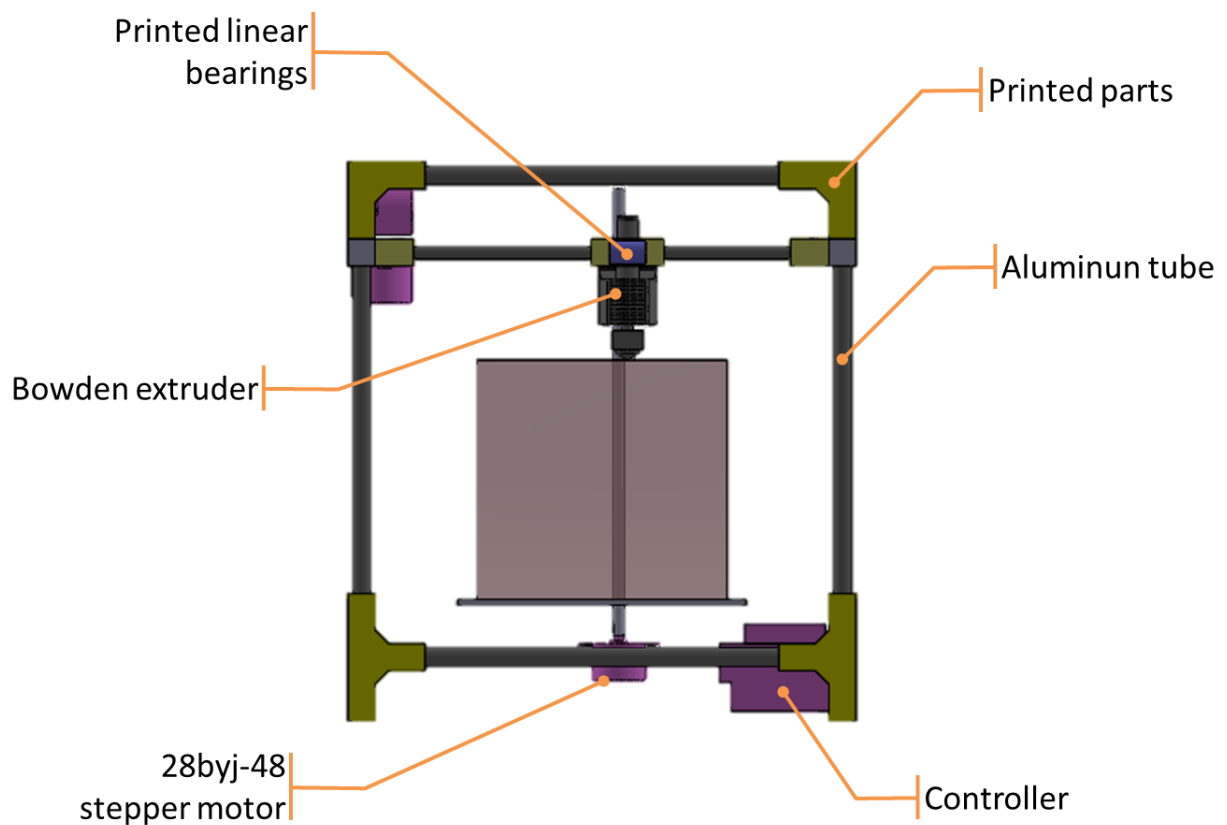
# *Bill of Material*

Item	Part	Pcs
1	250V, 1A power supply	1
2	28bcy-48 stepper motor	5
3	Arduino	1
4	stepper driver	4
5	controller	1
6	10x300 mm aluminum tube	10
7	hotend	1
8	polycarbonate bed plate	1
9	micro switch	3
10	30x30 fan	1
11	5x250 mm Threaded Rod	2
12	printed parts	20
13	bolts, washers and hex nuts	30

\* It is a previous list.

# *Design to Cost*

- **Simplicity**
- **Easy to Assembly**
- **Effectiveness**
- **Focus on Education**



**BETA**mini  
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