

# Gatoino Bill of Materials (BOM)

I've listed the sources I originally ordered from. Since prices change constantly you can also order the same parts from a different vendor. Shipping prices might vary depending on your location. Since AliExpress links can be volatile and it might be a while since you downloaded the files here is the link to a possibly [updated Version of this document](#).

The base cost for a complete order is around \$35, however since most parts are sold in bulk you'll have enough parts to build a few units. The extra parts needed for an additional unit (Arduino, OLED Display) only adds around \$10 to the bill.

Category	Pcs	Name	Type	Size	Source Link	Comment
Electronics	1	Base PCB			<a href="#">JLPCB</a>	Use provided Gerber Files
	1	USB C Port	4 Pin		<a href="#">AliExpress</a>	
	1	Power Switch	3 Pin 90°		<a href="#">AliExpress</a>	
	2	Male Pin Header	3 Pin		<a href="#">AliExpress</a> <a href="#">AliExpress</a> <a href="#">Male + Female header</a>	Cut any larger header to size. You can also order the set to save money but you have to cut the female header.
	1	Female Pin Header	4 Pin, 2.54mm Pitch		<a href="#">AliExpress</a> or <a href="#">AliExpress</a>	You can also cut larger headers apart and use only 4 pins
	2	Female Pin Header	15 Pin, 2.54mm Pitch		<a href="#">AliExpress</a> or <a href="#">AliExpress</a>	OPTIONAL: You can also solder the Arduino directly to the board and save a few dollars
	4	Switches	4 Pin 6x6x12mm	6.5x4.5 Pin spacing	<a href="#">AliExpress</a>	12mm length preferred, 8mm work as well using the 8mm D-Pad file
	1	OLED Display	4 Pin SSD1306	0.96"	<a href="#">AliExpress</a>	The color doesn't matter. I used white. <b>Do NOT</b> order the SSD1315 type, you need SSD1306

		1 Ceramic Capacitor	680nF		<a href="#">AliExpress</a>	If unavailable use any larger one (uF is the higher unit after nF, 1uF = 1000 nF)
		2 Resistor	150 Ohm		<a href="#">AliExpress</a> or <a href="#">AliExpress</a>	Select the appropriate ones on the page (150R). If unavailable use a higher value (never a lower one!). Up to 470R has been tested to work fine
		2 Resistor	10k Ohm		<a href="#">AliExpress</a> or <a href="#">AliExpress</a>	Select the appropriate ones on the page (150R). If unavailable use a higher value (never a lower one!). Up to 56k has been tested to work fine
		2 Mosfet	2N7000		<a href="#">AliExpress</a>	
		1 Arduino Nano	ATMEGA 328p		<a href="#">AliExpress</a>	USB port type doesn't matter, I prefer USB-C ("TYPE-C welding"). No 168p, it lacks memory!
		2 Servo with Screws	9g		<a href="#">AliExpress</a>	I tried many vendors, those were the most reliable so far
		1 Laser Diode	5 Volt		<a href="#">AliExpress</a> or as bulk: <a href="#">AliExpress</a>	Diode only, not the ones with a PCB
		1 USB Power Supply	5 Volt, 1 Amp			Less Amps should work as well, if you already have a spare just try it
3D Printed		1 Outer Case				PLA and PETG both work fine. ABS might warp on larger parts
		1 Case Lid				
		1 Front Plate				
		1 Laser Cage				
		1 Small Mirror Axis				
		1 Large Mirror Axis				

	1	Power Switch Slider				
	1	OLED Bracket				
	1	D-PAD				8mm or 12mm print file depending on the button length
	1	Small Mirror Servo Gear				
	1	Small Mirror Drive Gear				
	1	Large Mirror Servo Gear				
	1	Large Mirror Drive Half Gear				
Screws	2	Large Mirror Fix	M3	10mm	<a href="#">AliExpress</a>	Buying longer screws and cutting them to size is also possible
	1	Small Mirror Fix	M3	25mm	<a href="#">AliExpress</a>	Select the right type, the link is only the general product page
	6	PCB Fix	M3	6mm	<a href="#">AliExpress</a>	OPTIONAL: 10mm M3 can also be used
	8	Case Screws	M2	8mm	<a href="#">AliExpress</a>	
Other	1	Acrylic Glass	2mm thick	42x84mm	<a href="#">AliExpress</a>	Probably sourced cheaper locally. Red tint works as well.
	1	Mirror Small		10x10mm	<a href="#">AliExpress</a> / <a href="#">Amazon.de</a>	Feel free to cut any mirror to size yourself, it works just fine
	1	Mirror Large		50x10mm	<a href="#">AliExpress</a> / <a href="#">Amazon.de</a>	I've chosen those parts since I planed on mass producing them