

## Sheet1

	details1	details2	details3	quantity	unit price
<b>Common</b>					
Barrel connector		3A	2,1mm int pin	1	0.47
Power supply	12V	5A	2.1mm pin	1	18.65
Custom PCB				1	5
3D printed frame				1	5
Flat ribbon cable	10pin	3m colored	AWG-28	1	1.99
<b>Raspberry pi module</b>					
Capacitor	16V	680µF	Electrolitic	1	0.43
Capacitor	16V	220µF	Electrolitic	1	0.08
Diode	20-60V	3A	Schottky	1	0.18
Inductor	3.6A	33µH	Ferrit	1	0.6
Screw terminal	2pin	6A		1	0.24
Switching volt reg (LM2596)	45V	3A	TO-220-5	1	3.8
Raspberry pi 3	Pi 2 will also work			1	37.5
HDMI cable	0.5m			1	1.55
USB cable	A to micro B			1	1.5
Screws	M3	Head cap	6mm long	4	0.05
<b>Arduino module</b>					
Arduino Nano	Atmega328			1	22.9
socket terminal strip	20 pin	2.54 spacing	8.5mm height	2	0.27
USB cable	A to mini B	0.3m		1	1.95
<b>Peltier module</b>					
H-Bridge (L298N)	Multiwatt 15			1	2.4
Fan	12V	40X40X20		1	1.99
Capacitor	100V	0.1µF	Electrolitic	2	0.04
LED RGB	4V	20mA	4 pin	1	0.58
Resistor	1/4W	220Ohm	carbon film	3	0.11
Resistor	17W	10hm	Axial	1	0.97
Resistor	1/4W	270Ohm	carbon film	1	0.11
Resistor	1/4W	1kOhm	carbon film	1	0.11
Transisitor (BC368)	20V	1A	0.8W	1	0.08
Peltier element	15.4V	6A	40X40X4.1mn	1	17.1
Screw terminal	2pin	6A		4	0.24
Heat sink	36X36X12			2	1.15
Temp sensor (AD22100-KT)	TO-92	for negative temps use AT va		1	3.4
<b>Ring + Matrix</b>					
Capacitor	16V	680µF	Electrolitic	1	0.43
Capacitor	16V	220µF	Electrolitic	1	0.08
Diode	20-60V	3A	Schottky	1	0.18
Inductor	3.6A	33µH	Ferrit	1	0.6
Switching volt reg (LM2596)	45V	3A	TO-220-5	1	3.8
Screw terminal	3pin	6A		1	0.36
Screw terminal	2pin	6A		1	0.24
Adafruit neopixel ring	12 LEDs			1	6.71
Adafruit LED matrix	8X8	with backpackblue		1	10.7
<b>Power LEDs + Servo</b>					
Capacitor	16V	680µF	Electrolitic	1	0.43

Sheet1

Capacitor	16V	220µF	Electrolitic	1	0.08
Diode	20-60V	3A	Schottky	1	0.18
Inductor	3.6A	33µH	Ferrit	1	0.6
Switching volt reg (LM2596)	45V	3A	TO-220-5	1	3.8
Resistor	1/4W	270Ohm	carbon film	1	0.11
Transistor (BC368)	20V	1A	0.8W	3	0.08
LED(violet – High power)	3.9V	350mA	130mW	1	8.79
Resistor(High power)	11W	120hm	axial	1	0.65
Reflective collimator	6°	17.5mm	CLP17CR	1	2.33
Heat sink	36X36X12			1	1.15
Excitation filter	Roscolux #381			1	10.2
Emission filter	Roscolux #12			1	10.2
Servo motor	5V		cont. rotation	1	6.99
Screw terminal	3pin	6A		1	0.36
Screw terminal	2pin	6A		2	0.24

**TOTAL**

**Extras**

HDMI to VGA dongle	Optional			1	20.99
Red filter (optional)	Roscolux #19			1	17.6
Monitor				1	89.95
Keyboard & mouse set	USB			1	15.95
Soldering iron				1	4.99
Solder	1mm			1	3.2
Thermal paste				1	7.99
Third Hand				1	9.95
Screw driver	3.5mm			1	3.99

**TOTAL**

**Grand total**

total

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18.65 <https://www.reichelt.de/Power-Supplies-Fixed-Voltage/MW-GST60A12/3/index.html?&>  
5 <https://github.com/amchagas/Flypi/tree/development/PCB>  
5 [https://github.com/amchagas/Flypi/tree/development/3D\\_print\\_files](https://github.com/amchagas/Flypi/tree/development/3D_print_files)  
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22.9 <https://www.reichelt.de/ARDUINO-NANO/3/index.html?&ACTION=3&LA=446&ARTICL>  
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10.7 <https://www.adafruit.com/products/1052>

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0.24 <https://www.reichelt.de/BC-Transistors/BC-368/3/index.html?&ACTION=3&LA=5700&>  
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2.33 [http://www.roithner-laser.com/led\\_highoptic.html](http://www.roithner-laser.com/led_highoptic.html)  
1.15 <https://www.reichelt.de/Heat-Sinks-PCB-mounting/V-ICK-PGA36X36/3/index.html?&A>  
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**202.68** all prices in euros and most items from the same distributor – which is not the cheapest:

20.99 <https://www.conrad.de/de/manhattan-hdmi-auf-vga-konverter-1284618.html>  
17.6 <https://www.rosco.com/uk/german/filters/roscolux.cfm>  
89.95 <https://www.reichelt.de/HANNS-G-HE225DPB/3/index.html?&ACTION=3&LA=446&AF>  
15.95 <http://www.reichelt.de/Keyboard-Mouse-Sets/CHERRY-JD-0800DE/3/index.html?&AC>  
4.99 <https://www.reichelt.de/KOLBEN-FP-30/3/index.html?&ACTION=3&LA=446&ARTICLE>  
3.2 <https://www.reichelt.de/Solder/LZ-FE-1-0-100/3/index.html?&ACTION=3&LA=2&ARTI>  
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