

FLIGHT CONTROLLER PCB COMPONENTS							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
4"x5" (127x101mm) Double side copper clad (FR1)	1	1,6	\$	1,6	Bantam Tools	Link	The set includes 25 pcs, total cost - 40\$
Microcontroller ATtiny 3216	1	1,10	\$	1,10	Digi-Key ATTINY3216-SNR	ATtiny3216	
1 µF capacitor	1	0,28	\$	0,28	Digi-Key No. 445-1423-1-ND	Capacitor	
1K resistor	1	0,10	\$	0,10	Digi-Key No. 311-1.00KFRCT-ND	Resistor	
LED (blue color)	1	0,30	€	0,30	Digi-Key No. 160-1889-1-ND	LED	
2.54mm Pitch Horizontal 1x02 Connector Headers (for UPDI)	2	0,13	€	0,27	Digi-Key S1133E-30-ND	Link	The set includes 30 pcs, so the cost is calculated once, total cost - 3,98€
2.54mm Pitch Horizontal 1x06 Connector Headers (for FTDI)	6			0,80			
Rivets, Outside = 1.4 mm, inner = 1 mm	21	0,02	€	0,44	reichelt.de	Link	The set includes 1000 pcs, total cost - 20,80€
Rivets, outside = 0.8 mm, inner = 0.6 mm	11			0,23			
2.54mm Pitch Vertical 1x03 Connector Headers, D = 1 mm (for ESC)	12	0,66	\$	1,32	Digi-Key S1011EC-40-ND	Vertical Connector Headers	The set includes 40 pcs, so the cost is calculated once, but I need two set
2.54mm Pitch Vertical 1x06 Connector Headers, D = 1.4 mm (for sensor)	6						
2.54mm Pitch Vertical 1x04 Connector Headers, D = 1.4 mm (for sensor)	4						
2.54mm Pitch Vertical 1x07 Connector Headers, D = 1.4 mm (for receiver)	21						
3mm, 40mm high connecting screws	4	<i>failed to find out</i>	<i>failed to find out</i>	<i>failed to find out</i>	<i>failed to find out</i>	<i>failed to find out</i>	
3mm connecting screws nuts	4	0,04	\$	0,17	Digi-Key No. H762-ND	Link	The set includes 100 pcs, total cost - 4,27€
Accelerometer, Gyroscope Sensor LSM6DSOX by Adafruit	1	4,86	€	4,86	Digi-Key No. 1528-4480-ND	Accel + Gyro module	
Wire Connectors	2	0,35	€	0,70	Digi-Key No. A30818-ND	Link	
6 Wires, ~0,1 m	1	0,84	€	0,84	Digi-Key No. 3M157821-50-ND	Wires	The set includes 15,24 m, total cost - 12,86€

POWER SUPPLY PCB COMPONENTS							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
4" x 5" (127x101mm) Single side copper clad (FR1)	1	1,4	\$	1,4	Bantam Tools	Link	The set includes 25 pcs, total cost - 35\$
1K resistor	1	0,10	\$	0,10	Digi-Key No. 311-1.00KFRCT-ND	Resistor	
LED (red color)	1	0,30	€	0,30	Digi-Key No. 160-1167-1-ND	LED	
2.54mm Pitch Horizontal 1x06 Connector Headers (for FTDI)	6	<i>calculated above</i>	€	<i>calculated above</i>	Digi-Key S1133E-30-ND	Link	The set includes 30 pcs, so the cost is calculated once
3.5mm Pitch Screw Horizontal 1x02 Terminal	4	0,74	\$	2,96	Digi-Key No. 609-4725-ND	3.5 mm screw terminal	
5mm Pitch Screw Horizontal 1x02 Terminal	1	0,38	\$	0,38	Digi-Key No. 732-10955-ND	5 mm screw terminal	
Regulator Linear, 1A	1	0,56	\$	0,56	Digi-Key No. NCP1117ST50T3G SOT223	Regulator Linear	

BATTERIES PART							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
18650 Li-ion Battery, 3.7V, 3000mAh 20A	3	6,3	€	18,9	Pro-akku	Link	
Compatible batteries charger	1	42,90	€	42,90	Pro-akku	Link	As it is also used for other projects and is not limited to my project, this part is not included in the total cost
Compatible batteries holder (18650)	1	0,60	\$	0,60	Digi-Key	Batteries holder	
ON/OFF switch	1	<i>failed to find out</i>	€	<i>failed to find out</i>	Opal No. ACZ256	Link	Suitable only as a temporary option, in future - should be integrated into PCB
2.5 mm connecting nylon screws (black color)	2	0,04	\$	0,08	Adafruit No. 4685	Link	The set includes 420 pieces, total cost - 16,95\$
2.5 mm connecting nylon screws nuts (black color)	2	0,04	\$	0,08			
Heavy duty strong tape (to ensure that the batteries do not move)	-	-	-	-	-	-	

REMOTE CONTROLLER PART							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
Remote controller Flysky FS-IA6	1	49,63	€	49,63	Banggood		
Compatible Receiver FS-IA6	1	16,04	€	16,04	Banggood	Manual	

MOVEMENT PART							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
4 pcs Brushless motors	1	31,59	\$	31,59	Amazon	Link	
4 pcs Electronic speed controller (ESC), 35A, Makerfire BLHeli-32 set	1	41,99	\$	41,99	Amazon	Link	
4 pcs Propellers Kit (with 2 spare sets), in total 12	1	15,99	\$	15,99	Amazon	Link	
flat screw nuts to fix propellers	4	0,04	\$	0,16	Digi-Key No. H767-ND	Link	The set includes 100 pieces, total cost - 4\$
Plastic lock straps	4	0,02	€	0,08	Digi-Key No. 2162-AL-04-18-30-C-ND	Link	The set includes 100 pieces, total cost - 1,89€

3D PRINTING PART							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
Connectors (need to separate both PCBs and the screws do not touch the copper plate) by PLA filament	3	0,07	€	0,21	3Dk Berlin	Aalto FabLab material price list	Quantity - g, Costs are calculated according to Aalto Fablab pricing
Landing gears by flexible resin in SLA technology	44,76	0,30	€	13,428	maker3D.fi	Aalto FabLab material price list	Quantity - ml, Costs are calculated according to Aalto Fablab pricing
Vertical Connection lines by PLA filament	12	0,07	€	0,84	3Dk Berlin	Aalto FabLab material price list	Quantity - g, Costs are calculated according to Aalto Fablab pricing

FRAME PART							
COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
3mm 900x600mm koskipli plywood	1	12,40	€	12,40	Koskisen	-	Costs are calculated according to Aalto Fablab pricing

CONVERT FROM \$
TO € (14.06.2021)

83,38

TOTAL: 203,64

ADDITIONAL PURCHASED (future perspective)

COMPONENT	QUANTITY	UNIT COST	CURRENCY	TOTAL COST	VENDORS	DATASHEET	NOTES
250x600mm, 2mm Carbon fiber sheet	1	62,90	€	62,9	Kevra.fi	Link	Not included in the total cost