A0002 Full Flight Computer BOM

Project:	Full Feature Flight Computer
Revision:	1.0
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Qty	Component	Manufacturer	Part Number	Designator	Footprint	Footprint Type	Price per Unit	Data Sheet	Source	Alternate Parts	Other
1	ARM Cortex-M7 Microcontroller 100-LQFP	STMicroelectronics	STM32H750VBT6	U1	100-LQFP	SMD	$17.06	STM32H750VBT6	LCSC		
11	CAP CER 0.1UF 10V X7R 0402	Samsung Electro-Mechanics	CL05B104KP5NNNC	C2, C3, C5, C6, C7, C8, C15, C16, C17, C18, C19, C25	0402	SMD	$0.10	CL05B104KP5NNNC	Digikey		Decoupling Capacitors
1	IC REG LINEAR 3.3V 300MA SOT89-3	Diodes Incorporated	AP7370-33Y-13	U2	SOT89-3	SMD	$0.42	AP7370-33Y-13	Digikey		3.3V Regulator
1	LED GREEN CLEAR SMD	Lite-On Inc.	LTST-C191KGKT	D5	0603	SMD	$0.26	LTST-C191KGKT	Digikey		Power Supply Indication LED
2	RES SMD 240 OHM 1% 1/10W 0402	Panasonic Electronic Compone	ERJ-2RKF2400X	R3, R6	0402	SMD	$0.13	ERJ-2RKF2400X	Digikey		
2	CAP CER 2.2UF 10V X5R 0402	Samsung Electro-Mechanics	CL05A225MP5NSNC	C4, C9	0402	SMD	$0.15	CL05A225MP5NSNC	Digikey		
6	CAP CER 1UF 6.3V X5R 0402	YAGEO	CC0402KRX5R5BB105	C10, C20, C21, C22, C23, C24	0402	SMD	$0.11	CC0402KRX5R5BB105	Digikey		
1	External Flash	Microchip	SST25VF040B-50-4I-S2AE-T	U7	8-SOIC	SMD	$0.92	SST25VF040B-50-4I-S2AE-T	Digikey	SST25VF040B-50-4I-S2AF-T	
1	IC USB-TO-UART BRIDGE 28VQFN	Silicon Labs	CP2102-GMR	U8	QFN-28	SMD	$3.24	CP2102-GMR	LCSC		
4	POWER MOSFET N-CH 30V 2A TSMT5	Rohm Semiconductor	QS5U17TR	Q1, Q2, Q3, Q4	TSOT-23-5	SMD	$0.63	QS5U17TR	Digikey		Ignition MOSFETs
1	St-Link V2 Programmer	STMicroelectronics	St-LINK V2				$25.31	St-LINK V2	ST		
1	TVS DIODE 5.5VWM 8.5VC SOT23-5	Littelfuse Inc.	SP0504BAHTG	D6	SOT23-5	SMD	$0.95	SP0504BAHTG	Digikey		
6	RES 100K OHM 1% 1/16W 0402	YAGEO	RC0402FR-07100KL	R13, R14, R15, R16, R22, R25	0402	SMD	$0.10	RC0402FR-07100KL	Digikey		
1	CAP CER 4.7UF 6.3V X5R 0402	Murata Electronics	GRM155R60J475ME47D	C1	0402	SMD	$0.12	GRM155R60J475ME47D	Digikey		MCU decoupling capacitor
2	RES 82 OHM 1% 1/16W 0402	YAGEO	RC0402FR-0782RL	R1, R2	0402	SMD	$0.10	RC0402FR-0782RL	Digikey		Blue/Green Current Limiting LEDs
1	LED RGB CLEAR 4PLCC SMD	CreeLED, Inc.	CLMVC-FKA-CL1D1L71BB7C3C3	D1		SMD	$0.19	CLMVC-FKA-CL1D1L71BB7C3C	Digikey		
3	RES 4.7K OHM 5% 1/16W 0402	YAGEO	RC0402JR-074K7L	R10, R16, R26	0402	SMD	$0.10	RC0402JR-074K7L	Digikey		
1	CONN RCPT USB2.0 MICRO B SMD R/A	Amphenol ICC (FCI)	10118194-0001LF	P6	SMD/Through-hole	SMD/Through-hole	$0.48	10118194-0001LF	Digikey		
13	RES SMD 10K OHM 1% 1/16W 0402	Samsung Electro-Mechanics	RC1005F103CS	R5, R7, R8, R9, R11, R17, R18, R19, R20, R21, R24, R27, R28	0402	SMD	$0.10	RC1005F103CS	Digikey		
1	IMU ACCEL/GYRO I2C/SPI 14LGA	Bosch Sensortec	BMI323	U3	14-VFLGA	SMD	$6.23	BMI323	Bosch Sensortec		
1	BUZZER PIEZO 5V 13.8MM TH	PUI Audio, Inc.	AT-1438-TWT-R	BZ1	2POS	Through-hole	$1.69	AT-1438-TWT-R	Digikey		
1	SENSOR PRESSURE ABS	Bosch Sensortec	BMP390	U5	10-WFLGA	SMD	$5.36	BMP390	Bosch Sensortec		
1	SENSOR FLIPCORE/HALL SPI 12WLCSP	Bosch Sensortec	BMM150	U4	12-WLCSP	SMD	$2.34	BMM150	Digikey		
1	CONN HEADER VERT 6POS 1.25MM	Molex	530470610	P1	6POS	Through-hole	$0.48	530470610	Digikey		Programming Connector
1	PICOBLADE 6 CIRCUIT 300MM	Molex	151340603				$5.50	151340603	Digikey		Programming Cable
1	CRYSTAL 24.0000MHZ 12PF SMD	ECS Inc.	ECS-240-12-37B-CKY-TR	Y1	4-SMD, No Lead	SMD	$0.38	ECS-240-12-37B-CKY-TR	Digikey		
2	CAP CER 4PF 50V C0G/NP0 0402	Murata Electronics	GJM1555C1H4R0BB01D	C12, C14	0402	SMD	$0.10	GJM1555C1H4R0BB01D	Digikey		
1	RES SMD 200K OHM 1% 1/16W 0402	Samsung Electro-Mechanics	RC1005F204CS	R23	0402	SMD	$0.10	RC1005F204CS	Digikey		
1	RES SMD 39K OHM 5% 1/10W 0402	Panasonic Electronic Compone	ERJ-2GEJ393X	R4	0402	SMD	$0.10	ERJ-2GEJ393X	Digikey		Battery Voltage Measurement
1	CONN HEADER VERT 2POS 2MM	JST Sales America Inc.	B2B-PH-K-S(LF)(SN)	P2	2POS	Through-hole	$0.17	B2B-PH-K-S(LF)(SN)	Digikey		LiPo Battery Connector
2	CAP CER 1UF 50V X5R 0603	Samsung Electro-Mechanics	CL10A105KB8NNNC	C11, C13	0603	SMD	$0.14	CL10A105KB8NNNC	Digikey		
3	TERM BLK 4POS SIDE ENT 3.5MM PCB	TE Connectivity AMP Connecto	1546551-4	P3, P4, P5	4POS	Through-hole	$1.60	1546551-4	Digikey		Screw terminals
6	MOSFET N-CH 60V 115MA SOT323	Diodes Incorporated	2N7002W-7-F	Q5, Q6, Q7, Q8, Q9, Q10	SOT323	SMD	$0.41	2N7002W-7-F	Digikey		Continuity MOSFETS
3	DIODE SCHOTTKY 30V 1A DSN1006-2	Nexperia USA Inc.	PMEG3010AESBYL	D2, D3, D4	DSN1006-2	SMD	$0.38	PMEG3010AESBYL	Digikey		Power mux diodes
1	TERM BLK 2POS SIDE ENT 3.5MM PCB	TE Connectivity AMP Connecto	1546551-2		2POS	Through-hole	$1.34	1546551-2	Digikey		Main Power Connector
1	ACCELEROMETER 100G I2C/SPI 16LGA	STMicroelectronics	H3LIS100DLTR	U6	16-VFLGA	SMD	$4.50	H3LIS100DLTR	Digikey		High-G accelerometer