

Bill of Materials for Controller and Sensors Rev 5.0

Part ID	QTY	Value	Digi-Key P/N/ Source	Description	Manufacturer	Manufacturer Part No.	Unit Price	Cost	Min QTY
U1	1	NA	Digikey 296-17009-1-ND	IC MCU 16BIT 60K FLASH 64-LQFP	Texas Instruments	MSP430F169IPMR	13.24	13.24	1
U7, U8, U9, U10, U11, U12, U14, U17	8	NA	Digikey 296-12749-1-ND	IC TEMP SENSOR DIGITAL SOT-23-6	Texas Instruments	TMP100NA/250	2.13	17.04	1
U2	1	NA	Digikey 296-17609-1-ND	IC 10OHM SPDT ANALOG SW 16-SSOP	Texas Instruments	TS3A5018DBQR	0.96	0.96	1
U3	1	NA	Digikey 296-19850-1-ND	IC RS232 3V5.5V 15KVESD 16-SSOP	Texas Instruments	MAX3232ECDBR	1.5	1.5	1
C18	1	100pF	Digikey 311-1069-1-ND	CAP CERAMIC 100PF 50V NP0 0603	Yageo Corporation	CC0603JRNPO9BN101	0.062	0.62	10
C2, C3	2	20pF	Digikey 478-3506-1-ND	CAP RF 20PF 250V 0603 SMD	AVX Corporation	SQCSVA200JAT1A	0.296	2.96	10
U4	1	NA	Digikey 497-5531-ND	ACCELEROMETER TRIPLE AXIS 16-LGA	STMicroelectronics	LIS3LV02DL	13.9	13.9	1
C30, C35	2	470pF	Digikey 490-1443-1-ND	CAP CER 470PF 50V 5% C0G 0603	Murata Electronics North America	GRM1885C1H471JA01D	0.103	1.03	10
C6, C8, C10, C12, C14, C20	6	10uF	Digikey 587-1256-1-ND	CAP CER 10UF 6.3V X5R 0603	Taiyo Yuden	JMK107BJ106MA-T	1.32	13.2	10
U15	1	NA	Digikey HTM2500-ND	SENSOR RH CAP NTC THERM VOUT	Humirel	HTM2500	65.52	65.52	1
J1	1	NA	Digikey MHB14K-ND	SHROUDED HEADER 14 POS STRAIGHT	3M	2514-6002UB	1.41	1.41	1
U16	1	NA	Digikey MPX4250A-ND	SENSOR ABS PRESS 36.3PSI MAX	Freescale Semiconductor	MPX4250A	14.94	14.94	1
U13	1	NA	Digikey MPXV5050GP-ND	SENSOR GAUGE PRESS 7.25PSI MAX	Freescale Semiconductor	MPXV5050GP	14.94	14.94	1
C4, C5	2	12pF	Digikey PCC120ACVCT-ND	CAP CERAMIC 12PF 50V 0603 SMD	Panasonic - ECG	ECJ-1VC1H120J	0.033	0.33	10
C1, C7, C9, C11, C13, C15, C16, C17, C19, C26, C27, C28, C29, C32, C33, C36, C37	17	0.1uF	Digikey PCC1788CT-ND	CAP .1UF 16V CERAMIC Y5V 0603	Panasonic - ECG	ECJ-1VF1C104Z	0.03	1.2	10
C21, C22, C23, C24, C25, C31, C34	7	1uF	Digikey PCC2354CT-ND	CAP 1UF 25V CERAMIC 0603 X5S	Panasonic - ECG	ECJ-1V41E105M	0.167	1.67	10
R10 - R35, R37 - R44	34	0	Digikey RHM0.0GCT-ND	RES 0.0 OHM 1/10W 5% 0603 SMD	Rohm	MCR03EZPJ000	0.0372	1.86	50
R5	1	100	Digikey RHM100GCT-ND	RES 100 OHM 1/10W 5% 0603 SMD	Rohm	MCR03EZPJ101	0.069	0.69	10
R1, R2, R3, R4, R6, R8	6	10K	Digikey RHM10KGCT-ND	RES 10K OHM 1/10W 5% 0603 SMD	Rohm	MCR03EZPJ103	0.069	0.69	10
R7	1	10M	Digikey RHM10MGCT-ND	RES 10M OHM 1/10W 5% 0603 SMD	Rohm	MCR03EZPJ106	0.069	0.69	10
R9, R36	2	47K	Digikey RHM47KGCT-ND	RES 47K OHM 1/10W 5% 0603 SMD	Rohm	MCR03EZPJ473	0.069	0.69	10
X1	1	32.768 KHz	Digikey SE2405CT-ND	CRYSTAL 32.7680KHZ 12.5PF SMD	Epson Toyocom Corporation	MC-405 32.7680K-A0	0.95	0.95	1
SW1	1	NA	Digikey SW403-ND	SWITCH TACT 6MM MOM 150GF	Omron Electronics Inc-ECB Div	B3F-1022	0.23	0.23	1
J10, J13	2	NA	Digikey WM8195-ND	CONN HEADER 4POS .100" R/A TIN	Molex/Waldom Electronics Corp	90136-2104	1.14	2.28	1
J2, J3, J4, J8, J9, J12	6	NA	Digikey WM8262-ND	CONN HEADER 8POS .100" R/A TIN	Molex/Waldom Electronics Corp	90130-3108	1.83	10.98	1
X2	1	6.5MHz	Digikey X415-ND	CRYSTAL 6.500MHZ 20PF HC-49/US	ECS inc	ECS-65-20-4	0.58	0.58	1
U18	1	NA	www.sparkfun.com	20 Channel EM-408 SiRF III Receiver with Antenna/MMCX	Global Sat	EM-408	64.95	64.95	1
U5	1	NA	www.hobbyengineering.com/	Magnetic Compass	DV	CMPS03	54.99	54.99	1
U6	1	NA	www.sparkfun.com	SD/MMC Socket for Secure Digital Disk or Multi Media Cards	4UCON Technology Inc.	PRT-00136	3.95	3.95	1
J11	1	NA	www.allelectronics.com	2-PIN CONNECTOR W/HEADER, .10"	unknown	CON-242	0.7	0.7	1
J5	1	NA	Digikey WM8263-ND	CONN HEADER 10POS .100" R/A TIN	Molex/Waldom Electronics Corp	90130-3110	2.08	2.08	1
J6, J7	2	NA	Digikey SAM1204-04-ND	CONN RCPT .100" 8POS DUAL TIN	Samtec Inc.	SSQ-104-03-T-D	3.36	6.72	1
SD Card	1	128MB	www.superwarehouse.com	SimpleTech 128MB Secure Digital Memory Card	SimpleTech	STI-SD/128	10.99	10.99	1

Total 328.48