

# Bill of Materials

TI DESIGNS

TIDM-SWRGBLED

MSP-EXP430G2

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
1	2	C2, C3	16pF	Ceramic Capacitor				0402	
2	2	C9, C10	22pF	Ceramic Capacitor				0402	
3	1	C1	10nF	Ceramic Capacitor				0402	
4	5	C5, C7, C11, C12, C13	100nF	Ceramic Capacitor				0402	
5	3	C4, C6, C8	1uF	Ceramic Capacitor, 6.3V				0603	
6	1	D1	1V@ 50mA, 75V 0.15A	Switching Diode	Micro Commercial	1N4148WX-TP		0603	
7	1	EZ_USB	SB-MB-H	USB Connector	Würth Electronics	65100516121	UX60A-MB-5ST		
8	1	Q1	12.0MHz, 16pF	Crystal	Freqtech	FT10A-12,0/16-30-30/27			
9	3	R1, R2, R3, R16, R17	47k	Resistor 5% tolerance				0402	DNP: R16 R17
10	1	R8	61.5k	Resistor 5% tolerance				0402	
11	2	R19, R22	3.3k	Resistor 5% tolerance				0402	
12	1	R9	30k	Resistor 5% tolerance				0402	
13	2	R12 R21	33k	Resistor 5% tolerance				0402	
14	5	R4, R5, R6, R7, R23	100R	Resistor 5% tolerance				0402	
15	2	R14, R15	33R	Resistor 5% tolerance				0402	
16	2	R18, R20	100k	Resistor 1% tolerance				0402	
17	3	R13, R24, R25	1.5k	Resistor 5% tolerance				0402	
18	1	R10	10k	Resistor 5% tolerance				0402	
19	1	R11	15k	Resistor 5% tolerance				0402	
20	1	U1	<a href="#">MSP430F1612IPMR</a>	Texas Instrument Microcontroller	Texas Instruments	MSP430F1612IPMR		64QFP	
21	1	U4	<a href="#">TPD2E001DRLR</a>	2 channel +/-15kV ESD Protection	Texas Instruments	TPD2E001DRLR		5SOT	
22	1	U3	<a href="#">TUSB3410VF</a>	RS232/IrDA Serial-USB Converter	Texas Instruments	TUSB3410VF		32QFP	
23	1	U2	<a href="#">TPS77301DGKR</a>	Single Output 250mA LDO, Adjust	Texas Instruments	TPS77301DGKR		8VSSOP	
24	1	U5	AT24C128-10TU-2.7	Serial EEPROM	Atmel	ATC24C128-10TU-2.7	24AA128-I/ST	8TSSOP	
25	1	C14	1nF	Ceramic Capacitor				0603	
26	2	C21, C22	12.5pF	Ceramic Capacitor				0603	DNP
27	1	C23	10uF	Ceramic Capacitor, 10V	TDK	C2012Y5V1A106Z		0805	
28	1	C20, C24	100nF	Ceramic Capacitor				0603	DNP: C24
29	2	LED0, LED1	Green	Green 0603 LED				0603	
30	1	LED2	Red	Red 0603 LED				0603	
31	1	R34, R27	47k	Resistor 5% tolerance				0603	DNP: R34
32	2	R32, R26	270R	Resistor 5% tolerance				0603	
33	1	R33	470R	Resistor 5% tolerance				0603	
34	2	R28, R29	0R	Resistor				0603	
35	1	U7	DIL20	20DIP IC Socket	Aries Electronics	20-3518-10	4820-3000-CP	20DIP	
36	1	Q2	Crystal						DNP
37	2	J1, J2,	10-pin header, TH	10x1 100mil male header					
38	1	J3	2X05 Pin Header Male	5x2 100mil male header					place jumper on all header (5 pcs)
39	1	J4	6 Pin Header Male 1.28 mm						DNP
40	1	J5	2X02 Pin Header Male	2x2 100mil male header					place jumper on header (2 pcs)
41	2	J6	3-pin header, male, TH	3x1 100mil male header					

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42	2	S1, S2	Push Button	SPST Push Button	Panasonic	EVQ-21505R			
43	1	MSP430	MSP430G2452IN20	Texas Instrument Microcontroller	Texas Instruments	MSP430G2452IN20		20DIP	Option for Socket
44	1	MSP430	MSP430G2553IN20	Texas Instrument Microcontroller	Texas Instruments	MSP430G2553IN20		20DIP	Option for Socket



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TI DESIGNS

TIDM-SWRGBLED

RGB LED

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64	1	D1		RGB LED 20mA	Kingbright	WP154A4SUREQBFZG W	-	WP154A4SUREQBFZGW	
65	1	J1/J2		40Pin Booster Pack Connection	Samtec	SSW-110-23-F-D	-	40Pin BP	
66	3	Q1, Q2, Q3		P-FET, 20V	Vishay Siliconix	SI2301CDS	-	SOT-23	
67	3	R1, R2, R3	1.0Meg	RES, 1.0 M, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06031M00JNEA		0603	
68	1	R4	57.6	RES, 57.6, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060357R6FKEA		0603	
69	1	R5	51.7	RES, 51.7, 0.1%, 0.1 W, 0603	Yageo America	RT0603BRD0751R7L		0603	
70	1	R6	24.3	RES, 24.3, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060324R3FKEA		0603	
71	6	R7, R8, R9, R10, R11, R12	0	RES, 0, 5%, 0.1 W, 0603	Rohm	MCR03EZPJ000		0603	

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