

# Bill of Materials

TI DESIGNS

TIDM-3DGRAPHICS-QVG MSP-EXP430F5529LP LaunchPad

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB DECAL/Package	Rev 1.6 to Rev 2.0 Change
1	1		Micro USB cable	MicroUSB cable. Lierda to suggest part	CM		Box	
2	1	C101	470n	CAP CER 0.47UF 16V 10% X5R 0402,Digikey 445-4976-1-ND	Standard		C0402	
3	1	C102	220n	CAP CER 0.22UF 16V 10% X5R 0402,Digikey 445-4972-1-ND	Standard		C0402	
4	1	C103	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard		C0402	
5	1	C104	10u	CAP TANT 10UF 10V 20% 1206,Digikey 493-2351-1-ND	Standard		TANT_3216	
6	1	C107	220n	CAP CER 0.22UF 16V 10% X5R 0402,Digikey 445-4972-1-ND	Standard		C0402	
7	1	C110	10p	CAP CER 10PF 50V NPO 0402,Digikey 445-1235-1-ND	Standard		C0402	
8	1	C111	10p	CAP CER 10PF 50V NPO 0402,Digikey 445-1235-1-ND	Standard		C0402	
9	1	C112	1n	CAP CER 1000PF 50V 10% X7R 0402,Digikey 445-1256-1-ND	Standard		C0402	
10	1	C113	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard		C0402	
11	1	C121	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard		C0402	
12	1	C122	33p	CAP CER 33PF 50V 5% NPO 0402,Digikey 445-1241-1-ND	Standard		C0402	
13	1	C123	33p	CAP CER 33PF 50V 5% NPO 0402,Digikey 445-1241-1-ND	Standard		C0402	
14	1	C14	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard		C0402	
15	1	C15	220n	CAP CER 0.22UF 16V 10% X5R 0402,Digikey 445-4972-1-ND	Standard		C0402	
16	1	C16	220n	CAP CER 0.22UF 16V 10% X5R 0402,Digikey 445-4972-1-ND	Standard		C0402	
17	1	C17	1n	CAP CER 1000PF 50V 10% X7R 0402,Digikey 445-1256-1-ND	Standard		C0402	
18	1	C18	470n	CAP CER 0.47UF 16V 10% X5R 0402,Digikey 445-4976-1-ND	Standard		C0402	
19	1	C19	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard		C0402	
20	1	C20	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard		C0402	
21	1	C21	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
22	1	C23	10p	CAP CER 10PF 50V 5%NPO 0402,Digikey 445-1235-1-NC	Standard		C0402	
23	1	C24	10p	CAP CER 10PF 50V 5% NPO 0402,Digikey 445-1235-1-NC	Standard		C0402	
24	1	C25	12p	CAP CER 12PF 50V 5% NPO 0402,Digikey 445-1236-1-ND	Standard		C0402	
25	1	C26	12p	CAP CER 12PF 50V 5% NPO 0402,Digikey 445-1236-1-ND	Standard		C0402	
26	1	C27	4u7	CAP TANT 4.7UF 10V 10% 1206,Digikey 493-4142-1-ND	Standard		A/3216-18R	
27	1	C28	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
28	1	C29	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
29	1	C30	10u	CAP TANT 10UF 10V 20% 1206,Digikey 493-2351-1-ND	Standard		TANT_3216	
30	1	C31	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
31	1	C401	1u	CAP CER 1UF 10V 10% X7R 0805,Digikey 587-1284-2-NC	Standard		CSMD0805	
32	1	C402	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
33	1	C403	4u7	CAP TANT 4.7UF 10V 10% 1206,Digikey 493-4142-1-ND	Standard		A/3216-18R	
34	1	C404	1u	CAP CER 1UF 10V 10% X7R 0805,Digikey 587-1284-2-ND	Standard		CSMD0805	
35	1	C405	22p	CAP CER 22PF 50V 5% NPO 0402,Digikey 445-1239-1-NC	Standard		C0402	
36	1	C406	22p	CAP CER 22PF 50V 5% NPO 0402,Digikey 445-1239-1-NC	Standard		C0402	
37	1	C407	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
38	1	C408	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-NC	Standard		C0402	
39	1	C409	22p	CAP CER 22PF 50V 5% NPO 0402,Digikey 445-1239-1-NC	Standard		C0402	
40	1	C410	22p	CAP CER 22PF 50V 5% NPO 0402,Digikey 445-1239-1-NC	Standard		C0402	
41	1	C411	22p	CAP CER 22PF 50V 5% NPO 0402,Digikey 445-1239-1-NC	Standard		C0402	
42	1	C412	22p	CAP CER 22PF 50V 5% NPO 0402,Digikey 445-1239-1-NC	Standard		C0402	
43	1	IC401	TUSB2046BIRHBR	IC 4-PORT HUB FOR USB 32-QFN,Digikey 296-21926-1-ND	TI	TUSB2046BIRHBR	RHB_S-PQFP-N32	
44	1	J1		CONN HEADER 20POS .100" DUAL, FEMALE with long male leads	CM	CNT-F254-2*10-GS-850-9	2X10	Updated part # for stronger male leads
45	1	J10	PWR	CONN HEADER 3POS .100" SNGL TIN,Digikey SAM1075-03-ND	Standard		1X03	
46	1	J3	PWR	CONN HEADER 3POS .100" SNGL TIN,Digikey SAM1075-03-ND	Standard		1X03	
47	1	J401	ZX62R-B-5P	CONN RCPT MICRO USB B SMD R/A, Digikey H11574CT-ND	Standard		CONN_USB-MICRO-B-SMT_R	
48	1	J5		CONN HEADER 20POS .100" DUAL, FEMALE with long male leads	CM	CNT-F254-2*10-GS-850-9	2X10	Updated part # for stronger male leads
49	1	JP1	+5V	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
50	1	JP2	+3V3	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB DECAL/Package	Rev 1.6 to Rev 2.0 Change
51	1	JP3	GND	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
52	1	JP4.1	SBWTCK	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
53	1	JP4.2	SBWTDIO	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
54	0	JP4.3	SBWDAT (drp)	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
55	1	JP6.1	TXD	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
56	1	JP6.2	RXD	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
57	1	JP6.3	CTS	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
58	1	JP6.4	RTS	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1M	
59	1	JP8	LED1_PWR	CONN HEADER 2POS .100" SNGL TIN,Digikey SAM1075-02-ND	Standard		JP1	
60	1	L401	2.2uH (NR3010T2R2M)	INDUCTOR 2.2UH 20% SMD,Digikey 587-1638-1-ND	Taiyo Yuden	NR3010T2R2M	L-NR3010	
61	1	LED1		LED RED CLEAR 0603 SMD,Digikey 160-1181-1-ND	Standard		CHIPLED_0603	
62	1	LED101	Red	LED RED CLEAR 0603 SMD,Digikey 160-1181-1-ND	Standard		LED603	
63	1	LED102	Green	LED GREEN CLEAR 0603 SMD,Digikey 160-1183-1-ND	Standard		LED603	
64	1	LED2		LED GREEN CLEAR 0603 SMD,Digikey 160-1183-1-ND	Standard		CHIPLED_0603	
65	1	MSP101	MSP430F5528IRGC	IC MCU 16BIT 128KB FLASH 64VQFN,Digikey 296-27400-1-ND	TI	MSP430F5528IRGC	RGC-64	
66	1	Q101	PIEZO_CSTCR4M00G15L99	CER RESONATOR 4.00MHZ SMD	Murata	CSTCR4M00G15L99	PIEZO-2X4.5MM	
67	1	Q2	32.768kHz Microcrystal	MS3V-T1R 32.768kHz CL 12pF +-20ppm, Microcrystal	Microcrystal	MS3V-T1R	MS3V-T1R	
68	1	Q4	PIEZO_CSTCR4M00G15L99	CER RESONATOR 4.00MHZ SMD	Murata	CSTCR4M00G15L99	PIEZO-2X4.5MM	
69	1	Q401	PIEZO_CSTCR6M00G15L99	CER RESONATOR 6.00MHZ SMD	Murata	CSTCR6M00G15L99	PIEZO-2X4.5MM	
70	1	R101	470	RES 470 OHM 1/16W 1% 0402 SMD,Digikey 311-470LRCT-ND	Standard		R0402	
71	1	R102	390	RES 390 OHM 1/16W 1% 0402 SMD,Digikey 311-390LRCT-ND	Standard		R0402	
72	1	R103	27	RES 27 OHM 1/16W 5% 0402 SMD,Digikey 311-27JRCT-ND	Standard		R0402	
73	1	R104	27	RES 27 OHM 1/16W 5% 0402 SMD,Digikey 311-27JRCT-ND	Standard		R0402	
74	1	R105	1k4	RES 1.33K OHM 1/16W 1% 0402 SMD,Digikey 311-1.33KLRCT-ND	Standard		R0402	
75	1	R106	1M	RES 1.00M OHM 1/16W 1% 0402 SMD,Digikey 311-1.00MLRCT-ND	Standard		R0402	
76	1	R109	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard		R0402	
77	1	R121	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard		R0402	
78	1	R122	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard		R0402	
79	1	R124	240k	RES 240K OHM 1/16W 1% 0402 SMD,Digikey 311-240KLRCT-ND	Standard		R0402	
80	1	R125	150k	RES 150K OHM 1/16W 1% 0402 SMD,Digikey 311-150KLRCT-ND	Standard		R0402	
81	1	R14	100R	RES 100 OHM 1/16W 1% 0402 SMD,Digikey 311-100LRCT-ND	Standard		R0402	
82	1	R15	1k4	RES 1.33K OHM 1/16W 1% 0402 SMD,Digikey 311-1.33KLRCT-ND	Standard		R0402	
83	1	R16	1M	RES 1.00M OHM 1/16W 1% 0402 SMD,Digikey 311-1.00MLRCT-ND	Standard		R0402	
84	1	R27	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard		R0402	
85	1	R28	0R	RES 0.0 OHM 1/16W 0402 SMD,Digikey 311-0.0JRTR-ND	Standard		R0402	
86	1	R29	470R	RES 470 OHM 1/16W 1% 0402 SMD,Digikey 311-470LRCT-ND	Standard		R0402	
87	1	R30	470R	RES 470 OHM 1/16W 1% 0402 SMD,Digikey 311-470LRCT-ND	Standard		R0402	
88	1	R31	27R	RES 27 OHM 1/16W 5% 0402 SMD,Digikey 311-27JRCT-ND	Standard		R0402	
89	1	R32	27R	RES 27 OHM 1/16W 5% 0402 SMD,Digikey 311-27JRCT-ND	Standard		R0402	
90	1	R401	33R	RES 33 OHM 1/16W 5% 0402 SMD,Digikey 311-33JRCT-ND	Standard		R0402	
91	1	R402	10k	RES 10.0K OHM 1/16W 1% 0402 SMD,Digikey 311-10.0KLRCT-ND	Standard		R0402	
92	1	R403	1k5	RES 1.50K OHM 1/16W 1% 0402 SMD,Digikey 311-1.50KLRCT-ND	Standard		R0402	
93	1	R404	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard		R0402	
94	1	R405	22R	RES 22 OHM 1/16W 5% 0402 SMD,Digikey 311-22JRCT-ND	Standard		R0402	
95	1	R406	22R	RES 22 OHM 1/16W 5% 0402 SMD,Digikey 311-22JRCT-ND	Standard		R0402	
96	1	R407	1k5	RES 1.50K OHM 1/16W 1% 0402 SMD,Digikey 311-1.50KLRCT-ND	Standard		R0402	
97	1	R408	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
98	1	R409	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
99	1	R410	22R	RES 22 OHM 1/16W 5% 0402 SMD,Digikey 311-22JRCT-ND	Standard		R0402	
100	1	R411	22R	RES 22 OHM 1/16W 5% 0402 SMD,Digikey 311-22JRCT-ND	Standard		R0402	
101	1	R412	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
102	1	R413	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
103	1	R414	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
104	1	R415	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
105	1	R416	22R	RES 22 OHM 1/16W 5% 0402 SMD,Digikey 311-22JRCT-ND	Standard		R0402	
106	1	R417	22R	RES 22 OHM 1/16W 5% 0402 SMD,Digikey 311-22JRCT-ND	Standard		R0402	
107	1	R418	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
108	1	R419	15k	RES 15.0K OHM 1/16W 1% 0402 SMD,Digikey 311-15.0KLRCT-ND	Standard		R0402	
109	1	S1	SPST	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P80795TB-ND	Standard		PBTH	
110	1	S2	SPST	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P80795TB-ND	Standard		PBTH	

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB DECAL/Package	Rev 1.6 to Rev 2.0 Change
111	1	S3	SPST	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P8079STB-ND	Standard		PBTH	
112	1	S5	SPST	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P8079STB-ND	Standard		PBTH	
113	1	TP104	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
114	1	TP105	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
115	1	TP106	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
116	1	TP107	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
117	1	TP108	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
118	1	TP109	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
119	1	TP110	TP	Test Point,0.038 Hole, Digikey nothing-to-purchase	PCB		TP	
120	0	U401	TPS2041B_DBV_5	IC PWR DIST SWITCH SNGL SOT23-5,Digikey 296-21263-1-ND	TI	TPS2041BDBVR	DBV5	DNP- Parts Removed from PCB
121	1	U402	TPS62237DRY	IC REG BUCK SYNC 3.3V 0.5A 6SON,Digikey 296-25630-1-ND	TI	TPS62237DRYT	DRY6	
122	0	U403	TPS2041B_DBV_5	IC PWR DIST SWITCH SNGL SOT23-5,Digikey 296-21263-1-ND	TI	TPS2041BDBVR	DBV5	DNP- Parts Removed from PCB
123	1	U404	TPD2E001DRLR	IC ESD-PROT ARRAY 2CH SOT-5,Digikey 296-21883-1-ND	TI	TPD2E001DRLR	TPD2E001-DRL	
124	1	U6	MSP430F5529IPNR	IC MCU 16BIT 128K FLASH 80LQFP,Digikey 296-27306-1-ND	TI	MSP430F5529IPNR	PN80	
125	1	STAND1	110mil	Mounting Hole 110 mil, Digikey nothing-to-purchase	PCB		110mil	
126	1	STAND2	110mil	Mounting Hole 110 mil, Digikey nothing-to-purchase	PCB		110mil	
127	1	STAND3	110mil	Mounting Hole 110 mil, Digikey nothing-to-purchase	PCB		110mil	
128	1	STAND4	110mil	Mounting Hole 110 mil, Digikey nothing-to-purchase	PCB		110mil	

# Bill of Materials

TI DESIGNS

TIDM-3DGRAPHICS-QVG MSP-EXP430FR5969 LaunchPad

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB DECAL/Package	Rev 1.6 to Rev 2.0 Change
1	1	C1	1n	CAP CER 1000PF 50V 10% X7R 0402,Digikey 445-1256-1-ND	Standard			402
2	1	C2	1u	CAP CER 1UF 10V 10% X5R 0603,Digikey 445-1321-1-ND	Standard			603
3	0	C3	27p (DNP)	CAP CER 27PF 50V 5% NP0 0402,Digikey 445-1240-1-ND	Standard			402
4	0	C4	27p (DNP)	CAP CER 27PF 50V 5% NP0 0402,Digikey 445-1240-1-ND	Standard			402
5	1	C5	10p	CAP CER 10PF 50V NP0 0402,Digikey 445-1235-1-ND	Standard			402
6	1	C6	10p	CAP CER 10PF 50V NP0 0402,Digikey 445-1235-1-ND	Standard			402
7	1	C7	0.1F	CAP SUPER 100MF 5.5V RADIAL,Digikey P10787-ND	Panasonic-ECG	EEC-S0HD104H	10.5 mm Coil	
8	1	C8	100n	CAP CER 0.1UF 16V 10% X7R 0603,Digikey 445-1317-1-ND	Standard			603
9	1	C9	100n	CAP CER 0.1UF 16V 10% X7R 0603,Digikey 445-1317-1-ND	Standard			603
10	1	C101	470n	CAP CER 0.47UF 16V 10% X5R 0402,Digikey 445-4976-1-ND	Standard			402
11	1	C102	220n	CAP CER 0.22UF 16V 10% X5R 0402,Digikey 445-4972-1-ND	Standard			402
12	1	C103	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
13	1	C104	10u	CAP TANT 10UF 10V 20% 1206,Digikey 493-2351-1-ND	Standard			1206
14	1	C105	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
15	1	C106	4.7u	CAP TANT 4.7UF 10V 10% 1206,Digikey 493-4142-1-ND	Standard			1206
16	1	C107	220n	CAP CER 0.22UF 16V 10% X5R 0402,Digikey 445-4972-1-ND	Standard			402
17	1	C108	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
18	1	C109	4.7u	CAP TANT 4.7UF 10V 10% 1206,Digikey 493-4142-1-ND	Standard			1206
19	1	C110	10p	CAP CER 10PF 50V NP0 0402,Digikey 445-1235-1-ND	Standard			402
20	1	C111	10p	CAP CER 10PF 50V NP0 0402,Digikey 445-1235-1-ND	Standard			402
21	1	C112	1n	CAP CER 1000PF 50V 10% X7R 0402,Digikey 445-1256-1-ND	Standard			402
22	1	C113	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
23	1	C115	33p	CAP CER 33PF 50V 5% NP0 0402,Digikey 445-1241-1-ND	Standard			402
24	1	C116	33p	CAP CER 33PF 50V 5% NP0 0402,Digikey 445-1241-1-ND	Standard			402
25	1	C117	4.7u	CAP CER 4.7UF 10V 10% X5R 0603,Digikey 445-5170-1-ND	Standard			603
26	1	C118	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
27	1	C119	4.7u	CAP CER 4.7UF 10V 10% X5R 0603, Digikey 445-5170-1-ND	TDK	C1608X5R1A475K080AC		603
28	0	C120	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
29	1	C121	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
30	1	C122	33p	CAP CER 33PF 50V 5% NP0 0402,Digikey 445-1241-1-ND	Standard			402
31	1	C123	33p	CAP CER 33PF 50V 5% NP0 0402,Digikey 445-1241-1-ND	Standard			402
32	1	C124	100n	CAP CER 0.1UF 10V 20% X5R 0402,Digikey 445-4984-1-ND	Standard			402
33	1	D101	BAS40-05W	DIODE SCHOTTKY 40V 120MA SOT-323,Digikey 568-7982-1-ND	NXP	BAS40-05W 115	SOT-323	
34	1	D102	BAS40-05W	DIODE SCHOTTKY 40V 120MA SOT-323,Digikey 568-7982-1-ND	NXP	BAS40-05W 115	SOT523	
35	0	FOOT1	6mm	Rubber standoff, D=6mm, H=2.2mm, Glue=3M, Custom part	CM	custom	0.234 inch	
36	0	FOOT2	6mm	Rubber standoff, D=6mm, H=2.2mm, Glue=3M, Custom part	CM	custom	0.234 inch	
37	0	FOOT3	6mm	Rubber standoff, D=6mm, H=2.2mm, Glue=3M, Custom part	CM	custom	0.234 inch	
38	0	FOOT4	6mm	Rubber standoff, D=6mm, H=2.2mm, Glue=3M, Custom part	CM	custom	0.234 inch	
39	1	IC101	TLV70036DSE	IC REG LDO 3.6V 200MA 6WSON,Digikey 296-29752-1-ND	TI	TLV70036DSE		
40	1	IC102	TPD4E004DRY	IC 4CH ESD-PROT ARRAY 6-SON,Digikey 296-23618-1-ND	TI	TPD4E004DRY	USON	
41	1	IC103	TS5A21366RSER	IC SWITCH DUAL SPST 8QFN,Digikey 296-25285-1-ND	TI	TS5A21366RSER	uQFN	
42	1	J1	PEC03SAAN	CONN HEADER .100 SINGL STR 3POS,Digikey S1012E-03-ND	Standard		0.100 inch x 3	
43	1	J2	Place Jumper	CONN HEADER .100 SINGL STR 3POS,Digikey S1012E-03-ND	Standard		0.100 inch x 3	
44	1	J3		CONN HEADER 14 POS STRGHT GOLD,Digikey MHC14K-ND	Standard		0.338 x 0.988 inch	
45	1	J4		M/F CONN HEADER .100 SINGL STR 10POS	Standard		0.100 inch x 10	
46	1	J5		M/F CONN HEADER .100 SINGL STR 10POS	Standard		0.100 inch x 10	
47	1	J6	Place Jumper	CONN HEADER .100 SINGL STR 2POS,Digikey S1012E-02-ND	Standard		0.100 inch x 2	
48	0	J7	dnp	CONN HEADER .100 SINGL STR 1POS,Digikey S1012E-01-ND	Standard		0.100 inch x 1	Added 5V TP, DNP

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB DECAL/Package	Rev 1.6 to Rev 2.0 Change
49	0	J8	dnp	CONN HEADER .100 SINGL STR 3POS,Digikey S1012E-03-ND	Standard		0.100 inch x 3	
50	1	J9	Place Jumper	CONN HEADER .100 SINGL STR 2POS,Digikey S1012E-02-ND	Standard		0.100 inch x 2	
51	1	J10	Place Jumper	CONN HEADER .100 SINGL STR 3POS,Digikey S1012E-03-ND	Standard		0.100 inch x 3	
52	1	J11	Place Jumper	CONN HEADER .100 SINGL STR 2POS,Digikey S1012E-02-ND	Standard		0.100 inch x 2	
53	1	J12	PEC03SAAN	CONN HEADER .100 SINGL STR 3POS,Digikey S1012E-03-ND	Standard		0.100 inch x 3	
54	1	J13	Place Jumpers	CONN HEADER .100 DUAL STR 18POS,Digikey S2012E-09-ND	Standard		0.100 inch X2X9	Change from 2x8 to 2x9 header
55	0	J21	dnp	CONN HEADER .050" 6POS R/A PCB,Digikey S9010E-06-ND	Standard		0.200x0.320 inch	
56	1	J101	ZX62R-B-5P	CONN RCPT MICRO USB B SMD R/A, Digikey H11574CT-ND	Hirose Electrical Co	ZX62R-B-5P	6x8 mm	
57	1	L101	2.2uH	2.2uH, Tayo Yuden CBC2518T2R2M, Digikey 587-1618-1-ND	Taiyo Yuden	CBC2518T2R2M		1007
58	1	LED1	Low Current Red	LED GREEN CLEAR 0603 SMD,Digikey 160-1183-1-ND	Standard			603
59	1	LED2	Low Current Green	LED GREEN CLEAR 0603 SMD,Digikey 160-1183-1-ND	Standard			603
60	1	LED101	Low Current Red	LED RED CLEAR 0603 SMD,Digikey 160-1181-1-ND	Standard			603
61	1	LED102	Low Current Green	LED GREEN CLEAR 0603 SMD,Digikey 160-1183-1-ND	Standard			603
62	1	MSP101	MSP430F5528IRGC	IC MCU 16BIT 128KB FLASH 64VQFN,Digikey 296-27400-1-ND	TI	MSP430F5528IRGC	QFP-64	
63	1	MSP102	MSP430G2452RSA	IC MCU 16BIT 8KB FLASH 16QFN,Digikey 296-28129-1-ND	TI	MSP430G2452RSA	QFN	
64	1	Q101	PIEZO_CSTCR4M00G15L99	CER RESONATOR 4.00MHZ SMD	Murata	CSTCR4M00G15L99	2X4.5 mm	
65	1	R1	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard			402
66	1	R2	10	RES 10 OHM 1/10W 1% 0805 SMD,Digikey 311-10VCT-ND	Standard			805
67	1	R3	470	RES 330 OHM 1/16W 1% 0402 SMD,Digikey 311-330LRCT-ND	Standard			402
68	1	R4	0	RES 0.0 OHM 1/16W 0402 SMD,Digikey 311-0.0JRTR-ND	Standard			402
69	1	R5	0	RES 0.0 OHM 1/16W 0402 SMD,Digikey 311-0.0JRTR-ND	Standard			402
70	1	R6	390	RES 330 OHM 1/16W 1% 0402 SMD,Digikey 311-330LRCT-ND	Standard			402
71	1	R7	10	RES 10 OHM 1/10W 1% 0805 SMD,Digikey 311-10VCT-ND	Standard			805
72	1	R101	470	RES 470 OHM 1/16W 1% 0402 SMD,Digikey 311-470LRCT-ND	Standard			402
73	1	R102	390	RES 390 OHM 1/16W 1% 0402 SMD,Digikey 311-390LRCT-ND	Standard			402
74	1	R103	27	RES 27 OHM 1/16W 5% 0402 SMD,Digikey 311-27JRCT-ND	Standard			402
75	1	R104	27	RES 27 OHM 1/16W 5% 0402 SMD,Digikey 311-27JRCT-ND	Standard			402
76	1	R105	1k4	RES 1.33K OHM 1/16W 1% 0402 SMD,Digikey 311-1.33KLRCT-ND	Standard			402
77	1	R106	1M	RES 1.00M OHM 1/16W 1% 0402 SMD,Digikey 311-1.00MLRCT-ND	Standard			402
78	1	R107	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard			402
79	1	R108	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard			402
80	1	R109	47k	RES 47.0K OHM 1/16W 1% 0402 SMD,Digikey 311-47.0KLRCT-ND	Standard			402
81	1	R112	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard			402
82	1	R113	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard			402
83	1	R114	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard			402
84	1	R115	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard			402
85	1	R116	4k7	RES 4.7K OHM 1/16W 5% 0402 SMD,Digikey 311-4.7KJRCT-ND	Standard			402
86	1	R117	4k7	RES 4.7K OHM 1/16W 5% 0402 SMD,Digikey 311-4.7KJRCT-ND	Standard			402
87	1	R118	820	RES 820 OHM 1/16W 1% 0402 SMD,Digikey 311-820LRCT-ND	Standard			402
88	1	R119	0	RES 0.0 OHM 1/16W 0402 SMD,Digikey 311-0.0JRTR-ND	Standard			402
89	1	R120	470	RES 470 OHM 1/16W 1% 0402 SMD,Digikey 311-470LRCT-ND	Standard			402
90	1	R121	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard			402
91	1	R122	220k	RES 220K OHM 1/16W 1% 0402 SMD,Digikey 311-220KLRCT-ND	Standard			402
92	1	R123	33k	RES 33.0K OHM 1/16W 1% 0402 SMD,Digikey 311-33.0KLRCT-ND	Standard			402
93	1	R124	240k	RES 240K OHM 1/16W 1% 0402 SMD,Digikey 311-240KLRCT-ND	Standard			402
94	1	R125	150k	RES 150K OHM 1/16W 1% 0402 SMD,Digikey 311-150KLRCT-ND	Standard			402
95	1	R126	2k2	RES 2.20K OHM 1/16W 1% 0402 SMD,Digikey 311-2.20KLRCT-ND	Standard			402
96	1	R127	3k3	RES 3.30K OHM 1/16W 1% 0402 SMD,Digikey 311-3.30KLRCT-ND	Standard			402
97	1	R128	6k8	RES 6.80K OHM 1/16W 1% 0402 SMD,Digikey 311-6.80KLRCT-ND	Standard			402
98	1	S1	EVQ221304M	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P12216SCT-ND	Standard		0.236 x 0.236 inch	
99	1	S2	EVQ221304M	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P12216SCT-ND	Standard		0.236 x 0.236 inch	
100	1	S3	EVQ221304M	SWITCH TACTILE SPST-NO 0.02A 15V,Digikey P12216SCT-ND	Standard		0.236 x 0.236 inch	
101	1	T101	DMG1013UW-7	MOSFET P-CH 20V 820MA SOT323,Digikey DMG1013UW-7DICT-ND	Diodes	DMG1013UW-7	SOT-323	
102	1	T102	BC850CW-115	TRANSISTOR NPN 45V 100MA SOT323,Digikey 568-6076-1-ND	NXP	BC850CW-115	SOT-323	
103	1	TP101	TPD4E004DRY	Test Point,Hole, Digikey nothing-to-purchase	Standard		TP	
104	1	TP102	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB DECAL/Package	Rev 1.6 to Rev 2.0 Change
105	1	TP103	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
106	1	TP104	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
107	1	TP105	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
108	1	TP106	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
109	1	TP107	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
110	1	TP108	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
111	1	TP109	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
112	1	TP110	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
113	1	TP113	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
114	1	TP114	STD	Test Point,Hole, Digikey nothing-to-purchase	Standard			
115	1	U1	MSP430FR5969RGZ	IC Mixed Signal Microcontroller,TI	TI	MSP430FR5969RGZ	QFN-48	
116	0	Y1	4 MHz (DNP)	CRYSTAL 4.000 MHZ 20PF 49UA,Digikey X971-ND	ECS	ECS-40-20-1X	4.65 x 11.35 mm	
117	1	Y4	32.7638 KHz, 7.0pF	MICRO CRYSTAL - MS3V-T1R 32.768KHZ 7.0PF +/-20PPM	Micro Crystal AG	MS3V-T1R	6.7 x 1.40 mm	

# Bill of Materials

TI DESIGNS

TIDM-3DGRAPHICS-QVG BOOSTXL-K350QVG-S1

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Note
1	1			PCB-BOOSTERXL-K350QVG-S1_V1.0	JLC	PCB_V1.0	
2	1	U1		LED driver, SOT-23-6	Analog Integrations Corporation	AIC1896PGTR	
3	1	D1		Diode, SOD-123	ON Semiconductor	MBR0520LT1G	
4	1	D2		Zener diode, LL34	SEMTECH	ZMM24	
5	1	L1	Inductor, 10uH/6x6	Inductor, 10uH/6x6	Anruike	CD5D28-100M	
6	1	CN2		FPC connector, 0.5mm pitch, 60 way, bottom contact	P-TWO	196070-60041	
7	1	C8	CAP CER 33nF/1063/16V(5%)	CAP CER 33nF/1063/16V(5%)	YAGEO	CC0603JPX7R7BB333	
8	4	C4,C5,C6,C7	CAP CER 10nF/0603/50V/(5%)	CAP CER 10nF/0603/50V/(5%)	YAGEO	CC0603JPX7R9BB103	
9	1	C1	CAP CER 0.1uF/0603/25V/X5R	CAP CER 0.1uF/0603/25V/X5R	YAGEO	CC0603KRX5R8BB104	
10	1	C2	CAP CER 2.2uF/1210/50V/(10%)	CAP CER 2.2uF/1210/50V/(10%)	YAGEO	CC1210KKX7R8BB225	
11	1	C3	CAP TANT 68uF/C/16V	CAP TANT 68uF/C/16V	AVX	TAJC686M016TNJ	
12	12	R1, R3, R4-R7, R9, R11, R15-R18	RES 0R/0603(+/-5%)	RES 0R/0603(+/-5%)	YAGEO	RC0603JR-070RP	
13	1	R13	RES 68R/0603(+/-1%)	RES 68R/0603(+/-1%)	YAGEO	RC0603FR-0768RP	
14	1	R12	RES 1K/0603(+/-1%)	RES 1K/0603(+/-1%)	YAGEO	RC0603FR-071KP	
15	2	J1-J4		CONN RECEPT 2.54MM SMD AU 20POS	HONGWEI	PA6T-2x10	
16	2			Double side tape: 15mm x 50mm	3M	3M9080	
17	1			TFT LCD Module, QVGA with LED backlight	KENTEC	K350QVG-V2-F	

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