

6.4 Bill of Materials (BOM)

Table 7 lists the LAUNCHXL-F28069M bill of materials.

Table 7. LAUNCHXL-F28069M Bill of Materials

S No	Category	MPN	Per	Mfg.	Description	Package	Value	Working Voltage	Reference
1	PCB	LAUNCHXL-F28069M PCB	1		4 layers PCB, Red Soldermask, white Silkscreen, Immersion gold, 51 mm*130.5 mm, LAUNCHXL-F28069M PCB				
2	MCU	TMS320F28069MPZT	1	TI	MCU 32-bit C2000 C28x RISC 128KB Flash 3.3 V 100-Pin LQFP, customer supply	LQFP-100		1.71~1.995 V	U1
3	Memory	93LC56BT-I/OT	1	Microchip	IC, EEPROM Serial-Microwire 2K-Bit 128 x 16 2 MHz, 93LC56BT-I/OT, SOT-23-6, SMD	SO-23-6	2Kb	2.5~5.5 V	U8
4	DC-DC	LMR62421XMFE/NOPB	1	TI	Conv DC-DC Single Step Up 2.7 V to 5.5 V 5-Pin SOT-23 T/R, customer supply	SOT23-5		2.7 V to 5.5 V	U12
5	DC-DC	TPS62162DSGR	1	TI	Conv DC-DC Single Step Down 3 V to 17 V 8-Pin WSON EP T/R, customer supply	WSON-8		3 V to 17 V	U17
6	Logic	SN74AHC1G32DBVR	2	TI	IC, Single 2-Input Positive-OR Gate, SN74AHC1G32DBVR, SOT23-5, SMD, customer supply	SOT23-5		2~5.5 V	U13,U14
7	Logic	TXB0106PWR	1	TI	IC, 6-BIT Bidirectional Voltage-Level Translator with Auto-Direction Sensing and ± 15 -kV ESD Protection, TXB0106PWR, TSSOP-16, SMD, customer supply	TSSOP-16		1.2~5.5 V	U2
8	Logic	SN74LV4052APW	1	TI	Analog Multiplexer Dual 4:1 16-Pin TSSOP Tube, customer supply	TSSOP-16		2~5.5 V	U10
9	Logic	SN74LVC2G07DBVR	1	TI	Buffer/Driver 2-CH Non-Inverting Open Drain CMOS 6-Pin SOT-23 T/R, customer supply	SOT23-6		1.65~5.5 V	U9
10	Logic	SN74LVC1G04DCKR	1	TI	IC, Single Inverter Gate, SN74LVC1G04DCKR, SC70-5, SMD	SC70-5		1.65 V ~ 5.5 V	U18
11	Logic	SN74AHC1G02DBVR	1	TI	IC, NOR Gate 1-Element 2-IN CMOS, SN74AHC1G02DBVR, SOT23-5, SMD	SOT23-5		2 V ~ 5.5 V	U4
12	Interface	SN65HVD234D	1	TI	IC, 3.3 V CAN Transceiver with Sleep Mode, SN65HVD234D, SOIC-8, SMD, customer supply	SO-8		3.3V	U3
13	Interface	FT2232HQ-REEL	1	FTDI	IC, Dual High Speed USB to Multipurpose UART/FIFO IC, FT2232HQ-REEL, QFN-64, SMD	QFN-64		1.62 V to 1.98 V	U6
14	Interface	TS5A3153DCUR	2	TI	Analog Switch Single SPDT 8-Pin VSSOP T/R, customer supply	VSSOP-8		1.65~5.5 V	U11, U15
15	Interface	TS5A23159DGSR	1	TI	Analog Switch Dual SPDT 10-Pin VSSOP T/R, customer supply	VSSOP-10		1.65~5.5 V	U16
16	Isolator	ISO7231CDWR	1	TI	IC DGTL ISO 3CH CMOS 16SOIC, customer supply	SO-16		3.15~5.5 V	U7
17	Isolator	ISO7240CDWR	1	TI	IC DGTL ISO 4CH CMOS 16SOIC, customer supply	SO-16		3.15~5.5 V	U5
18	Thick film Resistor	RC0402JR-070RL	4	YAGEO	RES, 0R, $\pm 5\%$, 1/16W, SMD0402	0402	0R	50 V	R15, R33, R43, R44
19	Thick film Resistor	RC0402JR-07120RL	1	YAGEO	RES, 120R, $\pm 5\%$, 1/16W, SMD0402	0402	120R	50 V	R34
20	Thick film Resistor	RC0402JR-07330RL	4	YAGEO	RES, 330R, $\pm 5\%$, 1/16W, SMD0402	0402	330R	50 V	R26, R27, R38, R39

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21	Thick film Resistor	RC0402JR-07820RL	4	YAGEO	RES, 820R, ±5%, 1/16W, SMD0402	0402	820R	50 V	R1, R4, R5, R46
22	Thick film Resistor	RC0402JR-071KL	6	YAGEO	RES, 1K, ±5%, 1/16W, SMD0402	0402	1K	50 V	R22, R23, R36, R37, R40, R41
23	Thick film Resistor	RC0402JR-072K2L	6	YAGEO	RES, 2K2, ±5%, 1/16W, SMD0402	0402	2K2	50 V	R2, R6, R8, R9, R10, R31
24	Thick film Resistor	RC0402JR-0710KL	7	YAGEO	RES, 10K ±5%, 1/16W, SMD0402	0402	10K	50 V	R3, R11, R12, R14, R35, R42, R45
25	Thick film Resistor	RC0402FR-0712KL	1	YAGEO	RES, 12K, ±1%, 1/16W, SMD0402	0402	12K	50 V	R24
26	Thick film Resistor	RC0402FR-0730K1L	1	YAGEO	RES, 30K1, ±1%, 1/16W, SMD0402	0402	30K1	50 V	R17
27	Thick film Resistor	RC0402JR-07100KL	1	YAGEO	RES, 100K, ±5%, 1/16W, SMD0402	0402	100K	50 V	R47
28	Ceramic Capacitor	GRM1555C1H821JA01D	1	Murata	CAP, 820PF, ±5%, C0G, 50 V, SMD0402	0402	820PF	50 V	C25
29	Ceramic Capacitor	GRM155R71C104KA88D	23	Murata	CAP, 100 NF, ±10%, X7R, 16 V, SMD0402	0402	100 NF	16 V	C7, C9, C12, C13, C14, C16, C24, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C42, C43, C46, C47, C48, C49
30	Ceramic Capacitor	GRM155R60J225ME15D	14	Murata	CAP, 2.2 µF, ±20%, X5R, 6.3 V, SMD0402	0402	2.2 µF	6.3 V	C1, C2, C5, C6, C19, C20, C21, C22, C23, C26, C27, C28, C29, C30
31	Ceramic Capacitor	GRM32DR71E106KA12L	2	Murata	CAP, 10 µF, ±10%, X7R, 25 V, SMD1210	1210	10 µF	25 V	C41, C44
32	Ceramic Capacitor	CC1210KKX5R7BB226	1	YAGEO	CAP, 22 µF, ±10%, X5R, 16 V, SMD1210	1210	22 µF	16 V	C45
33	Ceramic Capacitor	GRM155R60J475ME47	3	Murata	CAP, 4.7 µF, ±20%, X5R, 6.3 V, SMD0402	0402	4.7 µF	6.3 V	C8, C10, C11
34	Ceramic Capacitor	CL05A335MR5NNNC	1	Samsung	CAP, 3.3 µF, ±20%, X5R, 4 V, SMD0402	0402	3.3 µF	4 V	C15
35	Ceramic Capacitor	GRM1555C1H360JA01D	2	Murata	CAP, 36 pF, ±5%, C0G, 50 V, SMD0402	0402	36 pF	50 V	C17, C18
36	Inductor	CDRH2D18/HPNP-2R2NC	1	Sumida	Power Inductor, Magnetic shielded, 2.2 µH, 1.6A, 0.06 Ω, 3.0 x 3.0 x 1.8 mm, SMD	3.0X3.0mm	2.2 µH		L7
37	Inductor	CDRH3D16/HPNP-3R3NC	1	Sumida	Power Inductor, Magnetic shielded, 3.3 µH, 1.4A, 0.085 Ω, 3.8 x 3.8 x 1.6 mm, SMD	3.8X3.8mm	3.3 µH		L6
38	Ferrite Bead	BLM15AG601SN1D	2	Murata	Ferrite Bead, 60 Ω@100 MHz, ±25%, 300 mA, 0.6 Ω, SMD0402	0402	600 Ω		L1, L2
39	Ferrite Bead	BLM15PD600SN1D	1	Murata	Ferrite Bead, 60 Ω@100 MHz, ±25%, 1700 mA, 0.06 Ω, SMD0402	0402	60 Ω		L4
40	Ferrite Bead	BLM15AG221SN1D	1	Murata	Ferrite Bead, 220 Ω@100 MHz, ±25%, 300 mA, 0.6 Ω, SMD0402	0402	220 Ω		L3
41	LED	19-217/R6C-AL1M2VY/3T	2	Everlight	LED, Brilliant Red, Water Clear, 20 mA, SMD0603	0603		1.7–2.3 V	D8, D9

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S No	Category	MPN	Per	Mfg.	Description	Package	Value	Working Voltage	Reference
42	LED	19-217/G7C-AN1P2/3T	2	Everlight	LED, Super Yellow Green, Water Clear, 20 mA, SMD0603	0603		1.75–2.35 V	D1, D4
43	LED	19-217/BHC-AN1P2/3T	2	Everlight	LED, Blue, Water Clear, 20 mA, SMD0603	0603		1.7–2.2 V	D7, D10
44	Diode	1N5819HW-7-F	1	Diodes	Diode,Schottky Diode, 1N5819HW-7-F, 40 V, 1A, SOD-123,SMD	SOD-123		40 V	D3
45	Polyswitch	SMD1812P050TF	1	PTTC	Polyswitch, SMD1812P050TF, 15 V, Ihold=0.5A, Itrip=1A, 0.5 Ω , SMD1812	1812		15 V	F1
46	Crystal	7D12000182BTAF60Q5	1	Interquip	Crystal, 7D12000182BTAF60Q5, 12 MHz, $\pm$ 20 PPM, 18PF, HC-49S, SMD	HC-49SMD	12 MHz		Q3
47	Pin Header	P6E02A-602530-B1	7	CHI-BAN	Connector, Pin Header, Straight, Male,1 x 2 Pin, 2.54 MM pitch, 6.06, 3.00, Gold Flash 1 μ , black, DIP	DIP			JP1,JP2,JP3,J P4,JP5,JP6, JP7
48	Pin Header	P6E03A-602530-B1	2	CHI-BAN	Connector, Pin Header, Straight, Male, 1 x 3 Pin, 2.54 MM pitch, 6.06, 3.00, Gold Flash 1 μ , black, DIP	DIP			J9,J12
49	Pin Header	P101-1*05SGF-116A-NX	2	Townes	Connector, Pin Header, Straight, Male, 1 x 5 Pin, 2.54 MM pitch, 6.06, 3.00, Gold Flash 1 μ , black, DIP	DIP			QEP_A, QEP_B
50	Pin Socket	CRD-081413-A-G	4	Major League	Connector, Pin Socket, Straight, Female, 2 x 10 Pin, 2.54 MM pitch, 8.5, 9.92, Gold Flash 1 μ , black, DIP	DIP			J1,J2,J3,J4,J5, J6,J7,J8
51	USB Connector	UBF11-03	1	JXT	Connector, MiniUSB AB port, 5 Position, Right Angle, Gold Flash 1 μ , black, SMD	SMD			CON1
52	Shunt	MJ501-EOGF-B-K	7	Townes	Connector, Shunt, 2Pin, 2.54 MM Pitch, 6 MM Height, Gold Flash 1 μ , black				U\$1, U\$2, U\$9, U\$10, U\$11, U\$12, U\$13,
53	Tacticle Switch	TP-1138K9-BE1125	1	Toneparts	Switch, Tacticle, 160gf $\pm$ 50gf, black housing, black plunger, 6*6*4.3 MM, SMD	SMD-4			S2
54	DIP Switch	DSIC03LSGET	1	KE	Switch, DIP SWITCH, 3 Position, 2.54 MM Pitch, black housing, white plunger, SMD	SMD			S1
55	Thick Film Resistor	RC0402FR-071KL	6	YAGEO	RES, 1K, $\pm$ 1%, 1/16W, SMD0402	0402	1K	50 V	R13,R29,R48-R51
56	Ceramic Capacitor	GRM155R71H102KA01D	6	Murata	CAP ,1NF, $\pm$ 10%, X7R, 50 V, SMD0402	0402	1NF	50 V	C50-C55
57	ESD bag	Anti-static bag 180*130mm ,	1		Anti-static bag 180*130 mm				
58	Label	700/SCH, Label,11mm*7mm	1		700/SCH Label,11 mm*7 mm				