

**Bill of materials**
**Table 1. STEVAL-ROBKIT1 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	1	Table 2. STEVAL-ROBKIT1-1	STEVAL-ROBKIT1-1	STEVAL-ROBKIT1-KIT Main board	STMicroelectronics	STEVAL-ROBKIT1-1
2	1	Table 3. STEVAL-ROBKIT1-2	STEVAL-ROBKIT1-2	STEVAL-ROBKIT1-KIT Motor board	STMicroelectronics	STEVAL-ROBKIT1-2
3	1	Table 4. STEVAL-ROBKIT1-3	STEVAL-ROBKIT1-3	STEVAL-ROBKIT1-KIT Imaging board	STMicroelectronics	STEVAL-ROBKIT1-3
4	1	Acrylic chassis (as per provided design 3mm , 8mm, and 10mm transparent sheet respectively)	Acrylic chassis	Acrylic chassis (as per provided design 3mm transparent sheet)	N.A.	N.A.
5	2	DC Motor with encoder	6V/90RPM TT DC Motor with encoder	SparkFun Hobby Motor with encoder	SparkFun	DG01D-E
6	2	6-pin motor cable	6-pin motor cable	6-pin JST PH, 2.0mm, Both side Female 10cm	N.A.	N.A.
7	2	TT Motor 65MM Wheel	TT Motor 65MM Wheel	TT Motor 65MM Wheel	N.A.	N.A.
8	1	Castor wheel with two screws to mount on bottom chassis	Castor wheel	Mini universal wheel for car for Robot chassis	N.A.	N.A.
9	1	Battery holder case	Battery holder case	4AA 1.5V AA battery holder case wired (With case cover preferable)	N.A.	N.A.
10	1	12-pin cable to connect STEVAL-ROBKIT1-1 with STEVAL-ROBKIT1-2	12 Position cable	12 Position Cable Assembly Rectangular Socket to Socket 0.250" (76.20mm, 2.00")	Samtec	FFSD-06-D-02.00-01-N
11	1	26-pin FFC cable to connect STEVAL-ROBKIT1-1 with STEVAL-ROBKIT1-3	26 Position FFC, FPC cable	26 Position FFC, FPC Cable 0.020" (0.50mm) 1.969" (50.00mm) 26 Position FFC, FPC Cable 0.020" (0.50mm) 1.969" (50.00mm)	Würth Elektronik	687726050002
12	1	Additional 14 Position cable for STLINK Connection	14 Position cable	14 Position Cable Assembly Rectangular Socket to Socket,	Samtec	FFSD-07-D-05.90-01-N

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
				Reversed 0.492' (149.86mm, 5.90")		
13	8	Female-Female Hex Standoff: 4 x Hex Standoff between STEVAL-ROBKIT1-1 and STEVAL-ROBKIT1-2; 4x Hex Standoff between chassis top and chassis bottom part	Female - Female Threaded Hex Standoff, M3, 25mm	Hex Standoff Threaded M3x0.5 Nylon 0.984" (25.00mm) Natural	Harwin-Inc	R30-1612500 R30-1612500
14	4	Male-Female Hex Standoff: 4x between STEVAL-ROBKIT1-2 and acrylic chassis	Male- Female Threaded Hex Standoff, M3, 6mm	Hex Standoff Threaded M3x0.5 Nylon 0.236" (6.00mm) Natural	Essentra	36M30MF006
15	16	M3 Screws: 4 at STEVAL-ROBKIT1-1 board top; 4 at STEVAL-ROBKIT1-2 bottom; 8 for Chassis	PAN HEAD SCREW_M3 X 8MM CROSS SL	M3x8mm Pan Head Machine Screw Phillips Drive Nylon	Würth Elektronik	97790803111
16	2	Motor Bracket Holder Mount consists of a motor mount + 2 long screws + 2 short screws + 2 nuts) for each motor	TT DC Geared Motor Bracket Holder Mount	TT DC Geared Motor Bracket Holder Mount for Smart Car Robot Parts	N.A.	N.A.
17	6	Hex bolt: 6 x for camera mount assembly	HEX UNSLOTTED BOLT, M3 X 0.5, Head dia: 0.197" (5.00mm), Length below head: 0.787" (20.00mm)	M3x0.5 Hex Head Bolt Hex Socket Drive Nylon, Head dia: 0.197" (5.00mm), Length below head: 0.787" (20.00mm)	Essentra	50M030050J020
18	6	Hex nut: 6 x for bolts used in camera mount assembly	HEX NUT, NATURAL, NYLON, M3 X 0.5	M3x0.5 Hex Nut 0.210" (5.33mm) Nylon	Essentra	04M030050HN
19	1	Terminal Wire between J4 of STEVAL-ROBKIT1-1 to battery holder case; Red wire to be connected to 6V (Positive terminal)	Terminal Wire, 120 mm	Terminal wires 120 mm to connect with power terminal, wire of 0.5 sq.mm	Alpha Wire	1856/19 RD005
20	1	Terminal Wire between J4 of STEVAL-ROBKIT1-1 to battery holder case; black wire to be connected to Ground terminal	Terminal Wire, 120 mm	Terminal wires 120 mm to connect with power terminal, wire of 0.5 sq.mm	Alpha Wire	1856/19 BK005

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
21	1	Fuse Holder	FUSE BLOCK CART 250V 6.3A PCB	Fuse Block 6.3 A 250V 1 Circuit Cartridge chassis Mount	Littelfuse	64700001003
22	1	Fuse Ceramic	FUSE CERAMIC 1.6A 250VAC 5X20MM	1.6 A 250 V AC DC Fuse Cartridge, Ceramic Requires Holder 5mm x 20mm	Littelfuse	021501.6MXP
23	2	Each Ferrite Clamp connected on motor to motor board cable	Ferrite Clamp	Ferrite Clamp On Cores STAR-BUENO Snap 25MHz 125Ohm	Wurth Elektronik	74275812
24	1	Double-sided tape to tape camera module on STEVAL-ROBKIT1-3 board	Acrylic Double Coated Tape	3M 9088 High-performance Acrylic Double Coated Tape, Heavy Duty, Clear, 0.25 in	3M	N.A.
25	1	Double Sided Tape to fix battery Holder on the chassis	Double Coated Tape	3M High-performance Acrylic Double Coated Tape, Heavy Duty, Clear,	3M	

**Table 2. STEVAL-ROBKIT1-1 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	2	C1, C2	5.6pF	CAP CER 5.6PF 50V C0G/NPO 0402	Yageo	CC0402BRNPO9BN5R6
2	2	C3, C4	1.5pF	Capacitor, MLCC, 1.5pF, 50V, NPO, +-0.25pF, 0402, T=0,5mm	Yageo	CC0402BRNPO9BN1R5
3	11	C5, C7, C63, C76, C77, C80, C81, C83, C84, C85, C86	1uF	CAP CER 1UF 6.3V X5R 0402	Yageo	CC0402MRX5R5BB105
4	53	C6, C10, C12, C13, C14, C15, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C36, C37, C39, C41, C43, C44, C45, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C61, C62, C65, C66, C67, C68, C69, C70, C71, C72, C78	0.1uF	CAP CER 0.1UF 50V X7R 0402	Yageo	CC0402KRX7R9BB104
5	1	C8	220pF	CAP CER 220PF 16V X7R 0402	Yageo	CC0402KRX7R7BB221

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
6	7	C9, C11, C35, C47, C59, C60, C74	10uF	CAP CER 10UF 10V X5R 0402	Yageo	CC0402MRX5R6BB106
7	1	C16	4.7uF	CAP CER 4.7UF 16V X5R 0402	Yageo	CC0402MRX5R7BB475
8	2	C38, C40	10pF	CAP CER 10PF 16V C0G/NPO 0402	Yageo	CC0402KRNPO7BN100
9	1	C42	2.2uF	CAP CER 2.2UF 16V X5R 0402	Murata	GRM155R61C225KE11J
10	1	C46	0.22uF	CAP CER 0.22UF 10V X5R 0402	Yageo	CC0402KPX5R6BB224
11	1	C64	10000pF	CAP CER 10000PF 10V X7R 0402	Yageo	CC0402KRX7R6BB103
12	2	C73, C79	47uF	CAP CER 47UF 10V X5R 0805	Murata	GRM21BR61A476ME15L
13	1	C75	20pF	CAP CER 20PF 25V C0G/NPO 0402	Murata	GRM1555C1E200JA01D
14	1	C82	22uF	CAP CER 22UF 10V X5R 0402	Murata	GRM158R61A226ME15D
15	1	CN1	Header 20X2	Header, 20x2, 2.54mm, VR, TH, Height 5.84mm/ 2.54mm	Würth Elektronik	61304021121
16	31	D1, D2, D3, D4, D5, D7, D8, D9, D10, D11, D12, D13, D14, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33	ESDALC6V1-1U2, ST0201	TVS DIODE 3VWM ST0201	STMicroelectronics	ESDALC6V1-1U2
17	1	D6	SMC30J10A, SMC	Tvs Diode Surface Mount SMC	STMicroelectronics	SMC30J10A
18	1	D15	1N4148WS	Diode 75 V 150mA Surface Mount SOD-323F	ON Semiconductor	1N4148WS
19	1	F1	Fuse 3A 8VDC	PTC RESET FUSE 8V 2.6A 1812	Bel Fuse Inc.	OZCG0260FF2C
20	3	F2, F3, F4	Fuse 5VDC	Polymeric PTC Resettable Fuse 6V 500 mA 1h Surface Mount 0402 (1005 Metric), Concave	Bourns Inc.	MF-ASML050/6-2
21	3	FB1, FB2, FB3	BLM15EG121SN1D	FERRITE BEAD 120 OHM 0402 1LN	Murata Electronics	BLM15EG121SN1D
22	6	FIDUCIAL1, FIDUCIAL2, FIDUCIAL3,	Fiducial	FIDUCIALS	-	-

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
		FIDUCIAL4, FIDUCIAL5, FIDUCIAL6				
23	1	HW1	HW1	Short Pin Header, 2.54mm	Harwin Inc.	M7567-05
24	2	J1, J5	FTSH-107-01-L-DV-K-P- TR	CONN HEADER SMD 14POS 1.27MM	Samtec Inc.	FTSH-107-01-L-DV-K-P-TR
25	1	J2	CON3	Connector Header Through Hole 3 position 0.100" (2.54mm)	Samtec Inc.	TSW-103-07-F-S
26	1	J3	S8411-45R	BATT HOLDER COIN 12MM 1 CELL SMD	Harwin Inc.	S8411-45R
27	1	J4	CON2	TERM BLK 2P SIDE ENT 2.54MM PCB	Phoenix Contact	1725656
28	1	J6	687126149022	CONN FFC BOTTOM 26POS 0.5MM R/A	Würth Elektronik	687126149022
29	1	J7	'62701221721	WR-BHD 1.27MM MALE ANGLED BOX HE	Würth Elektronik	62701221721
30	1	L1	2.2uH	Inductor 2.2uH 138 mOhms 1.2 A, 0806 (2016 metric)	Murata	LQM2MPN2R2MG0L
31	1	L2	100uH	FIXED IND 100NH 200MA 1.6OHM SMD	TDK Corporation	KLZ2012NHR101LTD25
32	1	L3	16.7uH	WE-HCIA SMT FLAT WIRE HIGH CURRE	Würth Elektronik	784325160
33	1	LD1	LED RED	LED RED CLEAR 0603 SMD	Würth Elektronik	150060RS75000
34	1	LD2	LED GREEN	LED GREEN CLEAR 0603 SMD	Würth Elektronik	150060GS75000
35	1	LD3	LED YELLOW	LED YELLOW CLEAR 0603 SMD	Würth Elektronik	150060YS75000
36	1	LS1	CMT-4023S-SMT-TR	BUZZER MAGNETIC 3V 4X4MM SMD	CUI Devices	CMT-4023S-SMT-TR
37	4	MH1, MH2, MH3, MH4	M3 HOLE NOT PLATED	M3 Pan Head Machine Screw Phillips Drive Nylon	Würth Elektronik	97790803111
38	1	Q1	2STR1160, SOT-23	Bipolar (BJT) Transistor NPN 60 V 1 A 500 mW Surface Mount SOT-23-3	STMicroelectronic s	2STR1160
39	6	R1, R2, R3, R23, R49, R60	0/NM	RES 0 OHM JUMPER 1/16W 0402	Vishay Beyschlag/ Draloric/BC	MCS04020Z0000ZE000

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
					Components, Vishay	
40	6	R4, R17, R18, R38, R47, R61	0	RES 0 OHM JUMPER 1/16W 0402	Vishay Beyschlag/ Draloric/BC Components	MCS04020Z0000ZE000
41	2	R5, R8	10K/NM	RES 10K OHM 1% 1/16W 0402	Vishay	CRCW040210K0FKEDC
42	11	R6, R7, R9, R10, R11, R13, R31, R32, R56, R57, R59	10K	RES 10K OHM 5% 1/16W 0402	Yageo	RC0402JR-1010KL
43	2	R12, R15	33R	Thick Film Resistors - SMD 33Ohms 1/16W 0402 5%	Yageo	RC0402JR-7D33RL
44	1	R16	47K	RES 47K OHM 5% 1/16W 0402	Yageo	RC0402JR-1047KL
45	10	R19, R20, R36, R37, R48, R50, R52, R53, R54, R55	2.2K	RES SMD 2.2K OHM 0.5% 1/16W 0402	Yageo	RT0402DRE072K2L
46	5	R21, R22, R24, R25, R26	4.7K	RES 4.7K OHM 0.1% 1/16W 0402	Yageo	RP0402BRD074K7L
47	3	R27, R28, R29	300R	RES SMD 300 OHM 1% 1/16W 0402	Yageo	AC0402FR-07300RL
49	2	R30, R51	1K	RES SMD 1K OHM 1% 1/10W 0402	Yageo, Panasonic Electronic Components	ERJ-2RKF1001X
50	2	R33, R34	1.8K	RES SMD 1.8K OHM 0.1% 1/16W 0402	Yageo, MULTICOMP	RT0402BRD071K8L
51	1	R35	200K	RES 200K OHM 1% 1/16W 0402	Yageo	RC0402FR-13200KL
52	1	R39	402K	RES SMD 402K OHM 1% 1/16W 0402	Yageo	RE0402FRE07402KL
53	1	R40	82.5K	RES 82.5K OHM 1% 1/16W 0402	Yageo	RC0402FR-0782K5L
54	1	R41	39K	RES SMD 39K OHM 1% 1/16W 0402	Yageo	RT0402FRE0739KL
55	1	R42	31.2K	RES SMD 31.2KOHM 0.1% 1/10W 0603	Yageo	RT0603BRD0731K2L
56	4	R43, R44, R45, R46	0	Resistor,0R,0603, ULO	Rohm Semiconductor	PMR03EZPJ000
57	1	R58	12K	RES 12K OHM 1% 1/10W 0402	Würth Elektronik	560112110038
58	1	SB1	Solder Bridge 0402 ON	Solder Bridge 0402 ON	Yageo	RC0402JR-070RL
59	1	SB2	Solder Bridge 0402 ON/NM	Solder Bridge 0402 ON	Yageo	RC0402JR-070RL

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
60	1	SW1	1101M2S3CQE2	Slide Switch SPDT Through Hole	C&K	1101M2S3CQE2
61	4	SW2, SW3, SW4, SW5	PUSHBUTTON	Tactile Switch SPST-NO Top Actuated Surface Mount	Würth Elektronik	435171014816
62	2	TP1, TP2	TEST POINT	PC TEST POINT NATURAL	Harwin Inc.	S2761-46R
63	3	TP3, TP4, TP5	T_POINT_R	PC TEST POINT NATURAL	Harwin Inc.	S2761-46R
64	1	U1	STM32H725IGT6, LQFP 176 24x24x1.4 mm	CONTROLLER / PROCESSOR	STMicroelectronic s	STM32H725IGT6
65	1	U2	APS6408L-3OBM-BA	RAM 64Mb OPI (x8) DDR 133MHz, 3V, Ind. Temp., BGA24	AP Memory	APS6408L-3OBM-BA
66	1	U3	W25Q128JVPIQ	NOR flash, spiFlash, 3V, 128Mbit, 4KB Uniform Sector	Winbond	W25Q128JVPIQ
67	1	U4	BLUENRG-M2SA, BLUENRG-2 MODULE QFN, CHIP ANT	Very low power application processor module for Bluetooth® Low Energy v5.2	STMicroelectronic s	BLUENRG-M2SA
68	1	U5	LSM6DSV16BX, LGA 14L 2.5x3x0.74 mm	6-axis iNEMO INERTIAL MODULE: 3-axis accelerometer	STMicroelectronic s	LSM6DSV16BXTR
69	1	U6	LIS2MDLTR, LGA2X2X0.7 12 LEADS	Digital output magnetometer	STMicroelectronic s	LIS2MDLTR
70	1	U7	MP34DT06JTR, HCLGA 4MM X 3 MM X 1.00 MM MICRO	MEMS microphones MEMS audio sensor	STMicroelectronic s	MP34DT06JTR
71	3	U8, U10, U11	ECMF2-40A100N6, QFN-6L	Common-mode filter with ESD protection for high-speed serial interface	STMicroelectronic s	ECMF2-40A100N6
72	1	U9	STMIPID02/TR	Dual-mode MIPI CSI-2/SMIA CCP2 de-serializer	STMicroelectronic s	STMIPID02/TR
73	1	U12	74AVC8T245-Q100J	8-bit dual supply translating transceiver with configurable voltage translation; 3-state	Nexperia	74AVC8T245BQ-Q100J
74	1	U13	SN74AVC4T774RSVR	4-Bit Dual-Supply Bus Transceiver with Configurable Voltage-Level Shifting and 3- State Outputs with Independent Direction Control Inputs	TI	SN74AVC4T774RSVR

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
75	1	U14	PCA9306FMUTCG	Dual Bidirectional I2C Bus	ON Semiconductor	PCA9306FMUTCG
76	1	U15	L6981NDR, SO-8	Switching Voltage Regulators 38 V, 1.5 A	STMicroelectronics	L6981NDR
77	1	U16	LD39050PUR, DFN6 3x3	LDO Voltage Regulators ADJ FRM 0.8V	STMicroelectronics	LD39050PUR
78	1	U17	L6982N33DR, SO-8	Switching Voltage Regulators 38 V, 2 A	STMicroelectronics	L6982N33DR
79	1	XTAL1	CS08742-25M	25 MHz Crystal 20pF 80 Ohms 4-SMD, No Lead	NDK America, Inc.	CS08742-25M
80	1	XTAL2	NX3215SA-32.768KHz-EXS00A-MU00525	Crystal 32.768kHz, 6pF, +20ppm, 50Kohms max, SMD	NDK	NX3215SA-32.768KHz-EXS00A-MU00525
81	1	XTAL3	831056216	WE-SPXO 24.0MHz 50ppm 2.0 x 1.6mm	Würth Elektronik	831056216

**Table 3. STEVAL-ROBKIT1-2 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	2	C1, C2	6.8pF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 50 V 6.8pF C0G 0603 Tol 0.25pF	Yageo	CC0603CRNPO9BN6R8
2	2	C3, C4	10pF	'CAPACITOR CERAMIC SMD 0603	Yageo	CC0603JRNPO9BN100
3	13	C5, C7, C10, C11, C12, C22, C23, C24, C25, C26, C27, C28, C29	100nF	CAP CER 0.1UF 50V X7R 0603	KEMET	C0603C104K5RACTU
4	1	C6	1uF	CAP CER 1UF 50V X5R 0603	Samsung Electro-Mechanics America, Inc.	CL10A105KB8NNNC
5	2	C8, C9	4.7uF	CAP CER 4.7UF 16V X5R 0603	Murata Electronics	GRM188R61C475KAAJD
6	1	C13	2.2uF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 0603 25VDC 2.2uF 10% B(JIS)	Murata Electronics	GRM188B31E225KA12D
7	2	C14, C15	22uF	CAP TANT 22UF 10% 25V 2312	Vishay Sprague	TR3C226K025C0425
8	1	C16	1nF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 50volt 1nF 10%	Vishay Vitramon	GA0603Y102KXAAAC31G



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9	1	C17	10nF	CAP CER 10000PF 50V X7R 0603	Murata Electronics North America	GRM188R71H103KA01D
10	1	C18	2.2nF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 50V 2200pF X7R 0603 10%	Yageo	CC0603KPX7R9BB222
11	1	C19	22nF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 50V 0.022uF X7R 0603 20%	Yageo	CC0603MRX7R9BB223
12	6	D1, D2, D3, D4, D5, D6	ESDALC6V1-1U2	ESD Suppressors / TVS Diodes single-line Low Cap ESD TVS 0201	STMicroelectronic s	ESDALC6V1-1U2
13	1	D7	LED RED	LED RED CLEAR 2SMD	Everlight Electronics Co Ltd	19-217/R6C-AL1M2VY/3T
14	1	D8	LED GREEN	LED GREEN CLEAR 0603 SMD	Würth Elektronik	150060GS75000
15	1	D9	LED YELLOW	LED YELLOW CLEAR 0603 SMD	Würth Elektronik	150060YS75000
16	1	J1	CONN_12	Headers & Wire Housings WR- BHD 1.27mm Male Angled Box Header 12 pins right angled	Würth Elektronik	62701221721
17	1	J2	CONN_14	CONN HEADER SMD 14POS 1.27MM	Samtec Inc.	FTSH-107-01-F-DV-K-P-TR
18	2	J3, J4	Male Horizontal Shrouded Header	WR-WTB 2.0mm Male Horizontal Shrouded Header	Würth Elektronik	62000611722
19	2	JP1, JP2	0ohm	RES 0 OHM JUMPER 1/10W 0603	Yageo	RC0603JR-070RL
20	1	L1	600 Ohms @ 100 MHz	600 Ohms @ 100 MHz 1 Ferrite Bead 0603 (1608 Metric) 350mA 500mOhm	TAI-TECH	FCM1608KF-601T03
21	4	R1, R2, R3, R4	100R	RES SMD 100 OHM 1% 1/10W 0603	Yageo	RC0603FR-07100RP
22	8	R5, R10, R31, R32, R33, R34, R35, R36,	0	RES 0 OHM JUMPER 1/10W 0603	Yageo	RC0603FR-070RL, RC0603JR-070RL
23	4	R6, R7, R29, R30	0/NM	RES 0 OHM JUMPER 1/10W 0603	Yageo	RC0603FR-070RL, RC0603JR-070RL
24	4	R8, R9, R11, R52	10K	Thick Film Resistors - SMD	Yageo	RC0603FR-0710KL

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
				10 kOhms 100mW 0603 1%		
25	1	R12	18K	Thick Film Resistors - SMD 1/10watt 18Kohms 1%	Vishay/Dale	CRCW060318K0FKEA
26	1	R13	39K	Thick Film Resistors - SMD 39kOhms 1/10W 0603 1%	Yageo	RC0603FR-1039KL
27	5	R14, R15, R16, R17, R18	330	Thick Film Resistors - SMD CRGCQ 0603 330R 1% SMD Resistor	TE Connectivity / Holsworthy	CRGCQ0603F330R
28	1	R19	200K	SMD 200 kOhms 100mW 0603 1%	Yageo	RC0603FR-07200KL
29	2	R20, R25	47K	Thick Film Resistors - SMD 47 kOhms 100mW 0603 1%	Yageo	RC0603FR-0747KL
30	4	R21, R22, R23, R24	0R68	SMD 680 mOhms 100mW 5 % 300 ppm/C AEC-Q200	Panasonic	ERJ-6DQJR68V
31	1	R26	1K	'RES SMD 1K OHM 1% 1/10W 0603	Yageo	RC0603FR-071KL
32	5	R37, R38, R39, R40,	12K/NM	Thick Film Resistors - SMD 12 kOhms 100-200 mW 0603 1%	Yageo	RC0603FR-1312KL
33	1	R51	12K	Thick Film Resistors - SMD 12 kOhms 100-200 mW 0603 1%	Yageo	RC0603FR-1312KL
34	2	R41, R42	2.2K	Thick Film Resistors - SMD 2.2 kOhms 100mW 0603 1%	Yageo	RC0603FR-072K2L
35	5	R43, R44, R45, R46, R47	4.7K	Thick Film Resistors - SMD 4.7 kOhms 100 mW 0603 5%	Yageo	RC0603JR-074K7L
36	2	R48, R50	300R	Thick Film Resistors - SMD 300 Ohms 100 mW 0603 1%	Yageo	RC0603FR-10300RL
37	1	R49	75R	Thick Film Resistors - SMD 1/10watt 75ohms 5%	Vishay/Dale	CRCW060375R0JNEA
38	5	SW1, SW2, SW3, SW4, SW5	WS-TASV SMT Tact Switch	SMT 3.0 X 2.6 MM TACT SWITCH WIT	Würth Elektronik	435171014816

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
39	4	TP1, TP2, TP3, TP4	TP	Solder pads	solder pads	solder pads
40	1	U1	STM32G071CBT6, LQFP 48 7x7x1.4 mm	IC MCU 32BIT 128KB FLASH 48LQFP	STMicroelectronics	STM32G071CBT6
41	1	U2	ESDALC6V1W5, SOT323-5L	ESD Suppressors / TVS Diodes 25W 6.1V Quad Array	STMicroelectronics	ESDALC6V1W5
42	1	U3	STSPIN240, VFQFPN 16 3x3x1.0	IC HALF BRIDGE DRV 1.3A 16VFQFPN	STMicroelectronics	STSPIN240
43	1	U4	LSM6DSR, LGA 14L 2.5x3x0.86 mm	CONSUMER MEMS	STMicroelectronics	LSM6DSRXTR
44	1	X1	8MHz	CRYSTAL 32.7680KHZ 12.5PF SMD	NDK	NX3225GD 8MHz EXS00A-CG04874
45	1	Y1	32.768kHz	CRYSTAL 32.7680KHZ 12.5PF SMD	CTS-Frequency Controls	TFE322P32K7680R

**Table 4. STEVAL-ROBKIT1-3 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	4	C1, C3, C18, C19	10uF	CAP, CER, 10uF, 6.3V, X5R, 0402	Murata	GRJ155R60J106ME11D
2	6	C2, C4, C5, C8, C9, C12	4.7uF	CAP, CER, 4.7uF, 10V, X5R, 0402	Murata	ZRB15XR61A475KE01D
3	11	C6, C7, C10, C11, C13, C14, C15, C16, C17, C21, C22	220nF	CAP, CER, 220nF, 16V, X7R, 0402	Murata	GRM155R71C224KA12D
4	1	J1	BM28B0.6-30DS	CONN RCPT 30POS SMD GOLD, with PLCC28_Fox Module	Hirose	BM28B0.6-30DS/2-0.35V(53)
5	1	J2	0.5mm	CONN FFC FPC BOTTOM 26POS 0.5MM R/A	Würth Elektronik	687126149022
6	1	L1	3.3 uH	FIXED IND, 3.3uH, 1.9A, 178 mOHM, 1008	TDK	VLS252010HBX-3R3M-1
7	1	Q1	FDN5618P/NM	MOSFET P-CH 60V 1.25A SUPERSOT3	ON Semiconductor	FDN5618P
8	1	Q2	BC847ALT1G/NM	TRANS NPN 45V 100MA SOT23-3	ON Semiconductor	BC847ALT1G
9	2	R1, R18	10k	RES, 10k, 1%, 1/10W, 0402	Panasonic	ERJ-2RKF1002X
10	8	R2, R3, R4, R8, R9, R10, R11, R14,	10k/MN	RES, 10k, 1%, 1/10W, 0402	Panasonic	ERJ-2RKF1002X
11	2	R5, R13	10k/NM	RES, 1k, 1%, 1/10W, 0603	Yageo	RC0603FR-071KL

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
12	1	R6	1k/NM	RES, 0R, Jumper, 1/10W, 0603	Panasonic	ERJ-3GEY0R00V
13	2	R15, R16	0R/NM	RES, 1.8k, 1%, 1/16W, 0402	Yageo	RC0402FR-071K8L
14	3	R17	1.8k	RES, 0R, Jumper, 1/16W, 0402	Yageo	RC0402JR-070RL
15	2	R21, R22	1.8k/NM	RES, 0R, Jumper, 1/16W, 0402	Yageo	RC0402JR-070RL
16	1	R20	150R	RES, 150R, 1%, 1/16W, 0402	Vishay	CRCW0402150RFKED
17	1	U1	ST1PS01BJR, CSP P 0.4 mm	400 mA nano-quiescent synchronous step-down converter with digit	STMicroelectronics	ST1PS01BJR
18	1	U2	LD39020ADTPU28R, DFN4 1x1	IC, REG, LDO, 2.8V, 0.2A, 4-DFN	STMicroelectronics	LD39020ADTPU28R
19	1	U3	LD39020ADTPU18R, DFN4 1x1	IC, REG, LDO, 1.8V, 0.2A, 4-DFN	STMicroelectronics	LD39020ADTPU18R
20	1	U4	Time-of-Flight (ToF) sensor, OPT. LGA 6.40X3.0	Low-power 8x8 multizone Time-of-Flight (ToF) sensor	STMicroelectronics	VL53L8CXV0GC/1
21	1	U5	PI4ULS3V204	IC, 4-Bit Bi-directional Level Shifter, TQFN3.5x3.5-14	Diodes Incorporated	PI4ULS3V204ZBEX
22	1	U7	TXU0304DTR	Voltage Level Translator Bidirectional 1 Circuit 4 Channel	Texas Instruments	TXU0304DTR
23	1	Y1	12MHz 50ppm	XTAL OSC XO 12MHZ CMOS SMD	ECS Inc.	ECS-2520MVLC-120-CN-TR
24	1	Camera module	VD56G3 Promodule	VD56G3 promodule with 152° FoV lens	STMicroelectronics	CAM-6G3-152CLR

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