

# Hermes-Lite 2.0build8 BOM

Standard Build - February 17, 2019

Reference	Spec	Part No.	Supplier	SKU	Price	Qty	Total
B1,B2,B3,B4,B5,B6, B7,B8,B9,B10,B11, B12,B13,B14,B15,B16, B17,B18,B19,B20,B21, B22,B23,B24,B25,B26, B27,B28,B29,B30,B31, B32,B33,B34,B35,B36, B37,B38,B39,B40,B41, B42,B43,B44,B45,B46, B47,B48,B49,B50,B51, B52,B53,B54,B56,B57, B59,B60,B61,B62,B63, B64,B66,B68,B70,B72, B73,B74,B75,B77,B78, B80,B81,B83,B84,B85, B86,B87,B88,B89,B90, B91,B92,B94,B97,B98, B99,B100,B101,B102, B103,B105,B106,B108, B109,B111,B113,B114, B115,B116,B118,B119, B120,B122	0.1uF 0603 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">C0603C104M5RACTU</a>	<a href="#">Mouser</a>	80-C0603C104M5R	0.12	104	12.58
C1,C2,C3,C4,C6,C7, C8,C9,C12,C25,C35, C38,C39,C40,C41,C44, C45,C62,C64,C66,C70	10uF 0603 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	<a href="#">GRM188R60J106KE47D</a>	<a href="#">Digi-Key</a>	<a href="#">490-12538-1-ND</a>	0.12	21	2.48
C5,C16,C22	100uF 1206 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	<a href="#">GRM31CR60J107ME39K</a>	<a href="#">Digi-Key</a>	<a href="#">490-7217-1-ND</a>	0.98	3	2.94
C13,C19,C27,C90,C91	4.7nF 0603 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">C0603C472K5RACTU</a>	<a href="#">Digi-Key</a>	<a href="#">399-1087-1-ND</a>	0.10	5	0.50
C14,C15,C20,C21,C28, C29,C30,C31,C32,C92	22uF 0805 $\geq$ X5R $\geq$ 16V $\leq$ 20%	<a href="#">CL21A226MOCLRNC</a>	<a href="#">Digi-Key</a>	<a href="#">1276-6780-1-ND</a>	0.25	10	2.53
C17,C23,C33,C43,C48, C86,C88	10uF 1206 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">TMK316BJ106ML-T</a>	<a href="#">Digi-Key</a>	<a href="#">587-2259-1-ND</a>	0.32	7	2.24
C18,C24,C34	4.7uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">TMK212BJ475KG-T</a>	<a href="#">Digi-Key</a>	<a href="#">587-1782-1-ND</a>	0.31	3	0.93
C26,C60,C61,C63,C65, C67,C68,C69,C71,C72	1uF 0603 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	<a href="#">LMK107B7105KA-T</a>	<a href="#">Mouser</a>	963-LMK107B7105KA-T	0.04	10	0.42

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C36,C37	15pF 0603NP0 $\geq$ 6.3V $\leq$ 5%	CC0603JRNPO9BN150	Digi-Key	311-1060-1-ND	0.10	2	0.20
C46,C89,C144,C145, C146,C147	1uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	GRM219R71E105KA88D	Digi-Key	490-5899-1-ND	0.26	6	1.56
C49	75pF 0805NP0 $\geq$ 50V $\leq$ 5%	08051A750JAT2A	Mouser	581-08051A750J	0.29	1	0.29
C50	150pF 0805NP0 $\geq$ 50V $\leq$ 5%	CL21C151JCANNNC	Digi-Key	1276-2591-1-ND	0.18	1	0.18
C51	160pF 0805NP0 $\geq$ 50V $\leq$ 5%	GRM2165C2A161JA01D	Digi-Key	490-1604-1-ND	0.18	1	0.18
C52,C57,C81	100pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN101	Digi-Key	311-1485-1-ND	0.15	3	0.45
C53	10pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO9BN100	Mouser	603-CC805JRNPO9BN100	0.13	1	0.13
C56	180pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN181	Digi-Key	311-4220-1-ND	0.18	1	0.18
C84	270pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN271	Digi-Key	311-1843-1-ND	0.18	1	0.18
C87	8.2pF 0805NP0 $\geq$ 25V $\leq$ 5%	CL21C8R2DBANNNC	Digi-Key	1276-2697-1-ND	0.10	1	0.10
CN1	2x5 M 0.1in	67997-410HLF	Mouser	649-67997-410HLF	0.28	1	0.28
CN2	Power	PJ-102AH	Mouser	490-PJ-102AH	0.76	1	0.76
CN3	Eth MagJack	L829-1J1T-43	Mouser	530-L829-1J1T-43	5.72	1	5.72
CN4	CW Jack	SJ1-3525N	Digi-Key	CP1-3525N-ND	0.76	1	0.76
D1	TVS Diode	CDSOD323-T05LC	Mouser	652-CDSOD323-T05LC	0.82	1	0.82
D2,D3,D4,D5	LED RA	LTST-S220KFKT	Mouser	859-LTST-S220KFKT	0.23	4	0.92
D8	TVS Diode	SM05.TCT	Mouser	947-SM05.TCT	0.62	1	0.62
D12	TVS Diode	SMBJ18CA	Mouser	512-SMBJ18CA	0.39	1	0.39
DB7	20 Pin Single Row 0.1in	PRPC040SAAN-RC	Digi-Key	S1011EC-40-ND	0.66	1	0.66
F1	FUSE PTC 3.0A 24V	MF-LSMF300/24X-2	Mouser	652-MF-LSMF300/24X-2	0.80	1	0.80
FB1,FB2,FB3,FB4,FB5, FB6,FB7,FB8,FB9,FB10, FB11,FB12,FB13,FB14, FB15,FB16,FB17,FB18, FB19,FB20,FB21,FB22, FB23,FB24,FB25,FB26, FB28,FB30	FB 0603 $\geq$ 600R@100MHz $\leq$ 200mOhm@DC 1A $\leq$ 25%	MPZ1608S601ATA00	Digi-Key	445-2205-1-ND	0.07	28	2.00
J1,J2,J5,J9,J10,J11, J13,J15,J17,J18,J19, J21,J22,J23,J24,J25, J26,J27,J28,J29,J30, J31,J32,L33,L34	0Ohm 0603 $\leq$ 5% $\geq$ 1/10W	CR0603-J/-000ELF	Mouser	652-CR0603-J/-000ELF	0.01	25	0.20
K2	Relay	EC2-3NU	Digi-Key	399-11042-5-ND	1.73	1	1.73
L1,L3	3.3uH $\geq$ 2.4A	SRR4528A-3R3Y	Mouser	652-SRR4528A-3R3Y	0.67	2	1.34
L2	2.2uH $\geq$ 2.4A	SRR4528A-2R2Y	Mouser	652-SRR4528A-2R2Y	0.67	1	0.67
L4,L7	240nH	LQW2BASR24J00L	Digi-Key	490-5670-1-ND	0.24	2	0.48
L5,L6,L8,L9	270nH	LQW2BASR27J00L	Digi-Key	490-5671-1-ND	0.24	4	0.96

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L10,L11	330nH	<a href="#">LQW2BASR33J00L</a>	<a href="#">Digi-Key</a>	<a href="#">490-5672-1-ND</a>	0.24	2	0.48
Q1	MOSFET P-CH 30V	<a href="#">DMP3099L-7</a>	<a href="#">Mouser</a>	<a href="#">621-DMP3099L-7</a>	0.34	1	0.34
Q2,Q5	Inductive Load Driver	<a href="#">NUD3124LT1G</a>	<a href="#">Mouser</a>	<a href="#">863-NUD3124LT1G</a>	0.40	2	0.80
Q3,Q4	RF LDMOS	<a href="#">AFT05MS003NT1</a>	<a href="#">Mouser</a>	<a href="#">841-AFT05MS003NT1</a>	3.16	2	6.32
Q6	Thermal Sensor	<a href="#">MCP9700T-E/TT</a>	<a href="#">Mouser</a>	<a href="#">579-MCP9700T-E/TT</a>	0.25	1	0.25
R1,R41,R42,R45,R50, R64	33 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0733RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-33.0HRCT-ND</a>	0.10	6	0.60
R2,R3,R4,R5,R6,R7, R14,R21,R22,R23,R24, R25,R27,R28,R29,R131, R132	10K 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-0710KL</a>	<a href="#">Mouser</a>	<a href="#">603-RC0603FR-0710KL</a>	0.02	17	0.31
R10	2.2 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-072R2L</a>	<a href="#">Digi-Key</a>	<a href="#">311-2.2HRCT-ND</a>	0.10	1	0.10
R11	35.7K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0735K7L</a>	<a href="#">Digi-Key</a>	<a href="#">311-35.7KHRCT-ND</a>	0.10	1	0.10
R12,R91	11.5K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0711K5L</a>	<a href="#">Digi-Key</a>	<a href="#">311-11.5KHRCT-ND</a>	0.10	2	0.20
R15	20K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0720KL</a>	<a href="#">Digi-Key</a>	<a href="#">311-20.0KHRCT-ND</a>	0.10	1	0.10
R19	16.2K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0716K2L</a>	<a href="#">Digi-Key</a>	<a href="#">311-16.2KHRCT-ND</a>	0.10	1	0.10
R20,R26,R49,R65,R75, R76	2.2K 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-072K2L</a>	<a href="#">Digi-Key</a>	<a href="#">311-2.20KHRCT-ND</a>	0.10	6	0.60
R34	12.1K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0712K1L</a>	<a href="#">Digi-Key</a>	<a href="#">311-12.1KHRCT-ND</a>	0.10	1	0.10
R39	130 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-07130RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-130HRCT-ND</a>	0.10	1	0.10
R40	75 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-0775RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-75.0HRCT-ND</a>	0.10	1	0.10
R43,R44,R48,R53,R95, R101,R106,R107,R117, R118,R119,R124,R125, R126,R130	4.7K 0603 $\leq 5\% \geq 1/10W$	<a href="#">CR0603-FX-4701ELF</a>	<a href="#">Mouser</a>	<a href="#">652-CR0603FX-4701ELF</a>	0.01	15	0.15
R46	1.8K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-071K8L</a>	<a href="#">Digi-Key</a>	<a href="#">311-1.80KHRCT-ND</a>	0.10	1	0.10
R47,R66	9.1K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-079K1L</a>	<a href="#">Digi-Key</a>	<a href="#">311-9.10KHRCT-ND</a>	0.10	2	0.20
R51,R63	22 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-0722RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-22.0HRCT-ND</a>	0.10	2	0.20
R52,R54,R61,R62,R94, R100	12 0805 $\leq 5\% \geq 1/8W$	<a href="#">RC0805FR-0712RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-12.0CRCT-ND</a>	0.10	6	0.60
R55	120 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-07120RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-120HRCT-ND</a>	0.10	1	0.10
R56,R59	330 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-07330RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-330HRCT-ND</a>	0.10	2	0.20
R57,R58,R67,R68,R71, R72,R73,R74,R109	1K 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-071KL</a>	<a href="#">Digi-Key</a>	<a href="#">311-1.00KHRCT-ND</a>	0.10	9	0.90
R69,R102	1.6K 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-071K6L</a>	<a href="#">Digi-Key</a>	<a href="#">311-1.60KHRCT-ND</a>	0.10	2	0.20
R70,R127	27K 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-0727KL</a>	<a href="#">Digi-Key</a>	<a href="#">311-27.0KHRCT-ND</a>	0.10	2	0.20
R77,R78	100 0603 $\leq 1\% \geq 1/10W$	<a href="#">RC0603FR-07100RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-100HRCT-ND</a>	0.10	2	0.20

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R92,R99,R108,R133, R134	270 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-07270RL</a>	<a href="#">Digi-Key</a>	<a href="#">311-270HRCT-ND</a>	0.10	5	0.50
R123	0.04 1206 $\leq 1\% \geq 1/4W$	<a href="#">RL1206FR-070R04L</a>	<a href="#">Digi-Key</a>	<a href="#">311-.04LWCT-ND</a>	0.55	1	0.55
T1	1:1 RF Transformer	<a href="#">MABAES0060</a>	<a href="#">Mouser</a>	<a href="#">937-MABAES0060</a>	2.35	1	2.35
T2	8:1 RF Transformer	<a href="#">MABA-010143-FLUX18</a>	<a href="#">Mouser</a>	<a href="#">937-MABA010143FLUX18</a>	3.15	1	3.15
T3	4:1 RF Transformer	<a href="#">B62152A4X30</a>	<a href="#">Mouser</a>	<a href="#">871-B62152A4X30</a>	1.04	1	1.04
U1	EEPROM 2Mx8bit >40MHz	<a href="#">S25FL116K0XMF1043</a>	<a href="#">Mouser</a>	<a href="#">797-25FL116K0XMF1043</a>	0.48	1	0.48
U2	FPGA	<a href="#">EP4CE22E22C8N</a>	<a href="#">Digi-Key</a>	<a href="#">544-3193-ND</a>	35.52	1	35.52
U3,U8,U16	Switching Regulator	<a href="#">ST1S10PHR</a>	<a href="#">Mouser</a>	<a href="#">511-ST1S10PHR</a>	1.76	3	5.28
U4	Gigabit EthPhy	<a href="#">KSZ9031RNXCC</a>	<a href="#">Mouser</a>	<a href="#">998-KSZ9031RNXCC</a>	2.89	1	2.89
U6	Clock Generator	<a href="#">5P49V5923B000NLGI</a>	<a href="#">Digi-Key</a>	<a href="#">800-3404-ND</a>	2.80	1	2.80
U7	RF ADC DAC	<a href="#">AD9866BCPZ</a>	<a href="#">Mouser</a>	<a href="#">584-AD9866BCPZ</a>	35.62	1	35.62
U9	RF Preamp OpAmp	<a href="#">OPA2677IDDA</a>	<a href="#">Digi-Key</a>	<a href="#">296-33472-5-ND</a>	5.12	1	5.12
U10,U11	RF Switch	<a href="#">4259-63</a>	<a href="#">Digi-Key</a>	<a href="#">1046-1011-1-ND</a>	0.65	2	1.30
U12	LDO Regulator	<a href="#">AP2204MP-ADJTRG1</a>	<a href="#">Digi-Key</a>	<a href="#">AP2204MP-ADJTRG1</a>	0.47	1	0.47
U13	Slow ADC	<a href="#">MAX11613EUA</a>	<a href="#">Mouser</a>	<a href="#">700-MAX11613EUA</a>	1.93	1	1.93
U14	Current Sense AMP	<a href="#">INA199A1DCKR</a>	<a href="#">Mouser</a>	<a href="#">595-INA199A1DCKR</a>	0.83	1	0.83
U15	Digital Rheostat 5K	<a href="#">MCP4662-502E/UN</a>	<a href="#">Mouser</a>	<a href="#">579-MCP4662-502E/UN</a>	1.29	1	1.29
U17	LDO Regulator	<a href="#">TPS73025DBVR</a>	<a href="#">Mouser</a>	<a href="#">595-TPS73025DBVR</a>	0.69	1	0.69
U19	LDO 10V 150mA	<a href="#">LP2985-10DBVR</a>	<a href="#">Mouser</a>	<a href="#">595-LP2985-10DBVR</a>	0.58	1	0.58
W1	21cm PFTE 24to30AWG wire	PFTE Tef SilPlated 30AWG	<a href="#">AliExpress</a>	<a href="#">AliExpress</a>	0.25	1	0.25
X1	25MHz XTAL	<a href="#">NX3225SA-25.000M-STD-CSR-3</a>	<a href="#">Mouser</a>	<a href="#">344-NX3225SA25MCSR3</a>	1.08	1	1.08
X2	38.4MHz Osc 3.3V $\leq 10ppm$	<a href="#">ASTXR-12-38.400MHZ-514054-T</a>	<a href="#">Digi-Key</a>	<a href="#">535-13192-1-ND</a>	2.12	1	2.12

**Total Price:** \$166.67

**Line Items:** SMT:76 TH:7 Total:84

**Parts:** SMT:368 TH:7 Total:376

**Pins:** SMT:1093 TH:70 Total:1168

**Do Not Include:** B55 B104 B107 C42 C47 C54 C55 C58 C59 C79 C80 C82 C83 C85 C148 C149 CL1 CL2 CL3 CL4 CL5 CL6 CL7 CL8 CL10 CN7 CN8 CN9 CN10 D6 D7 DB1 DB2 DB3 DB6 DB8 DB9 DB11 DB12 DB13 DB14 DB15 DB17 DB20 DB23 DB27 J3 J4 J6 J7 J8 J12 J14 J16 J20 R8 R9 R13 R16 R17 R36 R38 R60 R93 R96 R97 R98 R104 R112 R115 R128 R129 R135 RF1 RF2 RF3 RF4 RF5 RF6 RF7 X3