

# Hermes-Lite 2.0beta4 BOM

Standard Build - September 19, 2017

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,B69,B70, B71,B72,B73,B74,B75, B76,B77,B78,B79,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 $\geq$ 50V $\leq$ 20%	<a href="#">C0603C104M5RACTU</a>	<a href="#">Mouser</a>	80-C0603C104M5R	0.01	108	1.19
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="#">GRM188R60J106ME47D</a>	<a href="#">Digi-Key</a>	<a href="#">490-3896-1-ND</a>	0.12	21	2.58
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>	0.62	3	1.86
C13,C19,C27,C90,C91	4.7nF 0603 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">CL10B472KB8NNNC</a>	<a href="#">Digi-Key</a>	<a href="#">1276-1098-1-ND</a>	0.10	5	0.50
C14,C15,C20,C21,C28, C29,C30,C31,C32	22uF 0805 $\geq$ X5R $\geq$ 16V $\leq$ 20%	<a href="#">CL21A226MOCLRNC</a>	<a href="#">Digi-Key</a>	<a href="#">1276-6780-1-ND</a>	0.26	9	2.34
C17,C23,C33,C43,C48, C86,C88	10uF 1206 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">CL31A106KAHNNNE</a>	<a href="#">Digi-Key</a>	<a href="#">1276-1075-1-ND</a>	0.24	7	1.68
C18,C24,C34	4.7uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">GRM21BR61E475KA12L</a>	<a href="#">Digi-Key</a>	<a href="#">490-3335-1-ND</a>	0.16	3	0.48

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C26,C60,C61,C63,C65, C67,C68,C69,C71,C72, C73,C74	1uF 0603 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	GRM188R61C105KA93D	Digi-Key	490-1536-1-ND	0.08	12	1.01
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%	CL21B105KAFNNNE	Digi-Key	1276-1066-1-ND	0.11	6	0.66
C49	75pF 0805NP0 $\geq$ 50V $\leq$ 5%	08051A750JAT2A	Mouser	581-08051A750J	0.26	1	0.26
C50	150pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN151	Digi-Key	311-1839-1-ND	0.14	1	0.14
C51	160pF 0805NP0 $\geq$ 50V $\leq$ 5%	GRM2165C2A161JA01D	Mouser	81-GRM2165C2A161JA1D	0.16	1	0.16
C52,C57,C81	100pF 0805NP0 $\geq$ 50V $\leq$ 5%	CL21C101JCANNNC	Digi-Key	1276-1261-1-ND	0.10	3	0.30
C53	10pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO9BN100	Digi-Key	311-1099-1-ND	0.10	1	0.10
C56	180pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN181	Mouser	603-CC805JRNPO0BN181	0.23	1	0.23
C84	270pF 0805NP0 $\geq$ 50V $\leq$ 5%	CL21C271JCANNNC	Digi-Key	1276-2627-1-ND	0.14	1	0.14
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	Digi-Key	609-3243-ND	0.26	1	0.26
CN2	Power	1377g2-bk	Mouser	879-1377G2-BK	0.71	1	0.71
CN3	Eth MagJack	L829-1J1T-43	Mouser	530-L829-1J1T-43	5.72	1	5.72
CN4	4x2 M 0.1in HDR RA	61300821021	Mouser	710-61300821021	0.74	1	0.74
D1	TVS Diode	CDSOD323-T05LC	Mouser	652-CDSOD323-T05LC	0.80	1	0.80
D2,D3,D4,D5	LED RA	LTST-S220KFKT	Digi-Key	160-2031-1-ND	0.25	4	1.00
D12	TVS Diode	SMBJ18CA	Digi-Key	SMBJ18CAFSCT-ND	0.43	1	0.43
EN1	55x106x100 raw aluminum	Aluminum 100x100x50	AliExpress	AliExpress	16.78	1	16.78
F1	FUSE PTC 3.0A 24V	MF-LSMF300/24X-2	Mouser	652-MF-LSMF300/24X-2	0.47	1	0.47
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,J9,J10,J11, J14,J15,J19,J21,J22, J30,J31,J32,L33,L34	00hm 0603 $\leq$ 5% $\geq$ 1/10W	RC0603JR-070RL	Mouser	603-RC0603JR-070RL	0.01	15	0.12
K2	Relay	EC2-3NU	Digi-Key	399-11042-5-ND	1.73	1	1.73
L1,L3	3.3uH $\geq$ 2.4A	SRN5020-3R3M	Digi-Key	SRN5020-3R3MCT-ND	0.39	2	0.78
L2	2.2uH $\geq$ 2.4A	SRN5020-2R2Y	Mouser	652-SRN5020-2R2Y	0.36	1	0.36
L4,L7	240nH	LQW2BASR24J00L	Mouser	81-LQW2BASR24J00L	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
PB1	PCB	PCB	Tindie	<a href="#">Tindie</a>	18.00	1	18.00
PG1	Programmer	USB Blaster	EBay	<a href="#">EBay</a>	3.00	1	3.00
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="#">Digi-Key</a>	<a href="#">NUD3124LT1GOSCT-ND</a>	0.50	2	1.00
Q3,Q4	RF LDMOS	<a href="#">AFT05MS003NT1</a>	<a href="#">Mouser</a>	<a href="#">841-AFT05MS003NT1</a>	1.69	2	3.38
Q6	Thermal Sensor	<a href="#">MCP9700T-E/TT</a>	<a href="#">Mouser</a>	<a href="#">579-MCP9700T-E/TT</a>	0.26	1	0.26
R1,R42,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	4	0.40
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>	0.01	17	0.15
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,R79,R80	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	8	0.80
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
R43,R44,R48,R53,R95, R101,R106,R107,R124, R125,R126,R130	4.7K 0603 $\leq 5\% \geq 1/10W$	<a href="#">RC0603FR-074K7L</a>	<a href="#">Mouser</a>	<a href="#">603-RC0603FR-074K7L</a>	0.01	12	0.11
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,R81,R82,R120, R121,R122	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	7	0.70
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

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R123	0.04 1206 $\leq$ 1% $\geq$ 1/4W	RL1206FR-070R04L	Digi-Key	311-.04LWCT-ND	0.60	1	0.60
RF1,RF2	SMA Straight	5-1814832-1	Mouser	571-5-1814832-1	1.58	2	3.16
T1	1:1 RF Transformer	MABAES0060	Mouser	937-MABAES0060	2.35	1	2.35
T2	8:1 RF Transformer	MABA-010143-FLUX18	Mouser	937-MABA010143FLUX18	3.15	1	3.15
T3	4:1 RF Transformer	B62152A4X30	Mouser	871-B62152A4X30	1.04	1	1.04
U1	EEPROM 2Mx8bit >40MHz	W25Q16JVSNIQ	Digi-Key	W25Q16JVSNIQ-ND	0.48	1	0.48
U2	FPGA	EP4CE22E22C8N	Digi-Key	544-3193-ND	35.52	1	35.52
U3,U8,U16	Switching Regulator	ST1S10PHR	Mouser	511-ST1S10PHR	1.63	3	4.89
U4	Gigabit EthPhy	KSZ9031RNXCC	Mouser	998-KSZ9031RNXCC	3.38	1	3.38
U6	Clock Generator	5P49V5923B000NLGI	Digi-Key	800-3404-ND	2.80	1	2.80
U7	RF ADC DAC	AD9866BCPZ	Mouser	584-AD9866BCPZ	35.62	1	35.62
U9	RF Preamplifier OpAmp	OPA2677IDDA	Digi-Key	OPA2677IDDA	3.90	1	3.90
U10,U11	RF Switch	4259-63	Digi-Key	1046-1011-1-ND	0.65	2	1.30
U12	LDO Regulator	AP2204MP-ADJTRG1	Mouser	621-AP2204MP-ADJTRG1	0.51	1	0.51
U13	Slow ADC	MAX11613EUA	Mouser	700-MAX11613EUA	1.75	1	1.75
U14	Current Sense AMP	INA199A1DC	Mouser	INA199A1DC	0.84	1	0.84
U15	Digital Rheostat 5K	MCP4662-502E/UN	Digi-Key	MCP4662-502E/UN-ND	1.32	1	1.32
U17	LDO Regulator	TPS73025DBVR	Mouser	595-TPS73025DBVR	0.69	1	0.69
U19	LDO 10V 150mA	LP2985-10DBVR	Mouser	595-LP2985-10DBVR	0.58	1	0.58
X1	25MHz XTAL	NX3225SA-25.000M-STD-CSR-3	Digi-Key	644-1267-1-ND	0.76	1	0.76
X2	38.4MHz Osc 3.3V $\leq$ 10ppm	ASTXR-12-38.400MHZ-514054-T	Digi-Key	535-13192-1-ND	2.18	1	2.18

**Total Price:** \$186.61

**Line Items:** SMT:73 Assembled TH:5 Manual TH:5 Total:83

**Parts:** SMT:362 Assembled TH:5 Manual TH:6 Total:373

**Pins:** SMT:1080 Assembled TH:48 Manual TH:14 Total:1142

**Do Not Include:** B55 B58 B65 B67 B82 B96 B104 B107 B112 B117 B121 C10 C11 C42 C47 C54 C55 C58 C59 C75 C76 C77 C78 C79 C80 C82 C83 C85 C148 C149 CL1 CL2 CL3 CL4 CN5 CN6 CN7 CN8 CN9 CN10 CN11 CN12 D6 D7 D8 D9 D10 D11 D13 D14 DB1 DB2 DB3 DB4 DB5 DB6 DB7 DB8 DB9 DB10 DB11 DB12 DB14 DB16 DB17 DB19 DB20 DB22 DB23 DB24 DB26 DB27 FB27 FB29 J3 J4 J5 J6 J7 J8 J12 J13 J16 J17 J18 J20 J23 Q7 R8 R9 R13 R16 R17 R18 R30 R31 R32 R33 R35 R36 R37 R38 R39 R40 R41 R45 R60 R83 R84 R85 R86 R87 R88 R89 R90 R93 R96 R97 R98 R103 R104 R112 R113 R114 R115 R116 R117 R118 R119 R128 R129 R135 RF3 U5 U18 X3