Hermes-Lite 2.0build9 BOM

DIY Hand Build - August 15, 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≥X5R≥25V≤20%	C0603C104M5RACTU	Digi-Key	399-7845-1-ND	0.02	104	1.97
C1,C2,C3,C4,C6,C7, C8,C9,C12,C25,C35, C38,C39,C40,C41,C44, C45,C62,C64,C66,C70	10uF 0603≥X5R≥6.3V≤20%	GRM188R60J106KE47D	Digi-Key	490-12538-1-ND	0.12	21	2.48
C5,C16,C22	100uF 1206≥X5R≥6.3V≤20%	GRM31CR60J107ME39K	Digi-Key	490-7217-1-ND	0.98	3	2.94
C13,C19,C27,C90,C91	4.7nF 0603≥X5R≥25V≤20%	CL10B472KB8NNNC	Digi-Key	1276-1098-1-ND	0.10	5	0.50
C14,C15,C20,C21,C28, C29,C30,C31,C32,C92	22uF 0805≥X5R≥16V≤20%	CL21A226MOCLRNC	Digi-Key	1276-6780-1-ND	0.21	10	2.11
C17,C23,C33,C43,C48, C86,C88	10uF 1206≥X5R≥25V≤20%	CL31A106KAHNNNE	Digi-Key	1276-1075-1-ND	0.22	7	1.54
C18,C24,C34	4.7uF 0805≥X5R≥25V≤20%	TMK212BJ475KG-T	Mouser	963-TMK212BJ475KG-T	0.28	3	0.84
C26,C60,C61,C63,C65, C67,C68,C69,C71,C72	1uF 0603≥X5R≥6.3V≤20%	LMK107B7105KA-T	Mouser	963-LMK107B7105KA-T	0.04	10	0.38

Reference	Spec	Part No.	Supplier	SKU	Price	Qty	Total
C36,C37	15pF 0603NP0≥6.3V≤5%	CC0603JRNPO9BN150	Digi-Key	311-1060-1-ND	0.10	2	0.20
C46,C89,C144,C145, C146,C147	1uF 0805≥X5R≥25V≤20%	CL21B105KAFNNNE	Digi-Key	1276-1066-1-ND	0.11	6	0.66
C49	75pF 0805NP0≥50V≤5%	08051A750JAT2A	Digi-Key	478-3743-1-ND	0.27	1	0.27
C50	150pF 0805NP0≥50V≤5%	CL21C151JCANNNC	Digi-Key	1276-2591-1-ND	0.17	1	0.17
C51	160pF 0805NP0≥50V≤5%	GRM2165C2A161JA01D	Digi-Key	490-1604-1-ND	0.18	1	0.18
C52,C57,C81	100pF 0805NP0≥50V≤5%	CL21C101JCANNNC	Digi-Key	1276-1261-1-ND	0.11	3	0.33
C53	10pF 0805NP0≥50V≤5%	CC0805JRNPO9BN100	Digi-Key	311-1099-1-ND	0.11	1	0.11
C56	180pF 0805NP0≥50V≤5%	CC0805JRNPO0BN181	Digi-Key	311-4220-1-ND	0.18	1	0.18
C84	390pF 0805NP0≥50V≤5%	CL21C391JBANNNC	Digi-Key	1276-1303-1-ND	0.12	1	0.12
C87	8.2pF 0805NP0≥25V≤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	0.27	1	0.27
CN2	Power	PJ-102AH	Mouser	490-PJ-102AH	0.76	1	0.76
CN3	Eth MagJack	L829-1J1T-43	Mouser	530-L829-1J1T-43	6.48	1	6.48
CN4	CW Jack	SJ1-3525N	Digi-Key	CP1-3525N-ND	0.76	1	0.76
D1	TVS Diode	CDSOD323-T05LC	Mouser	652-CDSOD323-T05LC	0.78	1	0.78
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	Digi-Key	SMBJ18CABCT-ND	0.42	1	0.42
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 ≥600R@100MHz ≤200mOhm@DC 1A ≤25%	MPZ1608S601ATA00	Digi-Key	445-2205-1-ND	0.07	28	2.00
HS2	14X14mm Raspberry Pi Heatsink	Raspberry Pi Heat Sink	AliExpress	AliExpress	0.25	1	0.25
HS7	9X9mm Raspberry Pi Heatsink	Raspberry Pi Heat Sink	AliExpress	AliExpress	0.25	1	0.25
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≤5%≥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

Reference	Spec	Part No.	Supplier	SKU	Price	Qty	Total
L1,L3	3.3uH ≥2.4A	SRR4528A-3R3Y	Mouser	652-SRR4528A-3R3Y	0.67	2	1.34
L2	2.2uH ≥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
L10,L11	330nH	LQW2BASR33J00L	Digi-Key	490-5672-1-ND	0.24	2	0.48
Q1	MOSFET P-CH 30V	DMP3099L-7	Mouser	621-DMP3099L-7	0.33	1	0.33
Q2,Q5	Inductive Load Driver	NUD3124LT1G	Mouser	863-NUD3124LT1G	0.43	2	0.86
Q3,Q4	RF LDMOS	AFT05MS003NT1	Mouser	841-AFT05MS003NT1	3.30	2	6.60
Q6	Thermal Sensor	MCP9700T-E/TT	Mouser	579-MCP9700T-E/TT	0.25	1	0.25
R1,R41,R42,R45,R50, R64	33 0603≤1%≥1/10W	RC0603FR-0733RL	Digi-Key	311-33.0HRCT-ND	0.10	6	0.60
R2,R3,R4,R5,R6,R7, R13,R14,R16,R21,R22, R23,R24,R25,R27,R28, R29,R131,R132	10K 0603≤5%≥1/10W	RC0603FR-0710KL	Mouser	603-RC0603FR-0710KL	0.02	19	0.34
R10	2.2 0603≤5%≥1/10W	RC0603FR-072R2L	Digi-Key	311-2.2HRCT-ND	0.10	1	0.10
R11	35.7K 0603≤1%≥1/10W	RC0603FR-0735K7L	Digi-Key	311-35.7KHRCT-ND	0.10	1	0.10
R12,R91	11.5K 0603≤1%≥1/10W	RC0603FR-0711K5L	Digi-Key	311-11.5KHRCT-ND	0.10	2	0.20
R15	20K 0603≤1%≥1/10W	RC0603FR-0720KL	Digi-Key	311-20.0KHRCT-ND	0.10	1	0.10
R19	16.2K 0603≤1%≥1/10W	RC0603FR-0716K2L	Digi-Key	311-16.2KHRCT-ND	0.10	1	0.10
R20,R26,R49,R65,R75, R76	2.2K 0603≤5%≥1/10W	RC0603FR-072K2L	Digi-Key	311-2.20KHRCT-ND	0.10	6	0.60
R34	12.1K 0603≤1%≥1/10W	RC0603FR-0712K1L	Digi-Key	311-12.1KHRCT-ND	0.10	1	0.10
R39	130 0603≤1%≥1/10W	RC0603FR-07130RL	Digi-Key	311-130HRCT-ND	0.10	1	0.10
R40	75 0603≤5%≥1/10W	RC0603FR-0775RL	Digi-Key	311-75.0HRCT-ND	0.10	1	0.10
R43,R44,R48,R53,R95, R101,R106,R107,R117, R118,R119,R124,R125, R126,R130	4.7K 0603≤5%≥1/10W	CR0603-FX-4701ELF	Mouser	652-CR0603FX-4701ELF	0.01	15	0.15
R46	1.8K 0603≤1%≥1/10W	RC0603FR-071K8L	Digi-Key	311-1.80KHRCT-ND	0.10	1	0.10
R47,R66	9.1K 0603≤1%≥1/10W	RC0603FR-079K1L	Digi-Key	311-9.10KHRCT-ND	0.10	2	0.20
R51,R63	22 0603≤5%≥1/10W	RC0603FR-0722RL	Digi-Key	311-22.0HRCT-ND	0.10	2	0.20
R52,R54,R61,R62,R94, R100	12 0805≤5%≥1/8W	RC0805FR-0712RL	Digi-Key	311-12.0CRCT-ND	0.10	6	0.60
R55	120 0603≤1%≥1/10W	RC0603FR-07120RL	Digi-Key	311-120HRCT-ND	0.10	1	0.10
R56,R59	330 0603≤1%≥1/10W	RC0603FR-07330RL	Digi-Key	311-330HRCT-ND	0.10	2	0.20
R57,R58,R67,R68,R71, R72,R73,R74,R109	1K 0603≤5%≥1/10W	RC0603FR-071KL	Digi-Key	311-1.00KHRCT-ND	0.10	9	0.90

Reference	Spec	Part No.	Supplier	SKU	Price	Qty	Total
R69,R102	1.6K 0603≤5%≥1/10W	RC0603FR-071K6L	Digi-Key	311-1.60KHRCT-ND	0.10	2	0.20
R70,R127	27K 0603≤1%≥1/10W	RC0603FR-0727KL	Digi-Key	311-27.0KHRCT-ND	0.10	2	0.20
R77,R78	100 0603≤1%≥1/10W	RC0603FR-07100RL	Digi-Key	311-100HRCT-ND	0.10	2	0.20
R92,R99,R108,R133, R134	270 0603≤5%≥1/10W	RC0603FR-07270RL	Digi-Key	311-270HRCT-ND	0.10	5	0.50
R123	0.04 1206≤1%≥1/4W	RL1206FR-070R04L	Digi-Key	311-.04LWCT-ND	0.55	1	0.55
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	0.49	1	0.49
U2	FPGA	EP4CE22E22C8N	Digi-Key	544-3193-ND	35.52	1	35.52
U3,U8,U16	Switching Regulator	ST1S10PHR	Mouser	511-ST1S10PHR	1.76	3	5.28
U4	Gigabit EthPhy	KSZ9031RNXCC	Mouser	998-KSZ9031RNXCC	2.89	1	2.89
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 Preamp OpAmp	OPA2677IDDA	Digi-Key	296-33472-5-ND	5.12	1	5.12
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	1.93	1	1.93
U14	Current Sense AMP	INA199A1DCKR	Mouser	595-INA199A1DCKR	0.83	1	0.83
U15	Digital Rheostat 5K	MCP4662-502E/UN	Mouser	579-MCP4662-502E/UN	1.29	1	1.29
U17	LDO Regulator	TPS73025DBVR	Mouser	595-TPS73025DBVR	0.69	1	0.69
U19	LDO 10V 150mA	LP2985-10DBVR	Digi-Key	296-24263-1-ND	0.60	1	0.60
W1	21cm PFTE silver plated 24to30AWG wire	400R0111-24-9	Mouser	400R0111-24-9	0.50	1	0.50
X1	25MHz XTAL	NX3225SA-25.000M-STD-CSR-3	Mouser	344-NX3225SA25MCSR3	1.08	1	1.08
X2	38.4MHz Osc 3.3V≤10ppm	ASTXR-12-38.400MHZ-514054-T	Digi-Key	535-13192-1-ND	2.25	1	2.25

Total Price: $155.73
Line Items: SMT:76 TH:10 Total:86
Parts: SMT:370 TH:10 Total:380
Pins: SMT:1097 TH:71 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 R17 R36 R38 R60 R93 R96 R97 R98 R104 R112 R115 R128 R129 R135 RF1 RF2 RF3 RF4 RF5 RF6 RF7 X3