

# Hermes-Lite 2.0build8 BOM

Assembly Build - February 16, 2019

Part ID	Description	Part Number	Sub OK	Designators	Footprint	Pins	Quantity
15331	0.1uF 0603 $\geq$ X5R $\geq$ 25V $\leq$ 20%	C0603C104M5RACTU C1608X7R1E104K080AA	Y	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	0603	2	104
20411	10uF 0603 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	GRM188R60J106KE47D GRM188R60J106ME47D	Y	C1,C2,C3,C4,C6,C7, C8,C9,C12,C25,C35, C38,C39,C40,C41,C44, C45,C62,C64,C66,C70	0603	2	21
	100uF 1206 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	GRM31CR60J107ME39K	Y	C5,C16,C22	1206	2	3
55004	4.7nF 0603 $\geq$ X5R $\geq$ 25V $\leq$ 20%	CL10B472KB8NNNC C0603C472K5RACTU	Y	C13,C19,C27,C90,C91	0603	2	5
46786	22uF 0805 $\geq$ X5R $\geq$ 16V $\leq$ 20%	CL21A226MOCLRNC GRM21BR61E226ME44L GRT21BR61E226ME13L CC0805MKX5R8BB226 GRM21BR61C226ME44L	Y	C14,C15,C20,C21,C28, C29,C30,C31,C32,C92	0805	2	10

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14236	10uF 1206 $\geq$ X5R $\geq$ 25V $\leq$ 20%	CL31A106KAHNNNE TMK316AB7106KL-T TMK316BJ106ML-T	Y	C17,C23,C33,C43,C48, C86,C88	1206	2	7
2131	4.7uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	GRM21BR61E475KA12L TMK212BJ475KG-T	Y	C18,C24,C34	0805	2	3
16531	1uF 0603 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	GRM188R61E105KA12D GRM188R61C105KA93D CL10B105KP8NNNC LMK107B7105KA-T	Y	C26,C60,C61,C63,C65, C67,C68,C69,C71,C72	0603	2	10
1996	15pF 0603NP0 $\geq$ 6.3V $\leq$ 5%	CC0603JRNPO9BN150	Y	C36,C37	0603	2	2
29074	1uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	CL21B105KAFNNNE CL21B105KBFNFNE CL21A105KACLNNC GRM219R71E105KA88D	Y	C46,C89,C144,C145, C146,C147	0805	2	6
	75pF 0805NP0 $\geq$ 50V $\leq$ 5%	C0805C750J1GACTU 251R15S750JV4E 08051A750JAT2A	N	C49	0805	2	1
	150pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN151 GRM2195C2A151JA01D CL21C151JCANNNC C0805C151J1GACTU 251R15S151JV4E	N	C50	0805	2	1
	160pF 0805NP0 $\geq$ 50V $\leq$ 5%	GRM2165C2A161JA01D CL21C161JCANNNC C0805C161J1GACTU 251R15S161JV4E	N	C51	0805	2	1
2142	100pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN101 GRM2195C2A101JA01D CL21C101JCANNNC C0805C101J1GACTU 251R15S101JV4E	N	C52,C57,C81	0805	2	3
2137	10pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO9BN100	Y	C53	0805	2	1
	180pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN181 GRM2195C2A181JA01D CL21C181JCANNNC C0805C181J1GACTU 251R15S181JV4E	N	C56	0805	2	1

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	270pF 0805NP0 $\geq$ 50V $\leq$ 5%	CC0805JRNPO0BN271 GRM2195C2A271JA01D 251R15S271JV4E	Y	C84	0805	2	1
	8.2pF 0805NP0 $\geq$ 25V $\leq$ 5%	CL21C8R2DBANNNC	Y	C87	0805	2	1
	2x5 M 0.1in	67997-410HLF	Y	CN1	Custom	10	1
	Power	PJ-102AH	Y	CN2	Custom	3	1
	Eth MagJack	L829-1J1T-43	N	CN3	Custom	18	1
	CW Jack	SJ1-3525N	Y	CN4	Custom	5	1
	TVS Diode	CDSOD323-T05LC	N	D1	SC-76, SOD-323	2	1
	LED RA	LTST-S220KFKT	N	D2,D3,D4,D5	2.1x1.0mmRightAngle	2	4
	TVS Diode	SM05.TCT	N	D8	SOT-23-3	3	1
	TVS Diode	SMBJ18CA	N	D12	DO-214AA (SMB)	2	1
	20 Pin Single Row 0.1in	PRPC040SAAN-RC	Y	DB7	Custom	20	1
	FUSE PTC 3.0A 24V	MF-LSMF300/24X-2	N	F1	2920 7.36x5.12mm	2	1
	FB 0603 $\geq$ 600R@100MHz $\leq$ 200mOhm@DC 1A $\leq$ 25%	MPZ1608S601ATA00	Y	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	0603	2	28
21903	0Ohm 0603 $\leq$ 5% $\geq$ 1/10W	RC0603JR-070RL CR0603-J/-000ELF	Y	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	0603	2	25
	Relay	EC2-3NU	N	K2	Custom	10	1
	3.3uH $\geq$ 2.4A	SRR4528A-3R3Y	N	L1,L3	5x5mm	2	2
	2.2uH $\geq$ 2.4A	SRR4528A-2R2Y	N	L2	5x5mm	2	1
	240nH	LQW2BASR24J00L	N	L4,L7	0805	2	2
	270nH	LQW2BASR27J00L	N	L5,L6,L8,L9	0805	2	4
	330nH	LQW2BASR33J00L	N	L10,L11	0805	2	2
	MOSFET P-CH 30V	DMP3099L-7	N	Q1	SOT-23-3	3	1
	Inductive Load Driver	NUD3124LT1G	N	Q2,Q5	SOT-23-3	3	2
	RF LDMOS	AFT05MS003NT1	N	Q3,Q4	SOT-89-3	3	2
	Thermal Sensor	MCP9700T-E/TT	N	Q6	SOT-23-3	3	1
23867	33 0603 $\leq$ 1% $\geq$ 1/10W	RC0603FR-0733RL CR0603-FX-33R0ELF	Y	R1,R41,R42,R45,R50, R64	0603	2	6

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26547	10K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-0710KL CR0603-FX-1002HLF	Y	R2,R3,R4,R5,R6,R7, R14,R21,R22,R23,R24, R25,R27,R28,R29,R131, R132	0603	2	17
23666	2.2 0603 $\leq 5\% \geq 1/10W$	RC0603FR-072R2L	Y	R10	0603	2	1
	35.7K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0735K7L	Y	R11	0603	2	1
	11.5K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0711K5L	Y	R12,R91	0603	2	2
4591	20K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0720KL CR0603-FX-2002ELF	Y	R15	0603	2	1
	16.2K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0716K2L	Y	R19	0603	2	1
4597	2.2K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-072K2L	Y	R20,R26,R49,R65,R75, R76	0603	2	6
	12.1K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0712K1L	Y	R34	0603	2	1
	130 0603 $\leq 1\% \geq 1/10W$	RC0603FR-07130RL	Y	R39	0603	2	1
4682	75 0603 $\leq 5\% \geq 1/10W$	RC0603FR-0775RL CR0603-FX-75R0ELF	Y	R40	0603	2	1
23889	4.7K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-074K7L CR0603-FX-4701ELF	Y	R43,R44,R48,R53,R95, R101,R106,R107,R117, R118,R119,R124,R125, R126,R130	0603	2	15
4584	1.8K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-071K8L CR0603-FX-1801ELF	Y	R46	0603	2	1
23987	9.1K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-079K1L	Y	R47,R66	0603	2	2
24078	22 0603 $\leq 5\% \geq 1/10W$	RC0603FR-0722RL CR0603-FX-22R0ELF	Y	R51,R63	0603	2	2
	12 0805 $\leq 5\% \geq 1/8W$	RC0805FR-0712RL ERJ-6ENF12R0V	Y	R52,R54,R61,R62,R94, R100	0805	2	6
23514	120 0603 $\leq 1\% \geq 1/10W$	RC0603FR-07120RL	Y	R55	0603	2	1
23865	330 0603 $\leq 1\% \geq 1/10W$	RC0603FR-07330RL CR0603-FX-3300ELF	Y	R56,R59	0603	2	2
21904	1K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-071KL CR0603-FX-1001HLF	Y	R57,R58,R67,R68,R71, R72,R73,R74,R109	0603	2	9
	1.6K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-071K6L	Y	R69,R102	0603	2	2
23694	27K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0727KL	Y	R70,R127	0603	2	2
23502	100 0603 $\leq 1\% \geq 1/10W$	RC0603FR-07100RL CR0603-FX-1000ELF AC0603FR-07100RL	Y	R77,R78	0603	2	2

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23693	270 0603 $\leq 5\% \geq 1/10W$	RC0603FR-07270RL CR0603-FX-2700ELF	Y	R92,R99,R108,R133, R134	0603	2	5
	0.04 1206 $\leq 1\% \geq 1/4W$	RL1206FR-070R04L PE1206FRM070R04L	Y	R123	1206	2	1
	1:1 RF Transformer	MABAES0060	N	T1	SM-22-5 3.81x3.81mm	5	1
	8:1 RF Transformer	MABA-010143-FLUX18 WBC8-1LB	N	T2	SM-22-5 3.81x3.81mm	5	1
	4:1 RF Transformer	B62152A4X30	N	T3	Custom	4	1
	EEPROM 2Mx8bit >40MHz	W25Q16JVSNIQ	N	U1	8-SOIC (3.90mm)	8	1
	FPGA	EP4CE22E22C8N	N	U2	144-LQFP EP	144	1
	Switching Regulator	ST1S10PHR	N	U3,U8,U16	8-SOIC (3.90mm) EP	8	3
	Gigabit EthPhy	KSZ9031RNXCC	N	U4	48-VFQFN EP	48	1
	Clock Generator	5P49V5923B000NLGI	N	U6	24-VFQFN EP	24	1
	RF ADC DAC	AD9866BCPZ	N	U7	64-VFQFN EP	64	1
	RF Preamp OpAmp	OPA2677IDDA	N	U9	8-SOIC (3.90mm) EP	8	1
	RF Switch	4259-63	N	U10,U11	SC70-6	6	2
	LDO Regulator	AP2204MP-ADJTRG1	N	U12	8-SOIC (3.90mm) EP	8	1
	Slow ADC	MAX11613EUA	N	U13	8-MSOP (3.00mm)	8	1
	Current Sense AMP	INA199A1DCKR	N	U14	SC-70-6	6	1
	Digital Rheostat 5K	MCP4662-502E/UN	N	U15	10-MSOP (3.00mm)	10	1
	LDO Regulator	TPS73025DBVR	N	U17	SOT-23-5	5	1
	LDO 10V 150mA	LP2985-10DBVR	N	U19	SOT-23-5	5	1
	21cm PFTE 24to30AWG wire	30AWG Teflon PFTE	Y	W1	Custom	5	1
	25MHz XTAL	NX3225SA-25.000M- STD-CSR-3	Y	X1	3.2x2.5mm	4	1
	38.4MHz Osc 3.3V $\leq 10ppm$	ASTXR-12-38.400MHZ- 514054-T	N	X2	2.5x2mm	4	1

**Line Items:** SMT:76 Assembled TH:7

**Parts:** SMT:368 Assembled TH:7

**Pins:** SMT:1093 Assembled TH:70

**Do Not Assemble:** 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