

Table 1

<b>Source:</b>	/Users/dorjamjr/Documents/KiCad/CM4_HatBat_183/HAT_CM4_183.kicad_sch						
<b>Date:</b>	Friday, April 08, 2022 at 01:41:44 PM						
<b>Tool:</b>	Eeschema (6.0.1-0)						
<b>Generator:</b>	/Users/dorjamjr/Documents/KiCad/5.99/plugins/bom_csv_grouped_by_value.py						
<b>Component Count:</b>	158						
<b>Notes:</b>	1. This BOM includes all parts for manufacture of the HAT_CM4_183 board assembly but does not include parts (ex: battery terminals) external to the box						
	2. This BOM has been adjusted to remove optional parts (ex: Ethernet connector).						
	Such parts are listed at the end and noted as OPTIONAL. <b>Please do not order these parts for normal production.</b>						
<b>Collated Components:</b>							
<b>Item</b>	Qty	Reference(s)	Value	Description	DigiKey P/N	Manufacturer	Manufacturer P/N
3	12	C1, C2, C3, C4, C12, C25, C26, C27, C32, C34, C36, C38	10uF	CAP CER 10UF 6.3V X5R 0603	399-C0603C106M9PAC7867CT-ND	Samsung Electro-Mechanics	C0603C106M9PAC TU
4	3	C5, C6, C7	4.7uF	CAP CER 4.7UF 6.3V X5R 0603	399-3482-1-ND	KEMET	C0603C475K9PAC TU
5	3	C8, C9, C10	1uF	CAP CER 1UF 6.3V X5R 0603	1276-1036-1-ND	Samsung	CL10A105KQ8NNN C
6	4	C14, C15, C19, C20	150uf	150uf, 6.3V Alum Polymer Cap	565-4332-1-ND	Nippon Chemi-Con	APXF6R3ARA151M E61G
7	1	C16	1.0uf	CAP CER 1UF 6.3V X5R 0603	399-7848-1-ND	KEMET	C0603C105K9PAC TU
8	1	C17	0.22uf	CAP CER 0.22UF 6.3V X5R 0603	399-14969-1-ND	KEMET	C0603C224K9PAC 7867
9	9	C18, C21, C22, C28, C29, C31, C33, C35, C37	0.1uf	CAP CER 0.1UF 6.3V X5R 0603	399-17575-1-ND	KEMET	C0603C104K9PAC 7867
10	2	C23, C24	9pF	9 pF ±0.5pF 50V Ceramic Capacitor C0G, NP0 0603 (1608 Metric)	445-5627-1-ND	TDK	CGA3E2C0G1H090 D080AA
11	1	C30	100uF	150uf, 6.3V Alum Polymer Cap	565-4332-1-ND	Nippon Chemi-Con	APXF6R3ARA151M E61G
12	2	C39, C40	22uF	CAP CER 22UF 6.3V X5R 0603	1276-1193-1-ND	Samsung	CL10A226MQ8NR NC
13	2	D1, D3	MMBD914	DIODE GEN PURP 100V 200MA SOT23	MMBD914LT1GOS CT-ND	ON Semiconductor	MMBD914LT1G
14	1	D5	NRVTS260ESFT1G	DIODE SCHOTTKY 60V 2A SOD123FL	NRVTS260ESFT1G OSCT-ND	ON Semiconductor	NRVTS260ESFT1G
16	1	J1	Micro_SD_Card	MICRO SD PUSH/ PUSH SMALL 8CCARRIER	WM11190CT-ND	Molex	5033981892
17	1	J2	690-019-298-412	CONN RCPT HDMI 19POS SMD R/A	1175-1703-ND	CNC Tech	2000-1-2-41-00-BK
18	2	J3, J4	USB_A	USB-A USB 2.0 Receptacle Surface Mount	102-4133-1-ND	CUI Devices	UJ2-AH-1-SMT-TR
19	1	J5	USB-C	CONN RCP USB2.0 TYP C 24P SMD RA	2073-USB4105-GF-ACT-ND	GCT	USB4105-GF-A
22	1	L1	4.7 uH	FIXED IND 4.7UH 3A 40.3 MOHM SMD	587-2100-1-ND	Taiyo Yuden	NR6028T4R7M
23	1	L2	1.0 uH	FIXED IND 1.5UH 3A 31.2MOHM SMD	587-2404-1-ND	Taiyo Yuden	NRS5020T1R5NM GJ

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24	1	L3	1.5 uH	FIXED IND 1.5UH 3A 31.2MOHM SMD	587-2404-1-ND	Taiyo Yuden	NRS5020T1R5NM GJ
25	4	LED1, LED2, LED3, LED4	LED - Blue - R/A	LED BLUE CLEAR 0603 SMD - RA	160-1650-1-ND	Liteon	LTST-S270TBKT
	2	LED6, LED7	LED - Blue	LED BLUE CLEAR 0603 SMD	1830-1068-1-ND	Inolux	IN-S63BT5B
26	1	LED5	Red	LED RED CLEAR 0603 SMD	160-1447-1-ND	Lite-On Inc.	LTST-C191KRKT
27	1	LED8	Green	LED GREEN CLEAR 0603 SMD	160-1446-1-ND	Lite-On Inc.	LTST-C191KFKT
29	2	Module1	ComputeModule4 connectors	100 Position Connector Receptacle, Center Strip Contacts Surface Mount Gold	H11615CT-ND	Hirose	DF40C-100DS-0.4V
30	1	P1	OLED DISPLAY				
31	2	PB1, PB2	SPST-PUSH	Tactile Switch SPST-NO Side Actuated SMD, RA	EG4388CT-ND	E-Switch	TL3330AF130QG
32	1	Q1	2N7002	N-Channel 400mA (Ta) 320mW (Ta) Surface Mount SOT-23-3	T2N7002BKLCT- ND (alt: T2N7002AKLMCT- ND)	Toshiba	T2N7002BK,LM
33	12	Q2, Q3, Q4, Q6, Q7, Q8, Q10, Q11, Q12, Q14, Q15, Q16	3J15	P-Channel 30 V 100mA (Ta) 150mW (Ta) Surface Mount USM	SSM3J15FULCT- ND	Toshiba	SSM3J15FU,LF
34	4	Q5, Q9, Q13, Q17	8205A	FS8205A Lithium battery protection chip - TSSOP-8	[none - from AliExpress]		
35	13	R1, R6, R9, R12, R15, R18, R21, R24, R27, R31, R38, R39, R42	10K	RES SMD 10K OHM 1% 1/8W 0603	311-10.0KHRCT- ND	Yageo	RC0603FR-0710KL
36	8	R2, R3, R4, R11, R17, R23, R29, R50	20K	RES SMD 20K OHM 1% 1/8W 0603	311-20.0KHRCT- ND	Yageo	RC0603FR-0720KL
37	9	R5, R10, R13, R16, R19, R22, R25, R28, R44	100K	RES SMD 100K OHM 1% 1/8W 0603	311-100KHRCT-ND	Yageo	RC0603FR-07100K L
38	5	R7, R51, R52, R53, R55	36K	RES SMD 36K OHM 1% 1/8W 0603	311-36.0KHRCT- ND	Yageo	RC0603FR-0736KL
39	5	R8, R14, R20, R26, R40,	510	RES SMD 1K OHM 1% 1/8W 0603	311-510HRCT-ND	Yageo	RC0603FR-07510R L
40	1	R30	0.03 ohm	RES 0.03 OHM 1% 1/3W 0603	P17466CT-ND	Panasonic Electronic Components	ERJ-3BWFR030V
41	1	R32	100	RES SMD 100 OHM 1% 1/8W 0603	311-100HRCT-ND	Yageo	RC06-3FR-07100R L
42	1	R33	200K	RES SMD 200K OHM 1% 1/8W 0603	311-200KHRCT-ND	Yageo	RC0603FR-07200K L
43	1	R34	1.8K	RES SMD 1.8K OHM 1% 1/8W 0603	311-1.80KHRCT- ND	Yageo	RC0603FR-071K8L
44	2	R35, R36	2.2K	RES SMD 2.2K OHM 1% 1/8W 0603	311-2.20KHRCT- ND	Yageo	RC0603FR-072K2L
45	2	R37, R46	1K	RES SMD 1K OHM 1% 1/8W 0603	311-1.00KHRCT- ND	Yageo	RC0603FR-071KL
46	3	R41, R47, R54	12K	RES SMD 12K OHM 1% 1/8W 0603	311-12.0KHRCT- ND	Yageo	RC0603FR-12K2L

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47	1	R43	33K	RES SMD 33K OHM 1% 1/8W 0603	311-33.0KHRCT-ND	Yageo	RC0603FR-0733KL
48	1	R45	2.0	RES SMD 2.0 OHM 1% 1/8W 603	311-2.00HRCT-ND	Yageo	RC0603FR-072RL
49	1	U1	ATTiny88-AU	AVR series Microcontroller IC 8-Bit 12MHz 8KB - TQFP-32	ATTINY88-AU-ND	Microchip Technology	ATTINY88-AU
50	1	U3	AXP209	Enhanced single Cell Li-Battery and Power System Management IC	[none - from AliExpress]	X-Powers	AXP209
52	3	U6, U9, U12	RT9742ANGJ5F	Power Switch/Driver 1:1 N-Channel 1A TSOT-23-5	1028-1427-1-ND	Richtek	RT9742ANGJ5F
53	1	U7	AP22814A	IC PWR SWITCH P-CHAN 1:1 6UDFN	AP22814ASN-7DICT-ND	Diodes Incorporated	AP22814ASN-7
54	1	U8	MAX1709ESE	STEP-UP DC-DC CONVERTER	[none - from AliExpress]	Maxim	MAX1709ESE
55	1	U13	USB2514B-I/M2	USB Hub Controller USB Interface 36-SQFN (6x6)	USB2514B/M2-ND	MicroChip	USB2514B-I/M2
56	1	U15	HC-R8812AF1	WiFi Module	[none - see Kirk for order details]		
57	1	Y1	24MHz	24MHz Crystal 18pf 30ppm 30ppm	Newark: 2508493	Qantek	QCS24.0000F18B2 3M
<b>OPTIONAL PARTS:</b>				<b>DO NOT ORDER FOR NORMAL PRODUCTION.</b>			
60	1	J6	MagJack-S811	10/100 Ethernet Magjack	507-1456-1-ND	Bel Fuse Inc	S811-1X1T-06-F
61	2	R48, R49	510	RES SMD 1K OHM 1% 1/8W 0603	311-510HRCT-ND	Yageo	RC0603FR-07510RL
62	1	LED10	Green	LED GREEN CLEAR 0603 SMD	160-1446-1-ND	Lite-On Inc.	LTST-C191KFKT
63	1	LED11	Amber	LED AMBER CLEAR 0603 SMD	160-1445-1-ND	Lite-On Inc.	LTST-C191KFKT
64	1	U5	TPD4EUSB30	Quad TVS diode for high speed signals (USB3, GigE etc.)	296-28063-1-ND	TI	TPD4EUSB30DQAR
65	1	J7	Flex-4	Connector FFC Bottom 4 Position 1.00mm R/A	609-SFW4R-1STE1HLFCT-ND	Amphenol	SFW4R
66	1	R57	1K	RES SMD 1K OHM 1% 1/8W 0603	311-1.00KHRCT-ND	Yageo	RC0603FR-071KL
67	1	LED12	LED - Blue	LED BLUE CLEAR 0603 SMD	1830-1068-1-ND	Inolux	IN-S63BT5B