

# Next Thing Co.

Creative Commons: CC-BY-SA

[docs.nextthing.co](http://docs.nextthing.co)

## PCBA BOM

Model	ALPHA C.H.I.P.			
Version	v0.21			
BOM Revision	SC3805R_MB_V02_150811			
Date	8/11/15			

ITEM	Class	P/N.	Description	Vendor	Qty	Designator	Remarks
1	A		Main PCB, 6layer T=1.6mm FR-4 C.H.I.P. v0x21 58.5MMX39.7MM		1		
2	A		IC CPU R8M LGA128_SSQ0_8		1	U1	
3	A		IC PMU AXP209 QFN49_0_4H0_8A		1	U3	
4	A		IC IO EXTEND PCF8574ARGYR QFN20-PT0_5-3_65X4_65H1A		1	U27	
5	A		IC CONTINUOUS CURRENT LPW5210 SOT23_5H14A		2	U10,U15	
6	A		IC DC-DC LP32205ABS5F SOT23-5		2	U4,U12	
7	A		IC DC-DC LP6226B6F SOT23-6		1	U11	
8	A		SMD MODULE WIFI 8723BS QFN44-AP6476-12X12H1_6A		1	U9	
9	A		SMD CRYSTAL 24MHz ±10ppm 18pF SMD322524ECP1F 3.2*2.5mm		1	X1	
10	B		SMD INDUCTOR 1.8uH 0603		1	L9	
11	B		SMD INDUCTOR 2.2uH DCR<0.1R-1.7A 3518		6	L2,L3,L4,L5,L6,L8	
12	B		SMD DIODE INS819 SOD123FL		1	D16	
13	B		SMD DIODE BATS45 SOT-23		1	D18	
14	B		SMD LED 0603 white color (e.g. Everlight QTLP603CIWTR or similar)		1	D2	
15	B		SMD LED EC01-0603QRC-E-Ag pink color		1	D1	
16	B		CHIP WIFI/Bluetooth Ceramic Antenna AA055 3.2X1.6X0.5		1	ANT1	
17	B		SMD TRANSISTOR MMBT3904 NPN SOT-23		1	Q4	
18	B		SMD C-MOS N-channel BSN20 SOT-23		1	Q11	
20	B		DIP CONNECTOR CON2X20-PT2_54-5_2X31_2H2A (40PIN @ 2.54MM)		2	U13,U14	
21	B		DIP CONNECTOR CON2-PT2_54H7_1A(2PIN @ 2.54MM)		1	J1	
22	B		SMD JACK MICRO USB A015B141BH2_4A		1	J4	
22	B		SMD JACK USB_AF-011Z_45H5_2A		1	J5	
23	B		SMD JACK EARPHONE PJ-033SMTH4A		1	J11	
24	B		SMD KEY SW_4P_TC3061B/IT-1100AE (2PIN @ 4.4MM)		1	SW1	
25	C		CHIP CAP 0201 18P 16V NPO		2	C1,C5	
26	C		CHIP CAP 0201 22P 16V NPO		1	C53	
27	C		CHIP CAP 0201 47P 16V NPO		2	C67,C73	
28	C		CHIP CAP 0201 100P 16V NPO		1	C294	
29	C		CHIP CAP 0201 270P 16V NPO		1	C55	
30	C		CHIP CAP 0201 330P 16V NPO		1	C56	
31	C		CHIP CAP 0201 102 16V ±20%		2	C15,C20	
32	C		CHIP CAP 0402 8P 16V NPO		1	C51	
33	C		CHIP CAP 0402 104 10V ±20%		9	C35,C54,C58,C64,C69,C72,C148,C151,C152	
34	C		CHIP CAP 0402 105 10V ±20%		7	C9,C22,C24,C26,C37,C49,C145	
35	C		CHIP CAP 0603 4.7uF 10V ±20%		17	C10,C11,C12,C25,C27,C28,C29,C50,C59,C65,C66,C68,C70,C71,C74,C76,C188	
36	C		CHIP CAP 0603 10uF 10V ±20%		15	C2,C3,C4,C13,C14,C16,C17,C18,C19,C21,C32,C45,C57,C75,C77	
37	C		CHIP CAP 0805 22uF 10V ±20%		2	C78,C79	
38	C		CHIP RESISTOR 0201 0Ω 1/20W		8	R12,R39,R40,R41,R43,R84,R85,R414	
39	C		SMD RCA 0201-4 0ΩX4 1/20W		2	RN1,RN2	
40	C		CHIP RESISTOR 0201 24Ω 1/20W ±5%		2	R100,R101	
41	C		CHIP RESISTOR 0201 75Ω 1/20W ±5%		1	R60	
42	C		CHIP RESISTOR 0201 1KΩ 1/20W ±5%		4	R83,R86,R102,R113	
43	C		CHIP RESISTOR 0201 1.5KΩ 1/20W ±5%		1	R192	
44	C		CHIP RESISTOR 0201 2.2KΩ 1/20W ±5%		7	R1,R2,R3,R4,R6,R18,R103	
45	C		CHIP RESISTOR 0201 10KΩ 1/20W ±5%		7	R10,R11,R55,R56,R70,R87,R206	
46	C		CHIP RESISTOR 0201 20KΩ 1/20W ±5%		1	R8	
47	C		CHIP RESISTOR 0201 33KΩ 1/20W ±5%		5	R48,R49,R51,R52,R53	
48	C		CHIP RESISTOR 0201 47KΩ 1/20W ±5%		2	R16,R17	
49	C		CHIP RESISTOR 0201 100KΩ 1/20W ±5%		3	R65,R66,R105	
50	C		CHIP RESISTOR 0201 510KΩ 1/20W ±5%		1	R74	
51	C		CHIP RESISTOR 0201 1MΩ 1/20W ±5%		1	R88	
52	C		CHIP RESISTOR 0402 0Ω 1/16W		3	R19,R45,R46	
53	C		CHIP RESISTOR 0402 1Ω 1/16W ±5%		2	R9,R82	
54	C		CHIP RESISTOR 0402 2KΩ 1/16W ±5%		1	R20	
55	C		CHIP RESISTOR 0805 0Ω 1/8W		1	R81	
56	C		CHIP RESISTOR 0201 6.8KΩ 1/20W ±1%		2	OR4,R75	
57	C		CHIP RESISTOR 0201 27KΩ 1/20W ±1%		1	R57	
58	C		CHIP RESISTOR 0201 100KΩ 1/20W ±1%		2	R14,R78	
59	C		CHIP RESISTOR 0201 150KΩ 1/20W ±1%		2	R15	
60	C		CHIP RESISTOR 0201 200KΩ 1/20W ±1%		2	R13,R54	
61	C		CHIP RESISTOR 0402 442KΩ 1/16W ±1%		1	R79	
62	C		CHIP RESISTOR 0805 0.03Ω 1/8W ±1%		1	R7	