

KiCAD Freakduino BOM								
17/08/2013 v1.2 post-r132 corrections								
element14								
Qty	Reference(s)	Manufacturer	Part No.	Description	Order Code	MOQ	Price ea.	Amount
1	ANT1	Amphenol Connex	132136RP	RP-SMA Connector	<a href="#">1789593</a>	1	23.660	23.66
1	BATT1	JST	S2B-XH-A	2-pin mated, polarized connector, male	<a href="#">1516289</a>	10	0.240	2.40
1	BATT2	Keystone	2462	2-AA battery case	<a href="#">1702630</a>	1	2.660	2.66
1	BLN1	Johanson Technology	2450BL14B100E	100 ohm diff/50 ohm single ended, 2.4 GHz, balun 0805	<a href="#">1885503</a>	5	2.110	10.55
10	C1, C10, C11, C13, C14, C16, C18, C20, C21, C23	TDK	C1608Y5V1H104Z	0.1uF/50V,0603	<a href="#">1844266</a>	1	0.030	0.30
0	C2, R3, R9		DNI (Do Not Insert)			0	0.000	0.00
1	C3	Nichicon	UWX1C101MCL1GB	100uF/16V, electrolytic, SMD 6.3mm	<a href="#">8823065</a>	5	0.120	0.60
1	C4	Johanson Technology	251R14S0R4AV4T	0.4pf, 0603 RF, Hi Q	<a href="#">1885354</a>	25	0.228	5.70
2	C5, C22	TDK	C2012X5R0J226M/1.25	22uF, 6.3V, 0805, MLCC	<a href="#">2309030</a>	1	0.214	0.43
2	C6, C7	Multicomp	MC000291	5.6pf, 50V, 0402,RF	<a href="#">2310316</a>	10	0.030	0.30
2	C8, C12	Multicomp	MC0603B103M250CT	0.01uF, 0603	<a href="#">1709947</a>	1	0.007	0.01
1	C9	Nichicon	F920G226MPA	22uf, 6.3V, Tant, 0805	<a href="#">1892302</a>	1	1.800	1.80
1	C15	AVX	06036D106MAT2A	10uF, 6.3V, 0603	<a href="#">1833804</a>	10	0.300	3.00
2	C17, C19	Multicomp	MC0603N120J101CT	12pF, 50V, 0603	<a href="#">1759054</a>	100	0.029	2.90
1	D1	Vishay	VLMB1300-GS08	Blue LED, 0603	<a href="#">2251459</a>	1	0.207	0.21
2	D2, D6	Vishay	VLMO1300-GS08	Red LED, 0603	<a href="#">2251473</a>	1	0.207	0.41
2	D3, D4	Vishay	VLMTG1300-GS08	Green LED, 0603	<a href="#">2251490</a>	1	0.160	0.32
1	FB1	Fair-Rite	2508051027Y0	Ferrite Bead, 0805	<a href="#">2112874</a>	1	0.022	0.02
1	H3	Molex	10897061 (see below)	3x2 straight male header, 2.54mm (0.100")	<a href="#">1508365</a>	1	0.902	0.90
			----->	30x2 and cut to size	<a href="#">1918095</a>	1	2.630	2.63
1	JP1	Molex	22-28-5030 (see below)	1x3 straight male header, 2.54mm (0.100")	<a href="#">1513726</a>	1	0.077	0.08
2	JP2, JP7	Molex	22-28-4022 (see below)	1x2 straight male header, 2.54mm (0.100")	<a href="#">1704910</a>	1	0.201	0.40
			----->	30x1 and cut to size	<a href="#">1819800</a>	1	4.060	4.06
2	JP4, JP6	Global Connector	BG095-08-A-N-D	1x8 straight female header, 2.54mm (0.100")	<a href="#">1799005</a>	1	1.890	3.78
2	JP3, JP5	Global Connector	BG095-06-A-N-D	1x6 straight female header, 2.54mm (0.100")	<a href="#">1799003</a>	1	1.420	2.84
1	J1	Multicomp	MC32598	USB Mini-AB connector	<a href="#">1696539</a>	1	2.280	2.28
1	J2	Lumberg	NEB 21 R	DC Power Jack, 1.95mm center conductor	<a href="#">1217037</a>	1	2.260	2.26
1	L1	Johanson Technology	L-14C3N3SV4T	3.3nH RF inductor, 0603	<a href="#">1865790</a>	50	0.132	6.60
1	L2	Taiyo Yuden	NR4018T4R7M	4.7uH inductor, 1.2A, 4x4mm	<a href="#">1284636</a>	1	0.550	0.55
7	R1, R2, R4, R5, R7, R8, R12	Multicomp	MCMR06X102 JTL	1 Kohm, 0603	<a href="#">2073354</a>	100	0.005	0.50
4	R6, R10, R11, R13	Multicomp	MCSR06X103 JTL	10 Kohms, 0603	<a href="#">2074170</a>	100	0.003	0.30
2	R14, R15	Multicomp	MCMR06X104 JTL	100 Kohms, 0603	<a href="#">2073357</a>	100	0.003	0.30
1	SW1	Omron	A6TN-2104	DIP switch, SPST, 2 poles, raised slide, thru	<a href="#">2066443</a>	1	2.660	2.66
1	S1	C & K Components	OS102011MA1QN1	Right angle slide switch, SPDT, ON-ON	<a href="#">1201431</a>	5	1.820	9.10
1	S2	Würth Elektronik	430471031826	SMD SPST Tactile Switch/Pushbutton	<a href="#">1867986</a>	1	1.360	1.36
1	U1	FTDI	FT232RL	USB-to-Serial converter	<a href="#">1146032</a>	1	11.830	11.83
1	U2	Texas Instruments	LM3940IMP-3.3	3.3V regulator SOT-223-3 (IGO pin order)	<a href="#">9779280</a>	1	2.280	2.28
1	U3	Atmel	AT86RF231-ZU QFN	2.4GHz, 802.15.4 radio.	<a href="#">1748493</a>	1	8.970	8.97
1	U4	NXP	GTL2003	Voltage level shifter, 8-bit, TSSOP-20 package	<a href="#">2212068</a>	1	1.260	1.26
1	U5	Texas Instruments	TPS61222DCKT	5V boost converter	<a href="#">1755643</a>	1	2.930	2.93
1	U6	Atmel	ATMEGA328-AU	AVR Microcontroller QFP32	<a href="#">1972086</a>	1	4.450	4.45
1	VR1	ST Micro	L78M05CDT-TR	5.0V regulator D-PAK 500mA	<a href="#">1261392</a>	1	0.890	0.89
1	Y1	Aker	C3E-16.000-12-1010-X	16MHz crystal, 10ppm, 12pf	<a href="#">1640978</a>	1	6.210	6.21
Total								134.70

COLOUR KEY

- BLACK
- ORANGE
- PURPLE
- RED

As originally specified for Freakduino v2.1a.  
Alternative part with same footprint as original. Additional orange text shows difference in part parameters.  
Alternative part with **different** footprint to original.  
Part not available and no alternative so far found. Red in price column indicates price unreasonably high.

# KiCAD Freakduino BOM

DigiKey

Qty	Reference(s)	Manufacturer	Part No.	Description	DigiKey SKU	MOQ	USD ea.	Amount
1	ANT1	ChangHong	SMA-02-113-TGG	RP-SMA Connector			0.00	
1	BATT1	JST	JST-XH2P	2-pin mated, polarized connector, male				
1	BATT2	COMF	BH321-1P	2-AA battery case				
1	BLN1	Murata	LDB-182G4510C-110	100 ohm diff/50 ohm single ended, 2.4GHz, balun				
10	C1,C10,C11,C13,C14,C16,C18,C20,C21,C23	Various		0.1uF/50V,0603				
0	C2,R3,R9		DNI					
1	C3	Various		100uF/16V				
1	C4	Johanson Technology	251R14S0R4	0.4pf,0603 RF capacitor				
2	C5,C22	Various		22uF, 6.3V,0805, MLCC				
2	C6,C7	Taiyo Yuden	UMK105C-G5R6DW-F	5.6pf,50V,0402,RF				
2	C8,C12	Various		0.01uF, 0603				
2	C9,C15	Various		100uF, 35V, thru				
2	C17,C19	Various		12pF, 50V, 0603				
1	D1	Various		Blue LED, 0603				
2	D2,D6	Various		Red LED, 0603				
2	D3,D4	Various		Green LED, 0603				
1	D5	Vishay	BAT43	Schottky Diode, thru				
1	FB1	Various		Ferrite Bead, 0805				
1	H3	Various	H3X2	3x2 straight male header, 2.54mm (0.100")				
1	JP1	Various	JP3/THRU_VERT	1x3 straight male header, 2.54mm (0.100")				
2	JP2,JP7	Various	1X2	1x2 straight male header, 2.54mm (0.100")				
2	JP4,JP6	Various		1x8 straight male header, 2.54mm (0.100")				
2	JP3,JP5	Various		1x6 straight male header, 2.54mm (0.100")				
1	J1	4UCON	9558	USB Mini-AB connector				
1	J2	4UCON	5537	DC Power Jack, 2.0mm center conductor				
1	L1	Johanson Technology	L-14C3N3SV4T	3.3nH RF inductor				
1	L2	Various		47uH inductor, 200mA, thru				
5	R1,R2,R7,R8,R12	Various		220 ohms, 0603				
4	R6,R10,R11,R13			10 Kohms, 0603				
2	R14,R15	Various		100 Kohms, 0603				
2	R4,R5	Various		1 Kohm, 0603				
1	SW1	Various		2-input DIP switch, thru				
1	S1	Various		Right angle slide switch				
1	S2	Various		SMD SPST Tactile Switch/Pushbutton				
1	U1	FTDI	FT232RL	USB-to-Serial converter				
1	U2	Microchip	TC1264-3.3	3.3V regulator				
1	U3	Atmel	AT86RF231	2.4GHz, 802.15.4 radio				
1	U4	Fairchild	FXMA108	Voltage level converter, DQFN-20 package	<a href="#">FXMA108BQXFSC-TND</a>	1	1.52	
1	U5	Holtek	HT7750A	5V boost converter	NOT AVAILABLE			
1	U6	Atmel	ATMEGA328-QFP32	AVR Microcontroller				
1	VR1	NJRC	NJM2845-5.0	5.0V regulator				
1	Y1	NDK	NX3225SA,15ppm	16MHz crystal, 15ppm				