


Component List / BOM Archive				Company:		Box Synergy									
Project:	Frost 5000			Location:	Córdoba, Argentina										
Version:	Beta 1.0			Website:	https://www.box-synergy.com/										
Report Date:	07-16-2020			Design Engineer Contact:	electronic@box-synergy.com - Gustavo Belbruno										
Generated by:	Gustavo Belbruno - Box Synergy Engineering Area														
#	Designator	Name/Value	Description	Package / Case	Importance*	Quantity	Manufacturer	Supplier 1			Alternative Supplier				
								Name	Part Number	Link Part	Name	Part Number	Link Part		
1	Antenna	2450AT42B100E	Ceramic Antenna SMD	T&R		1	Johanson Technology	Mouser	609-2450AT42B100E	Link Mouser	Digikey	712-1008-1-ND	Link Digikey		
2	Ca1, Ce3, Ce5	10uF	Capac Ceramic SMD 0603	0603		3	-	-	-	-	-	-	-		
3	Ca2	100nF	Capac Ceramic SMD 0603	0603		1	-	-	-	-	-	-	-		
4	Ca3	3.0pF	Capac Ceramic SMD 0402	0402		1	-	-	-	-	-	-	-		
5	Ca4	2.4pF	Capac Ceramic SMD 0402	0402		1	-	-	-	-	-	-	-		
6, 13	Cb1, Ce6	4.7uF	Capac Ceramic SMD 0603	0603		2	-	-	-	-	-	-	-		
7	Cd1	220nF	Capac Ceramic SMD 0603	0603		1	-	-	-	-	-	-	-		
8, 14	Ce1, Cf_out	22uF	Capac Ceramic SMD 1210	1210		2	-	-	-	-	-	-	-		
9	Ce2	1uF	Capac Ceramic SMD 0603	0603		1	-	-	-	-	-	-	-		
11	Ce4	47nF	Capac Ceramic SMD 0603	0603		1	-	-	-	-	-	-	-		
15, 16	Cg1, Cg2	22uF	Capac Ceramic SMD 0603	0603		2	-	-	-	-	-	-	-		
17, 18	Cy1, Cy2	22pF	Capac Ceramic SMD 0603	0603		2	-	-	-	-	-	-	-		
19, 20, 21, 22, 23	D_LED1, D_LED2, D_LED3, D_LED4, D_LED5	LCB TTSD-T2V1-2J8L-Z	Blue LED PLCC-2	PLCC-2		5	OSRAM	Mouser	720-LC8TTSDT2VA1160	Link Mouser	-	-	-		
24	D_Zen	DDZ12ASF-7	Zener 11.5V-0.5W	SOD323F		1	DIODES	Mouser	621-DDZ12ASF-7	Link Mouser	Digikey	DDZ12ASF-7DICT-ND	Link Digikey		
26	J_Jumper	M50-3530242	1.27mm Pin Header 2x1	1.27mm Header		1	HARWIN	Mouser	855-M50-3530242	Link Mouser	-	-	-		
28	J_UART	M50-3530442	1.27mm Pin Header 4x1	1.27mm Header		1	HARWIN	Mouser	855-M50-3530442	Link Mouser	-	-	-		
27	J_MICROUSB	CQ-MUB-FS8772	MicroUSB B-type Socket	-		1	Shenzhen Chuangqin Technology	Alibaba	-	Link Alibaba	-	-	-		
29	J_USB_A	CQ-USB-AFFS90	USB-A Socket	-		1	Shenzhen Chuangqin Technology	Alibaba	-	Link Alibaba	-	-	-		
30	La1	4.3nH	Inductor SMD 0603	0603		1	-	-	-	-	-	-	-		
31	La2	2.2nH	Inductor SMD 0402	0402		1	-	-	-	-	-	-	-		
32, 33	Le, Lf	SRN5040TA-1R0M	Inductor 1uH 5A	Non Standard		2	Bourns	Mouser	652-SRN5040TA-1R0M	Link Mouser	Digikey	SRN5040TA-1R0MCT-ND	Link Digikey		
34, 35, 36, 37, 38	Q1, Q2, Q3, Q4, Q5	ZXT11N20DFTA	Transistor NPN Low Saturation Vce - SOT23-3	SOT-23-3	Important Low Saturation Vce	5	Diodes	Mouser	522-ZXT11N20DFTA	Link Mouser	Digikey	ZXT11N20DFTR-ND	Link Digikey		
39	Ra1	12K +- 1%	Resistor SMD	0603		1	-	-	-	-	-	-	-		
40, 47	Ra2, Re2	200	Resistor SMD	0603		2	-	-	-	-	-	-	-		
41	Ra3	499	Resistor SMD	0603		1	-	-	-	-	-	-	-		
42, 45, 57, 59, 61, 63, 65	Ra4, Rd1, Rq1b, Rq2b, Rq3b, Rq4b, Rq5b	1K	Resistor SMD	0603		6	-	-	-	-	-	-	-		
43	Ra5	5K	Resistor SMD	0603		1	-	-	-	-	-	-	-		
46	Re1	260	Resistor SMD	0603		1	-	-	-	-	-	-	-		
48	Re3	2.2K	Resistor SMD	0603		1	-	-	-	-	-	-	-		
49, 50, 55, 56	Re4, Re5, Rp1, Rp2	10K	Resistor SMD	0603		4	-	-	-	-	-	-	-		
51	Rf1	732K	Resistor SMD	0603		1	-	-	-	-	-	-	-		
52	Rf2	100K	Resistor SMD	0603		1	-	-	-	-	-	-	-		

53	Ro1	330K	Resistor SMD	0603		1	-	-	-	-	-	-	-
54	Ro2	90K	Resistor SMD	0603		1	-	-	-	-	-	-	-
58, 60, 62, 64, 66	Rq1c, Rq2c, Rq3c, Rq4c, Rq5c	130	Resistor SMD	0603		5	-	-	-	-	-	-	-
44	RcS	ERJ-6BWFR010V	Shunt 0.01 Ohm 0.5W 1% SMD Resistor	0805		1	Panasonic	Mouser	667-ERJ-6BWFR010V	Link Mouser	Digikey	P.01AQTR-ND	Link Digikey
67	U1	ESP8266EX	Microcontroller ESP8266EX	32VFQFN		1	Espressif Systems	Mouser	356-ESP8266EX	Link Mouser	Digikey	1904-1001-1-ND	Link Digikey
68	U2	W25Q32JVSSIQ	FLASH - NOR Memory IC 32Mb _4M x 8 - SOIC	SOIC-8		1	Winbond	Mouser	454-W25Q32JVSSIQ	Link Mouser	Digikey	W25Q32JVSSIQ-ND	Link Digikey
69	U3	INA219BIDCNR	Current Monitor I2C	SOT-23-8		1	Texas Instruments	Mouser	595-INA219BIDCNR	Link Mouser	Digikey	296-46420-1-ND	Link Digikey
70	U4	LSM303AGR	Accelerometer, Magnetometer	VFLGA-12		1	STMicroelectronics	Digikey	497-16527-1-ND	Link Digikey	Mouser	511-LSM303AGRTR	Link Mouser
71	U5	BQ25606RGER	Battery Charger 3A	VQFN-24		1	Texas Instruments	Mouser	595-BQ25606RGER	Link Mouser	Digikey	296-47743-1-ND	Link Digikey
72	U6	TPS61023DRLT	Boost Switching Regulator 3A	SOT-563		1	Texas Instruments	Mouser	595-TPS61023DRLR	Link Mouser	Digikey	296-TPS61023DRLTCT-ND	Link Digikey
73	U7	LM1117LD-3.3/NOPB	LDO Regulator Pos 3.3V 0.8A Texas - WSON8	WSON8		1	Texas Instruments	Mouser	926-LM1117LD33NOPB	Link Mouser	Digikey	LM1117LD-3.3 /NOPBCT-ND	Link Digikey
74	Y	ABM8-26MHz	26MHz Â±10ppm Crystal 10pF 50 Ohms 4-SMD, No Lead	ABM8		1	Abracon	Mouser	815-ABM8-26-T	Link Mouser	-	-	-
25	J_Battery	Connx2_Battery	NO SOCKET										
*Importance: Refers to the importance of using the designated component and not a default replacement			This is a critical device and was specially calculated, it should not be exchanged for any device. In case of not obtaining this device, please contact the design engineer.										
			If possible, use the supplied device. In case there is difficulty in obtaining it, you can use another one with similar characteristics, but as long as the device has a complete datasheet where its parameters can be consulted.										
			This is a regular device and you can choose the device that suits you.										