

	Name On PCB	Value	Package Size	Manufacturer part number	DigiKey part number	Quantity per PCB	Cost per 1 pcs	Cost per Required	Product/site info
ANALOG SWITCH									
	SN74LVC2G53	IC3	SM8	SN74LVC2G53DCT	296-13269-2-ND	1	\$0.67	\$0.67	https://www.digikey.com/product-detail/en/texas-instruments/SN74LVC2G53DCT/296-13269-1-ND/484508
	Bypass Capacitor 1 uF (1206)	C5	1206	CC1206KRX7R9BB104	311-1179-1-ND	1	\$0.19	\$0.19	https://www.digikey.com/product-detail/en/yageo/CC1206KRX7R9BB104/311-1179-1-ND/303089
RADIO									
	SAMTEC TLE 14 POS	Freewave Z9-C	TLE	TLE-107-01-G-DV-A	SAM10182-ND	1	\$2.83	\$2.83	https://www.digikey.com/product-detail/en/samtec-inc/TLE-107-01-G-DV-A/SAM10182-ND/6678819
	FREEWAVE Z9-C or Z9-T	Freewave Z9-C		Z9-C	2108-Z9-C-ND	1	\$490.44	\$490.44	https://www.digikey.com/products/en?keywords=freewave%20Z9-C
CONNECTIVE HARDWARE									
	Female-Female 1/4", 2-56 standoffs					4	\$1.87	\$7.48	https://www.mcmaster.com/91115A806
	Female-Male 1/4", 2-56 standoffs	For connecting the entire board				4	\$2.15	\$8.60	https://www.mcmaster.com/91075A211
	2-56 Thread, 3/16" Long Bolt					1	\$5.40	\$5.40	https://www.mcmaster.com/31802A076
CONNECTORS/ANTENNA									
	900 MHz RF antenna		SMA	A09-HASM-675	A09-HASM-675-ND	1	\$25.00	\$25.00	https://www.digikey.com/product-detail/en/digi-international/A09-HASM-675/A09-HASM-675-ND/615818
	MMCX to SMA connector		MMCX	CBA-SMA-MMCXRA	CBA-SMA-MMCXRA-ND	1	\$5.81	\$5.81	https://www.digikey.com/product-detail/en/rf-solutions/CBA-SMA-MMCXRA/CBA-SMA-MMCXRA-ND/2781759
JUMPERS									
	2x3 2.54 mm header block	Z9-C Radio/Z9-Tradio	2.54 mm	M20-9980-345	952-2120-ND	4	\$0.27	\$1.08	https://www.digikey.com/product-detail/en/harwin-inc/M20-9980345/952-2120-ND/3728084
	2x1 2.54 mm Shunt Jumper	RST_RADIO/EN_VCC2	2.54 mm	QP02SXXGN-RC	S9337-ND	2	\$0.10	\$0.20	https://www.digikey.com/product-detail/en/sullins-connector-solutions/QP02SXXGN-RC/S9337-ND/2618262
	2x2 2.54 mm Shunt Jumper	Z9-C Radio/Z9-Tradio	2.54 mm	MNT-102-BK-G	SAM9042-ND	3	\$0.76	\$2.28	https://www.digikey.com/product-detail/en/samtec-inc/MNT-102-BK-G/SAM9042-ND/2685308
SD CARD									
	Micro SD socket	SD card				1	\$1.95	\$1.95	https://www.adafruit.com/product/1660
RELAY BLOCK									
	Relay Driver		SOT26	DRDC3105E6-7	DRDC3105E6-7DICT-ND	1	\$0.46	\$0.46	https://www.digikey.com/product-detail/en/diodes-incorporated/DRDC3105E6-7/DRDC3105E6-7DICT-ND/3028443
	2A Latching Relay	relays 1 and 2		TQ2SS-L2-3V-Z	255-3845-1-ND	1	\$5.07	\$5.07	https://www.digikey.com/product-detail/en/panasonic-electric-works/TQ2SS-L2-3V-Z/255-3845-1-ND/3885594
ROCKBLOCK+ INTERFACE									
	ROCKBLOCK+					1	\$250.00	\$250.00	
	TERM BLK 7POS SIDE ENT 3.5MM PCB				277-6247-ND	1	\$4.40	\$4.40	https://www.digikey.com/product-detail/en/phoenix-contact/1751293/277-6247-ND/2511029
VOLTAGE DIVIDER									
	VBAT Resistor (0603) 1M0hm	1 M Ohms	10603	CPF0603B1M0E	A119955DKR-ND	1	\$0.52	\$0.52	https://www.digikey.com/product-detail/en/te-connectivity-passive-product/CPF0603B1M0E/A119955DKR-ND/4966666
	Trim pot CT6 2M0hms	2 M Ohms	CT6	CT6EP205	CT6EP205-ND	1	\$0.79	\$0.79	https://www.digikey.com/product-detail/en/hidex-cogal-electronics/CT6EP205/CT6EP205-ND/7383111
POWER GRID									
	Pololu 5V step down	D36V28F5		D36V28F5		1	\$11.95	\$11.95	https://www.pololu.com/product/3782
	Pololu 3.3V step down	(Recommend D36V28F3)		N/A		1	\$11.95	\$11.95	https://www.pololu.com/product/3782
	3.5 mm 3-position screw terminal		3.5 mm pitch length	1751251	277-5749-ND	1	\$1.95	\$1.95	https://www.digikey.com/product-detail/en/phoenix-contact/1751251/277-5749-ND/2511152
RS232 INTERFACE TO RADIO									
	MAX3243	MAX3243	SSOP-28	MAX3243CDBR	296-6941-1-ND	1	\$1.91	\$1.91	https://www.digikey.com/product-detail/en/texas-instruments/MAX3243CDBR/296-6941-1-ND/371563
	0.1 uF SMD capacitor (1206)	C1, C2, C3, C4, CBYPASS	1206	CC1206KRX7R9BB104	311-1179-1-ND	5	\$0.19	\$0.95	https://www.digikey.com/product-detail/en/yageo/CC1206KRX7R9BB104/311-1179-1-ND/303089
							Total	\$41.88	
Consolidated BOM									
	Part	Number	Digkey Number	price per unit	Total Price	Purpose			
Digikey	Analog switch	3	296-13269-1-ND	\$0.67	\$2.01	For signal routing on SB base			
Digikey	1 uF Capacitor	10	311-1179-1-ND	\$0.19	\$1.90	Passives for SB base			
Digikey	TLE 14-pos connector	3	SAM10182-ND	\$2.83	\$8.49	Connector for Freewave radion on Base			
Digikey	2x3 2.54 mm header block	10	952-2120-ND	\$0.27	\$2.70	Signal routing on Base PCB			
Digikey	2x1 2.54 mm Shunt Jumper	5	S9337-ND	\$0.10	\$0.50	Signal routing on Base PCB			
Digikey	2x2 2.54 mm Shunt Jumper	10	SAM9042-ND	\$0.76	\$7.60	Signal routing on Base PCB			
Adafruit	Micro SD socket	2	1660	\$1.95	\$3.90	For Micro SD on base PCB			
Digikey	Relay Driver	4	DRDC3105E6-7DICT	\$0.46	\$1.84	For driving power relay on Base PCB			
Digikey	Dual coil latching relay	2	255-3845-1-ND	\$5.07	\$10.14	Power switching on base PCB			
Digikey	7-pos screw terminal	2	277-6247-ND	\$4.40	\$8.80	Connector for ROCKBLOCK+ on Base PCB			
Digikey	10k 0603 resistor	5	A119955DKR-ND	\$0.56	\$2.80	Passives for SB base			
Digikey	variable potentiometer	3	CT6EP205-ND	\$0.81	\$2.43	Power management on base PCB			
Digikey	3-pos screw terminal	2	277-5749-ND	\$1.95	\$3.90	Power management on base PCB			
Digikey	MAX3234 RS232 interface	3	296-6941-1-ND	\$1.91	\$5.73	RS232 interface for ROCKBLOCK+ and Z9-C on base PCB			
Pololu	3.3V voltage reg	1	3781	\$11.95	\$11.95	Power management on base PCB			
Pololu	5V voltage reg	1	3782	\$11.95	\$11.95	Power management on base PCB			
Base Pins									
	A0	CHANNEL SELECT ANALOG SWITCH							
	A3	ROCKBLOCK+ Ring Alert							
	A1	Battery voltage reader							
	A2	GNSS RELAY RESET							
	A4								
	A5	ROCKBLOCK+ Network Available							
	RX (0)	Radio TX							
	TX (1)	Radio RX							
	9	Rockblock+ ON/OFF							
	13	RX2 to Rockblock+							
	12	GNSS RELAY SET							
	11	TX2 to Rockblock+							
	10	SD Card CS							
	6	SD card Reset							
	5	Reset Radio							
	SCL (GPIO 21)	optionally enable/disable the second voltage regulator							
	SDA (GPIO 20)								