

Part	X	Y	Angle	Package	Value	Manufacturer	Manufacturer Part No	Farnell Part No	Mouser Part No	Description
FD1	5.08	5.08	0							Fiducial 1mm
FD2	52.48	60.96	0							Fiducial 1mm
C1	30.48	23.91	180	0603	1uF	Walsin	0603X105K100CT	2496916		MultiLayer Ceramic Capacitor; 1uF; 10V; 0603; X5R
C2	40.96	26.45	0	0603	12pF	Walsin	0603N120J500CT	2496884		MultiLayer Ceramic Capacitor; 12pF; 50V; 0603
C3	16.26	35.21	270	0805	10uF	Walsin	0805F106Z100CT	2496998		MultiLayer Ceramic Capacitor; 10uF; 10V; 0805
C4	40.96	28.92	0	0603	12pF	Walsin	0603N120J500CT	2496884		MultiLayer Ceramic Capacitor; 12pF; 50V; 0603
C5	36.20	37.88	180	0805	10uF	Walsin	0805F106Z100CT	2496998		MultiLayer Ceramic Capacitor; 10uF; 10V; 0805
C6	12.03	23.40	180	0805	10uF	Walsin	0805F106Z100CT	2496998		MultiLayer Ceramic Capacitor; 10uF; 10V; 0805
C7	23.81	24.16	270	0603	1uF	Walsin	0603X105K100CT	2496916		MultiLayer Ceramic Capacitor; 1uF; 10V; 0603; X5R
C8	21.59	24.16	270	0805	10uF	Walsin	0805F106Z100CT	2496998		MultiLayer Ceramic Capacitor; 10uF; 10V; 0805
C9	15.24	38.13	0	0805	0.1uF	Walsin	0805B104K500CT	2496944		MultiLayer Ceramic Capacitor; 0.1uF; 50V; 0805; X7R
C10	19.05	44.48	0	0805	10uF	Walsin	0805F106Z100CT	2496998		MultiLayer Ceramic Capacitor; 10uF; 10V; 0805
C13	16.95	32.04	0	0603	0.1uF	Walsin	0603B104K500CT	2496834		MultiLayer Ceramic Capacitor; 0.1uF; 50V; 0603; X7R
C14	38.86	31.59	0	0603	1uF	Walsin	0603X105K100CT	2496916		MultiLayer Ceramic Capacitor; 1uF; 10V; 0603; X5R
C15	37.59	40.10	0	0603	1uF	Walsin	0603X105K100CT	2496916		MultiLayer Ceramic Capacitor; 1uF; 10V; 0603; X5R
C16	36.77	46.70	0	0603	0.22uF	Multicomp	MC0603F224Z160CT	1759019		MultiLayer Ceramic Capacitor; 0.22uF; 16V; 0603
C17	36.86	55.05	0	0805	2.2uF	Multicomp	MCTT21X225K100CT	1759477		MultiLayer Ceramic Capacitor; 2.2uF; 10V; 0805; X5R
C18	2.95	59.94	180	0805	10nF	Walsin	0805B103K500CT	2496939		MultiLayer Ceramic Capacitor; 10nF; 50V; 0805; X7R
C19	23.15	12.67	180	0805	10uF	Walsin	0805F106Z100CT	2496998		MultiLayer Ceramic Capacitor; 10uF; 10V; 0805
CON1	32.83	2.99	0		Micro_USB	Amphenol_FCI	10103594	2293752		Amphenol FCI 10103594 Micro USB Type B
CON4	44.89	59.98	90	uFL	uFL	Hirose	U.FL-R-SMT(01)	3908021		HIROSE U.FL-R-SMT(01); U.FL Coaxial; Straight Jack; 50 ohm
D1	20.99	53.12	180	SOD-123	MBR120	ON SEMICONDUCTOR	MBR120VLSFT1G	1431044		Schottky Rectifier; 20V; 1A; SOD-123
D2	21.56	57.15	90	SOD-123	MBR120	ON SEMICONDUCTOR	MBR120VLSFT1G	1431044		Schottky Rectifier; 20V; 1A; SOD-123
D3	25.43	57.18	90	SOD-123	MBR120	ON SEMICONDUCTOR	MBR120VLSFT1G	1431044		Schottky Rectifier; 20V; 1A; SOD-123
D4	31.50	9.21	270	SOD-123	MBR120	ON SEMICONDUCTOR	MBR120VLSFT1G	1431044		Schottky Rectifier; 20V; 1A; SOD-123
J1	26.27	42.10	0		SS4-10-3.50	Samtec	SS4-10-3.50-L-D-K-TR	2085336		Samtec SS4-10-3.50-L-D-K-TR
L1	11.78	59.98	0	0805	33nH	Coilcraft	0805HT-33NTGLB	2286465		Surface Mount High Frequency Inductor; 0805; 33 nH; 600 mA
LED1	25.05	8.83	0		WS2812B	Sparkfun / Worldsemi	WS2812B		474-COM-13667	RGB LED with Driver
LED2	29.59	9.02	180	2.0x1.25	RED	Multicomp	703-0107	2112119		LED; Red; 20mA; 2.2V; 2.0x1.25mm
Q1	15.24	41.94	90	SOT23	DMG3415U-7	Diodes Inc.	DMG3415U-7	1843688		MOSFET; P Channel; SOT23-WIDE
R1	19.94	39.02	90	0805	100k	Multicomp	MC01W08051100K	9332405		Chip Resistor; Thick Film; 100k; 150V; 0805; 100mW
R2	42.77	44.42	90	0805	12K	Panasonic	ERJ6ENF1202V	2303661		Chip Resistor; Thick Film; 12k; 150V; 0805; 125mW
R3	37.18	23.65	0	0603	100k	Yageo	RC0603FR-13100KL	2309107		Chip Resistor; Thick Film; 100k; 50V; 0603; 100mW
R4	41.91	39.97	0	0805	100k	Multicomp	MC01W08051100K	9332405		Chip Resistor; Thick Film; 100k; 150V; 0805; 100mW
R5	16.95	29.85	0	0603	1K	Multicomp	MCWR06X1001FTL	2447272		Chip Resistor; Thick Film; 1k; 50V; 0603; 100mW
R6	40.99	23.65	0	0603	100k	Yageo	RC0603FR-13100KL	2309107		Chip Resistor; Thick Film; 100k; 50V; 0603; 100mW
R7	35.37	13.72	0	0603	47k	Multicomp	MCWR06X4702FTL	2447376		Chip Resistor; Thick Film; 47k; 50V; 0603; 100mW
R8	12.76	29.85	180	0603	1K	Multicomp	MCWR06X1001FTL	2447272		Chip Resistor; Thick Film; 1k; 50V; 0603; 100mW
R9	8.00	59.98	180	0805	10 ohm	Multicomp	MC01W0805110R	9332421		Chip Resistor; Thick Film; 10 ohm; 150V; 0805; 100mW
R10	29.56	12.35	270	0603	1K	Multicomp	MCWR06X1001FTL	2447272		Chip Resistor; Thick Film; 1k; 50V; 0603; 100mW
SW1	24.13	3.18	180	4.6x2.8	Tactile Switch	Multicomp	MCIPTG23K-V	1605470		Tactile Switch; 4.6x2.8mm; 50mA; 12V
U1	30.54	20.22	0	SOT23-3	MCP111T-240E/TT	Microchip	MCP111T-240E/TT	1627192		Reset Supervisor; SOT23-3; 2.40V; Open Drain; Active Low
U2	17.78	24.16	270	SOT23-5	SPX3819-3.3	Exar	SPX3819M5-L-3-3/TR		701-SPX3819M5-L-33TR	LDO Voltage Regulator; 500mA; SOT-23-5
U3	39.05	43.02	90	DFN-10	LTC3225EDDB	Linear Technology	LTC3225EDDB#TRMPBF	1715231		Supercapacitor Charger
U4	12.03	33.69	180	LGA8	MPL3115A2	NXP	MPL3115A2	2009084		Pressure Sensor
U5	30.48	30.26	90	TQFN48	ATSAMD21G18A	Atmel	ATSAMD21G18A-MF	2460544		ATSAMD21G18A-MF; QFN48
U6	9.41	52.63	270		MAX-M8Q	u-blox	MAX-M8Q			https://www.u-blox.com/en/product/max-m8-series
U7	35.46	9.75	0	MSOP8	LT1634BCMS8-1.25	Linear Technology	LT1634BCMS8-1.25	2252797	584-1634BCMS8-1.25PF	1.25V Precision Voltage Reference
X1	37.66	27.72	270	3.2x1.5	32.768	Epson	Q13FC13500004	1278036		Crystal; 32.768kHz; 12.5pF; 3.2 x 1.5mm

Part	Value	Manufacturer	Manufacturer Part No	Farnell Part No	Mouser Part No	McMaster Part No	Description
Non-surface mount components:							
BAT1	AA-Clip_Pair	Keystone Electronics	92	908733			Keystone Electronics 92 AA Battery Clip (Pair)
BAT2	AA-Clip_Pair	Keystone Electronics	92	908733			Keystone Electronics 92 AA Battery Clip (Pair)
BAT3	AA-Clip_Pair	Keystone Electronics	92	908733			Keystone Electronics 92 AA Battery Clip (Pair)
C11	1F 2.7V	Bussmann	HV0810-2R7105-R	2148482			Supercapacitor; 1F; 2.7V; +30%, -10%; 3.5mm Pitch
C12	1F 2.7V	Bussmann	HV0810-2R7105-R	2148482			Supercapacitor; 1F; 2.7V; +30%, -10%; 3.5mm Pitch
S1	Press-In Nut	McMaster-Carr	95117A411			95117A411	Press-In Nut; 2-56
S2	Press-In Nut	McMaster-Carr	95117A411			95117A411	Press-In Nut; 2-56
CON2	SMA Jack	Johnson	142-0711-821	1019328			SMA End Launch Jack
CON3	SMA Jack	Johnson	142-0711-821	1019328			SMA End Launch Jack
Mounting hardware for Iridium 9603N:							
SPACERS_x2						94669A100	4.5mm OD x 6mm Spacers for Iridium Module
SCREWS_x2						92185A081	2-56 x 7/16 Screws for Iridium Module
Cable for Iridium 9603N:							
CABLE		Molex	73412-0508	1340201			Molex uFL Plug/Plug 50mm 73412-0508
Antennas:							
Iridium		Maxtena	M1621HCT-SMA	2281619			Iridium Passive Antenna with SMA connector
GNSS		Maxtena	M1516HCT-P-SMA	2484960			GPS / Glonass Passive Antenna with SMA connector
For solar operation:							
Don't install BAT1-BAT3 battery clips							
Replace C11 and C12 with 10F capacitors. Install these flat against the underside of the PCB, carefully bending the legs to fit.							
C11 & C12	10F 2.7V	Bussmann	HV1030-2R7106-R	2148486			Supercapacitor; 10F; 2.7V; +30%, -10%; 5.0mm Pitch
Connect two PowerFilm MPT3.6-150 solar panels to the SOLAR+/- terminals. Be careful with the panel polarity.							
Replace R2 with 30k to set supercapacitor charge current to 60mA							
R2	30k	Panasonic	ERJ6GEYJ303V	2323830			Chip Resistor; Thick Film; 30k; 150V; 0805; 125 mW