

COMPONENT	DESCRIPTION	PART #	SUPPLIER	SUPPLIER PN	Pkg Qty	Price	BOM QTY	COST
Major Components								
Microcontroller	NUCLEO-U575ZI-Q	Nucleo U575ZI	Mouser	511-NUCLEO-U575ZI-Q	1	\$ 24.46	1	\$ 24.46
Iridium Modem	RockBLOCK 9603 SBD modem	9603	Ground Control	SKU: FP-RB-9603	1	\$ 302.00	1	
microSWIFT PCB (Separate BOM sheet)	APL design	-	-	-	1		1	
Antenna, GPS/Iridium	Maxtenna M1600HCT-P-SMA	M1600HCT-P-S	Mouser	259-M1600HCT-P-SMA	1	\$ 64.00	1	\$ 64.00
Sensor Payloads								
Aanderaa 4319B CT sensor	Aanderaa Conductivity/Temp sensor	5819C	Xylem	5819C	1	\$2,972	1	\$ 2,972.00
TSYS01 Temp Sensor	Blue Robotics TSYS01 Temp Sensor	BR-100317	Blue Robotics	BR-100317	1	\$ 70.00	1	\$ 70.00
Housing								
Main housing tube, Long	17.75" Long custom made cast acrylic	8486K565	McMaster-Carr	8486K565	2	\$ 296.40	1	\$ 148.20
Main housing tube, Short	Blue Robotics 15.6" cast acrylic	BR-100293	Blue Robotics	BR-100293	1	\$ 262.00	1	\$ 262.00
O-ring flanges (with tab)	3"	WTE3-M-LOCK	Blue Robotics	WTE3-M-LOCKING-FLANGE-SEAL	1	\$ 29.75	2	\$ 59.50
O-ring flanges (tab removed)	APL fab	-	APL	-				
End cap top	Acrylic dome	WTE3-P-END-C	Blue Robotics	WTE3-P-END-CAP-R1-RP	1	\$ 27.20	1	\$ 27.20
End cap bottom	Acrylic flat	WTE3-P-DOME	Blue Robotics	WTE3-P-DOME-R1-RP	1	\$ 12.75	1	\$ 12.75
O-ring radial seal	Radial o-ring for 3" series flanges	9452K157	McMaster-Carr	9452K157	50	\$ 12.99	4	\$ 1.04
O-ring face seal	Face o-ring for 3" series flanges	9452K155	McMaster-Carr	9452K155	50	\$ 12.53	2	\$ 0.50
Sticker	APL sticker	-	Letters Unlimited	-	1	\$ 4.50	1	\$ 4.50
Interface connectors/cables								
RF Cable assembly, antenna to board	Custom cable	-	Digi Key	-	1		1	\$ 14.00
RF Cable assembly, Iridium modem to board	Custom cable	-	Digi Key	-	1		1	\$ 14.00
Cable assembly, Iridium modem to board	Picoblade 10 pos	151341000	Digi Key	WM17198-ND	1	\$ 5.62	1	\$ 5.62
Ribbon cable, CT cable assembly	CBL RIBN 6COND 0.05 GRAY 3.28'	639106155210	Digi Key	732-11799-ND	2	\$ 1.73	1	\$ 0.87
Connector, instrument side, CT cable assembly	CONN CIRC INSERT 10P SOLDER CUP	FFA.3S.310.ZLA	Digi Key	FFA.3S.310.ZLA-ND	1	\$ 51.12	1	\$ 51.12
Connector board side, CT cable assembly	IDC receptacle 6 position	61200623021	Digi Key	732-5443-ND	1	\$ 1.67	1	\$ 1.67
Headers, STM board	0.1" (2.54mm) headers 2x35	G-D	Mouser	200-TSW13507GD	1	\$ 5.18	2	\$ 10.36
Buoyancy Foam								
Buoyancy foam collar	6x 6" x 2" x .25" EPDM Foam		McMaster-Carr	93725K116	50	\$ 93.51	2	3.7404
Zip Tie	.18" x 17" UV rated zip tie		McMaster-Carr	7130K61	100	\$ 23.40	1	0.234
Yellow tape for foam collar	Yellow vinyl tape	471	Grainger	15F765	1	\$ 34.28	0.03333	\$ 1.14
Backing tape for foam	Gorilla tape, 1.875" wide x 8"	105629	Grainger	787ER2	135	\$ 17.02	6	\$ 0.76
Ballast, if no CT	350 g lead shot		Scuba.com	-				

Chassis								
Chassis/PCB Mount, Long Tube	Marine-Grade HDPE Bar 1/4" X 3" X 4 ft., Black		McMaster-Carr	6644N171	3	\$ 9.55	1	\$ 3.18
Chassis/PCB Mount, Short Tube								
Internal Bulkhead Parts (set)	PETG plastic 3D print							
Fasteners								
Screws, #4x0.75 thread forming	#4 x .75" thread forming screw		McMaster-Carr	97349A418	100	\$ 7.38	8	\$ 0.59
Screws, #4x0.50 thread forming	#4 x 0.5" thread forming screw		McMaster-Carr	97349A417	100	\$ 6.30	4	\$ 0.25
Socket head cap screw M3x12mm	18-8 Stainless Steel Socket Head Screw, M3 x 0.5 mm Th		McMaster-Carr	91292A114	100	\$ 6.00	20	\$ 1.20
Press fit stud, Battery holders to chassis	#4-40 x .625"		McMaster-Carr	93580A010	50	\$ 9.48	4	\$ 0.76
Press fit stud, Iridium modem to board	#2-56 x 0.50		McMaster-Carr	93580A544	50	\$ 9.77	2	\$ 0.39
Spacers, Nucleo board to chassis	#4, 0.125" long		McMaster-Carr	94639A702	100	\$ 13.05	4	\$ 0.52
Spacers Iridium modem to board	#2, 5mm (.197") long	5243059905	Digi Key	RPC3356-ND	1	\$ 0.12	2	\$ 0.23
Spacers, microSWIFT to Nucleo board	#4, 7/16" long		McMaster-Carr	90176A114	25	\$ 4.12	4	\$ 0.66
Screws, board stack to chassis	#4-40 x 1.25" SHC		McMaster-Carr	92196A032	100	\$ 9.84	4	\$ 0.39
Alternative: #4-40 x 1.25" stud	#4-40 x 1.25" Press-Fit Stud		McMaster-Carr	93580A552	25	\$ 11.93	4	\$ 1.91
Hex Nut w/ Lock Washer #4-40	#4-40 hex nut with ingegrated lock washer		McMaster-Carr	96278A005	100	\$ 9.23	8	\$ 0.74
Hex nut #2-56	#2-56 hex nut		McMaster-Carr	91841A003	100	\$ 3.90	2	\$ 0.08
Lock washer #2	#2 external tooth lock washer		McMaster-Carr	98449A500	100	\$ 3.25	2	\$ 0.07
Plastic washer, CT sensor	M16		McMaster-Carr	95610A640	25	\$ 12.90	2	\$ 1.03
Nut, CT sensor	M16 x 1.0 mm		McMaster-Carr	90326A203	5	\$ 11.66	1	\$ 2.33
Adhesive mount, dessicant pack	0.75" x .75"		McMaster-Carr	7582K11	50	\$ 13.33	1	\$ 0.27
Zip tie, dessicant pack	6" Narrow zip tie		McMaster-Carr	7130K42	100	\$ 6.05	1	\$ 0.06
Dessicant pack	2 5/8" x 1"		McMaster-Carr	3492T35	300	\$ 86.71	1	\$ 0.29
Battery								
Battery holder	4x C cell holder	BH24CW	Digi Key	BH24CW-ND	1	\$ 2.67	2	\$ 5.35
Connector housing, battery wiring harness	CONN RCPT HSG 2POS 3.00MM		Digi Key	WM1845-ND	1	\$ 0.40	1	\$ 0.40
Contacts, battery wiring harness	CONN SOCKET 20-24AWG CRIMP TIN		Digi Key	WM1837CT-ND	1	\$ 0.13	1	\$ 0.13
Battery cells	C cell alkaline battery 1.5V	04914, 4014, A	McMaster-Carr	71455K63	72	76.08	8	\$ 8.45