

Project - Surface Vehicle
Document - Bill of Materials (BOM)
Revision - 4 (7/19/20)

Sub-System	Item	Vendor	Part Number	Qty.	Cost/Unit	Extended Cost
Power	Lithium-ion Battery (14.8V, 18Ah)	Blue Robotics	BATTERY-LI-4S-18AH-R3-RP	1	\$289.00	\$289.00
	5V 6A Power Supply	Blue Robotics	BEC-5V6A-R1	1	\$22.00	\$22.00
	Power Sense Module	Blue Robotics	PSM-ASM-R2-RP	1	\$31.00	\$31.00
Compute	NVIDIA Jetson Nano Developer Kit	Nvidia	Jetson Nano Developer Kit	1	\$99.00	\$99.00
	Noctua NF-A4x20 5V PWM, Premium Quiet Fan, 4-Pin, 5V Version (40x20mm, Brown)	Amazon	NF-A4x20 5V PWM	1	\$14.95	\$14.95
	SanDisk Ultra 32GB MicroSDHC UHS-I Card	Amazon	SDSQUAR-032G-GN6MA	1	\$8.99	\$8.99
	Pixhawk 1 Flight Controller	Blue Robotics	PIXHAWK-R1-RP	1	\$139.00	\$139.00
Connectivity (wifi)	Rambutan-DVK	8devices	rambutan-dvk	1	\$79.00	\$79.00
	Highline 2 x 6dBi 2.4GHz 5GHz Dual Band WiFi RP-SMA Antenna	Amazon	WIFI0006-ZJ	1	\$9.69	\$9.69
Cables and Connectors	Barrel Connector (5.5mm x 2.1mm DC Power Connector Adapter)	Amazon	B07SXKGLKJ	1	\$6.98	\$6.98
	Female/Female Jumper Wires	Adafruit	1950	1	\$1.95	\$1.95
	Electronics Tray Terminal Blocks and Hardware	Blue Robotics	ETRAY4-CONN-R1-RP	1	\$35.00	\$35.00
	Battery Power Cable	Blue Robotics	BROV2-CAB-POWER-BULLET-CONNECTOR-R1-RP	1	\$46.00	\$46.00
	XT-90 Male to XT-60 Female	Amazon	B07YRRCR9G	1	\$5.00	\$5.00
	XT-60 Male to 3.5mm Bullet Female	Amazon	B07MM9FGDP	1	\$3.00	\$3.00
	mRo 6-Pins JST-GH to 6-Pins DF13	mRobotics	MRC0203	1	\$4.90	\$4.90
	USB3.0 Male to Male Cable 1ft, SNANSHI USB 3.0 Cable Cord Type A Male to A Male Cable USB to USB Cable in White	Amazon	B01M719D7Q	1	\$5.99	\$5.99
	3-Pin Servo Extension Lead Wire Cable Cord for Control Board Remote Control Parts, Female to Male, 320 mm (12 Pieces)	Amazon	B06XCRSD3T	1	\$7.99	\$7.99
	StarTech.com 6 in. USB to Mini USB Cable - USB 2.0 A to Mini B - Gray - Mini USB Cable (USB2HABM6IN)	Amazon	USB2HABM6IN	1	\$7.44	\$7.44
	CableCreation [2-Pack] Short Left Angle USB 2.0 Cable, 90 Degree USB 2.0 A to Micro USB Cable, Compatible Chromecast, Power Pack, Samsung Galaxy Tab, Aluminium Case, 0.5FT	Amazon	CC0541	1	\$6.99	\$6.99
	Micro SlimRun Cat6 Ethernet Patch Cable - Stranded, 550MHz, UTP, Pure Bare Copper Wire, 32AWG, 1ft, Green	Monoprice	34223	1	\$1.69	\$1.69
Cable Passthroughs	MRC0257 - [6-Pins DF13] to [4-Pins 2.54mm header] - 200mm	mRobotics	MRC0257	1	\$2.86	\$2.86
	USB Bulkhead	Mouser	17-241001	1	\$16.28	\$16.28
	Blank penetrator	Blue Robotics	PENETRATOR-M-BLANK-10-25-R3-RP	2	\$4.00	\$8.00
	CABLE GLAND 3-6.5MM M12 NYLON	Digikey	AIO-CSM12	2	\$1.41	\$2.82
Actuation	Antenna bulkhead cable	Digikey	336320-12-0250	2	\$17.33	\$34.66
	T200 Thruster	Blue Robotics	T200-THRUSTER-R1-RP	2	\$179.00	\$358.00
	Basic ESC	Blue Robotics	BESC30-R3	2	\$27.00	\$54.00
	Subsea LED Indicator	Blue Robotics	INDICATOR-ASM-BLUE-R1-RP	1	\$13.00	\$13.00
Sensors	mRo GPS u-Blox Neo-M8N	mRobotics	MRO-GPS003-MR	1	\$66.90	\$66.90
	ZED 2 Stereo Camera	Stereo Labs	ZED 2 Stereo Camera	1	\$449.00	\$449.00
Mechanical (Electronics)	Bud Industries BOX PLASTIC GRAY/CLR 11"LX7.48"W	DigiKey	PTS-25340-C	1	\$42.20	\$42.20
	Bud Industries PTS MOUNTING PLATE PLASTIC	Mouser	PTX-25340-P	1	\$3.50	\$3.50
Mechanical (Battery)	Cast Acrylic Tube – 11.75", 298mm (3" Series)	Blue Robotics	WTE3-P-TUBE-12-R1-RP	1	\$86.00	\$86.00
	O-Ring Flange (3" Series)	Blue Robotics	WTE3-M-FLANGE-SEAL-R2-RP	2	\$24.00	\$48.00
	Aluminum End Cap with 4 Holes (3" Series)	Blue Robotics	WTE3-M-END-CAP-4-HOLE-R1-RP	1	\$12.00	\$12.00
	Aluminum End Cap (3" Series)	Blue Robotics	WTE3-M-END-CAP-R1-RP	1	\$10.00	\$10.00
	Enclosure Clamp (3" Series)	Blue Robotics	WTE3-M-CLAMP-R1-RP	1	\$36.00	\$36.00
Accessories	Lithium Battery Charger	Blue Robotics	BATTERY-CHARGER-0620AC-US-R1	1	\$149.00	\$149.00
Hardware	Female-Female Hex Standoff, 6mm Hex, 25mm Long, M3 x 0.5mm Thread	McMaster	92080A713	9	\$3.18	\$28.62
	Female-Female Hex Standoff, 4.5mm Hex, 6mm Long, M2.5 x 0.45 mm Thread	McMaster	92080A001	8	\$0.78	\$6.24
	Socket Head Screw, M3 x 0.5 mm Thread, 14 mm Long (Pack of 50)	McMaster	92290A118	1	\$5.33	\$5.33
	Hex Nut M3 x 0.5 mm Thread (Pack of 50)	McMaster	94150A325	1	\$3.08	\$3.08
	Button Head Hex Drive Screw, M2.5 x 0.45 Thread Size, 16mm Long (Pack of 100)	McMaster	92095A114	1	\$4.88	\$4.88
	Hex Nut M2.5 x 0.45 mm Thread (Pack of 50)	McMaster	94150A310	1	\$3.69	\$3.69
	Socket Head Screw, M2.5 x 0.45 mm Thread, 22 mm Long (Pack of 25)	McMaster	91292A312	1	\$8.50	\$8.50
	General Purpose Washer, for M2.5 Screw Size, 2.700 mm ID, 5 mm OD (Pack of 100)	McMaster	98689A111	1	\$2.57	\$2.57
					Total	\$2,280.68