

Apple Board Bill Of Materials Version III

#	Part Description	Part Name	Vendor	Product ID/#	Unit Cost	Quantity	Reason
1	Solar Charging Chip	USB LiPoly/Li-Ion Charger (3.7/4.2V) MCP73871	Adafruit	390	\$17.50	1	Charger compatible with the battery
2	Microprocessor	Arduino Uno R3	Adafruit	50	\$24.95	1	Easy to use and beginner-friendly
3	GPS Sensor	Ultimate GPS Breakout v3	Adafruit	746	\$39.95	1	GPS option at Adafruit
4	Wireless Transciever	Digi International XBee Pro S2B	Adafruit	967	\$37.95	1	Compatible with the lab since it already utilizes XBee Tranceivers
5	Battery	Tenergy Li-Ion 18650 3.7V 6600 mAh	Adafruit	353	\$29.50	1	Battery provides enough power to supply board
6	Pressure Sensor	Barometric Pressure Sensor BMP180 (newer model)	Adafruit	1603	\$9.95	1	Previous model discontinued, newer model smaller in size
7	Current Sensor	INA 219 High Slde DC Current Sensor Breakout 26V ± 3.2A Max	Adafruit	904	\$9.95	1	Recommended current sensor on Adafruit
8	Antenna Extension	Interface Cable - RPSMA Female to RPSMA Male (25cm)	Sparkfun	12860	\$4.95	1	Helps place antenna to minimize attenuation
9	Solar Irradiance Sensor	Silicon-Cell Pyranometer SP-215	Apogee	SP-215	\$235.00	1	Model that is self powered and does not require an operational amplifie
10	Solar Panel	Large 6V 3.4W Solar Panel 3.4 Watt	Adafruit	500	\$39.00	2	Good size and provided enough power
11	Solar Irradiance Sensor Stabilizer	AL-100 Solar Sensor Leveling Plate	Apogee	AL-100	\$35.00	1	Needed in order to stabilize the pyranometer
12	Temperature Sensor	One Wire Digital Temperature Sensor - DS18B20	Sparkfun	245	\$4.25	1	Temp sensor that fit inside of the box
13	Duck Antenna	2.4GHz Duck Antenna RP-SMA - Large	Sparkfun	558	\$9.95	1	Compatible duck antenna with the XBee
14	Humidity/Temperature Sensor	Sensirion Temperature/Humidity Sensor - SHT11	Adafruit	246	\$35.00	1	Dual sensor module that was power efficient
Unit Sub Cost							
\$571.90							