

Power:

<https://www.adafruit.com/product/4755> - Lithium Battery Charge Controller [1x]

<https://www.adafruit.com/product/328> - Lithium Pouch Battery (2500mAh) [1x]

<https://www.adafruit.com/product/5366> - 6v Solar Panel (2w) [1x]

This should be a large enough panel, but a larger 6v-10v solar panel is better

<https://www.adafruit.com/product/2788> - DC Adapter Cable for Solar [1x]

<https://www.adafruit.com/product/4872> - Power Out Cable [2x]

<https://www.adafruit.com/product/755> - Diode to protect charge controller [1x]

Technically optional and adds extra voltage drop (and out of stock at this link), but prevents the ESP from attempting to charge the charge controller (such as when uploading new code)

Based on <https://blog.adafruit.com/2018/06/04/building-a-solar-powered-remote-environmental-monitor-with-adafruit-materials/>

Case:

<https://www.adafruit.com/product/905> - Large Case [1x]

Just big enough for quad feather board with a little room to spare, should be able to get charge controller and battery (smaller battery will fit better)

<https://www.adafruit.com/product/761> - PG9 Waterproof Gland [2x]

<https://www.adafruit.com/products/762> - PG7 Waterproof Gland [2x]

<https://www.adafruit.com/product/3299> - Nylon Standoffs [1x]

Core Modules:

<https://www.adafruit.com/product/4254> - Quad Breakout [1x]

<https://www.adafruit.com/product/5438> - ESP32 Feather V2 with Antenna Connector [1x]

<https://www.adafruit.com/product/5445> - WiFi Antenna [1x]

<https://www.adafruit.com/product/3133> - GPS Module [1x]

<https://www.adafruit.com/product/960> - GPS Antenna [1x]

<https://www.adafruit.com/product/851> - GPS Antenna Adapter [1x]

<https://www.adafruit.com/product/4515> - STEMMA QT Breakout [1x]

<https://www.adafruit.com/product/4210> - 100mm QT Cable [4x]

Sensors:

<https://www.adafruit.com/product/4162> - LUX (QT) [1x]

<https://www.adafruit.com/product/4650> - Mini OLED Display (QT) [1x]

<https://www.adafruit.com/product/4099> - Outdoor Temp + Humidity Sensor (I2C) [1x]

<https://www.adafruit.com/product/4413> - Accelerometer (QT) [1x]

Total: \$245.30

Mostly complete list of required parts, (attempting to account for every needed component), some parts may already be on hand and can be eliminated from this list.

Additional Module Ideas:

<https://www.adafruit.com/product/3028> - Temperature Compensated RTC

<https://www.adafruit.com/product/3231> - LoRa Radio

<https://www.adafruit.com/product/5182> - Encased Temp + Humidity Sensor

<https://www.adafruit.com/product/4569> - High Precision Accelerometer

<https://www.adafruit.com/product/354> - Lithium Cell Battery (4400mAh)