

| Item                     | Manufacturer Part Number | Supplier | Supplier Part Number            | Reference                      | Value   | Package  | Price    | Qty Used | Component Price | Location  | Datasheet   | Notes   |
|--------------------------|--------------------------|----------|---------------------------------|--------------------------------|---------|----------|----------|----------|-----------------|---|---|---|
| Capacitor                | 885012206026             | Digikey  | 732-7945-1-ND                   | C1, C2, C7-C11                 | 1 uF    | 0603     | \$ 0.10  | 7 \$     | 0.70            | <a href="https://www.digikey.com">https://www.digikey.com</a> |   | 10V X7R   |
| Capacitor                | ZRB18AR61E106ME01L       | Digikey  | 490-10991-1-ND                  | C3-C5                          | 10 uF   | 0603     | \$ 0.48  | 3 \$     | 1.44            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://search.digikey.com">https://search.digikey.com</a>       | 25V X5R   |
| LED                      | SML-D12P8WT86C           | Digikey  | SML-D12P8WT86CCT-ND             | D1, D2, D3, D8                 |         | 0603     | \$ 0.48  | 4 \$     | 1.92            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 2.2Vf   |
| Schottky diode           | BAT400D-7-F              | Digikey  | BAT400D-FDICT-ND                | D4                             |         | SOT-23-3 | \$ 0.44  | 1 \$     | 0.44            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 40V, 500mA  |
| LED                      | ASMT-RA45-AP932          | Digikey  | 516-3217-1-ND                   | D5                             |         | AMBR     | \$ 0.33  | 1 \$     | 0.33            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://docs.digikey.com">https://docs.digikey.com</a>           | 2Vf   |
| LED                      | SML-D12U1WT86            | Digikey  | SML-D12U1WT86CT-ND              | D6, D7                         |         | 0603     | \$ 0.20  | 2 \$     | 0.40            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 2.2Vf   |
| Micro SD card receptacle | DM3AT-SF-PEJM5           | Digikey  | HR1964CT-ND                     | J1                             |         | SMD      | \$ 2.50  | 1 \$     | 2.50            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | Push-Push with ejection mechanism                   |
| Micro USB receptacle     | 10118192-0001LF          | Digikey  | 609-4613-1-ND                   | J2                             |         | SMD      | \$ 0.42  | 1 \$     | 0.42            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://cdn.digikey.com">https://cdn.digikey.com</a>             |   |
| N-Channel MOSFET         | DMG3414U-7               | Digikey  | DMG3414U-7DICT-ND               | Q1                             |         | SOT-23-3 | \$ 0.44  | 1 \$     | 0.44            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             |   |
| NPN transistor array     | MBT2222ADW1T1G           | Digikey  | MBT2222ADW1T1G0SCT-ND           | Q2                             |         | SOT-363  | \$ 0.22  | 3 \$     | 0.66            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="http://www.onsemi.com">http://www.onsemi.com</a>                 | 2 NPN transistors                                   |
| Resistor                 | RNCP0603FTD10K0          | Digikey  | RNCP0603FTD10K0CT-ND            | R1, R5-R10, R18, R19           | 10 kΩ   | 0603     | \$ 0.10  | 8 \$     | 0.80            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 0.125W  |
| Resistor                 | ESR03EZPJ102             | Digikey  | RHM1.0KDCT-ND                   | R2, R3, R4, R11, R12, R20, R21 | 1 kΩ    | 0603     | \$ 0.10  | 7 \$     | 0.70            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 0.25W   |
| Resistor                 | CRCW060322K1FKEAC        | Digikey  | 541-5271-1-ND                   | R26                            | 22.1 kΩ | 0603     | \$ 0.10  | 1 \$     | 0.10            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 0.1W; 1%  |
| Resistor                 | RT0603DRE0747K5L         | Digikey  | RT0603DRE0747K5L                | R27                            | 47.5 kΩ | 0603     | \$ 0.10  | 1 \$     | 0.10            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 0.1W; 0.5%  |
| Micro button             | KMR221GLFS               | Digikey  | 401-1427-1-ND                   | S1, S2, S4                     |         | SMD      | \$ 0.48  | 3 \$     | 1.44            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | SPST-NO   |
| Slide switch             | JS202011JCQN             | Digikey  |                                 | S3                             |         | SMD      | \$ 0.55  | 1 \$     | 0.55            |   |   | DPDT  |
| ESP32-WROOM Module       | ESP32-WROOM-32E (16MB)   | Digikey  | 1965-ESP32-WROOM-32E(16MB)CT-ND | U1                             |         | 38-SMD   | \$ 2.99  | 1 \$     | 2.99            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | 16 MB memory, could be used as alternate filesystem |
| 3V3 voltage regulator    | AZ1117H-3.3TRE1          | Digikey  | AZ1117H-3.3TRE1DICT-ND          | U2                             |         | SOT-223  | \$ 0.46  | 1 \$     | 0.46            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://media.digikey.com">https://media.digikey.com</a>         | 3.3V fixed output, 1A max                           |
| USB-UART Bridge          | CP2102N-A02-GQFN24R      | Digikey  | 336-5888-1-ND                   | U3                             |         | 24 QFN   | \$ 1.35  | 1 \$     | 1.35            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://www.digikey.com">https://www.digikey.com</a>             | USB2.0; uART up to 3Mb baud rate                    |
| BNO055 Breakout          | 2472                     | Digikey  | 1528-1426-ND                    | U4                             |         | SMD      | \$ 19.95 | 1 \$     | 19.95           | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://learn.digikey.com">https://learn.digikey.com</a>         | Breakout board is THT but solderable to SMD pads    |
| LiPoly Battery Charger   | MCP73831T-2ACI/OT        | Digikey  | MCP73831T-2ACI/OTCT-ND          | U5                             |         | SOT-23-5 | \$ 0.56  | 1 \$     | 0.56            | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="http://www.microware.com">http://www.microware.com</a>           | Used in all Adafruit LiPoly charging circuits       |
| GPS radio                | FGPMMOPA6H               | Adafruit | 790                             | U6                             |         | 20-SMD   | \$ 29.95 | 1 \$     | 29.95           | <a href="https://www.digikey.com">https://www.digikey.com</a> | <a href="https://cdn-shop.adafruit.com">https://cdn-shop.adafruit.com</a> | 10Hz refresh rate                                   |
| SD Card                  |                          | Amazon   |                                 |                                |         |          | \$ 4.00  | 1 \$     | 4.00            | <a href="https://www.amazon.com">https://www.amazon.com</a>   |   | 8GB, sold in bulk pack of 10                        |
| PCB                      |                          | JLCPCB   |                                 |                                |         |          | \$ 0.40  | 1 \$     | 0.40            |   |   | Sold in packs of 5 @ \$2.00; Black solder mask?     |
| <b>Total</b>             |                          |          |                                 |                                |         |          |          |          | <b>\$ 72.60</b> |   |   |   |