













| Designator                        | Quantity | Value | Comment                 | Footprint                    | Description   |
|-----------------------------------|----------|-------|-------------------------|------------------------------|---|
| COM1                              | 1        |       | 2.4 GHz radio           | nRF24L01                     | Header, 4-Pin,  |
| Will                              | ı        |       | module                  | IIRF24LUI                    | Dual row  |
| JB                                | 1        |       | 47053-1000              | FP-470531000-<br>MFG         | CONN HEADER<br>VERT 4POS<br>2.54MM  |
| J11                               | 1        |       | 292303-1                | TE-292303-1_V                | 1 Port Right Angle<br>Through Hole<br>Mount Female<br>Type A USB<br>Connector, 4<br>Position, -55 to 85<br>degC, RoHS, Tube |
| MAG1                              | 1        |       | GY-271                  | GY271                        | I2C Compass<br>Module Compass<br>Magnet Sensor  |
| P1                                | 1        |       | Header 20X2             | HDR2X20                      | Header, 20-Pin,<br>Dual row   |
| U1                                | 1        |       | A000005                 | MODULE_A000005               | Small, complete,<br>and breadboard-<br>friendly board<br>based on the<br>ATmega328<br>(Arduino Nano<br>3.x).                |
| C1, C2                            | 2        | 100nF | 100nF                   | C_SMD_C0402                  | SMD Capacitor   |
|                                   |          |       | B04B-PASK-              | FP-B04B-PASK-                | CONN HEADER   |
| J9, J10                           | 2        |       | 1(LF)(SN)               | 1_LF_SN-MFG                  | VERT4POS2MM   |
| P4, P5                            | 2        |       | Header 2                | HDR1X2                       | Header, 2-Pin   |
| U2, U3                            | 2        |       | ULN2003AN               | STM-DIP-16L                  | Seven Darlington<br>Array, 50 V, 0.5 A, -<br>40 to 85 degC, 16-<br>Pin DIP, RoHS,<br>Tube                                   |
| J1, J2, J3                        | 3        |       | Motor                   | FP-B5B-XH-<br>AM_LF_SN-MFG   | CONN HEADER<br>VERT 5POS 2.5MM  |
| R13, R14, R15                     | 3        | 10k   | 10k                     | R SMD R0402                  | SMD Resistor  |
| D1, D2, D3, D4                    | 4        | Tok   | SMDLEDRED               | SMD_0603_CHIP-<br>LED        | Red GaAs LED<br>(Vf=2V, If=20mA)  |
| D5, D6, D7, D8                    | 4        |       | SMD LED GREEN           | SMD_0603_CHIP-<br>LED        | Green GaAs LED<br>(Vf=2V, If=20mA)  |
| D9, D10, D11, D12                 | 4        |       | SMD LED BLUE            | SMD_0603_CHIP-<br>LED        | Blue SICLED<br>(Vf=3.2V, If=20mA)   |
| J4, J5, J6, J7                    | 4        |       | B02B-PASK-<br>1(LF)(SN) | FP-B02B-PASK-<br>1_LF_SN-MFG | CONN HEADER<br>VERT 2POS 2MM  |
| R9, R10, R11, R12                 | 4        | 91    | 91                      | R_SMD_R0402                  | SMD Resistor  |
| R1, R2, R3, R4, R5,<br>R6, R7, R8 |          | 150   | 150                     | R_SMD_R0402                  | SMD Resistor  |