**COMPONENT SPECIFICATIONS (BPWCB)**

**Note:** The specifications shown in here are given by the manufacturers.

1. **ARDUINO MEGA 2560**

* Microcontroller: ATmega2560
* Operating Voltage:5V
* Input Voltage (recommended):7-12V
* Input Voltage (limits):6-20V
* Digital I/O Pins:54 (of which 15 provide PWM output)
* Analog Input Pins:16
* DC Current per I/O Pin:40 mA
* DC Current for 3.3V Pin:50 mA
* Flash Memory:256 KB of which 8 KB used by bootloader
* SRAM:8 KB
* EEPROM:4 KB
* Clock Speed:16 MHz

1. **L298N Motor Driver**

* Driver chip: L298N dual H-bridge driver chip
* Terminal driver part of the supply area VMS: +5V ~ +35V
* Drive part of the peak current Io: 2A / Bridge
* Logical part of the terminal power supply range Vss :4.5-5 .5V
* Logical part of the operating current range: 0 ~ 36mA
* The control signal input voltage range: 4.5-5.5V low 0V high
* Maximum power consumption: 20W
* Storage temperature: -25 ~ +130
* Driver Board Size: 55mm \* 60mm \* 30mm
* Driver board Weight: 33g

1. **DC Motor (Propeller & Conveyor motors)**

* Voltage range: 3V - 12V DC
* Rated voltage: 12V
* No load speed: 20160
* No load current: 680MA
* Maximum current: 3.8A
* Rated torque: 600G.for CM
* Rated power: 20W
* Starting torque: 1000G. for CM
* Shaft Diameter: 2mm
* Shaft Length: 10mm
* Length: 47mm
* Width: 30mm

1. **Servo Motor (metal geared)**

* Operating voltage: DC 4.8~6.0V
* Motor: coreless motor
* Operating Speed (4.8V): 0.11sec/60°
* Operating Speed (6V): 0.09 sec/60°
* Stall Torque (4.8V): 5.3kg.cm
* Stall Torque (6V): 6.6kg.cm
* Dimensions: 33.5X15X30mm
* Weight: 26.32 g (0.93oz)
* Connector Wire Length: JR 180mm
* Bearing: 2BB
* Package size: 6.2 \* 4.9 \* 3.8cm / 2.4 \* 1.9 \* 1.5in
* Package weight: 44g / 1.6oz

1. **Boost Converter**

* Model: DSN6009 boost module
* Module Properties: Non-isolated boost (BOOST)
* Rectification: Non-Synchronous Rectification
* Input Range: 3V ~ 32V
* Output Range: 5V ~ 35V
* Input Current: 4A (max),
* Conversion efficiency: <94%
* Switching frequency: 400KHz
* Output Ripple: 50mV
* Load Regulation: +/-0.5%
* Voltage Regulation: +/-0.5%
* Operating Temperature: -40 degree to +85 degree
* Body Size: 43 x 20 x 12mm/1.7" x 0.8" x 0.47"(L\*W\*T)

1. **Li-Po Battery**

* Venom 1548 - DRIVE 6C 7.2V NiMH Battery, 5000mAh, UNI 2.0 Plug
* Venom UNI 2.0 Land Plug System. Compatible with XT60 Plug, Traxxas Plugs, Deans Plug & EC3 Plug Balance Connector
* Specs: Length: 5.39" (137mm), Width: 1.77" (45mm), Thickness: .94" (23.9mm), Weight: 14.4 oz (408g)
* Nominal Voltage: 7.2V
* Nominal capacity: 10Ah
* Charging voltage: 8.4V
* Charging current: ≤10A
* Discharging current: 7A
* Instant discharging current: 9A

1. **Ultrasonic Distance Sensor (SR04)**

* Power Supply :+5V DC
* Quiescent Current : <2mA
* Working Currnt: 15mA
* Effectual Angle: <15°
* Ranging Distance : 2cm – 400 cm/1″ – 13ft
* Resolution : 0.3 cm
* Measuring Angle: 30 degree
* Trigger Input Pulse width: 10uS
* Dimension: 45mm x 20mm x 15mm

1. **GPS Module (Neo 6M)**

* NEO 6M 7M 8M GPS Module with Large Antenna for Arduino Pixhawk APM MWC
* GPS modules NEO-6M 3V-5V power supply Universal
* Model: GY-GPS6MV2
* Destined module with ceramic antenna signal super
* Save the configuration parameter data EEPROM Down
* Antenna size 25 x 25mm
* Module size 25mm x 35mm
* Installation aperture 3mm
* Default Baud Rate: 9600

1. **GSM Module (SIM800L)**

* Quad-band 850/900/1800/1900MHz
* Connect onto any global GSM network with any 2G SIM
* Send and receive SMS messages
* Send and receive GPRS data (TCP/IP, HTTP, etc.)
* Scan and receive FM radio broadcasts
* Lead out buzzer and vibrational motor control port
* AT command interface with "auto baud" detection
* Supports Quad-band 850/900/1800/1900 MHz
* GPRS multi-slot class 12/10
* GPRS mobile station Class B
* Compatible with GSM 2/2 +
* Class 1 (1 W 1800 / 1900MHz)
* Class 4 (2 W @ 850 / 900MHz)
* Bluetooth 3.0 + EDR compatibility
* FM: International band 76 ~ 109MHz, 50KHz correction level.
* Control over AT instruction set
* Voltage: 4.1 ~ 5VDC
* Operating Temperature: -40 ~ 85

1. **IR Distance Sensor**

* Size: 3.5x 1cm
* Work Power : 5V DC
* Detector distance:10MM
* Built-in TCRT5000 Sensor NSOR

1. **IMU Sensor (MPU6050)**

* Chip: MPU-6050
* Power supply: 3v-5V power
* Gyroscope range: + 250 500 1000 2000 ° / s
* Acceleration range: ± 2 ± 4 ± 8 ± 16 g
* Communication: standard IIC communication agreement
* Chip built-in 16 bit AD converter, 16 bits of data output
* Pin spacing 2.54 mm