

Robot Body Stage 5: Assembly guide

Concept assembly guide derived from the staged build plan. Not a certified engineering drawing. Prices are estimates (Oct 2026); nothing here is a purchase.

Stage 5



Concept render (illustrative).

1

Mount the reSpeaker XVF3800 flat on top of the head.

Part R29: reSpeaker XVF3800 mic array x1 (+\$46) Buy: [Amazon search](#)

2

Mount the LD19 lidar on the top deck; fit three VL53L1X ToF sensors.

Part R30: LD19 lidar + 3x VL53L1X ToF x1 (+\$117) Buy: [Amazon search](#)

3

Swap in the Pololu 37D encoder motors.

Part R31: Pololu 37D encoder motors x2 ((in \$135)) Buy: [Pololu 4753](#)

4

Fit the Pololu wheels and hubs.

Part R32: Pololu wheels / hubs x1 ((in \$135)) Buy: [Pololu 2762](#)

5

Replace the TB6612 with the Cytron 10A driver.

Part R33: Cytron 10A dual motor driver x1 ((in \$135)) Buy: [Amazon search](#)

6

Install the Bioenno LiFePO4 pack and INA226 monitor in the spine.

Part R34: Bioenno 12.8V LiFePO4 pack + INA226 x1 (+\$77) Buy: [Amazon search](#)

7

Upgrade arms to Feetech STS bus servos; add the BNO085 IMU.

Part R35: BNO085 IMU + Feetech STS bus servos x1 (+\$95) Buy: [Amazon search](#)

8

Print the ASA outdoor shell; fit gaskets, E-stop and fan.

Part R36: ASA shell, gaskets, wiring, E-stop, fan x1 (+\$170) Buy: [Amazon search](#)