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Guides and Resources: Hardware - QBot 2

# Kobuki Base

This document provides information on the QBot 2's Kobuki base platform.

# The Kobuki base platform

The QBot 2 uses a Kobuki mobile robot platform (Figure 1). The QBot 2 follows the Quanser® standard for body frame axes, where the x-axis is in the forward direction, the y-axis is to the left, and the z-axis is up. The diameter of the vehicle is 34 cm, and its height (without attachments) is 10 cm. The Kobuki is driven by a set of differential drive wheels with built-in encoders. The Kobuki comes with bumper sensors as well as a built-in gyroscope and cliff sensors. The embedded computer target can access data from these sensors.

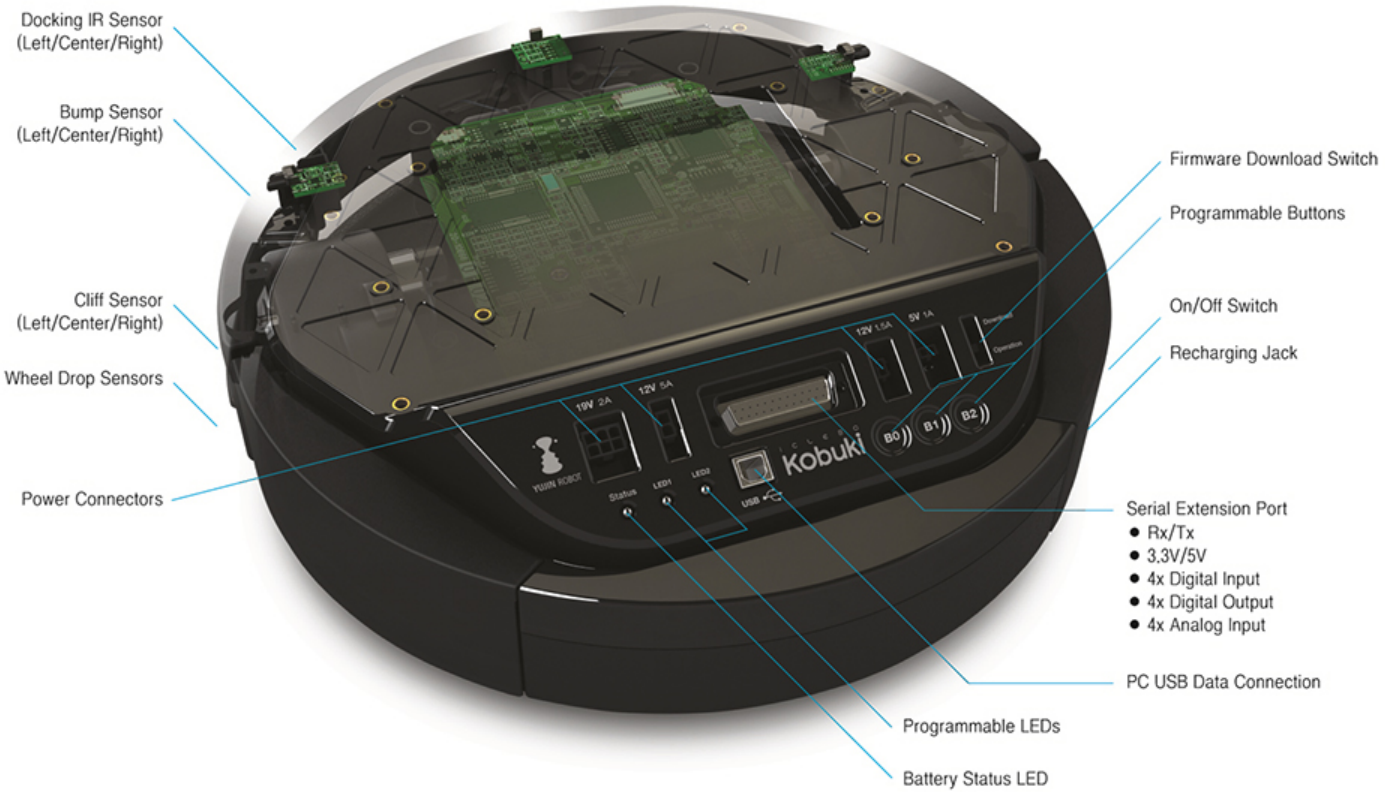
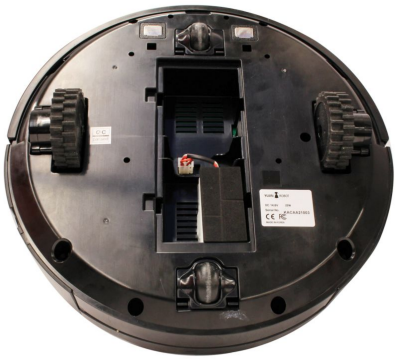



Figure 1: The Kobuki mobile robot platform

# Charging the QBot 2

The QBot 2 is powered by a Lithium ion (Li-ion) battery pack (Figure 2a) provided by Yujin Robot. The battery fits underneath the QBot 2, and can last continuously for about 3 hours after a full charge. The battery takes less than 3 hours to charge. While charging, the power light pulses slowly with a green colour. A battery charger is provided (Figure 2b). To recharge the QBot 2, plug in the battery charger and connect it to the charger input port on the QBot 2 next to the ON/OFF switch (Figure 2c).

**Note**: The battery still charges if the base is switched off.



a. the QBot 2 Battery

b. the QBot 2 Charger


c. the QBot 2 charger input

Figure 2: The QBot 2 battery and charger input