QUANSER
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Quick Start Guide: QBot Platform

python™

STEP 1 Software Prerequisites

The QLabs virtual QBot Platform is compatible with Windows 10 (64-bit) and requires Python 3.10 and Quanser SDK 2023, or later. Visit the virtual QBot Platform product page at www.quanser.com for the latest software support.

STEP 2 Register on Quanser Academic Portal

Visit the Quanser Academic Portal at portal.quanser.com/Accounts/Register. Follow the on-screen instructions to register and activate your account.

STEP 3 Running the Quick Start Example

The steps below outline the instructions to run the Quick Start Example for Python™:

A

Launch Quanser Interactive Labs and login. Browse to the QBot Platform device and launch the Warehouse space.

B

Launch two **cmd** terminals and browse to the directory containing the quick start codes in each of them. In the first **cmd prompt**, run the command:

```
> python quick_start_qbot_platform.py
```

In the second **cmd prompt**, run the command immediately after the first above:

```
> python observer.py
```

C

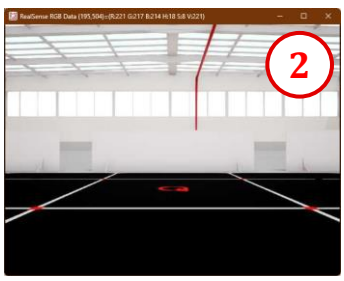
Your workspace is configured automatically, and the QBot's LEDs should turn blue.

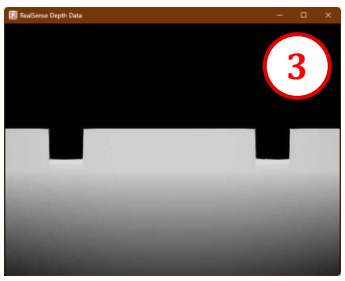
D

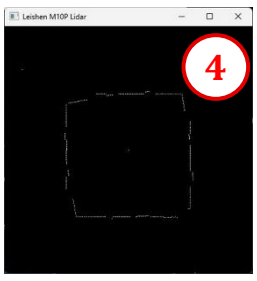
Use the Space key on your keyboard to arm the bot (green LEDs).

E

Use the I and K keys to drive the robot forwards/backwards. Use the A and D keys to steer. To reset speeds, let the Space key go. Monitor the live Downward camera (1), RealSense RGB (2), RealSense Depth (3) and Lidar (4) feeds as you drive the robot.







F

Stop the quick start Python script when done by pressing "U" on your keyboard. Close all terminals. Click on the "Exit" button in the top-right corner in Quanser Interactive Lab to stop the virtual environment.

TROUBLESHOOTING — Common issues and possible solutions

QLabs workspace does not set up correctly or is missing objects (walls, map etc.). or a caution symbol appears in QLabs. 	The **caution symbol** should **disappear** when you **run** the python command to run the **quick start** application. If it does not, or your workspace isn't being populated with objects (walls, maps, QBot etc.), ensure that you have a **valid license** for using the **Virtual QBot Platform**. Try running the quick start application via python again. Alternatively, try running the **qlabs_setup.py** script manually via `> python qlabs_setup.py`
The QBot Platform **LEDs** remain white when running the quick start.	Validate that you do not get any errors when launching the quick start application. Ensure that your quick start application is running. Try **restart**ing your laptop/PC. If the issue persists, contact **tech**[+].
The Virtual QBot Platform **LED** is blue but the robot doesn't drive.	Once the LEDs are blue, **arm** using your keyboard **Space key**. The Virtual QBot LEDs should turn **green**. If this is not the case, try **restart**ing your laptop/PC. If the issue persists, contact **tech**[+].

LEARN MORE — To browse and download the latest Quanser resources visit www.quanser.com/courseware or call +1-905-940-3575

STILL NEED HELP — [+] For further assistance from a Quanser engineer, contact us at tech@quanser.com