

ROS



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How to: UR Package for ROS Melodic

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Requirements

This guide expects that you have done the following **before**:

- Install Ubuntu 18.04 via VM or natively
- Install ROS Melodic Desktop-Full Install
- Initialize local ROS workspace, e.g. **catkin_ws**

Otherwise, please go through our VM+ROS guide.

This guide also expects **basic Linux knowledge** as navigating through folders via command line as well as **basic understanding about ROS**. Consider <http://wiki.ros.org/ROS/Tutorials> for the most ROS-related questions.

Getting the UR ROS Package

Please **download** the following packages from your Moodle space:

- **robot_utilities**, dependency for the ur10 package
- **universal_robot**, the actual package

robot_utilities comes as a .deb file that can be installed like this:

➤ `sudo apt install <path_to_deb_file>`

Unzip the **universal_robot** package and move the **resulting universal_robot** folder into the **src** folder of your local ROS workspace.

Installing Missing Dependencies and Compile

robot_utilities is not the only dependency. **Remaining dependencies** can be installed at once.

Open a **terminal** (ctrl + alt + t) and **navigate** into the **src** folder of your local ROS workspace. Run the following **command** to install missing dependencies:

➤ `rosdep install --from-paths ./ --ignore-src --rosdistro melodic -y`

Afterwards you are ready to **compile** the **universal_robot** package in your workspace. Go back to the root of your workspace and start compilation:

➤ `cd ..`

➤ `catkin_make`

Using the Package

If you want to **visualize** some configurations on the robot run:

➤ `roslaunch ur_launch ur10_sim_visualization.launch`

If you want to **simulate** the robot run:

➤ `roslaunch ur_launch ur10_sim_gazebo.launch`

Make yourself familiar with the **topics** that are published

➤ `rostopic list`

More information about the **universal_robot** package can be found in **README.md**.