

INSTALAR PX4

```
cd
git clone https://github.com/PX4/PX4-Autopilot.git --recursive
bash ./PX4-Autopilot/Tools/setup/ubuntu.sh
cd PX4-Autopilot/
make px4_sitl
```

INSTALAR QGroundControl

```
sudo usermod -a -G dialout $USER
sudo apt-get remove modemmanager -y
sudo apt install gstreamer1.0-plugins-bad gstreamer1.0-libav gstreamer1.0-gl -y
sudo apt install libfuse2 -y
sudo apt install libxcb-xinerama0 libxcbcommon-x11-0 libxcb-cursor-dev -y

wget
https://github.com/mavlink/qgroundcontrol/releases/download/v4.4.4/QGroundControl.A
pplmage
chmod +x QGroundControl.Applmage
```

INSTALAR MAVSDK-Python

```
pip3 install mavsdk
```

(repositorio para ejemplos) git clone <https://github.com/mavlink/MAVSDK-Python.git>

INSTALAR ROS2

```
sudo apt update && sudo apt install locales
sudo locale-gen en_US en_US.UTF-8
sudo update-locale LC_ALL=en_US.UTF-8 LANG=en_US.UTF-8
export LANG=en_US.UTF-8
sudo apt install software-properties-common
sudo add-apt-repository universe
sudo apt update && sudo apt install curl -y
sudo curl -sSL https://raw.githubusercontent.com/ros/rosdistro/master/ros.key -o
/usr/share/keyrings/ros-archive-keyring.gpg
echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/ros-archive-
keyring.gpg] http://packages.ros.org/ros2/ubuntu $(. /etc/os-release && echo
$UBUNTU_CODENAME) main" | sudo tee /etc/apt/sources.list.d/ros2.list > /dev/null
```

```
sudo apt update && sudo apt upgrade -y
sudo apt install ros-humble-desktop
sudo apt install ros-dev-tools
source /opt/ros/humble/setup.bash && echo "source /opt/ros/humble/setup.bash" >>
.bashrc
```

```
pip install --user -U empy==3.3.4 pyros-genmsg setuptools
```

INSTALAR Micro XRCE-DDS Agent & Client

```
git clone -b v2.4.2 https://github.com/eProsima/Micro-XRCE-DDS-Agent.git
cd Micro-XRCE-DDS-Agent
mkdir build
cd build
cmake ..
make
//Si después de ejecutarlo sale un error relacionado con fastdds, hay que entrar en
//cd build/fastdds/tmp
//Y modificar el archivo fastdds-gitclone.cmake
//cambiando 2.12.x por 2.12.2
//después volver a ejecutar make
sudo make install
sudo ldconfig /usr/local/lib/
```

INSTALAR px4_msgs

```
mkdir -p ~/ws_sensor_combined/src/
cd ~/ws_sensor_combined/src/

git clone https://github.com/PX4/px4_msgs.git
git clone https://github.com/PX4/px4_ros_com.git

cd ..
source /opt/ros/humble/setup.bash
colcon build
```

INSTALAR ros_gz

```
export GZ_VERSION=harmonic
```

```
mkdir -p ~/ws/src
```

```
cd ~/ws/src
```

```
git clone https://github.com/gazebo-sim/ros_gz.git -b humble
```

```
cd ~/ws
```

```
rosdep install -r --from-paths src -i -y --rosdistro humble
```

```
source /opt/ros/humble/setup.bash
```

```
cd ~/ws
```

```
colcon build
```