# Guia de Instalación

**---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**

wget

https://github.com/mavlink/qgroundcontrol/releases/download/v4.4.4/QGroundControl.AppImage

chmod +x QGroundControl.AppImage

./QGroundControl.AppImage

**---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**

mkdir -p ~/ws/src

cd ~/ws/src

git clone https://github.com/gazebosim/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
```