

RTK/PUMA

Ubuntu 18.04 and 20.04

Instructions for setting up RTK and PUMA on the Jetson AGX Xavier

```
cd <non-catkin-programs-folder>

# clone rtk repo
git clone https://gitlab.jhuapl.edu/apl-robotics/rtk/rtk.git
cd rtk
# checkout branch "slamr01"
git checkout slamr01

# install dependencies
# it installs octomapAPL from master by default
# It will install ROS if not found.
MAKE_FLAGS="-j7" RTK_HAS_NANOMAP="0" ./build_scripts/install_deps.sh

# Ubuntu 18.04 -----
# note: VTK 7.1 won't install, not available on apt for jetson
# easy solution, jetson comes with vtk 6.3, slight tweaks needed to use it
sudo ln -s /usr/lib/python2.7/dist-packages/vtk/libvtkRenderingPythonTkWidgets.aarch64-linux-gnu.so /usr/lib
/aarch64-linux-gnu/libvtk
RenderingPythonTkWidgets.so
sudo ln -s /usr/bin/vtk6 /usr/bin/vtk
# -----

# ROS Packages needed -----
# if ROS was installed from source, built packages from source
$ sudo apt install ros-noetic-gazebo-msgs

# build & install rtk
mkdir build && cd build
cmake .. -DCMAKE_BUILD_TYPE=Release -DRTK_BUILD_EXAMPLES=OFF -DRTK_HAS_NANOMAP=OFF -DRTK_BUILD_SHARED_LIBS=ON
# ---- you can user cmake to double check params
sudo apt-get install cmake-curses-gui
ccmake ..
# -----

make -j8 && sudo make install

# build & install puma
cd <non-catkin-programs-folder>
git clone https://gitlab.jhuapl.edu/apl-robotics/rtk/ugv/puma.git
cd puma
# checkout branch "slamr01"
git checkout slamr01
mkdir build && cd build
# this may require disconnecting from APLNIS due to additional external repos that are pulled from at this step
cmake .. -DCMAKE_BUILD_TYPE=Release

make -j8 && sudo make install
```