WIO-TRACKER BUILD STEPS

* Install prerequisites based on the following link

<https://developer.nordicsemi.com/nRF_Connect_SDK/doc/2.5.0/nrf/installation/recommended_versions.html>.

* Create a directory **‘ncs**’

**mkdir -p ~/ncs**

* Navigate to ‘ncs’ and execute the following

**cd ~/ncs**

**west init -m https://github.com/nrfconnect/sdk-nrf --mr v2.5.0**

**west update**

**west zephyr-export**

* Install additional dependencies

**pip3 install --user -r zephyr/scripts/requirements.txt**

**pip3 install --user -r nrf/scripts/requirements.txt**

**pip3 install --user -r bootloader/mcuboot/scripts/requirements.txt**

* Install zephyr sdk

**cd ~**

**wget** [**https://github.com/zephyrproject-rtos/sdk-ng/releases/download/v0.16.4/zephyr-sdk-0.16.4\_linux-x86\_64.tar.xz**](https://github.com/zephyrproject-rtos/sdk-ng/releases/download/v0.16.4/zephyr-sdk-0.16.4_linux-x86_64.tar.xz)

**wget -O - https://github.com/zephyrproject-rtos/sdk-ng/releases/download/v0.16.1/sha256.sum | shasum --check --ignore-missing**

**tar xvf zephyr-sdk-0.16.4\_linux-x86\_64.tar.xz**

**rm zephyr-sdk-0.16.4\_linux-x86\_64.tar.xz**

**cd ~/zephyr-sdk-0.16.4**

**./setup.sh**

* Clone the sidewalk repo  
  **cd ~/ncs**

**git clone https://github.com/nrfconnect/sdk-sidewalk.git sidewalk**

* Enable the Sidewalk SDK and install the requirements  
  **west config manifest.group-filter "+sidewalk"**

**west update**

**pip install -r sidewalk/requirements.txt**

* Clone the wm1110-asset-tracker repo  
  **cd ~/**

**git clone** [**https://github.com/aws-samples/wm1110-asset-tracker**](https://github.com/aws-samples/wm1110-asset-tracker)

**cd wm1110-asset-tracker**

**git clone https://github.com/Lora-net/SWDR006.git SWDR006**

* Apply the LR1110 patch to the sidewalk SDK  
  **cd ~/ncs/sidewalk  
    
  patch -p1 < ~/wm1110-asset-tracker/SWDR006/nRF52840\_LR11xx\_driver\_v010000.diff**
* Copy **libsmtc\_lr11xx\_swdr001\_impl.a** and **libsid\_pal\_radio\_lr11xx\_impl\_lrf.a** from **SWDR006**  to **ncs/sidewalk/lib/lora\_fsk**
* Build the app  
  **cd ~/wm1110-asset-tracker/**

**export ZEPHYR\_TOOLCHAIN\_VARIANT=zephyr**

**export ZEPHYR\_BASE=~/ncs/zephyr**

**export ZEPHYR\_SDK\_INSTALL\_DIR=~/zephyr-sdk-0.16.4**

**west build -b wio\_tracker\_1110 -- -DRADIO=LR1110 -DBOARD\_ROOT=.**

**Note : The UF2 image for the application will be found here: build/zephyr/AssetTrackerDeviceApp.uf2**

**Provision binary build steps**

* **cd ~/wm1110-asset-tracker/utils**
* **python3 -m pip install -r requirements.txt**
* **python3 provision\_sidewalk\_asset\_tracker.py**

**Note : This will output a .uf2 file located in the /wm1110-asset-tracker/utils  
  
Ref :** [**https://github.com/aws-samples/wm1110-asset-tracker/tree/main**](https://github.com/aws-samples/wm1110-asset-tracker/tree/main)