User's Manual

FCC warning:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada (IC) warning:

Canada Low-power license-exempt radio communication devices (RSS-247)

1. Common information operation is subject to the following two conditions:
    a. This device may not cause interference, and
    b. This device must accept any interference, including interference that may cause undesired operation of the device

2. Informations communes
   Son fonctionnement est soumis aux deux conditions suivantes:
    a. Ce dispositive ne peut causer des interferences, et
    b. Ce dispositive doit accepter toute interference, y compris les interferences qui peuvent causer un mauvais fonctionnement du dispositive.

RF Exposure and Separation Distance:

For safe operation, the minimum separation distance should be 20cm.

Pour un fonctionnement en toute sécurité, la distance de séparation minimale doit être de 20 cm.

Hardware needs:
1. Unprogrammed Wake-up dongle
2. Window 10 PC w/ USB port
3. TI bootloader .zip file
4. Firmware image file

Loading firmware onto the DUT:
The Wake-up dongle is programmed via a TI bootloader. The attached .zip file contains the executable.
To use it, copy the contents of the .zip file into a local directory.

Grab the latest firmware image file from the repository for programming.

Run the executable Python_Firmware_UpgraderGUI.exe. The following program will appear if the wake-up dongle is unprogrammed.

Figure 1: TI bootloader SW in ready state

Click File -> Open and point to the latest firmware image. The tool when then load the DUT.

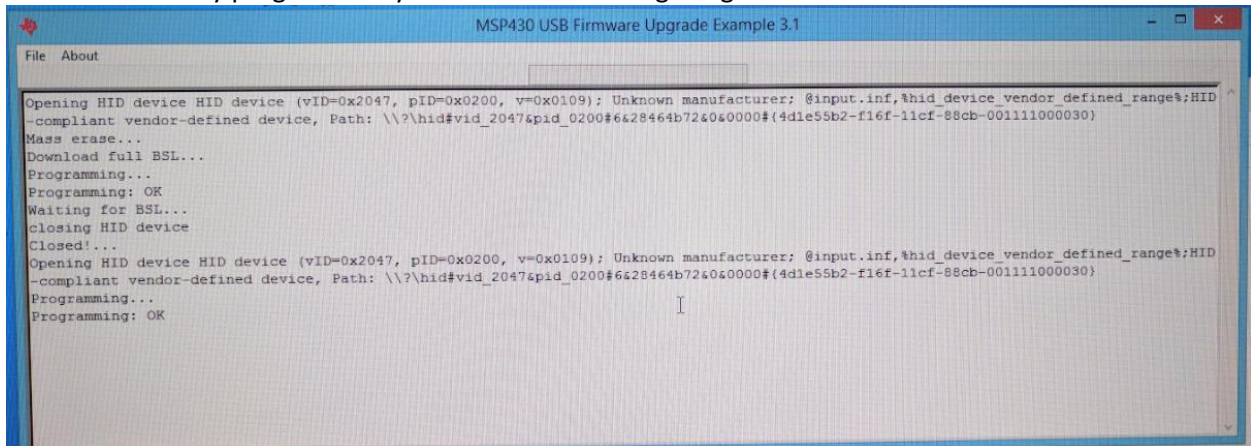When successfully programmed you'll see the following image:

Figure 2: TI bootloader SW successfully programmed

Operating the Wake-up Dongle using Python:

Take the example python script, wakeup.py, and the read-only API, dongle.py, and put them in a folder together.

Before running wakeup.py you must record the COM port that the wake-up dongle is using. To do that load Device Manager on Windows and copy down the COM port under "Ports (COM & LPT)" as shown in the image here:
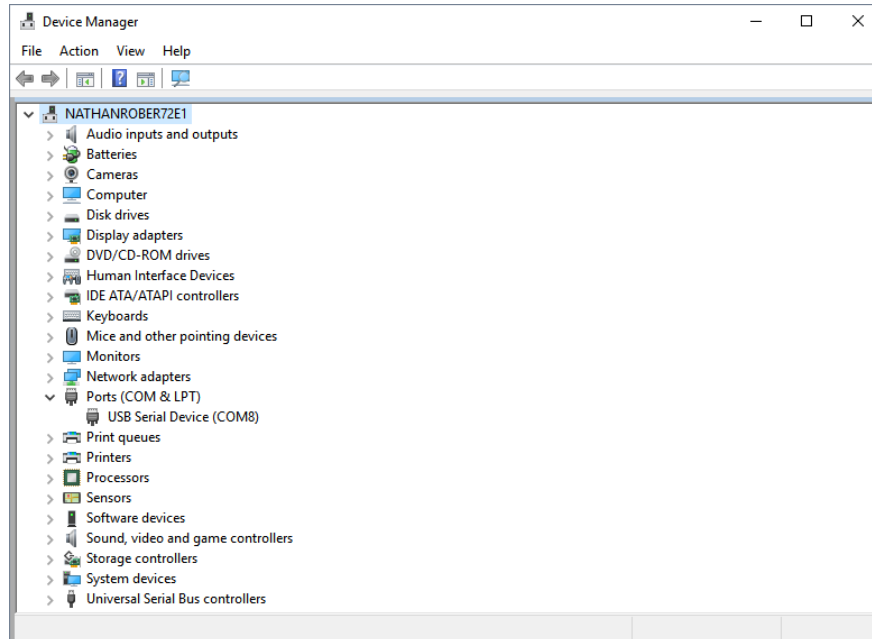

Figure 3: Finding the COM port for the CN Dongle

Edit the COM port in the wakeup.py script. See image below:

```
def main():
    """ Connect to the dongle and send some packets """
    try:
        # Create an object to wrap the dongle (change the port to match your setup)
        donger = Dongle('COM18', True)
        print(donger.get_param(Dongle.PARAM_PRODUCT_PN))
```

Figure 4: Editing the script to the appropriate COM port

To run wakeup.py open the command prompt, go to the folder containing the python scripts, and execute the following command:

```
python wakeup.py
```

The wakeup.py script can operate the following functions:
- Vary transmit output power
- Hop across all channels
- Sweep all channels

- Specify channels

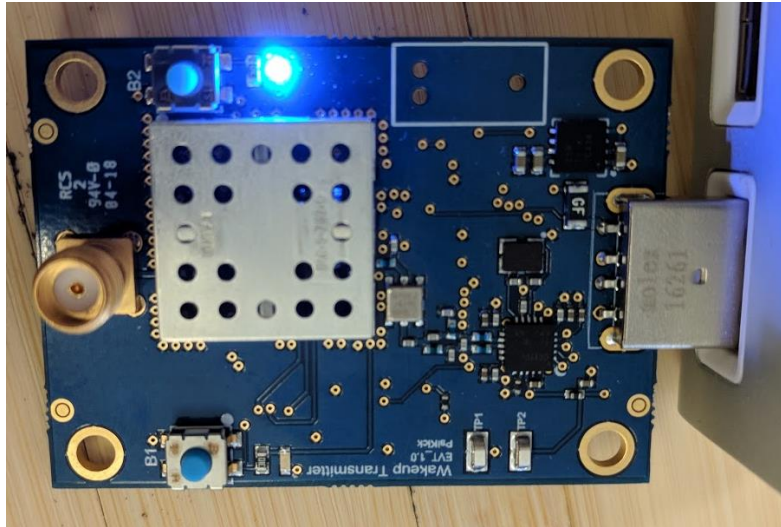The LED on the wake-up dongle will light up when a transmission is successfully sent. See image below:

Figure 5: CN Dongle operating (as seen via LED)