

PYANURA USER MANUAL



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INTRODUCTION

The pyanura package contains classes and command line utilities for interfacing the ReVibe Anura sensors and transceivers.

INSTALLING FOR PROGRAMMATIC USE

The package is installable using `pip3` by pointing to the top level directory of the downloaded pyanura folder. First you should set up and activate a suitable virtual environment for your project. After that you can install the pyanura package using `pip3`.

pyanura is available for download from <https://github.com/ReVibe-Energy/pyanura>

Example (assuming the package is located in the Downloads directory):

Unset

```
pip3 install ~/Downloads/pyanura
```

Or with optional CLI dependencies included:

Unset

```
pip3 install ~/Downloads/pyanura[cli]
```

DEVELOPMENT SETUP

For development in the pyanura repository you should setup a virtual environment in which you will install the dependencies of pyanura but not the pyanura package itself.

pyanura is available for download from <https://github.com/ReVibe-Energy/pyanura>

Assuming you have activated a suitable a virtual environment, install the dependencies as follows:

Unset

```
pip3 install -r requirements.txt
```

(Optional) Install extra requirements needed to run the examples under `/examples`.

Unset

```
pip3 install -r requirements-extras.txt
```

After that you should be able to launch the anura command-line interface with the following command:

Unset

```
python3 -m anura.cli
```

RUNNING AN EXAMPLE

Assuming you have activated a virtual environment with all the required dependencies you can launch the examples from the pyanura root directory as follows:

Unset

```
python3 -m examples.forwarder --config examples/forwarder/example-config.json
```

INSTALLING CLI PIPX

If you just want to install the `anura` command-line utility and make it available on your `PATH` the best option is likely to install `pipx` using your system's package manager and then install `pyanura`.

Using this method you don't have to manually set up a virtual environment as `pipx` will create one for you. Additionally it will add a script to your `PATH` that will launch the command-line in the appropriate virtual environment.

Ensure the following dependencies are installed on your system:

- Python3 (>=3.11 is required for `pyanura` to function.)
- Python3-venv
- `pipx`

Note: when using TR10-USB on windows `libusb1.0` is required

<https://github.com/libusb/libusb>

INSTALLATION CLI PIPX (Windows)

Follow these steps to install **pyanura**:

1. Install Python 3

Download and install the latest Python 3 release from the [official Python website](https://www.python.org/). During installation, **check the box to add Python to PATH**.

2. Install pipx

Open a command prompt and run the following command to install `pipx`:

```
Unset  
python -m pip install --user pipx
```

3. Initialize pipx

Run the following command to ensure `pipx` is ready for use:

```
Unset  
pipx ensurepath
```

Close and reopen the command prompt to apply the changes to your `PATH`.

4. Install pyanura

Use `pipx` to install the **pyanura** package with the following command:

Unset

```
pipx install  
git+https://github.com/ReVibe-Energy/pyanura#egg=pyanura[cli]
```

INSTALLATION CLI PIPX (Linux)

Follow these steps to install **pyanura** on linux:

1. Install pipx

Use the following command to install **pipx**:

```
Unset  
sudo apt install pipx
```

2. Initialize pipx

Run the following command to ensure **pipx** is set up correctly:

```
Unset  
pipx ensurepath
```

3. Install pyanura

Install the **pyanura** package via **pipx** using the command below:

```
Unset  
pipx install git+https://github.com/ReVibe-Energy/pyanura#egg=pyanura[cli]
```

UDEV RULES FOR TR10-USB ON LINUX

To use the TR10-USB device on Linux, you need to create a UDEV rule. Follow the steps below:

1. Open a Terminal

You'll need root privileges to perform these steps. Open a terminal window and proceed.

2. Create the UDEV Rules File

Use a text editor to create the UDEV rules file. Here's how:

Option 1: Using **nano**

Run the following command:

```
Unset  
sudo nano /etc/udev/rules.d/70-anura-transceiver.rules
```

Option 2: Using vi

Run this command:

```
Unset  
sudo vi /etc/udev/rules.d/70-anura-transceiver.rules
```

3. Add the Rule

Paste the following line into the file:

```
Unset  
SUBSYSTEM=="usb", ATTR{idVendor}=="16d0", ATTR{idProduct}=="13d4",  
GROUP="plugdev", MODE="0660"
```

- **Explanation:**
 - `SUBSYSTEM=="usb"`: Targets USB devices.
 - `ATTR{idVendor}=="16d0"`: Matches devices with vendor ID 16d0.
 - `ATTR{idProduct}=="13d4"`: Matches devices with product ID 13d4.
 - `GROUP="plugdev"`: Assigns the device to the `plugdev` group.
 - `MODE="0660"`: Sets file permissions to `rw-rw----`.

4. Save and Exit

- If using `nano`, press `CTRL + O` to save, then press `CTRL + X` to exit.
- If using `vi`, press `ESC`, type `:wq`, and press `Enter` to save and exit.

5. Reboot the Computer

To apply the new UDEV rule, reboot your system:

```
Unset  
sudo reboot
```

Notes:

- Ensure the `plugdev` group exists on your system. You can check with:

Unset

```
getent group plugdev
```

- If it doesn't exist, create it using:

Unset

```
sudo groupadd plugdev
```

- Add your user to the `plugdev` group to gain access to the device:

Unset

```
sudo usermod -aG plugdev $USER
```

- Log out and back in to apply the group changes.

CLI USER MANUAL

The Pyanura CLI includes a built-in manual for reference. Access it by running the following command in your terminal.

```
$ anura --help
```