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.
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