Getting started with Vector

What is Vector?

Vector is a small, intelligent, and expressive robot developed by Anki. Designed as both a companion and a programmable device, Vector uses a combination of sensors, cameras, and AI algorithms to perceive its environment and interact with people in real time. It can recognize faces, respond to voice commands, navigate autonomously, and even express emotions through animated eyes and body language.

What comes with the robot?

If you choose to use Vector, you will be given access to a box containing:

- 1 Vector
- 1 Charging Dock
- 1 Interactive Cube
- 1Router (shared by all Robots)

All equipment underwent thorough testing and verification prior to its availability to students. Kindly exercise caution and ensure the return of each item enclosed in the box in the same condition as it was borrowed.

What can Vector do?

Vector has the following hardware components:

- A **high-resolution camera** for facial recognition and navigation
- A **capacitive touch sensor** on top of its back for tactile interaction
- **Four microphones** for directional sound detection
- A **color display** for animated facial expressions
- **Infrared sensors** for obstacle avoidance and depth perception
- **Wi-Fi connectivity** for cloud services and programming integration

Initial Setup: When you receive Vector, press and hold the button on its back for about three seconds to power it on. Once booted, Vector will display its eyes on the screen and start moving.

You can test its sensors by gently touching its back—Vector should respond to the touch. Try calling out **“Hey, Vector!”** to see it react to your voice.

How can I program Vector?

The original Vector software was discontinued by the company that created it. Therefore, in this guide, we'll use a **community-maintained fork** of the original software.

After completing all the steps, you can explore and run the example code provided by the developers maintaining this version of the software: **Tutorials**

Install and run wire-pod

Download and install **Wire-Pod**, the open-source server that replaces Anki's original cloud services.

Once installed, launch the Wire-Pod application.

Connect Vector to your Computer

1. Open your browser (Google Chrome is recommended) and go to: https://wpsetup.keriganc.com/html/main.html
2. Place Vector on its charging dock and press the button twice. A pairing key will appear on Vector's screen.
3. In your browser, click "Pair with Vector."
4. A code will appear on Vector's screen — enter this code into the browser to complete the pairing process.
5. Follow the on-screen steps to connect Vector to the router network.
6. Vector may perform a short update, though all robots are already updated, so this step might be skipped.
7. Once everything is set up, click "Activate" to finish the connection.

Enviroment Setup

1. Create a virtual environment:

   ```
   python -m venv venv
   ```

2. Activate the environment (Windows example):

   ```
   venv\Scripts\activate
   ```

3. Install the SDK**:**

   ```
   pip install wirepod_vector_sdk
   ```

4. Run the configuration tool:

```
python -m anki_vector.configure
```

Now you’re ready to start programming Vector and exploring its capabilities!

How to connect the cube?

Just say: "Hey Vector, find your cube!"

Further documentation and guides:

- Wire-Pod Github
- Wire-Pod Vector SDK