

GOOGLE AIY VISION KIT

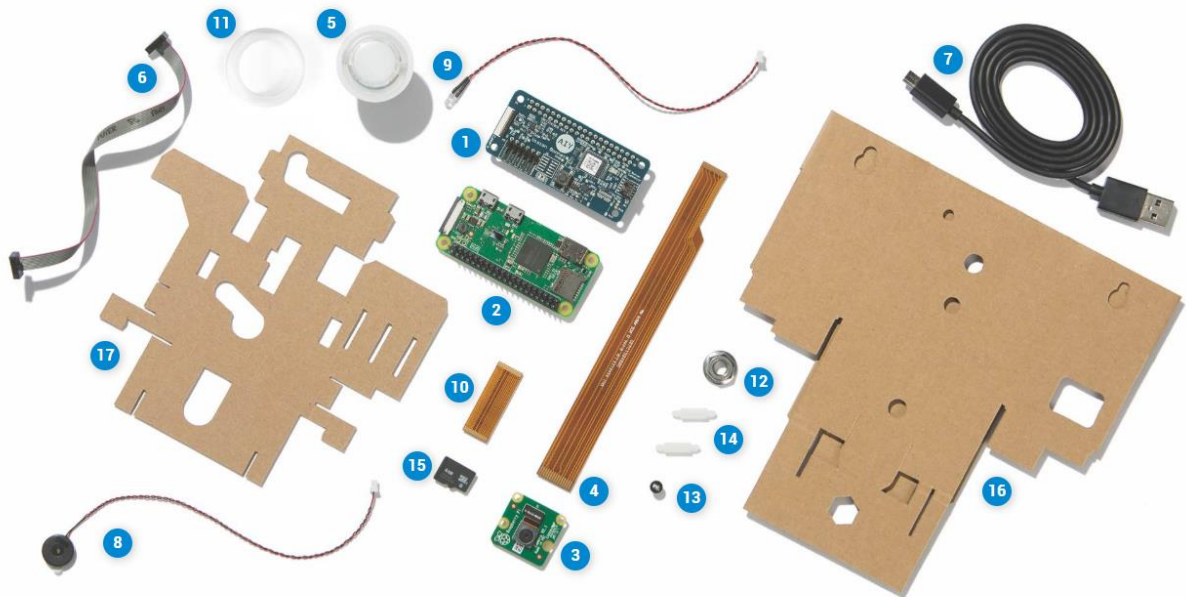


DESCRIPTION

The AIY Vision Kit from Google lets you build your own intelligent camera that can see and recognize objects using machine learning. All of this fits in a handy little cardboard cube, powered by a Raspberry Pi.

Everything you need is provided in the kit, including the Raspberry Pi.

LIST OF MATERIALS (INCLUDED ITEMS)



1	Vision Bonnet	(x1)	10	Short flex cable	(x1)
2	Raspberry Pi Zero WH	(x1)	11	Button nut	(x1)
3	Raspberry Pi Camera v2	(x1)	12	Tripod nut	(x1)
4	Long flex cable	(x1)	13	LED bezel	(x1)
5	Push button	(x1)	14	Standoffs	(x2)
6	Button harness	(x1)	15	Micro SD card	(x1)
7	Micro USB cable	(x1)	16	Camera box cardboard	(x1)
8	Piezo buzzer	(x1)	17	Internal frame cardboard	(x1)
9	Privacy LED	(x1)			

Please note: the 2,5 A microUSB power supply is **not** included, and should be ordered / sold separately.

ASSEMBLY INSTRUCTIONS & CODING SUPPORT

Detailed assembly instructions and some sample projects (demos), including a machine learning smile detector can be found at:

<https://aiyprojects.withgoogle.com/vision/>

Google provides a Python API Library, and downloads for a special image for the AIY Kits. TensorFlow is used for building models to recognize types of objects.

Due to limited hardware resources on Vision Bonnet, there are constraints on what type of models can run on device. Please refer to the AIY Projects website to read about the constraints.

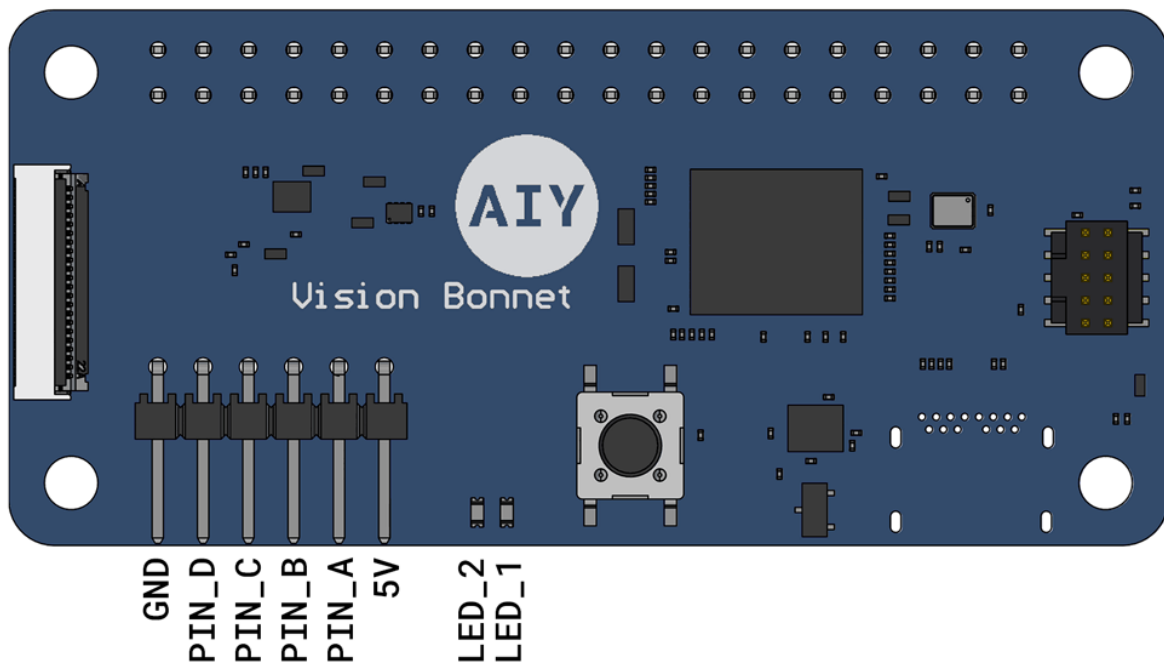
The SD card image supports both AIY Voice Kit and AIY Vision Kit. You can download the most recent release here:

<https://github.com/google/aiyprojects-raspbian/releases>

VISION BONNET ADDITIONAL CAPABILITIES

The Vision Bonnet also includes a dedicated microcontroller (MCU) that enables the following additional features:

- Control of four additional GPIO pins, freeing up the Pi GPIOs for other uses
- **PWM support for servo/motor control without taxing the Raspberry Pi's CPU**
- **Analog input support via on-board analog-to-digital converter (ADC)**
- Control of the two LEDs on the bonnet



The AIY projects page provides some samples how to use these advanced features of the Vision Bonnet as well.