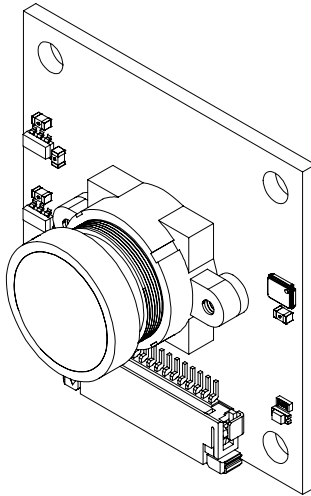# ArduCam

Arducam Ultra Wide Angle Fisheye 5MP OV5647 Camera
for Raspberry Pi

SKU: B0428

Introduction

5MP OV5647 cameras, namely the V1 camera series, are used a lot on Raspberry Pi camera applications. Unlike the V2 cameras which are encrypted on the camera board with a chip, the 5MP OV5647 cameras can be easily modified and customized by third-party manufacturers, thus you will see a lot of variations of this series.

Specifications

Sensor	Omnivision OV5647 sensor
Sensor Size	1/4" (OV5647)
Resolution	5MP 2592x1944
Frame Rates	1080p@30fps, 720p@60fps, 480p@90fps
IR Sensitivity	Integral IR Cut Filter, visible light only
Field of View	220°(H)
Effective Focal Length	0.76mm
35mm Equivalent Focal Length	8.2mm
Focus Type	Manual
Lens Mount	M12
Dimension	36mm x 36mm
Peak Current	300mA

Hardware Setup

You need to connect the camera module to the Raspberry Pi's camera port.

1. Locate the camera port (CSI) near the HDMI connector, and gently pull up on the plastic edge.
2. Push in the camera ribbon and make sure the silver connector is facing the Raspberry Pi camera MIPI port. Do not bend the flex cable and make sure it is firmly inserted.
3. Push the plastic connector down while holding the flex cable until the connector is back in place.
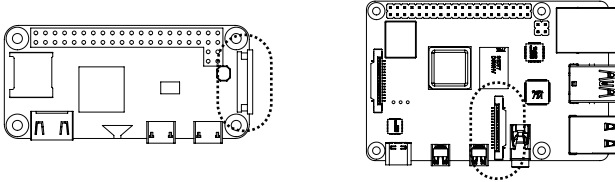
Software Setup

At present, we support using libcamera and raspistill to capture images with OV5647 camera, please refer to the following steps:

For Raspberry Pi OS(Bullseye)

• Using libcamera to access the camera

The Raspberry Pi Bullseye system support using libcamera to capture images. Please make sure you have downloaded the official Bullseye.

When using Raspberry Pi 4, you can use libcamera command to capture images.

When using Raspberry Pi 0-3, you need to enable Glamor graphic acceleration firstly and then use libcamera command to capture images. Please see the following:

1. Run raspi-config
Open your terminal and input sudo rapi-config
sudo raspi-config
2. Navigate to Advanced Options
3. Enable Glamor graphic acceleration
4. Save and reboot
sudo reboot
5. Use libcamera command
For more commands for using libcaemra, please refer to
https://www.arducam.com/docs/cameras-for-raspberry-pi/raspberry-pi-libcamera-guide/

● Using raspistill to access the camera

The raspberry pi Bullseye system support using raspistill command to capture image too, you need to run the raspi-config to enable legacy, please see the following:

1. Run raspi-config

Open your terminal and input sudo rapi-config

sudo raspi-config

2. Move to interface option

3. Enable the legacy camera

4. Save and reboot

sudo reboot

5. Detect the camera

vcgencmd get_camera

If the camera is detected, the output will be the follows:

vcgencmd get_camera

supported=1 detected=1, libcamera interfaces=0

6. Run the camera

Preview:

raspistill -t 0

Save a file:

raspistill -t -5000 -o test.jpg

For more usage of raspistill or previous command, please refer to the following messages:https://projects.raspberrypi.org/en/projects/getting-started-with-picamera

For Raspberry Pi OS (Legacy)

1. Run raspi-config

Open your terminal and input sudo rapi-config

sudo raspi-config

2. Select Enable Camera and hit Enter, then go to Finish and you'll be prompted to reboot.

Libraries for using the camera are available in:

● Shell (Linux command line):

https://www.raspberrypi.com/documentation/accessories/camera.html

● Python:

https://projects.raspberrypi.org/en/projects/getting-started-with-picamera/0

Contact Us

Email: support@arducam.com

Forum: https://www.arducam.com/forums/

Skype: arducam