



SPI Camera On Raspberry Pi Pico



(2MP SKU: B0067)



(5MP SKU: B0068)

QUICK START GUIDE

SOFTWARE SETUP

To facilitate copying, please refer to doc page: <https://www.arducam.com/docs/pico/arducam-camera-module-for-raspberry-pi-pico/spi-camera-for-raspberry-pi-pico/>
We will keep online up-to-date continuously.

1. Get the driver

```
git clone https://github.com/ArduCAM/PICO_SPI_CAM.git
```

2. How to access SPI Camera using C

2.1 Cameras supported by the driver

- OV2640 2MP_Plus JPEG format
- OV5642 5MP_Plus JPEG format
- ArduCAM_Mini_2MP_Plus_4CAM_VideoStreaming
- ArduCAM_Mini_2MP_Plus_Videostreaming
- ArduCAM_Mini_5MP_Plus_4CAM_VideoStreaming
- ArduCAM_Mini_5MP_Plus_Videostreaming

2.2 Compile the driver library

Note: Refer to the official manual for the development environment: <https://www.raspberrypi.org/documentation/rp2040/getting-started/#getting-started-with-c>

Choose the demo and input the following code to compile it. (default is ArduCAM_MINI_2MP_Plus_Videostreaming)

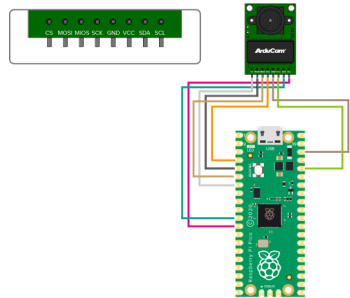
INTRODUCTION

As an alternative to Arduino, Raspberry Pi Pico lacks processing power, memory, and a CSI interface, which makes it impossible for Pico to work with the official or any MIPI CSI-2 camera modules. Thankfully, Pico has a wide range of flexible I/O options includes SPI, which enables the Arducam SPI camera to work with Pico.

Now, the Arducam team has solved the compatibility of our SPI camera with Raspberry Pi Pico. Getting started here!

PINOUT & TYPICAL WIRING

Camera	CS	MOSI	MISO	SCK	GND	VCC	SDA	SCL
PICO	GP5	GP3	GP4	GP2	GND	3V3	GP8	GP9



```
cd PICO_SPI_CAM/C
mkdir build
cd build
cmake ..
make
```

2.3 Run the .uf2 file

Copy the PICO_SPI_CAM/C/build/Examples/ArduCAM_MINI_2MP_Plus_Videostreaming/ArduCAM_mini_2mp_plus_videostreaming.uf2 file to Pico to run the test.

```
.git 2021/4/12 14:39
ArduCAM 2021/4/9 20:10
build 2021/4/22 11:18
Examples 2021/4/9 20:10
.gitignore 2021/4/1 19:25
.gitmodules 2021/4/1 19:25
CMakeLists.txt 2021/4/12 14:39
LICENSE 2021/4/1 19:25
pico_sdk_import.cmake 2021/4/1 19:25
README.md 2021/4/2 9:02
```

```
CMakeFiles
elf2uf2
ArduCAM_mini_2mp_plus_videostreaming.bin
ArduCAM_mini_2mp_plus_videostreaming.dis
ArduCAM_mini_2mp_plus_videostreaming.elf
ArduCAM_mini_2mp_plus_videostreaming.hex
ArduCAM_mini_2mp_plus_videostreaming.uf2
cmake_install.cmake
```

Please refer to the Doc page or contact us via support@arducam.com if you need the API detailed information.