

# Use JetCam

## Use JetCam

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## References

JetCam is an easy-to-use Python library developed by NVIDIA for the Jetson platform, which is used to integrate and operate USB cameras or CSI cameras

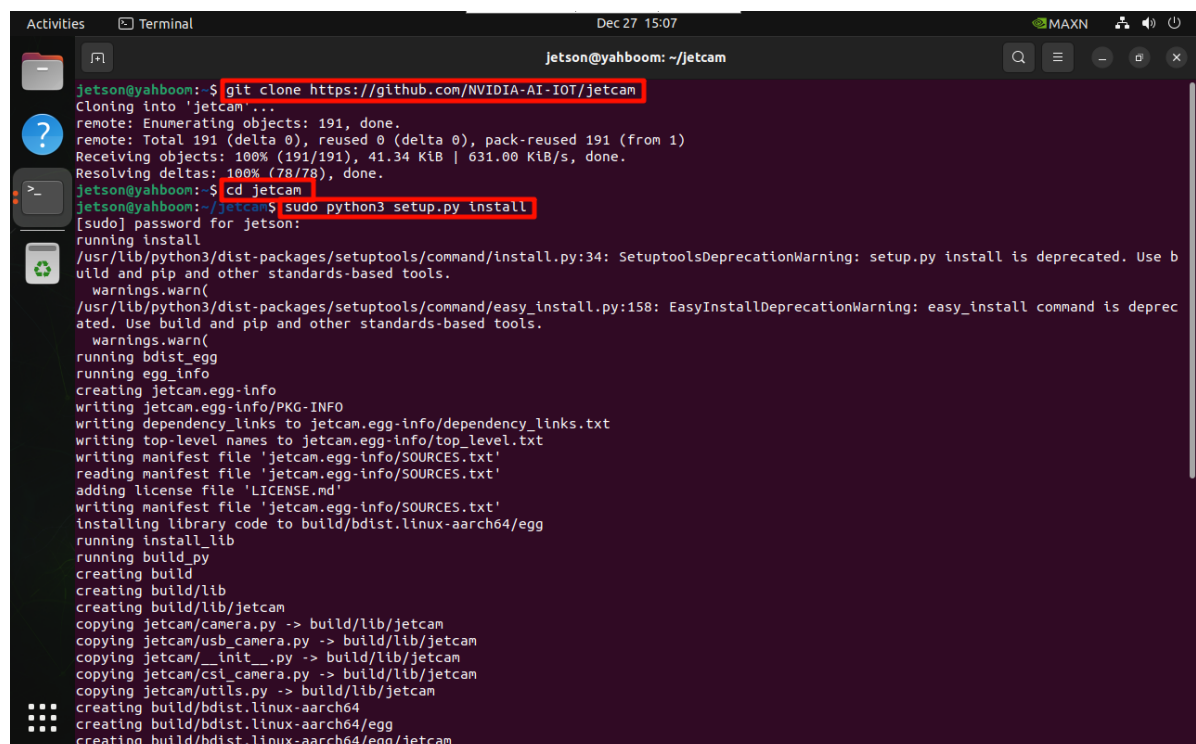
## 1. JetCam installation

```
git clone https://github.com/NVIDIA-AI-IOT/jetcam
```

```
cd jetcam
```

```
sudo python3 setup.py install
```

```
sudo pip3 install ipywidgets
```



```
Activities Terminal Dec 27 15:07 MAXN
jetson@yahboom: ~/jetcam
jetson@yahboom:~$ git clone https://github.com/NVIDIA-AI-IOT/jetcam
Cloning into 'jetcam'...
remote: Enumerating objects: 191, done.
remote: Total 191 (delta 0), reused 0 (delta 0), pack-reused 191 (from 1)
Receiving objects: 100% (191/191), 41.34 KiB | 631.00 KiB/s, done.
Resolving deltas: 100% (78/78), done.
jetson@yahboom:~$ cd jetcam
jetson@yahboom:~/jetcam$ sudo python3 setup.py install
[sudo] password for jetson:
running install
/usr/lib/python3/dist-packages/setuptools/command/install.py:34: SetuptoolsDeprecationWarning: setup.py install is deprecated. Use b
uild and pip and other standards-based tools.
  warnings.warn(
/usr/lib/python3/dist-packages/setuptools/command/easy_install.py:158: EasyInstallDeprecationWarning: easy_install command is deprec
ated. Use build and pip and other standards-based tools.
  warnings.warn(
running bdist_egg
running egg_info
creating jetcam.egg-info
writing jetcam.egg-info/PKG-INFO
writing dependency_links to jetcam.egg-info/dependency_links.txt
writing top-level names to jetcam.egg-info/top_level.txt
writing manifest file 'jetcam.egg-info/SOURCES.txt'
reading manifest file 'jetcam.egg-info/SOURCES.txt'
adding license file 'LICENSE.md'
writing manifest file 'jetcam.egg-info/SOURCES.txt'
installing library code to build/bdist.linux-aarch64/egg
running install_lib
running build_py
creating build
creating build/lib
creating build/lib/jetcam
copying jetcam/camera.py -> build/lib/jetcam
copying jetcam/usb_camera.py -> build/lib/jetcam
copying jetcam/_init_.py -> build/lib/jetcam
copying jetcam/csi_camera.py -> build/lib/jetcam
copying jetcam/utls.py -> build/lib/jetcam
creating build/bdist.linux-aarch64
creating build/bdist.linux-aarch64/egg
creating build/bdist.linux-aarch64/egg/jetcam
```

## 2. JetCam use

JetCam provides typical sample programs to demonstrate the calling of CSI and USB cameras to users.

The example needs to be run using Jupyter Lab. Using our factory image system, you can directly access it through the motherboard IP: 8888!

## 2.1, CSI camera

Enter the folder where the CSI camera is located on the Jupyter Lab web page and open the corresponding folder:

```
/home/jetson/jetcam/notebooks/csi_camera
```

**Note: If you are not familiar with Jupyter Lab, you can read the Jupyter Lab tutorial to learn basic operations!**

### Main code explanation

#### Call the camera

width: image output width

height: image output height

```
from jetcam.csi_camera import CSICamera  
camera = CSICamera(width=224, height=224)
```

#### Get the camera image

```
image = camera.read()
```

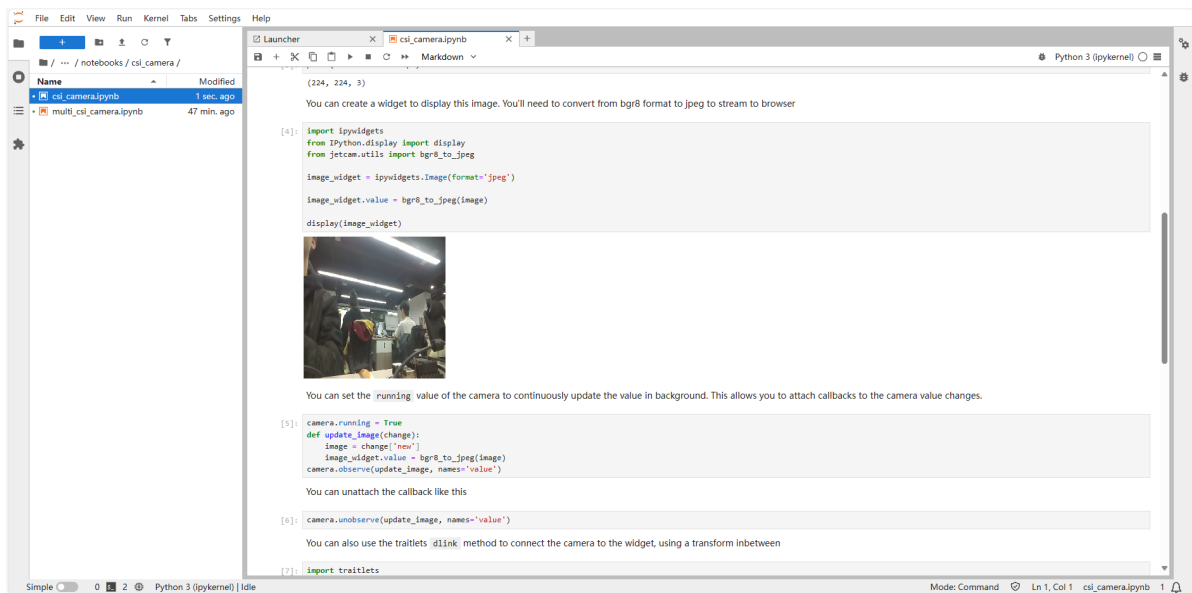
### 2.1.1, single-channel camera

#### Source code path

```
/home/jetson/jetcam/notebooks/csi_camera/csi_camera.ipynb
```

#### Running phenomenon

After opening the program file, a single unit block runs from top to bottom:



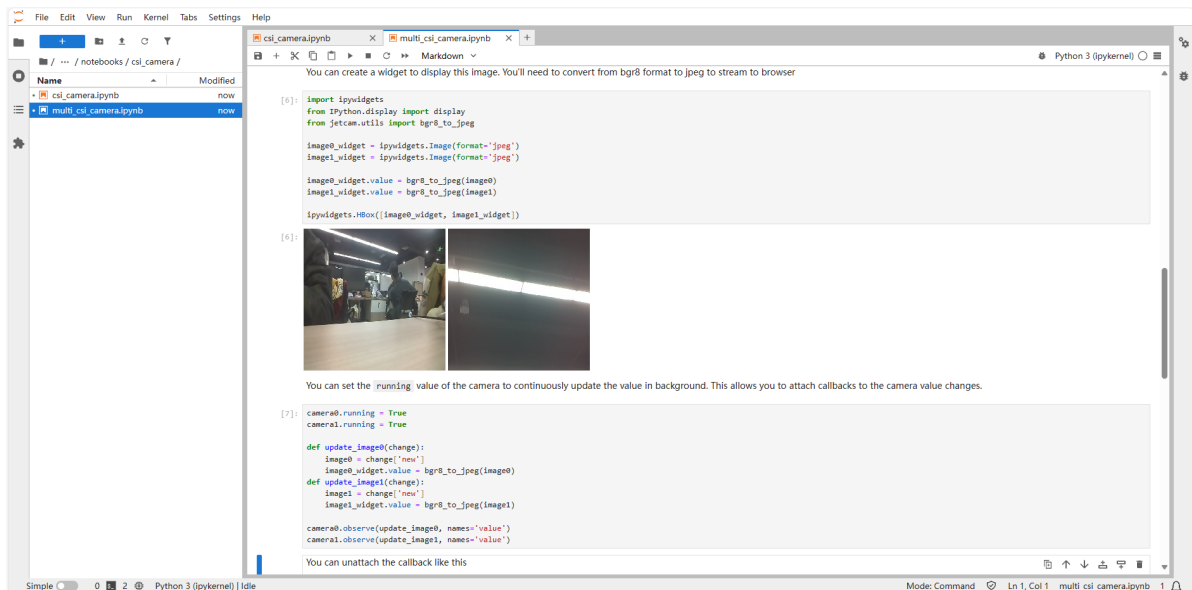
## 2.1.2, multi-channel camera

### Source code path

/home/jetson/jetcam/notebooks/csi\_camera/multi\_csi\_camera.ipynb

### Running phenomenon

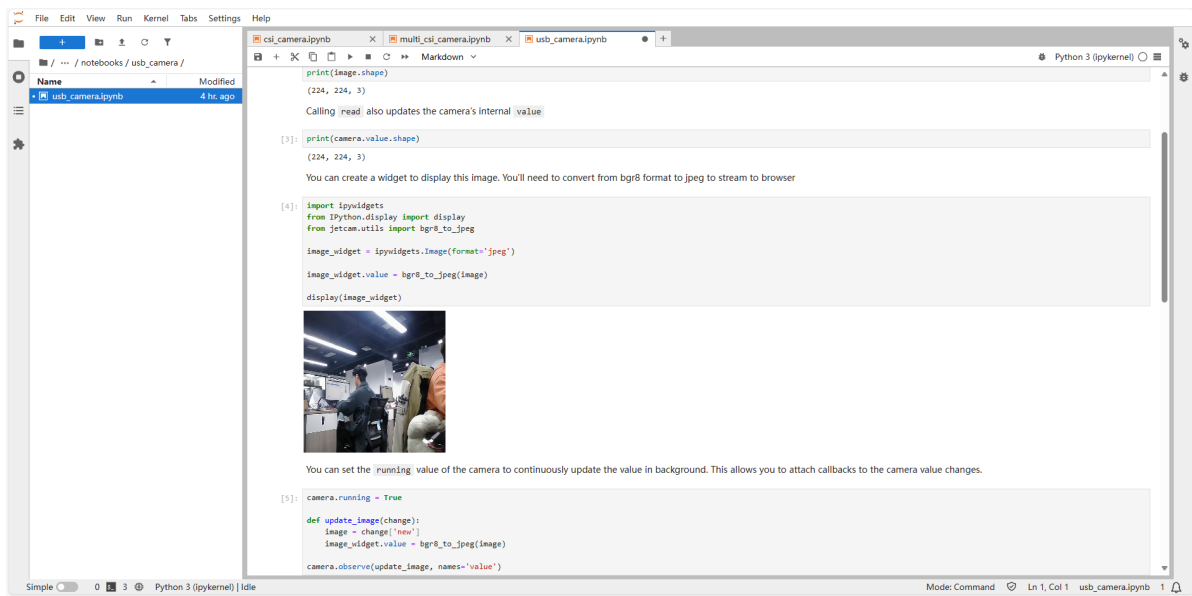
After opening the program file, a single unit block runs from top to bottom:



## 2.2, USB camera

Jupyter Lab enters the folder where the USB camera is located and opens the file. The factory image system folder path is:

/home/jetson/jetcam/notebooks/usb\_camera



## References

<https://github.com/NVIDIA-AI-IOT/jetcam>