

Raspberry Pi USB Webcam

Part 1 Preparation

1.1、 Hardware preparation

①Raspberry Pi 2 ②USB webcam ③PC



USB Webcam

1.2、 Software Preparation

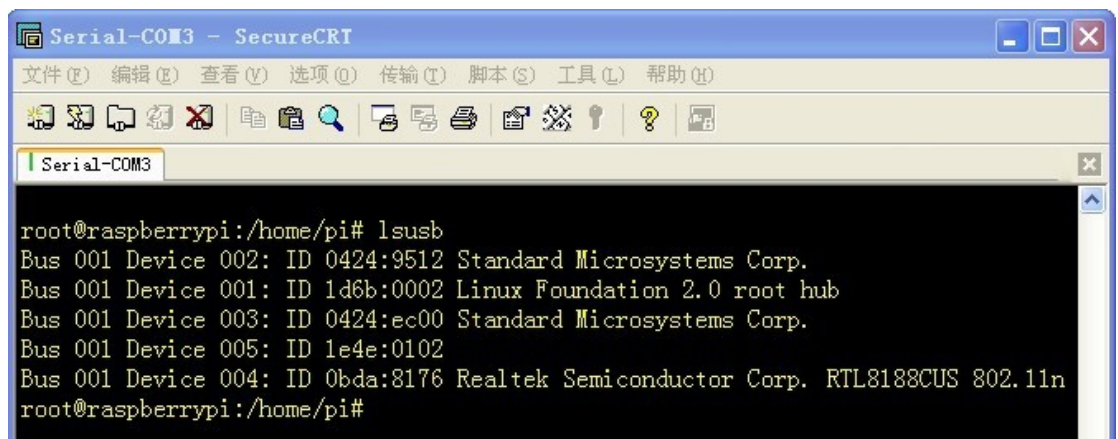
Raspberry pi mirror system, Firefox browser (Only in the Firefox browser, you can view the video monitor screen), [FTP software](#) (FileZilla).

Install Firefox browser and FTP software to your PC

Part 2 The installation and configuration of camera and monitoring software

2.1、 the use of USB camera in raspberry pi

When the raspberry pi 2 starts, plug in USB camera, and through lsusb you can see the following screen, which indicates that the USB camera has been identified by the system



```
Serial-COM3 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM3
root@raspberrypi:/home/pi# lsusb
Bus 001 Device 002: ID 0424:9512 Standard Microsystems Corp.
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 003: ID 0424:ec00 Standard Microsystems Corp.
Bus 001 Device 005: ID 1e4e:0102
Bus 001 Device 004: ID 0bda:8176 Realtek Semiconductor Corp. RTL8188CUS 802.11n
root@raspberrypi:/home/pi#
```

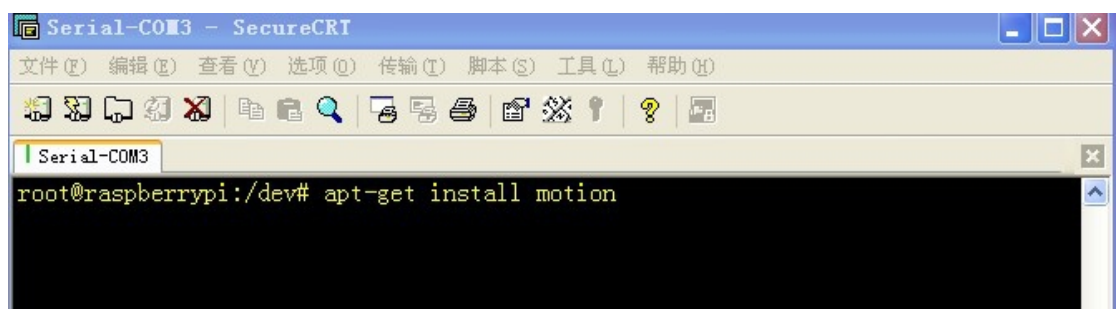
USB Camera identified page

Users can also check whether there exists video0 in the dev directory by cd/dev command. If the answer is yes, that means the webcam has been identified by the system, and users can DIY some simple video monitoring product with it.

2.2、motion software installation and configuration

(1) motion software installation

Type apt-get install motion command in the system terminal, and you can install the motion software. If not, users can input apt-get update command to update system.

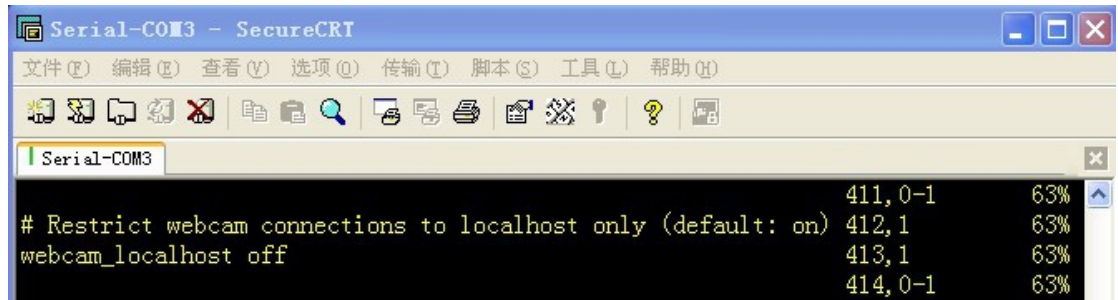


```
Serial-COM3 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM3
root@raspberrypi:/dev# apt-get install motion
```

Install motion software command

(2) configure motion software

Through command `vim /etc/motion/motion.conf`, open file of `motion.conf` and modify `webcam_localhost` on into off



Serial-COM3 - SecureCRT

文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)

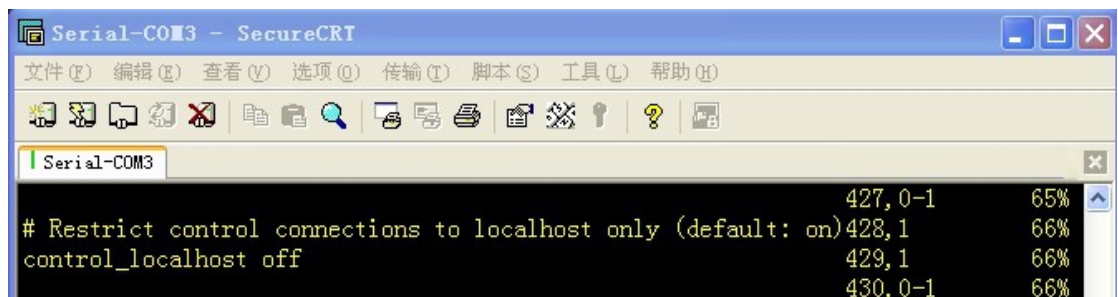
Serial-COM3

```
# Restrict webcam connections to localhost only (default: on)
webcam_localhost off
```

411,0-1	63%
412,1	63%
413,1	63%
414,0-1	63%

Modify webcam_localhost

Modify control_localhost on into off



Serial-COM3 - SecureCRT

文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)

Serial-COM3

```
# Restrict control connections to localhost only (default: on)
control_localhost off
```

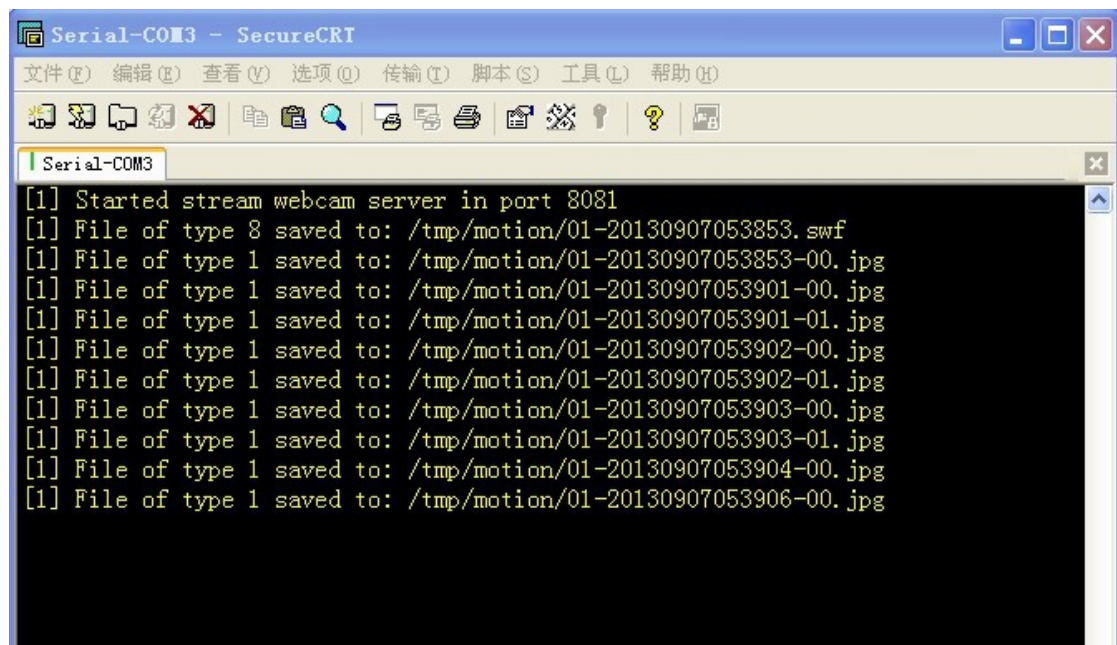
427,0-1	65%
428,1	66%
429,1	66%
430,0-1	66%

Modify control_localhost

Use motion software

3.1、Start motion in Terminal

Type motion command to start motion, the appearance of such screen as below represents the USB webcam start to work.



Serial-COM3 - SecureCRT

文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)

Serial-COM3

```
[1] Started stream webcam server in port 8081
[1] File of type 8 saved to: /tmp/motion/01-20130907053853.swf
[1] File of type 1 saved to: /tmp/motion/01-20130907053853-00.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053901-00.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053901-01.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053902-00.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053902-01.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053903-00.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053903-01.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053904-00.jpg
[1] File of type 1 saved to: /tmp/motion/01-20130907053906-00.jpg
```

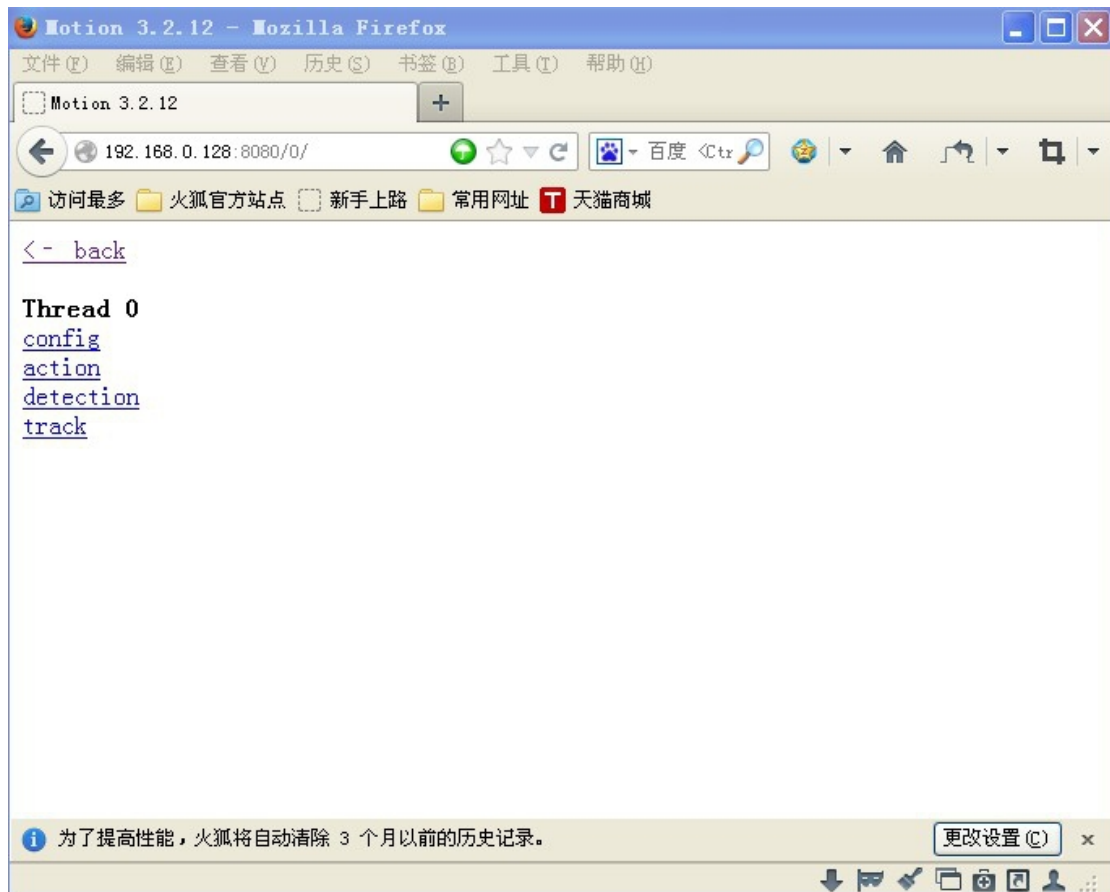
Camera Photographs

From the above screenshot, we can see that camera constantly takes pictures and the photos are stored in / tmp / motion directory. Users can transfer photos from raspberry pi system to the windows system with the transferring files software of FileZilla, mentioned previously. But when using FileZilla, you must use the root account, as other accounts do not have permissions to transfer files to the windows

3.2、Achieve remote monitor in the browser

(1)、Display control information in the browser

Type 192.168.0.128:8080 in the browser, you could see the page as below.



Remote Control Screen

(2)Display monitor information in the browser

Type 192.168.0.128: 8081 in the Firefox browser, you could see the screen as below.



remote monitor page

Note: The above IP is the address when use raspberry pi to do testing, and users must replace it into the IP address corresponding to their raspberry pi when in use. Here we recommend the Firefox browser, as the monitor screen can not display if our engineers use other browsers.