VC Camera Demo
Camera Setup

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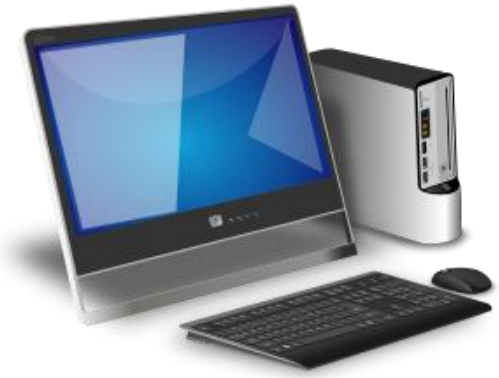
Last updated: 2019/10/28

System Overview

- Commands
- Setting file



Windows PC

VC Smart Camera
OS: Linux

- Camera Status
- Image Data
- Centroid Profile Data

Program Location and Sub Folders

Folder on VC Camera	
Folder	**Meaning**
/home/user/ftp	Storing images and profiles for PC download
Folders	**Meaning**
/home/user/mitech	program location

Folder on PC	
Folders	**Meaning**
setting	Store current setting
setting_example	Store some setting examples

On Camera: Create FTP User, Setup IO

- Create user name “user”, password also “user”
- Edit /etc/rc.local, add the following lines before the line exit 0

```
echo 234 > /sys/class/gpio/export
echo in  > /sys/class/gpio/gpio234/direction
echo 1   > /sys/class/gpio/gpio234/active_low

echo 235 > /sys/class/gpio/export
echo in  > /sys/class/gpio/gpio235/direction
echo 1   > /sys/class/gpio/gpio235/active_low

echo 236 > /sys/class/gpio/export
echo in  > /sys/class/gpio/gpio236/direction
echo 1   > /sys/class/gpio/gpio236/active_low

echo 237 > /sys/class/gpio/export
echo in  > /sys/class/gpio/gpio237/direction
echo 1   > /sys/class/gpio/gpio237/active_low

echo 238 > /sys/class/gpio/export
echo in  > /sys/class/gpio/gpio238/direction
echo 1   > /sys/class/gpio/gpio238/active_low

echo 239 > /sys/class/gpio/export
echo in  > /sys/class/gpio/gpio239/direction
echo 1   > /sys/class/gpio/gpio239/active_low
```

Change IP Address (if neccessary)

To change the IP address of a Z series camera edit the file vcsetip.scr (under /root) and modify the parameter ipaddr:

OLD

```
ipaddr    192.168.3.15
netmask   255.255.255.0
gatewayip 192.168.3.254
serverip  192.168.3.35
dnsip
dnsip2
#dnsip     192.168.3.254
#dnsip2    192.168.3.254
addip     setenv bootargs ${bootargs}
"ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:${hostname}:${ethdev}:off:${dnsip}:${dnsip2} "
```

NEW

```
ipaddr    192.168.3.16
netmask   255.255.255.0
gatewayip 192.168.3.1
#serverip  192.168.3.35
dnsip 8.8.8.8
#dnsip2
#dnsip     192.168.3.254
#dnsip2    192.168.3.254
addip     setenv bootargs ${bootargs}
"ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:${hostname}:${ethdev}:off:${dnsip}:${dnsip2} "
```

Then run the script vcsetip.sh (sh vcsetip.sh) to apply the changes. Reboot the camera

On Camera, Install FTP Server

1. Install vsftpd: `apt-get install vsftpd`

2. Edit file /etc/vsftpd.conf

   Comment the line

   `listen_ipv6=YES` ⇒ `# isten_ipv6=YES`

   Enable the following items:

   ```
   listen=YES
   local_enable=YES
   write_enable=YES
   ```

3. Allow root to ftp

   In `/etc/ftpusers`, comment the root

4. Restart service

   service vsftpd start

5. Check the service

   service vsftpd status

6. Create folder and set its permission:

   su user

   mkdir /home/user/ftp

   chmod 777 /home/user/ftp

```
#service vsftpd status
● vsftpd.service - vsftpd FTP server
   Loaded: loaded (/lib/systemd/system/vsftpd.service; enabled)
   Active: active (running) since Wed 2019-10-23 02:40:55 UTC; 10s ago
   Process: 11334 ExecStartPre=/bin/mkdir -p /var/run/vsftpd/empty
            (code=exited, status=0/SUCCESS)
 Main PID: 11338 (vsftpd)
   CGroup: /system.slice/vsftpd.service
           └─11338 /usr/sbin/vsftpd /etc/vsftpd.conf

Oct 23 02:40:55 VC-Z systemd[1]: Started vsftpd FTP server.
```

On Camera, Create Folder and Copy Program

- On “root” User
  - Create folders

    mkdir /home/user/mitech

    mkdir /home/user/mitech/param
  - Copy program 01A_DemoLinux to /home/user/mitech
  - Set the property of the program as rwxr-xr-x

- On “user” User

  su user

  mkdir /home/user/ftp

  chmod 777 /home/user/ftp

License Error: VCLIB Incompatible

You may got error when vclib is incompatible

Source Code:

```
rc =  vc_license_init("vclib");
if(rc<0){printf("license error, rc = %i¥n");}
rc =  vc_cam_init(&cam, &cpt, NULL, NULL, NULL);
if(rc<0){printf("vc_cam_init, rc = %i¥n", rc);}
```

Output:

```
license error, rc = 13
vc_cam_init, rc = -19111
```

Download VC Lib from VC Camera

- To ensure that you have identical libraries on the camera and on the development platform, it is recommended to download the libraries directly from the camera using the script vc-generate-crosscompile-package.sh, which produces an archive (.zip) file saved under /tmp. The script is present on all cameras or can be downloaded here:
  - http://files.vision-components.com/VCLinux/vc-generate-cross-compile-package.zip
- Execute the script with:
  - bash vc-generate-cross-compile-package.sh
- After that, a message will be like this

```
Processing  libvcflib5 v. 5.1.0-1
--------------------------------------------------------------------------------
Creating Zip Archive  /tmp/vc-cross-compile-package_20191012-061225.zip
--------------------------------------------------------------------------------
Cleanup.
```

- Copy /tmp/vc-cross-compile-package_20191012-061225.zip and extract to c:¥VC¥vclinux