



深圳市艾尔赛科技有限公司
Shenzhen LC Technology Co., Ltd.

Cherry Pi Allwinner V3S LINUX+QT ARM Open Source Maker

Development Board PK Raspberry Pi

SKU.: LC-CherryPi-PC-V3S

Testing guide

深圳市艾尔赛科技有限公司

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1, Firmware burning

1, Unzip and install the burning tool

PhoenixSuitV1.07开发者版本.msi	2013/7/31 15:01	Windows Install...	15,629 KB
PhoenixSuitV1.07开发者版本.rar	2019/11/12 23:05	360压缩 RAR 文件	15,156 KB
update.txt	2013/7/11 14:59	文本文档	2 KB

Open the installed PhoenixSuit





Click "One-key flashing" --> "Preview" to select the img file to be burned, and select format; then plug in the OTG interface with a USB cable and connect to the computer; press and hold the S6 button and then press the RESET button Release the S6 button again, and then start programming.





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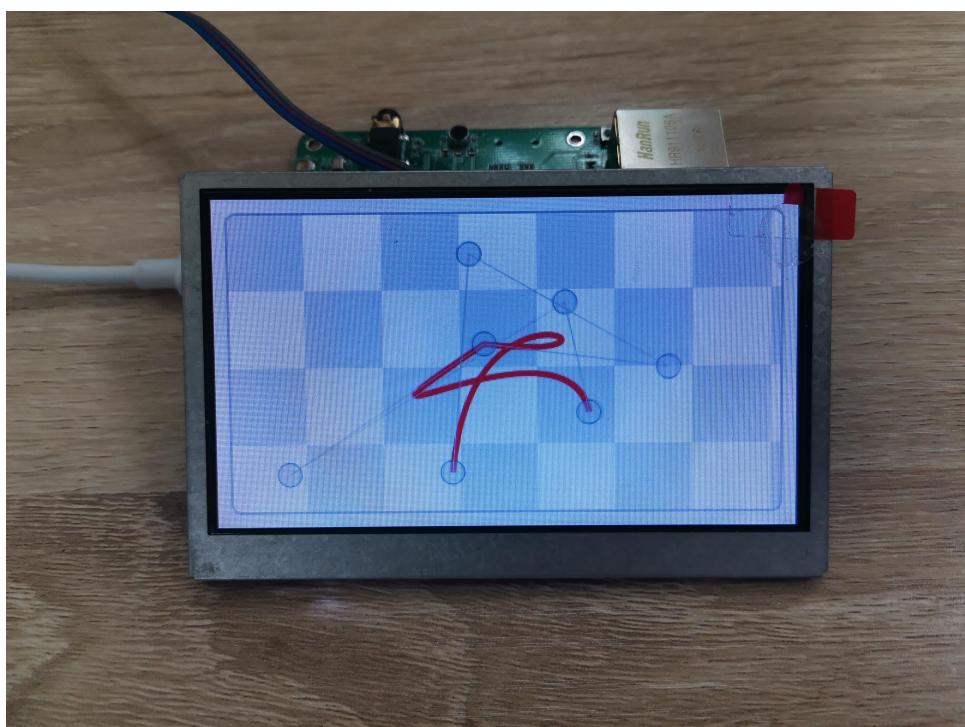
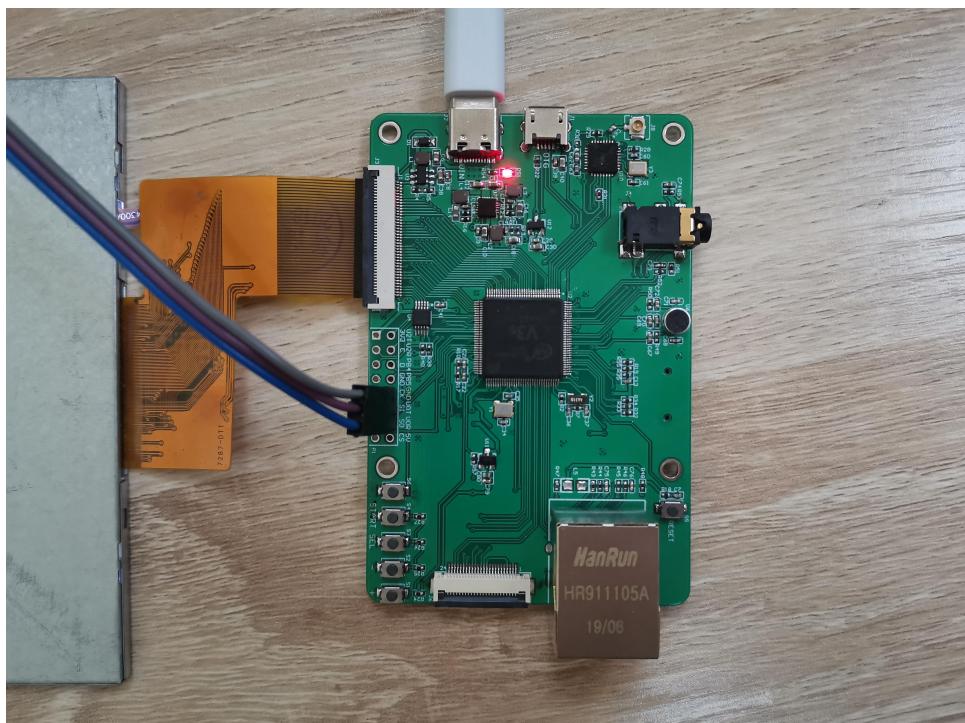


The burning time is about one minute, please be patient, the firmware is burned in the flash.



2, Function testing

The device uses microUSB or type-c to supply power, then use a usb to ttl module to connect to the U0T, U0R and GND pins, then turn on putty and wait for the boot to complete.





```
[ 50.514139] [VFE]vfe sensor detect start! input_num = 0
[ 50.520032] [VFE_WARN]NOT found this item: ar0330_mipi, you can add this sensor in the sensor_list_t!
[ 50.530515] [VFE]Sub device register "ar0330_mipi" i2c_addr = 0x20 start!
[ 50.538138] [VFE]v4l2_device_register_subdev return 0
[ 50.543829] [VFE]registered sensor subdev is OK!
[ 50.549005] [VFE]Check sensor!
[ 50.552443] [VFE]Sub device register "ar0330_mipi" is OK!
[ 50.570266] [VFE]Check open /system/etc/hawkview/ar0330_mipi/isp_test_param.ini failed!
[ 50.570297] Match isp cfg start!
[ 50.583095] [VFE]Match isp cfg ok
[ 50.610828] [VFE]V4L2 device registered as video0
[ 50.624449] [VFE].....vfe clk close!.....
...
[ 50.668318] [VFE]probe_work_handle end!
*****
*          Welcome to LC Linux V0.01
*          CherryPi-V3S-DVK
*          Shenzhen LC Technology Co.,Ltd.
*****
Welcome to use lc-board!
lc-board login:
```

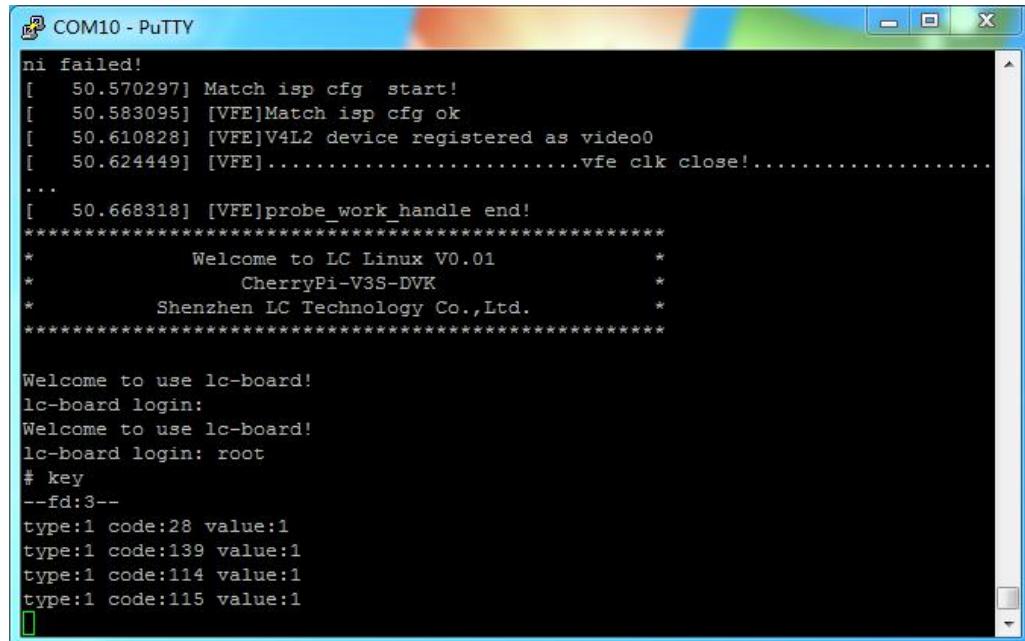
Login username root password is empty.

```
[ 50.530515] [VFE]Sub device register "ar0330_mipi" i2c_addr = 0x20 start!
[ 50.538138] [VFE]v4l2_device_register_subdev return 0
[ 50.543829] [VFE]registered sensor subdev is OK!
[ 50.549005] [VFE]Check sensor!
[ 50.552443] [VFE]Sub device register "ar0330_mipi" is OK!
[ 50.570266] [VFE]Check open /system/etc/hawkview/ar0330_mipi/isp_test_param.ini failed!
[ 50.570297] Match isp cfg start!
[ 50.583095] [VFE]Match isp cfg ok
[ 50.610828] [VFE]V4L2 device registered as video0
[ 50.624449] [VFE].....vfe clk close!.....
...
[ 50.668318] [VFE]probe_work_handle end!
*****
*          Welcome to LC Linux V0.01
*          CherryPi-V3S-DVK
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*****
Welcome to use lc-board!
lc-board login:
Welcome to use lc-board!
lc-board login: root
#
```

Next are the instructions for each function.

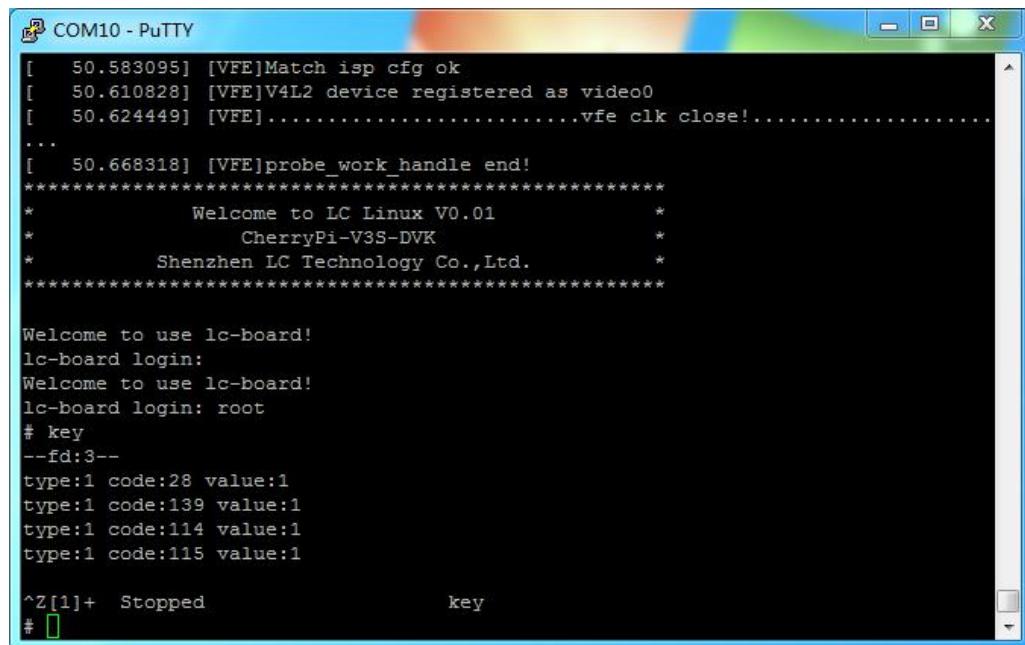
1, Key detecting

Type key and press Enter, press S1 to S4 respectively to detect, press Ctrl+C to exit the key detection function, Ctrl+Z to pause.



```
COM10 - PuTTY
ni failed!
[ 50.570297] Match isp cfg start!
[ 50.583095] [VFE]Match isp cfg ok
[ 50.610828] [VFE]V4L2 device registered as video0
[ 50.624449] [VFE].....vfe clk close!.....
...
[ 50.668318] [VFE]probe_work handle end!
*****
*          Welcome to LC Linux V0.01      *
*          CherryPi-V3S-DVK               *
*          Shenzhen LC Technology Co.,Ltd.  *
*****


Welcome to use lc-board!
lc-board login:
Welcome to use lc-board!
lc-board login: root
# key
--fd:3--
type:1 code:28 value:1
type:1 code:139 value:1
type:1 code:114 value:1
type:1 code:115 value:1
# 
```



```
COM10 - PuTTY
[ 50.583095] [VFE]Match isp cfg ok
[ 50.610828] [VFE]V4L2 device registered as video0
[ 50.624449] [VFE].....vfe clk close!.....
...
[ 50.668318] [VFE]probe_work handle end!
*****
*          Welcome to LC Linux V0.01      *
*          CherryPi-V3S-DVK               *
*          Shenzhen LC Technology Co.,Ltd.  *
*****


Welcome to use lc-board!
lc-board login:
Welcome to use lc-board!
lc-board login: root
# key
--fd:3--
type:1 code:28 value:1
type:1 code:139 value:1
type:1 code:114 value:1
type:1 code:115 value:1

^Z[1]+  Stopped                  key
# 
```



2,TF card

Insert the TF card into the TF card socket, the serial port will return sd init ok

```
ming LEGACY(SDR12) dt B
[ 377.140381] [mmc]: mclk 0xf1c20088 0x8002000e
[ 377.202550] [mmc]: sdc0 set ios: clk 400000Hz bm PP pm ON vdd 3.3V width 1 ti
ming LEGACY(SDR12) dt B
[ 377.220408] [mmc]: mclk 0xf1c20088 0x8002000e
[ 377.301835] [mmc]: sdc0 set ios: clk 25000000Hz bm PP pm ON vdd 3.3V width 1
timing LEGACY(SDR12) dt B
[ 377.320334] [mmc]: *** sunxi_mci_set_clk(L938): Error to get source clock for
clk 0Hz
[ 377.384138] [mmc]: sdc0 set ios: clk 25000000Hz bm PP pm ON vdd 3.3V width 1
timing LEGACY(SDR12) dt B
[ 377.400368] [mmc]: *** sunxi_mci_set_clk(L938): Error to get source clock for
clk 0Hz
[ 377.460825] [mmc]: sdc0 set ios: clk 25000000Hz bm PP pm ON vdd 3.3V width 4
timing LEGACY(SDR12) dt B
[ 377.480344] [mmc]: *** sunxi_mci_set_clk(L938): Error to get source clock for
clk 0Hz
[ 377.540193] mmc0: new SDHC card at address 0001
[ 377.560319] mmcblk0: mmc0:0001 SD 7.39 GiB
[ 377.617313] mmcblk0: p1 p2 p3 < p5 p6 p7 p8 p9 p10 p11 p12 p13 p14 p15 p16 >
[ 377.836014] mmcblk mmc0:0001: Card claimed for testing.
[ 377.841988] mmc0:0001: SD 7.39 GiB
[ 377.889815] *****sd init ok*****
```

3, Ethernet

Plug in the internet cable and enter ifconfig eth0 up and press Enter udhcpc -i eth0 and press Enter.

After the network connection is successful, enter ping baidu.com and press Enter to test the Internet function.

```
Welcome to use lc-board!
lc-board login: root
# ifconfig eth0 up
[ 55.122449] gmac0: probed
[ 55.142369] gmac0 gmac0: eth0: eth0: PHY ID 00441400 at 0 IRQ poll (gmac0-0:0
0)
# [ 59.140308] PHY: gmac0-0:00 - Link is Up - 100/Full

# udhcpc -i eth0
udhcpc: started, v1.27.2
udhcpc: sending discover
udhcpc: sending select for 192.168.0.169
udhcpc: lease of 192.168.0.169 obtained, lease time 86400
deleting routers
adding dns 192.168.0.1
# ping baidu.com
PING baidu.com (220.181.38.148): 56 data bytes
64 bytes from 220.181.38.148: seq=0 ttl=53 time=38.163 ms
64 bytes from 220.181.38.148: seq=1 ttl=53 time=37.837 ms
64 bytes from 220.181.38.148: seq=2 ttl=53 time=38.230 ms
64 bytes from 220.181.38.148: seq=3 ttl=53 time=38.115 ms
64 bytes from 220.181.38.148: seq=4 ttl=53 time=38.012 ms
64 bytes from 220.181.38.148: seq=5 ttl=53 time=38.421 ms
```



4, Voice Recording

Enter cd /tmp and press enter respectively.

amixer cset numid=10,iface=MIXER,name='Audio main mic' 1 and press Enter.

arecord -d 3 -f S16_LE -r 16000 tmp.wav and press Enter, after recording, wait for "#" to display indicating that the recording is complete.

```
# cd /tmp
# amixer cset numid=10,iface=MIXER,name='Audio main mic' 1
numid=10,iface=MIXER,name='Audio main mic'
: type=BOOLEAN,access=rw----,values=1
: values=off
# arecord -d 3 -f S16_LE -r 16000 tmp.wav
Recording WAVE 'tmp.wav' : Signed 16 bit Little Endian, Rate 16000 Hz, Mono
#
```

5, Music player

amixer cset numid=1,iface=MIXER,name='Master playback volume' 63 and press Enter

amixer cset numid=17,iface=MIXER,name='Speaker Function' 0 and press Enter

aplay tmp.wav and Press Enter, plug in the 3.5mm plug headphone cable or playback device to hear the sound just recorded

```
# amixer cset numid=1,iface=MIXER,name='Master playback volume' 63
numid=1,iface=MIXER,name='Master Playback Volume'
: type=INTEGER,access=rw----,values=1,min=0,max=63,step=0
: values=63
# amixer cset numid=17,iface=MIXER,name='Speaker Function' 0
numid=17,iface=MIXER,name='Speaker Function'
: type=ENUMERATED,access=rw----,values=1,items=3
: Item #0 'headset'
: Item #1 'spk'
: Item #2 'headset-spk'
: values=0
# aplay tmp.wav
Playing WAVE 'tmp.wav' : Signed 16 bit Little Endian, Rate 16000 Hz, Mono
#
```

6, WIFI

Enter ifconfig wlan0 up and press Enter, and then fill in the router's ssid and password in vi /etc/wpa_supplicant.conf

```
ctrl_interface=/var/run/wpa_supplicant
update_config=1

network={
    ssid="SSID"
    key_mgmt=WPA-PSK
    psk="PASSWORD"
}
~
```



Then execute the wifi link command and get the dynamic ip through udhcpc to connect to the network

wpa_supplicant -D nl80211 -i wlan0 -c /etc/wpa_supplicant.conf -B and press Enter

udhcpc -i wlan0 and press Enter

ping baidu.com and press Enter

```
# ifconfig wlan0 up
[ 15.645017] esp_op_start
[ 15.647896] esp_op_add_interface enter: type 2, addr ac:d0:74:04:1b:28
[ 15.655321] esp_op_add_interface STA
[ 15.670288] esp_op_bss_info_changed enter: changed e, assoc 0, bssid 00:00:00:00:00:00
[ 15.683221] esp_op_bss_info_changed enter: changed 2000, assoc 0, bssid 00:00:00:00:00:00
[ 15.699746] esp_op_bss_info_changed enter: changed 4000, assoc 0, bssid 00:00:00:00:00:00
[ 15.712264] esp_op_flush enter
[ 15.729878] ADDRCONF(NETDEV_UP): wlan0: link is not ready
# wpa_supplicant -D nl80211 -i wlan0 -c /etc/wpa_supplicant.conf -B
Successfully initialized wpa_supplicant
rfkill: Cannot open RFKILL control device
nl80211: Could not re-add multicast membership for vendor events: -2 (No such file or directory)
# [ 28.992055] esp_op_bss_info_changed enter: changed 4000, assoc 0, bssid 00:00:00:00:00:00
[ 29.915252] esp_op_bss_info_changed enter: changed 4000, assoc 0, bssid 00:00:00:00:00:00
[ 29.940668] esp_op_flush enter
[ 29.969967] esp_op_bss_info_changed enter: changed 4000, assoc 0, bssid 00:00:00:00:00:00
[ 29.979927] esp_op_bss_info_changed enter: changed a0, assoc 0, bssid b4:0f:3b:bb:3e:31
[ 30.246076] esp_op_sta_add enter, vif addr ac:d0:74:04:1b:28, sta addr b4:0f:3b:bb:3e:31
[ 30.258971] esp_op_bss_info_changed enter: changed 305d, assoc 1, bssid b4:0f:3b:bb:3e:31
[ 30.276005] ADDRCONF(NETDEV_CHANGE): wlan0: link becomes ready
[ 30.312059] esp_op_set_key enter, flags = 9 keyindx = 0 cmd = 0 mac = ac:d0:74:04:1b:28 cipher = fac04
[ 30.334967] esp_op_set_key exit
[ 30.339591] esp_op_set_key enter, flags = 1 keyindx = 1 cmd = 0 mac = ac:d0:74:04:1b:28 cipher = fac02
[ 30.351114] esp_op_set_key exit
[ 30.354883] esp_op_bss_info_changed enter: changed 4, assoc 1, bssid b4:0f:3b:bb:3e:31
[ 31.884189] esp_op_ampdu_action enter
[ 31.888456] esp_op_ampdu_action RX START b4:0f:3b:bb:3e:31 tid 0 2

# udhcpc -i wlan0
udhcpc: started, v1.27.2
udhcpc: sending discover
udhcpc: sending select for 192.168.0.179
udhcpc: lease of 192.168.0.179 obtained, lease time 86400
[ 46.997876] esp_op_bss_info_changed enter: changed 1000, assoc 1, bssid b4:0f:3b:bb:3e:31
deleting routers
adding dns 192.168.0.1
# ping baidu.com
[ 57.898977] esp_op_ampdu_action enter
[ 57.903325] esp_op_ampdu_action TX START, addr:b4:0f:3b:bb:3e:31,tid:0,state:1
PING baidu.com (39.156.69.79): 56 data bytes
[ 57.929080] esp_op_ampdu_action enter
[ 57.933426] esp_op_ampdu_action TX OPERATION, addr:b4:0f:3b:bb:3e:31,tid:0,state:2
64 bytes from 39.156.69.79: seq=0 ttl=49 time=103.960 ms
64 bytes from 39.156.69.79: seq=1 ttl=49 time=55.822 ms
64 bytes from 39.156.69.79: seq=2 ttl=49 time=58.443 ms
64 bytes from 39.156.69.79: seq=3 ttl=49 time=54.594 ms
64 bytes from 39.156.69.79: seq=4 ttl=49 time=54.709 ms
64 bytes from 39.156.69.79: seq=5 ttl=49 time=52.516 ms
^C
--- baidu.com ping statistics ---
6 packets transmitted, 6 packets received, 0% packet loss
round-trip min/avg/max = 52.516/63.340/103.960 ms
# [ 71.201932] esp_op_ampdu_action enter
[ 71.206193] esp_op_ampdu_action RX START b4:0f:3b:bb:3e:31 tid 6 0

# KEY
```

7, The screen is covered with random color dots

Kill the pathstroke application process before executing the command with random color dots on the screen

Enter ps and press Enter, you can see many processes, for example, pathstroke is the 139th, you can enter Kill 139 and press enter and the carriage return ends (each time you restart the device, it may not be 139), and the circle on the display stops moving



```
COM10 - PuTTY

# ps
 PID  USER      COMMAND
  1 root      init
  2 root      [kthreadd]
  3 root      [ksoftirqd/0]
  4 root      [kworker/0:0]
  5 root      [kworker/u:0]
  6 root      [khelper]
  7 root      [kdevtmpfs]
  8 root      [sync_supers]
  9 root      [bdi-default]
 10 root     [kblockd]
 11 root     [system]
 12 root     [khubd]
 13 root     [kworker/0:1]
 14 root     [cfg80211]
 15 root     [rpciod]
 16 root     [khungtaskd]
 17 root     [kswapd0]
 18 root     [fsnotify_mark]
 19 root     [nfsiod]
 20 root     [kworker/u:1]
 37 root     [SunxiDisCommit]
 38 root     [Sunxi_WB]
 39 root     [kworker/0:2]
 40 root     [kapmd]
 41 root     [nftld]
 42 root     [nand0]
 43 root     [nand1]
 44 root     [nand2]
 45 root     [nand3]
 46 root     [nand4]
 47 root     [nand_rcd]
 48 root     [f_mtp]
 49 root     [file-storage]
 50 root     [switch_resume]
 51 root     [codec_init]
 52 root     [deferwq]
 53 root     [kworker/u:2]
 54 root     [esp_wkq]
 56 root     [jbd2/nandd-8]
 57 root     [ext4-dio-unwrit]
 60 root     [flush-93:24]
 70 root     /sbin/syslogd -n
 73 root     /sbin/klogd -n
 98 root     [ksdioirqd/mmc1]
112 root     /usr/sbin/sshd
139 root     /usr/share/qt/demos/pathstroke/pathstroke -small-screen -nomouse
142 root     -sh
146 root     ps
#
56 root     [jbd2/nandd-8]
57 root     [ext4-dio-unwrit]
60 root     [flush-93:24]
70 root     /sbin/syslogd -n
73 root     /sbin/klogd -n
98 root     [ksdioirqd/mmc1]
112 root     /usr/sbin/sshd
139 root     /usr/share/qt/demos/pathstroke/pathstroke -small-screen -nomouse
142 root     -sh
146 root     ps
#
# kill 139
#
```

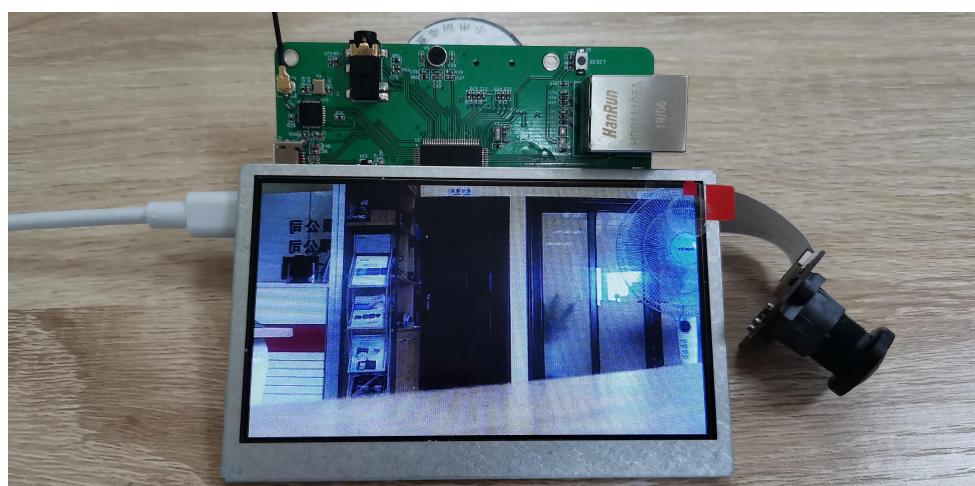
Finally enter cat /dev/urandom> /dev/fb0 and press Enter



8. Camera

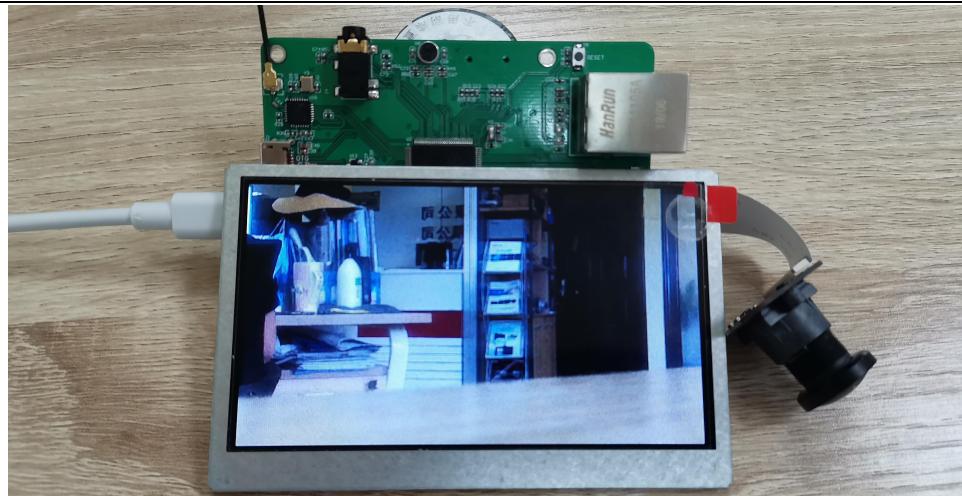
If pathstroke has not been killed, you need to kill it before opening the camera command.

Connect the AR0330 camera, reset the device, wait for the boot to complete the root login and enter demo-camera and Press Enter, the image can be seen on the screen.





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广东省深圳市福田区益田路 3008 号皇都广场 C 座 1803-1804 室
Address: Room 1803-1804, Block C, Huangdu Plaza, No.3008 Yitian Road, Futian District, Shenzhen, Guangdong, China, 518000

网址/Web: www.lctech-inc.com/www.chinalctech.com