

Link-card Tech HDMICard LCC260 on Linux

(test on ubuntu 16.04 x64)

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HDMI Card & Encoder LCC260 for windows/Linux/Mac



1. Detect LCC260

mrtos@mrtos-ThinkPad-E470c:~\$ **lsusb**

Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub

Bus 001 Device 004: ID 04f2:b594 Chicony Electronics Co., Ltd

Bus 001 Device 003: ID 0cf3:e500 Atheros Communications, Inc.

Bus 001 Device 051: ID 0c45:6367 Microdia

Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub

ID 0c45:6367 Microdia is LCC260

2. Ffmpeg

2.1 Install ffmpeg:

sudo apt-get install ffmpeg

mrtos@mrtos-ThinkPad-E470c:~\$ *sudo apt-get install ffmpeg*

Reading package lists... Done

Building dependency tree

Reading state information... Done

ffmpeg is already the newest version (7:2.8.15-0ubuntu0.16.04.1).

0 upgraded, 0 newly installed, 0 to remove and 572 not upgraded.

mrtos@mrtos-ThinkPad-E470c:~\$ *ffmpeg -v*

ffmpeg version 2.8.15-0ubuntu0.16.04.1 Copyright (c) 2000-2018 the FFmpeg developers

built with gcc 5.4.0 (Ubuntu 5.4.0-6ubuntu1~16.04.10) 20160609

configuration: --prefix=/usr --extra-version=0ubuntu0.16.04.1 --build-suffix=-ffmpeg

--toolchain=hardened --libdir=/usr/lib/x86_64-linux-gnu

--incdir=/usr/include/x86_64-linux-gnu --cc=cc --cxx=g++ --enable-gpl --enable-shared

--disable-stripping --disable-decoder=libopenjpeg --disable-decoder=libschroedinger

--enable-avresample --enable-avisynth --enable-gnutls --enable-ladspa --enable-libass

--enable-libbluray --enable-libbs2b --enable-libcaca --enable-libcdio --enable-libflite

--enable-libfontconfig --enable-libfreetype --enable-libfribidi --enable-libgme

--enable-libgsm --enable-libmodplug --enable-libmp3lame --enable-libopenjpeg

--enable-libopus --enable-libpulse --enable-librtmp --enable-libschrödinger

--enable-libshine --enable-libsnappy --enable-libsoxr --enable-libspeex --enable-libssh

--enable-libtheora --enable-libtwolame --enable-libvorbis --enable-libvpx

--enable-libwavpack --enable-libwebp --enable-libx265 --enable-libxvid --enable-libzvb

--enable-openal --enable-opengl --enable-x11grab --enable-libdc1394

--enable-libiec61883 --enable-libzmq --enable-frei0r --enable-libx264 --enable-libopencv

libavutil 54. 31.100 / 54. 31.100

libavcodec 56. 60.100 / 56. 60.100

libavformat 56. 40.101 / 56. 40.101

libavdevice 56. 4.100 / 56. 4.100

libavfilter 5. 40.101 / 5. 40.101

libavresample 2. 1. 0 / 2. 1. 0

libswscale 3. 1.101 / 3. 1.101

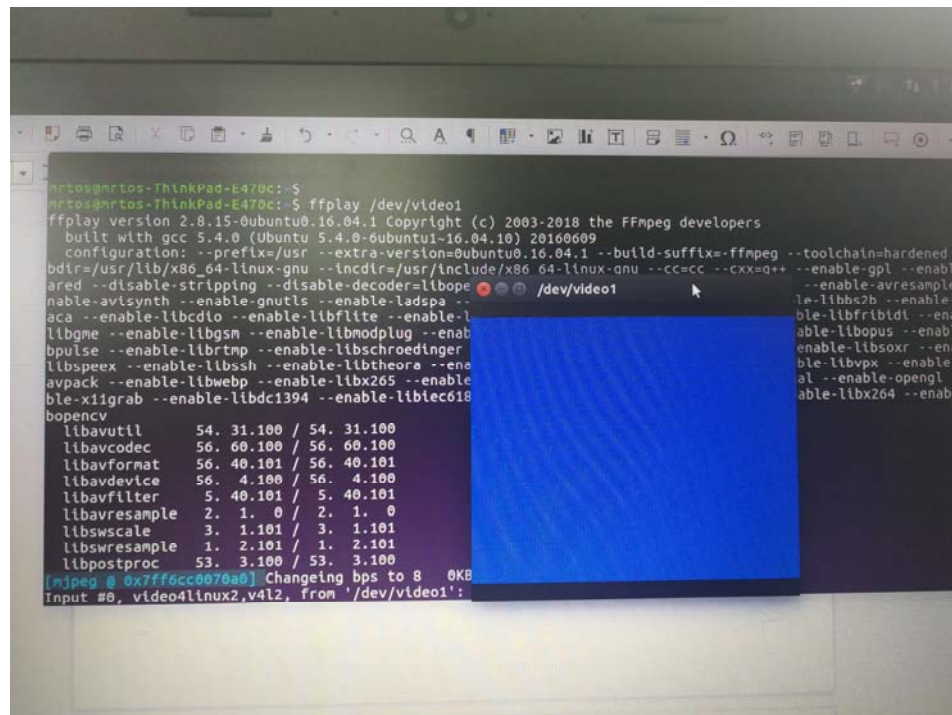
libswresample 1. 2.101 / 1. 2.101

libpostproc 53. 3.100 / 53. 3.100
Missing argument for option 'v'.

2.2 Play Mjpeg stream

mrtos@mrtos-ThinkPad-E470c:~\$ **ffplay /dev/video1**

*ffplay version 2.8.15-0ubuntu0.16.04.1 Copyright (c) 2003-2018 the FFmpeg developers
built with gcc 5.4.0 (Ubuntu 5.4.0-6ubuntu1~16.04.10) 20160609
configuration: --prefix=/usr --extra-version=0ubuntu0.16.04.1 --build-suffix=-ffmpeg
--toolchain=hardened --libdir=/usr/lib/x86_64-linux-gnu
--incdir=/usr/include/x86_64-linux-gnu --cc=cc --cxx=g++ --enable-gpl --enable-shared
--disable-stripping --disable-decoder=libopenjpeg --disable-decoder=libschrödinger
--enable-avresample --enable-avisynth --enable-gnutls --enable-ladspa --enable-libass
--enable-libbluray --enable-libbs2b --enable-libcaca --enable-libcdio --enable-libflite
--enable-libfontconfig --enable-libfreetype --enable-libfribidi --enable-libgme
--enable-libgsm --enable-libmodplug --enable-libmp3lame --enable-libopenjpeg
--enable-libopus --enable-libpulse --enable-librtmp --enable-libschrödinger
--enable-libshine --enable-libsnappy --enable-libsoxr --enable-libspeex --enable-libssh
--enable-libtheora --enable-libtwolame --enable-libvorbis --enable-libvpx
--enable-libwavpack --enable-libwebp --enable-libx265 --enable-libxvid --enable-libzvybi
--enable-openal --enable-opengl --enable-x11grab --enable-libdc1394
--enable-libiec61883 --enable-libzmq --enable-frei0r --enable-libx264 --enable-libopencv
libavutil 54. 31.100 / 54. 31.100
libavcodec 56. 60.100 / 56. 60.100
libavformat 56. 40.101 / 56. 40.101
libavdevice 56. 4.100 / 56. 4.100
libavfilter 5. 40.101 / 5. 40.101
libavresample 2. 1. 0 / 2. 1. 0
libswscale 3. 1.101 / 3. 1.101
libswresample 1. 2.101 / 1. 2.101
libpostproc 53. 3.100 / 53. 3.100
[mjpeg @ 0x7fb9d80070a0] Changing bps to 8 0KB sq= 0B f=0/0
Input #0, video4linux2,v4l2, from '/dev/video1':
Duration: N/A, start: 3371230.281270, bitrate: N/A
Stream #0:0: Video: mjpeg, yuvj420p(pc, bt470bg/unknown/unknown), 720x576 [SAR
1:1 DAR 5:4], -5 kb/s, 30 fps, 30 tbr, 1000k tbn, 1000k tbc*



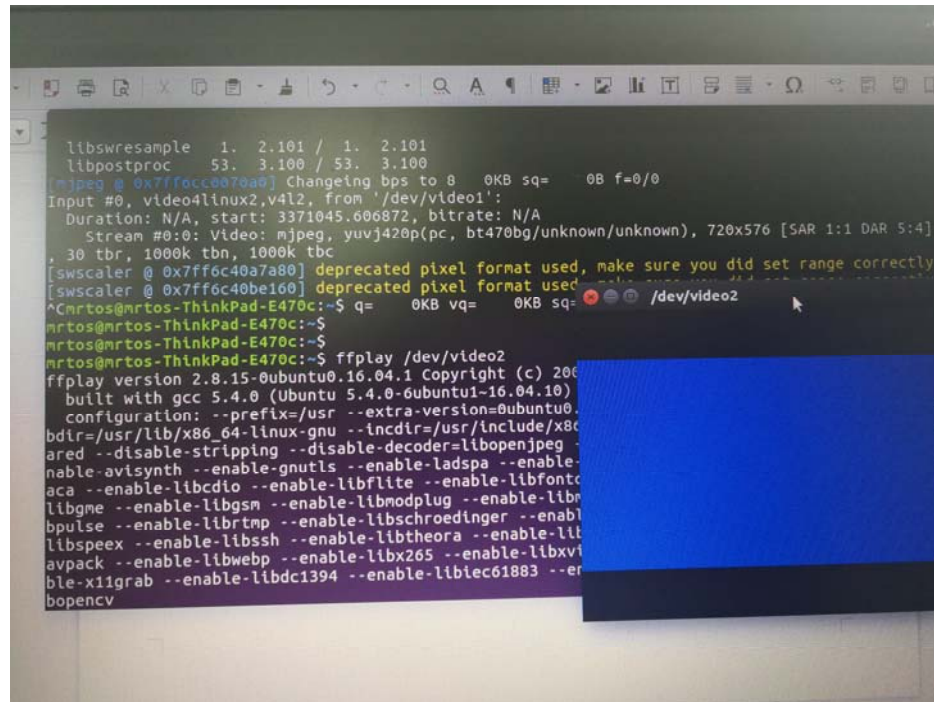
2.3 Play h264 stream

mrtos@mrtos-ThinkPad-E470c:~\$ [ffplay /dev/video2](#)

```
ffplay version 2.8.15-0ubuntu0.16.04.1 Copyright (c) 2003-2018 the FFmpeg developers
  built with gcc 5.4.0 (Ubuntu 5.4.0-6ubuntu1~16.04.10) 20160609
  configuration: --prefix=/usr --extra-version=0ubuntu0.16.04.1 --build-suffix=-ffmpeg --toolchain=hardened --
  --libdir=/usr/lib/x86_64-linux-gnu --cc=cc --cxx=g++ --enable-gpl --enable-shared
  --disable-stripping --disable-decoder=libopenjpeg --disable-decoder=libschroedinger
  --enable-avresample --enable-avisynth --enable-gnutls --enable-ladspa --enable-libass
  --enable-libbluray --enable-libbs2b --enable-libcaca --enable-libcdio --enable-libflite
  --enable-libfontconfig --enable-libfreetype --enable-libfribidi --enable-libgme
  --enable-libgsm --enable-libmodplug --enable-libmp3lame --enable-libopenjpeg
  --enable-libopus --enable-libpulse --enable-librtmp --enable-lbschroedinger
  --enable-libshine --enable-libsnappy --enable-libsoxr --enable-lbspeex --enable-libssh
  --enable-libtheora --enable-libtwolame --enable-libvorbis --enable-libvpx
  --enable-libwavpack --enable-libwebp --enable-libx265 --enable-libxvid --enable-libzvb
  --enable-openal --enable-opengl --enable-x11grab --enable-libdc1394 --enable-libiec61883
  --enable-libzmq --enable-frei0r --enable-libx264 --enable-libpencv
  libavutil      54. 31.100 / 54. 31.100
  libavcodec     56. 60.100 / 56. 60.100
  libavformat    56. 40.101 / 56. 40.101
```

[illegible]

[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
[h264 @ 0x7f4ac40070a0] non-existing PPS 0 referenced 0B f=0/0
Last message repeated 1 times
[h264 @ 0x7f4ac40070a0] decode_slice_header error
[h264 @ 0x7f4ac40070a0] no frame!
Input #0, video4linux2,v4l2, from '/dev/video2':B sq= 0B f=0/0
Duration: N/A, start: 3371285.661594, bitrate: N/A
Stream #0:0: Video: h264 (High), yuv420p, 1920x1080, -5 kb/s, 30 fps, 30 tbr, 1000k tbn,
2000k tbc
Switch subtitle stream from #-1 to #-10KB vq= 54KB sq= 0B f=0/0
^Cmrtos@mrtos-ThinkPad-E470c:~\$ q= 0KB vq= 53KB sq= 0B f=0/0
mrtos@mrtos-ThinkPad-E470c:~\$



3. v4l-utils

3.1 install v4l-utils

`sudo apt-get install v4l-utils`

```
mrtos@mrtos-ThinkPad-E470c:~$ sudo apt-get install v4l-utils
Reading package lists... Done
Building dependency tree
Reading state information... Done
v4l-utils is already the newest version (1.10.0-1).
0 upgraded, 0 newly installed, 0 to remove and 572 not upgraded.
mrtos@mrtos-ThinkPad-E470c:~$
```

3.2 Get device info

`mrtos@mrtos-ThinkPad-E470c:~$ v4l2-ctl --list-devices`

HDMICard: HDMI Cap&Encoder (usb-0000:00:14.0-2):
/dev/video1
/dev/video2

Integrated Camera: Integrated C (usb-0000:00:14.0-7):
/dev/video0

mrtos@mrtos-ThinkPad-E470c:~\$

3.3 Get Mjpeg stream details

mrtos@mrtos-ThinkPad-E470c:~\$ v4l2-ctl --all -d /dev/video1

Driver Info (not using libv4l2):

Driver name : uvcvideo
Card type : HDMICard: HDMI Cap&Encoder
Bus info : usb-0000:00:14.0-2
Driver version: 4.13.13
Capabilities : 0x84200001

Video Capture

Streaming

Extended Pix Format

Device Capabilities

Device Caps : 0x04200001

Video Capture

Streaming

Extended Pix Format

Priority: 2

Video input : 0 (Camera 1: ok)

Format Video Capture:

Width/Height : 720/576

Pixel Format : 'MJPG'

Field : None

Bytes per Line : 0

Size Image : 4147200

Colorspace : sRGB

Transfer Function : Default

YCbCr Encoding : Default

Quantization : Default

Flags :

Crop Capability Video Capture:

Bounds : Left 0, Top 0, Width 720, Height 576

Default : Left 0, Top 0, Width 720, Height 576

Pixel Aspect: 1/1

Selection: crop_default, Left 0, Top 0, Width 720, Height 576
Selection: crop_bounds, Left 0, Top 0, Width 720, Height 576
Streaming Parameters Video Capture:
Capabilities : timeperframe
Frames per second: 30.000 (30/1)
Read buffers : 0
brightness (int) : min=-127 max=127 step=1 default=0 value=0
contrast (int) : min=0 max=255 step=1 default=128 value=128
saturation (int) : min=0 max=255 step=1 default=128 value=128
hue (int) : min=0 max=360 step=1 default=0 value=0

3.4 Get H264 stream details

mrtos@mrtos-ThinkPad-E470c:~\$ `v4l2-ctl --all -d /dev/video2`

Driver Info (not using libv4l2):

Driver name : uvcvideo
Card type : HDMICard: HDMI Cap&Encoder
Bus info : usb-0000:00:14.0-2
Driver version: 4.13.13
Capabilities : 0x84200001
Video Capture
Streaming
Extended Pix Format
Device Capabilities
Device Caps : 0x04200001
Video Capture
Streaming
Extended Pix Format

Priority: 2

Video input : 0 (Camera 1: ok)

Format Video Capture:

Width/Height : 1920/1080
Pixel Format : 'H264'
Field : None
Bytes per Line : 3840
Size Image : 2073600
Colorspace : sRGB
Transfer Function : Default
YCbCr Encoding : Default
Quantization : Default
Flags :

Crop Capability Video Capture:

Bounds : Left 0, Top 0, Width 1920, Height 1080
Default : Left 0, Top 0, Width 1920, Height 1080

```
Pixel Aspect: 1/1
Selection: crop_default, Left 0, Top 0, Width 1920, Height 1080
Selection: crop_bounds, Left 0, Top 0, Width 1920, Height 1080
Streaming Parameters Video Capture:
  Capabilities    : timeperframe
  Frames per second: 30.000 (30/1)
  Read buffers    : 0
    brightness (int) : min=-127 max=127 step=1 default=0 value=0
    contrast (int)  : min=0 max=255 step=1 default=128 value=128
    saturation (int) : min=0 max=255 step=1 default=128 value=128
    hue (int)       : min=0 max=360 step=1 default=0 value=0
mrtos@mrtos-ThinkPad-E470c:~$
```

4. Gvncview

4.1 Install gvncview

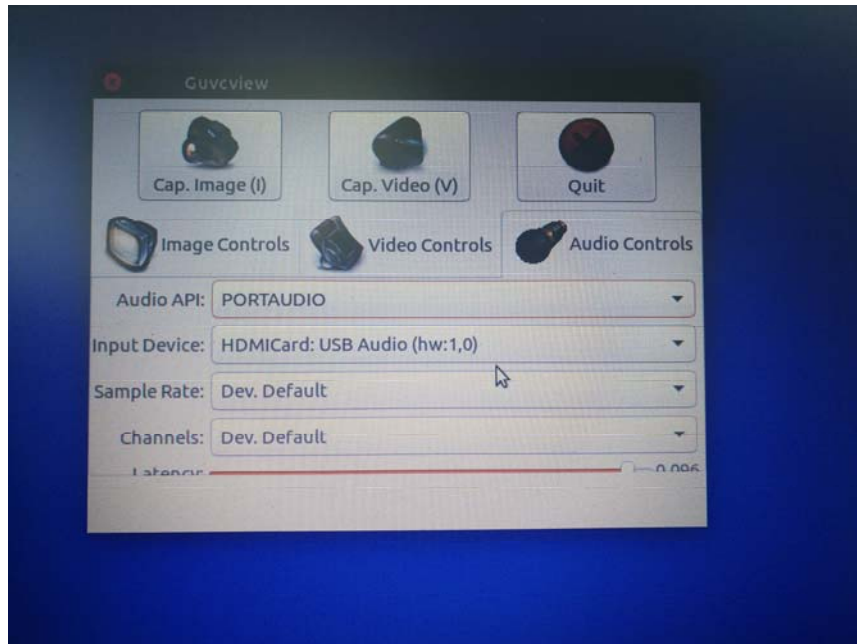
```
sudo apt-get install gvncview

mrtos@mrtos-ThinkPad-E470c:~$ sudo apt-get install gvncview
Reading package lists... Done
Building dependency tree
Reading state information... Done
gvncview is already the newest version (2.0.2+debian-3).
0 upgraded, 0 newly installed, 0 to remove and 572 not upgraded.
```

4.2 Play mjpeg/h264 streams

```
mrtos@mrtos-ThinkPad-E470c:~$ gvncview
```





5. Others free softwares for HDMI CARD LCC260

1. VLC
2. Mplayer
3. Potplayer
4. OBS