

Rockchip Buildroot Chromecast Introdution

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Preface

Overview

This document presents configuration methods and basic usage of Buildroot SDK Chromecast.

Product Version

Chipset	Kernel Version
All chipset	4.4

Intended Audience

This document (this guide) is mainly intended for:

Technical support engineers

Software development engineers

Revision History

Version	Author	Date	Revision History
V1.0.0	Jeff Chen	2019-11-27	Initial version
V1.0.1	Ruby Chen	2020-07-22	Update the company name and the format of the document

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1. Introduction

Chromecast is a line of digital media players developed by Google. The devices enable users to cast streamed audio-visual content to any Chromecast receiver that support Google Cast technology (such as Google Chromecast devices).

The latest Rockchip Buildroot SDK provides Chromecast sender support through open source python packages such as pychromecast and mkchromecast.

2. Usage

2.1 pychromecast

Currently, pychromecast is the most popular open source Chromecast protocol (v2) implementation software package, supporting device discovery, playback control, program control and other functions.

Please ensure that Buildroot repository is updated to this commit before using pychromecast:

```
commit 19031dafae2437c79cca8120d310612061369cc0
Author: Jeffy Chen <jeffy.chen@rock-chips.com>
Date:   Thu Oct 10 10:57:10 2019 +0800

    packages: Add python-pychromecast

    Library for Python 3.6+ to communicate with the Google Chromecast.

    Change-Id: I2d90d51c27a38037c072fdc8c7f839c9dc079c32
    Signed-off-by: Jeffy Chen <jeffy.chen@rock-chips.com>
```

And enable BR2_PACKAGE_PYTHON_PYCHROMECAST in Buildroot menuconfig.

Detailed usage should be operated through the python script, an official example is showed below:

```
>> import time
>> import pychromecast

>> chromecasts = pychromecast.get_chromecasts()
>> [cc.device.friendly_name for cc in chromecasts]
['Dev', 'Living Room', 'Den', 'Bedroom']

>> cast = next(cc for cc in chromecasts if cc.device.friendly_name == "Living Room")
>> # Start worker thread and wait for cast device to be ready
>> cast.wait()
>> print(cast.device)
DeviceStatus(friendly_name='Living Room', model_name='Chromecast',
manufacturer='Google Inc.', uuid=UUID('df6944da-f016-4cb8-97d0-3da2ccaa380b'),
cast_type='cast')
```

```
>> print(cast.status)
CastStatus(is_active_input=True, is_stand_by=False, volume_level=1.0,
volume_muted=False, app_id='CC1AD845', display_name='Default Media Receiver',
namespaces=['urn:x-cast:com.google.cast.player.message', 'urn:x-cast:com.google.cast.media'], session_id='CCA39713-9A4F-34A6-A8BF-5D97BE7ECA5C',
transport_id='web-9', status_text='')

>> mc = cast.media_controller
>> mc.play_media('http://commondatastorage.googleapis.com/gtv-videos-bucket/sample/BigBuckBunny.mp4', 'video/mp4')
>> mc.block_until_active()
>> print(mc.status)
MediaStatus(current_time=42.458322,
content_id='http://commondatastorage.googleapis.com/gtv-videos-bucket/sample/BigBuckBunny.mp4', content_type='video/mp4', duration=596.474195,
stream_type='BUFFERED', idle_reason=None, media_session_id=1, playback_rate=1,
player_state='PLAYING', supported_media_commands=15, volume_level=1,
volume_muted=False)

>> mc.pause()
>> time.sleep(5)
>> mc.play()
```

2.2 mkchromecast

mkchromecast is the most popular open source Chromecast application currently. It provides Chromecast casting with UI (such as control menu) based on pychromecast and pyqt.

Please ensure that the Buildroot repository is updated to this commit before using mkchromecast:

```
commit 94a9402dcefeb9d5b8cf62d334a66cda9b5c92e6
Author: Jeffy Chen <jeffy.chen@rock-chips.com>
Date: Mon Oct 14 09:25:30 2019 +0800

    packages: Add python-mkchromecast

    Cast audio/video to your Google Cast devices.

    Change-Id: If60f3f6590a355d09a6647f5ae3bc7d61d6bf449
    Signed-off-by: Jeffy Chen <jeffy.chen@rock-chips.com>
```

And enable BR2_PACKAGE_PYTHON_PYCHROMECAST and BR2_PACKAGE_PYTHON_MKCHROMECAST in Buildroot menuconfig.

Please refer to mkchromecast program for detailed usage, an official example is showed below:

```
mkchromecast -y https://www.youtube.com/watch?v=VuMBaAZn3II --video
mkchromecast --source-url http://192.99.131.205:8000/pvfm1.ogg -c ogg --control
mkchromecast --video -i "/path/to/file.mp4"
```

