Rockchip RV1106/RV1103 Linux IPC SDK Release Note

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Preface

Overview

The document presents Rockchip RV1106/RV1103 Linux IPC SDK release notes, aiming to help engineers get started with RV1106/RV1103 IPC SDK development and debugging faster.

Intended Audience

This document (this guide) is mainly intended for:

Technical support engineers

Software development engineers

Product Version

Chipset	Kernel Version
RV1106/RV1103	Linux 5.10

Revision History

Date	Version	Author	Revision History
2022-04-02	V0.0.1	CWW	Initial version
2022-05-09	V0.1.0	CWW	Beta version
2022-05-30	V1.0.0	CWW	Release version
2023-08-25	V1.1.0	CWW	Add the download address for battery & smart doorbell SDK

Contents

1. Overview

This SDK supports busybox file system, with kernel 5.10 and U-boot v2017.09. It is suitable for RV1106/RV1103 EVB development boards and all other IPC products developed based on it.

This SDK is suitable for, but not limited to IPC products, providing flexible data path combination interfaces to meet the customized requirements for free combination, please refer to the documents under the project's docs/ directory.

2. How to Get the SDK

The SDK is released by Rockchip server. Please refer to Software Development Guide to build a development environment.

2.1 Get RV1106/RV1103 Linux IPC Linux SDK

2.1.1 Get Source Code from Rockchip Code Server

To get the IPC SDK software package, customers need an account to access the source code repository provided by Rockchip. In order to get code synchronization permission, please provide SSH public key for server authentication and authorization when apply for SDK from Rockchip technical window. About Rockchip server SSH public key authorization, please refer to SSH Public Key Operation Introduction.

The IPC SDK download command is as follows：

```
repo init --repo-url ssh://git@www.rockchip.com.cn/repo/rk/tools/repo \
   -u ssh://git@www.rockchip.com.cn/linux/rockchip/ipc/manifests \
   -b master -m rv1106_ipc_linux_release.xml
```

The Battery IPC & Smart Doorbell SDK download command is as follows:

```
repo init --repo-url ssh://git@www.rockchip.com.cn/repo/rk/tools/repo \
   -u ssh://git@www.rockchip.com.cn/linux/rockchip/ipc/manifests \
   -b master -m rv1106_rv1103_battery_ipc_linux_release.xml
```

Repo, a tool built on Python script by Google to help manage git repositories, is mainly used to download and manage software repository of projects. The download address is as follows:

```
git clone ssh://git@www.rockchip.com.cn/repo/rk/tools/repo
```

2.1.2 Get Source Code from Local Compression Package

For quick access to SDK source code, Rockchip Technical Window usually provides corresponding version of SDK initial compression package. In this way, developers can get SDK source code through decompressing the initial compression package, which is the same as the one downloaded by repo.
Take RV1106_LINUX_IPC_SDK_VX.X.X_XXX.tar.bz2 as an example. After geting a initialization package, you can get source code by running the following command:

```
mkdir RV1106_IPC_SDK
tar xvf RV1106_LINUX_IPC_SDK_VX.X.X_XXX.tar.bz2  -C RV1106_IPC_SDK
cd RV1106_IPC_SDK
.repo/repo/repo sync -l
.repo/repo/repo sync -c
```

Developers can update via `.repo/repo/repo sync -c` command according to update introductions that are regularly released by FAE window.

3. Software Development Guide

For software development, please refer to the quick start documents in the project directory:

```
# The IPC SDK Quick Start
<SDK>/docs/en/ipc/Rockchip_Quick_Start_Linux_IPC_SDK_EN.pdf

# The Battery IPC & Smart Doorbell SDK Quick Start
<SDK>/docs/en/battery_doorbell/Rockchip_RV1106_RV1103_Quick_Start_Linux_Battery_IPC_Doorbell_EN.pdf
```

4. SSH Public Key Operation Introduction

Please follow the introduction in the “Rockchip_User_Guide_SDK_Application_And_Synchronization_CN” to generate an SSH public key and send the email to fae@rock-chips.com, to get the SDK code.
This document will be released to customers during the process of applying for permission.

4.1 Key Authority Management

Server can monitor download times and IP information of a key in real time. If an abnormality is found, download permission of the corresponding key will be disabled.

Keep the private key file properly. Do not grant second authorization to third parties.