



Amlogic Buildroot Openlinux Release Note

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Revision History

Revision	Date	Author	Changes
V20190131	Jan 31, 2019	Yeping Miao	Bringup Release for SoundBar Reference

Amlogic Buildroot Openlinux A113-SBR V201901

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1. Basic Information

1.1. Introduction

This document provides the Openlinux notes for Amlogic Linux SBR (SoundBar Reference) source code release running on Amlogic SBR hardware. To obtain Amlogic Linux SBR reference source code, you need to have an account to access Amlogic GIT source code repository.

1.2. How to Get Code

1) repo command

You can download Linux BSP source code by running the following repo commands:

- **China openlinux server**

```
$ cd ~/<your-repo-dir>/
$ repo init -u ssh://git@openlinux.amlogic.com/buildroot/platform/manifest.git
$ repo init -m buildroot-openlinux-201901-a113-sbr-bringup.xml
$ repo sync
```

- **Overseas openlinux server**

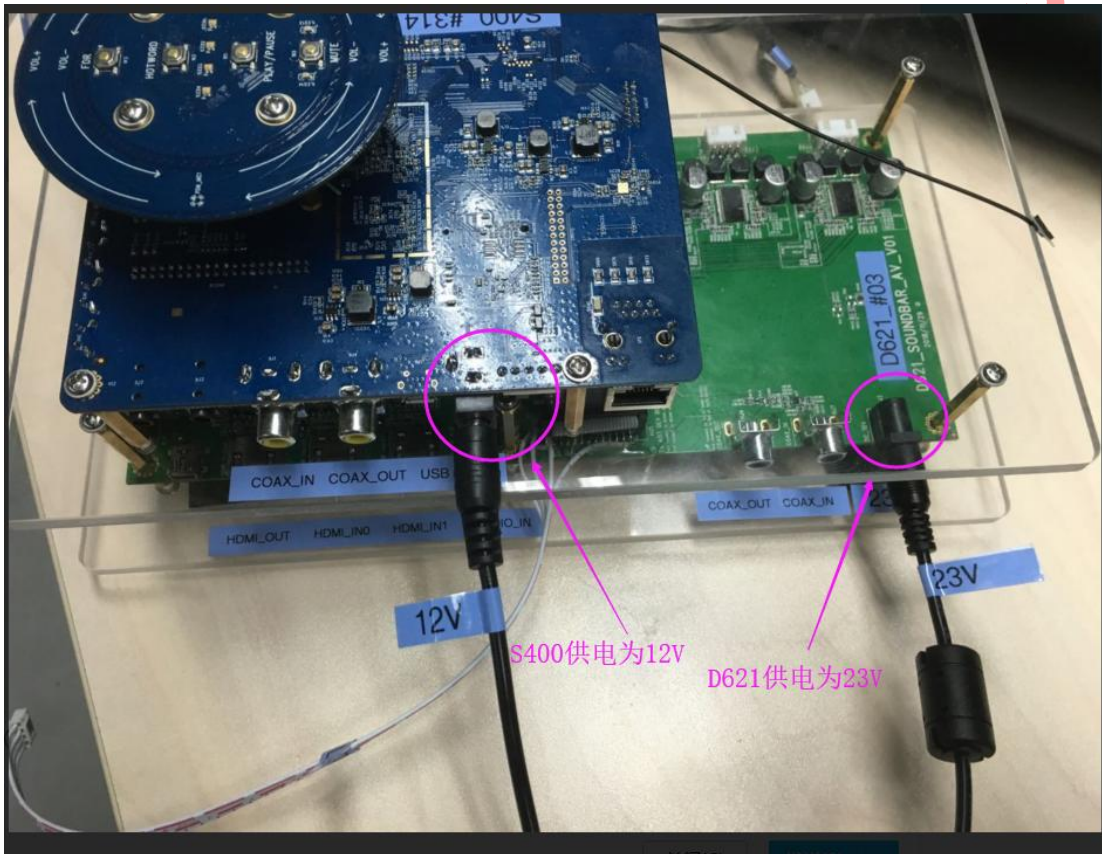
```
$ cd ~/<your-repo-dir>/
$ repo init -u ssh://git@openlinux2.amlogic.com/buildroot/platform/manifest.git
$ repo init -m buildroot-openlinux-201901-a113-sbr-bringup.xml
$ repo sync
```

1.3. Reference Platform

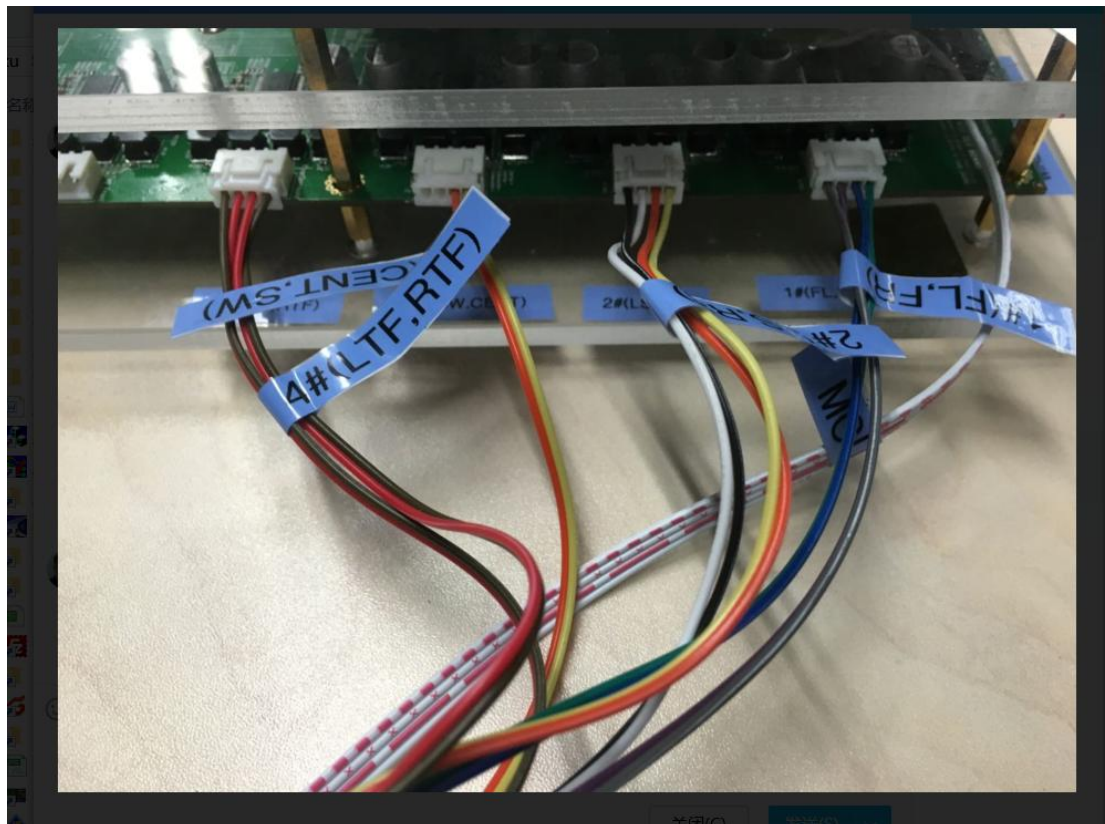
- **S400(A113D)**
EMMC,WIFI AP6398S,DDR 1GB, Flash 512M
- **SD621**
MCU IT6350, HDMI IT66321, TAS5782M x 6

1.3.1.How connect power supply

S400 and D621 use the different power supplies. S400 uses 12v, and D621 uses 23v.
Please plugin power supply according to the instruction, otherwise it will damage the boards.



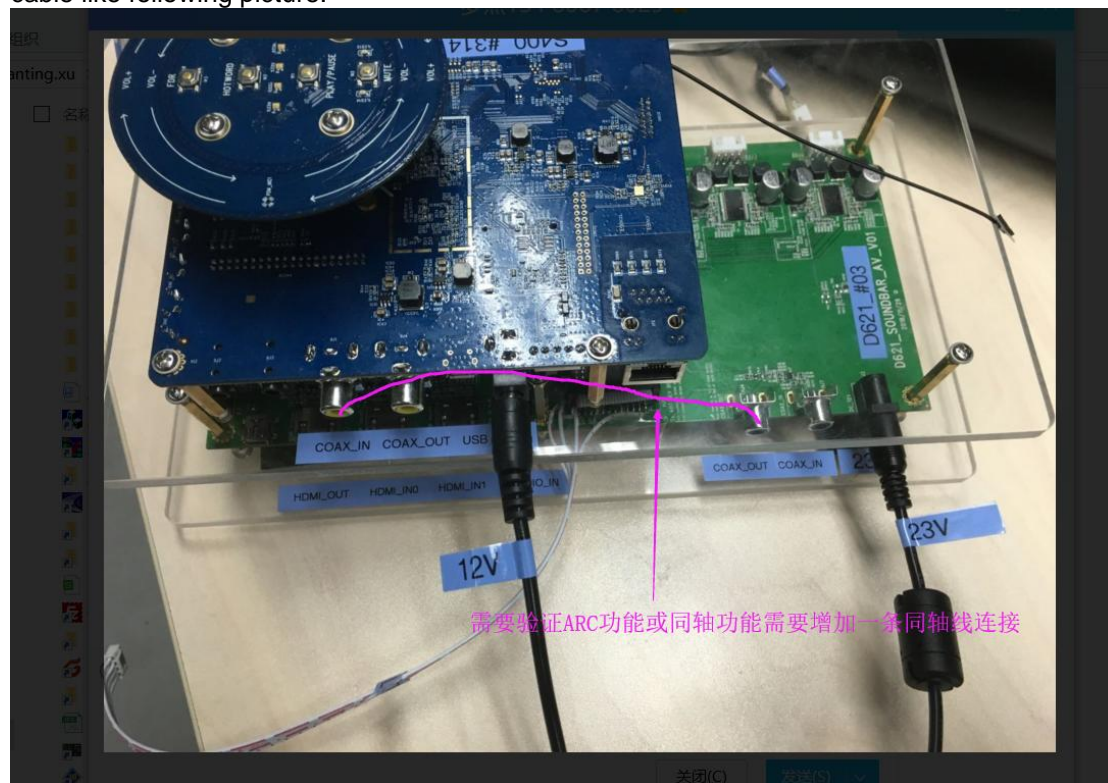
1.3.2. Speaker Connection



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1.3.3.SPDIF & Coax Connection

Plug in the Coax to COAX_IN of D621, and we should connect COAX_OUT of D621 to COAX_IN of S400 by a cable like following picture.



1.4. How to Build Code

1.4.1. Build

You can find corresponding Buildroot setenv config and kernel config for the reference hardware by doing the following:

1) SoundBar Reference (S400+D621)

```
. buildroot/build/setenv.sh
select mesonaxg_s400_sbr_32_release
make
```

Note: Do not use make -jN here as Buildroot does not support top-level parallel make. This does not mean that Buildroot does not support parallel compilation, but just that it will handle this inside the Buildroot compilation system.

The upgrade file aml_upgrade_package.img will be generated in output/[config_build_folder]/images/.

1.5. How to Upgrade

- For Windows: Upgrade with USB burn tool. (version 2.1.5 or upper)
- For Linux: Upgrade with bash script aml_update_whole_package.sh. Make sure usb driver has been installed correctly.
 - 1) plugin power cable, at the same time, hold down the POWER key.
 - 2) plugin the usb cable within 5 seconds.
 - 3) cd the script directory.
 - 4) ./aml_update_whole_package.sh path/to/aml_upgrade_package.img.

1.6. How to operate with remote controller

Now we can support following keys, please reference the following picture, the keys with red text have been supported.

SOURCE: Switch to next source. HDMI1->HDMI2->SPDIF(COAX)->LINEIN->OTT(local stream player)->BT->HDMI1

BlueTooth: Switch to BT directly. After switch to BT, then you can use smart phone to connect to SBR(SoundBar Reference) by bluetooth and start to play music.

Note: When you connect BT, if you want to switch to other source, please disconnect BT manually first.

LINEIN: Switch to LINEIN (AUX) directly.

SPDIF: Switch to SPDIF (COAX) directly.

HDMI1: Switch to HDMI1 directly.

HDMI2: Switch to HDMI2 directly.

Mute: Mute/un-mute audio.

Vol+: Volume up.

Vol-: Volume down.

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2. Test Report

功能模块测试		测试目标	测试用例及测试文件	结果	问题描述
Upgrade	烧录升级测试	使用 PC 烧录程序烧录后看能否正常启动	使用 PC 烧录程序烧录后看能否正常启动	Pass	
	u 盘 recovery 升级测试	使用 u 盘通过 recovery 进行升级	1.将系统文件 software.swu 拷贝到 u 盘根目录 2.接 u 盘上电 3.通过串口任意键进去 u-boot 4.串口输入 run recovery_from_flash 即可进入 recovery 升级, 进入 recovery 之后会自动寻找 U 盘中的升级包升级。	Pass	
Power	power on	上电后可以正常启动到系统	上电后可以正常启动到系统, 并观察开机打印是否有异常	Pass	
	power key on keypad or remote controller	power key on keypad or remote controller	按遥控上的 power 按键 or Soundar 上的 power 键能否正常开关机	Pass	
	指示灯	指示灯	Check Whether LED can show correnct information.	Pass	
Remote	红外遥控	测试遥控器是否能正确的响应	参考对应的遥控器 mapping (remote-layout.png)	Pass	
Input	Switch Input	Switch to each input source and check whether the audio	主要检查能否在 HDMI1, HDMI2, SPDIF, AUX(LINEIN), BT 之间切换	Partial Pass	LINEIN 声音不对

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		is noraml.			
HDMI	PCM	Audio 是否正常	Test some common PCM formats	Partial Pass	杂音
	AC3(没有atmos)	Audio 是否正常	DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\addbsi\ddplus\6ch_addbsi_7.ac3	Partial Pass	杂音
	EC3	Audio 是否正常	None Atmos: DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\addbsi\ddplus\8ch_addbsi_21.ec3 Atmos: DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\changing_configs_objects\ddplus\music_changing_configs_objects.ec3 Channel Mapping: 5.1.2 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\ddplus\general_listening_5_1_2.ec3 5.1.4 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\ddplus\general_listening_5_1_4.ec3 7.1.4 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\ddplus\general_listening_7_1_4.ec3	Partial Pass	None Atmos 和 Atmos 可以播，但有杂音 Channel Mapping 的数据声音不对

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	MAT	Audio 是否正常	<p>None Atmos: DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\changing_configs_channels\mat\music_changing_configs_channels.mat</p> <p>Atmos: DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\changing_configs_objects\music_changing_configs_objects.mat</p> <p>Channel Mapping: 5.1.2 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\mat\general_listening_5_1_2.mat 5.1.4 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\mat\general_listening_5_1_4.mat 7.1.4 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\mat\general_listening_7_1_4.mat</p>	Partial Pass	改 8ch,None Atmos 和 Atmos 可以播, 但有杂音 Channel Mapping 的数据不对且有杂音
	TRUEHD	Audio 是否正常	<p>Atmos: DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\changing_configs_objects\music_changing_configs_objects.mat</p> <p>Channel Mapping: 5.1.2 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\truehd\general_listening_5_1_2.mlp 5.1.4 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\truehd\general_listening_5_1_4.mlp 7.1.2 DolbyAtmosForSoundBarProducts\Test_Materials\Test_Signals\general_listening\truehd\general_listening_7_1_2.mlp</p>	Skip	暂不支持

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			Signals\general_listening\truehd\general_listening_7_1_4.mlp		
HDMI ARC	PCM	Audio 是否正常		Skip	暂不支持
	Bitstream	Audio 是否正常	同 HDMI-IN AC3&EC3	Skip	暂不支持
SPDIF	PCM	Audio 是否正常		Partial Pass	杂音
	Bitstream	Audio 是否正常	同 HDMI-IN AC3	Partial Pass	杂音
LINEIN	PCM	Audio 是否正常		Partial Pass	杂音
BT		Audio 是否正常		Partial Pass	杂音
Control	Volume	Audio 是否正常		Pass	
	Mute	Audio 是否正常		Pass	

3. Known Issues

- 1) Speaker has noise sometimes
- 2) LINEIN setting conflict with HDMI setting, current we use HDMI setting as default one, so LINEIN can't work.
- 3) HDMI TrueHD not support
- 4) HDMI ARC not support