

Yocto BSP and Poky SDK Build Guide

Version 1.1.2

Display Audio

Solution Team



Release information

The following changes have been made to this document.

Change History

Date	Change
08 Dec. 2017	First release for v1.0.0
16 Nov. 2018	Second release for v1.1.0
18 Feb. 2019	Third release for v1.1.1
19 Oct. 2019	Fourth release for v1.1.2

Proprietary Notice

Information in this document is provided solely to enable system and software implementers to use Nexell products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits or integrated circuits based on the information in this document.

Nexell reserves the right to make changes without further notice to any products herein.

Nexell makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Nexell assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters which may be provided in Nexell data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Nexell does not convey any license under its patent rights nor the rights of others. Nexell products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Nexell product could create a situation where personal injury or death may occur. Should Buyer purchase or use Nexell products for any such unintended or unauthorized application, Buyer shall indemnify and hold Nexell and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Nexell was negligent regarding the design or manufacture of the part.

Copyright© 2017 Nexell Co.,Ltd. All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electric or mechanical, by photocopying, recording, or otherwise, without the prior written consent of Nexell.

Contact us

[11595] BundangYemiji Bldg. 12F, 31 Hwangsaeul-ro 258 beon gil, Bundang-gu, Sungnam-city, Gyeonggi-do, Korea.

TEL: 82-31-698-7400

FAX: 82-31-698-7455

<http://www.nexell.co.kr>

CONFIDENTIAL

Table of contents

Chap 1.	Yocto BSP	1
1.1	Introduction	1
1.2	Features and Functionality	1
1.3	Build and configuration.....	1
Chap 2.	Poky SDK toolchain	3
2.1	Description	3
2.2	SDK build	3
2.3	SDK toolchain installation	3
2.4	Environment setup.....	3
2.5	Trouble shooting	3

Chap 1. Yocto BSP

1.1 Introduction

We release the source compilation and fusing script files of kernel and u-boot developed by Nexell using Yocto Poky system.

The meta-nexell layer is configured to minimize the dependency on the host PC compile environment of the 3rd party or end-user and to reduce the difficulty in configuring the root file system.

1.2 Features and Functionality

- linux kernel, u-boot, bl1 build & release
- Binary files packaging & fusing scripts
- Available Image type
 - QT5

1.3 Build and configuration

1.3.1 Source download

```
$ mkdir myrepo
$ cd myrepo
$ repo init -u https://nx\_customer:nx\_customer@gitlab.com/nexell\_yocto/manifest.git -b nexell_yocto_r2
$ repo sync
```

1.3.2 Yocto environment setup

```
$ ./tools/yocto_build_environment.sh
```

1.3.3 Yocto build

1.3.3.1 Fully build

```
$ ./tools/build.sh s5p4418-daudio-ref qt
```

1.3.3.2 Clean build

```
$ ./tools/build.sh s5p4418-daudio-ref qt -c
```

1.3.3.3 Help

```
$ ./tools/build.sh -h
```

1.3.4 Fusing

If you need usb boot.

Set the boot mode switch on the debug board to usb boot mode.

On the host PC side.

*Notice : If the firmware is already fused, skip this step.

```
$ cd yocto/out/ result-s5p4418-daudio-ref-qt/tools  
$ ./standalone-uboot-by-usb-download.sh
```

On the target board side (u-boot console)

```
$ fastboot 0
```

On the host PC side

```
$ ./standalone-fastboot-download.sh
```

For more information.

```
$ ./standalone-fastboot-download.sh -h
```

Chap 2. Poky SDK toolchain

2.1 Description

You need a toolchain to develop an app or library outside the Yocto environment.

2.2 SDK build

```
$ ./tools/build.sh s5p4418-audio-ref qt -s
```

2.3 SDK toolchain installation

```
$ cd yocto/out/SDK-result-s5p4418-qt  
$ ./poky-glibc-x86_64-nexell-qt-sdk-cortexa9hf-neon-toolchain-2.5.1.sh
```

2.4 Environment setup

```
$ source /opt/poky/2.5.1/environment-setup-cortexa9hf-neon-poky-linux-gnueabi
```

2.5 Trouble shooting

If you see the following error message during the SDK build,

```
ERROR: nexell-qt-sdk-1.0-r0 do_populate_sdk: The recipe nexell-qt-sdk is trying to  
install files into a shared area when those files already exist. Those files and their  
manifest location are:  
[Yocto top directory]/yocto/build/SDK-build-s5p4418-qt/tmp/deploy/sdk/poky-glibc-  
x86_64-nexell-qt-sdk-cortexa9hf-neon-toolchain-2.5.1.testdata.json  
(matched in manifest-s5p4418_audio_refx86_64-nexell-qt-sdk.populate_sdk)  
[Yocto top directory]/yocto/build/SDK-build-s5p4418-qt/tmp/deploy/sdk/poky-glibc-  
x86_64-nexell-qt-sdk-cortexa9hf-neon-toolchain-2.5.1.host.manifest  
(matched in manifest-s5p4418_audio_refx86_64-nexell-qt-sdk.populate_sdk)  
[Yocto top directory]/yocto/build/SDK-build-s5p4418-qt/tmp/deploy/sdk/poky-glibc-  
x86_64-nexell-qt-sdk-cortexa9hf-neon-toolchain-2.5.1.target.manifest  
(matched in manifest-s5p4418_audio_refx86_64-nexell-qt-sdk.populate_sdk)  
[Yocto top directory]/yocto/build/SDK-build-s5p4418-qt/tmp/deploy/sdk/poky-glibc-  
x86_64-nexell-qt-sdk-cortexa9hf-neon-toolchain-2.5.1.sh  
(matched in manifest-s5p4418_audio_refx86_64-nexell-qt-sdk.populate_sdk)  
Please verify which recipe should provide the above files.
```

take the following steps.

```
$ cd yocto/build/SDK-build-s5p4418-qt/tmp/deploy/sdk/  
$ rm -rf *  
$ cd -  
$ ./tools/build.sh s5p4418-dauidio-ref qt -s
```

CONFIDENTIAL