

Backports Integration by Yocto Recipe

Laird ST60 Products

Application Note

v1.0

INTRODUCTION

For basic ST60 backports integration, we recommend the use of buildroot to build separately from the customer's BSP (board support package). Laird also support Yocto recipe to build the ST60 backports software package.

LINUX SET UP

To set up the Yocto build environment in Linux, follow these steps:

1. Set up the Yocto build environment.

Note: This step is platform-dependent. You must follow the platform provider's instructions (e.g., NXP iMX8).

2. Create the following folder:

imx-yocto-bsp/sources/poky/meta-laird-cp

3. Modify the following:

bblayers.conf

(For example, in iMX8, *bblayers.conf* is located under *imx-yocto-bsp/build/conf* after the the build environment setup in step 1.)

In *bblayers.conf*, dd the following line highlighted in yellow in *bblayers.conf*.

```
BBLAYERS = " \
    ${BSPDIR}/sources/poky/meta \
    ${BSPDIR}/sources/poky/meta-poky \
    \
    ${BSPDIR}/sources/meta-openembedded/meta-oe \
    ${BSPDIR}/sources/meta-openembedded/meta-multimedia \
    \
    ${BSPDIR}/sources/meta-freescale \
    ${BSPDIR}/sources/meta-freescale-3rdparty \
    ${BSPDIR}/sources/meta-freescale-distro \
    ${BSPDIR}/sources/poky/meta-laird-cp \
```

4. Unzip the recipe download from the following link to the *imx-yocto-bsp/sources/poky/meta-laird-cp* folder.

<https://github.com/LairdCP/meta-laird-cp>

5. Copy *backports-laird-6.0.0.138.tar.bz2* into the following location:

imx-yocto-bsp/sources/poky/meta-laird-cp/recipes-kernel/backports-laird/

BUILD BY RECIPE

The following is the build by recipe:

1. Set up the build environment. The following is an example in iMX8:

```
source setup-environment build/
```

2. Use bitbake to build the backports recipe

```
bitbake -b ../sources/poky/meta-laird-cp/recipes-kernel/backports-laird/backports-laird_6.0.0.138.bb
```

Once complete, the build result should be located in the BSP package. The following is an example of the path in the iMX8 platform:

```
imx-yocto-bsp/build/tmp/work/imx8mqevk-poky-linux/backports-laird/6.0.0.138-r0/
```

You should also be able to find the build configuration as shown below:

Build Configuration:

```
BB_VERSION          = "1.32.0"  
BUILD_SYS           = "x86_64-linux"  
NATIVELSBSTRING    = "Ubuntu-16.04"  
TARGET_SYS         = "aarch64-poky-linux"  
MACHINE             = "imx8mqevk"  
DISTRO              = "fsl-imx-wayland"  
DISTRO_VERSION      = "4.9.51-mx8-ga"  
TUNE_FEATURES       = "aarch64"  
TARGET_FPU          = ""  
meta  
meta-poky           = "HEAD:8298428c032ec9bc5b514d0c194a16cf371475ea"  
meta-oe  
meta-multimedia     = "HEAD:b40116cf457b88a2db14b86fda9627fb34d56ae6"  
meta-freescale      = "HEAD:05681fdf8298bb441c15135eae424c7601b07e98"  
meta-freescale-3rdparty = "HEAD:e55167c3c2770c07a475342f99cc2a3a23fbfa0c"  
meta-freescale-distro = "HEAD:cd5c7a2539f40004f74126e9fdf08254fd9a6390"  
meta-laird-cp       = "HEAD:8298428c032ec9bc5b514d0c194a16cf371475ea"  
meta-bsp  
meta-sdk            = "HEAD:0649ff215e8f9b79ecd3b813d672547aa45c086b"  
meta-browser        = "HEAD:678706cb43fb8576ff7b88bfb612993b8542724d"  
meta-gnome  
meta-networking  
meta-python  
meta-fileSystems    = "HEAD:b40116cf457b88a2db14b86fda9627fb34d56ae6"  
meta-qt5            = "HEAD:ff073f04109900fc07bf81e2f1df63c626caf342"
```

REVISION HISTORY

Version	Date	Notes	Contributor(s)	Approver
1.0	08 July 2019	Initial Release	Miles Chung	Jay White