

# DRA7xx QT5 on GLSDK

This page is Under Construction. The information below has been verified, but the article is not fully complete at the moment.

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## QT5 on GLSDK

### QT5 Introduction

Qt is a cross-platform application framework that is widely used for developing application software that can be run on various software and hardware platforms with little or no change in the underlying codebase, while having the power and speed of native applications. [1] ([https://en.wikipedia.org/wiki/Qt\\_\(software\)](https://en.wikipedia.org/wiki/Qt_(software))).

The following instructions can be used to integrate QT5.4 on top of the GLSDK 7.x release for DRA7xx platforms.

### Pre-requisites

The following sections assume that the user is familiar with the GLSDK and has performed the following actions.

1. Installed the most recent available release for GLSDK 7.x
2. Setup of the GLSDK is complete
3. GLSDK Yocto build has been done on the installer.
4. A fair bit of familiarity with working with Yocto is desirable.

Please refer to [DRA7xx\\_GLSDK\\_Software\\_Developers\\_Guide](#) for further details on the above topics.

### Scope

- GLSDK 7.x does not support QT5 by default.
- This Application Note is intended to serve as an enabler for the QT5 integration on DRA7xx based on GLSDK.
- Any issues found either in the QT5 or GLSDK while running QT5 based applications will have to be handled by the user.

### Build steps

There are two main changes that need to be done to the existing config files and recipes.

1. Update the config file to pick up the latest meta-qt5 branch.
2. Update the meta-glsdk config and packagegroup.

#### 1. Updating the top level config file:

```
meta-qt5,git://github.com/meta-qt5/meta-qt5.git,daisy,HEAD,layers=
> meta-qt5,git://github.com/meta-qt5/meta-qt5.git,master,48ebff679e5dc084d395b861a1fc4cb21790d51b,layers=
```

#### 2. Updating the meta-glsdk

```
diff --git a/conf/distro/arago.conf b/conf/distro/arago.conf
index 5261e82..639f271 100644
--- a/conf/distro/arago.conf
+++ b/conf/distro/arago.conf
@@ -74,3 +74,14 @@ LICENSE_FLAGS_WHITELIST = "commercial_gst-ffmpeg \
PACKAGE_ARCH := "${TUNE_PKGARCH}-${PREFERRED_VERSION_linux-libc-headers}"
# Need to include the new PACKAGE_ARCH to the PACKAGE_ARCHS variable
PACKAGE_ARCHS += "${TUNE_PKGARCH}-${PREFERRED_VERSION_linux-libc-headers}"
+
+
+QT_PROVIDER ?= "qt5"
```

```
## Configure Qt5 flags (GLEW is still required for qtdeclarative and qtwebkit)
+PACKAGECONFIG_GL_pn-qtbase = "gles2 linuxfb"
+PACKAGECONFIG_DISTRO_pn-qtbase = "icu examples"
+
## Configure gstreamer-0.10.x as a dependency instead of gstreamer-1.x
+PACKAGECONFIG_pn-qtwebkit = "gstreamer qtlocation qtmultimedia qtsensors"

diff --git a/meta-arago-distro/recipes-core/packagegroups/packagegroup-arago-glSDK-multimedia.bb b/meta-arago-distro/recipes-core/packagegroups/packagegroup-arago-glSDK-multimedia.bb
index 46de317..fd516f6 100644
--- a/meta-arago-distro/recipes-core/packagegroups/packagegroup-arago-glSDK-multimedia.bb
+++ b/meta-arago-distro/recipes-core/packagegroups/packagegroup-arago-glSDK-multimedia.bb
@@ -29,6 +29,7 @@ ARAGO_GLSDK_MULTIMEDIA = "\
    gstreamer1.0-plugins-bad-meta \
    gstreamer1.0-plugins-ducati \
    gstreamer1.0-plugins-vpe \
+    packagegroup-arago-tisdk-qte \
"
ARAGO_GLSDK_MULTIMEDIA_append_dra7xx-evm = "\
```

3. Redo the GLSDK Yocto build

The procedure for this is the same as the original Yocto build instruction for building GLSDK. Please refer [DRA7xx\\_GLSDK\\_Software\\_Developers\\_Guide#Building\\_Yocto\\_FileSystem](#)

Preparing the target

When the build is completed, the target filesystem will be available under the following folder.

```
# cd build/arago-tmp-external-linaro-toolchain/deploy/images/dra7xx-evm
# tar tf arago-glSDK-multimedia-dev-image-dra7xx-evm.tar.gz | grep qt5
You should see many files when you run the above command.
```

Installation of font libraries

Some of the demos require some font libraries to be present on the target. There is known issue that font libraries do not get packaged along with the filesystem. A tar ball containing the required files is uploaded here. Please download this file and extract it into /usr/lib/fonts

```
# tar xvzf fonts.tar.gz /usr/lib/fonts
```

How to run the demos

There are several demos that get packaged in the default filesystem that gets generated, here are a few examples of how to invoke them.

```
target # pvrsvinit
target # weston --tty=1 --idle-time=0 &
target # cd /usr/share/qt5/examples

target # ./opengl/helloworld/helloworld --platform wayland-egl &
target # ./widgets/mainwindows/mainwindow/mainwindow --platform wayland-egl &
```

These are only illustrations of a few examples and other demos can be launched in a similar manner.

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