

Open Event Machine library

Compilation Guide

Applies to Product Release: 01.06.00.04:
Publication Date: September, 2013

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Open EM library version 01.06.00.04

Overview

This document explains how to install and (re)build the Open Event Machine (Open EM) library using GNU make.

Notations

$\${VAR}$ expands to the content of the VAR variable

Slashes (/) are used in this document as directory separators.

Pre-requisites

- GNU make, GNU tar, GNU rm and GNU mkdir must be installed. It shall be noted that these tools are available in the root and bin directory of the XDCtools.
- TI code generation tools must be installed.
- C6670 or C6678 or KeystoneII PDK must be installed.

Installing the Open Event Machine

While delivered as a standalone package, the Open EM library is released with an installer (openem_<version>_<keystone_indicator>_Linux-x86_Install.bin or openem_<version>_<keystone_indicator>_SetupWin32.exe). Execute and install in some directory (say `TMP_DIR`).

A directory named `openem_<version>/packages/ti/runtime/openem` will be created under `$(TMP_DIR)`.

Let us define an environment variable `OPENEM_DIR` to be `$(TMP_DIR)/openem_<version>/packages/ti/runtime/openem`.



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Building the Open EM library

Makefiles are available in the form `make_{$PLATFORM}_{$POLICY}_{$DEBUG}_{$SUFFIX}.mak` in the library directory `lib/{$PLATFORM}/`

where

- `DEBUG` can take one of the following values: `debug`, `release`.
- `SUFFIX` can take one of the following values: `e66` (C66 little endian ELF), `e66e` (C66 big endian ELF).
- `PLATFORM` can take one of the following values: `c6670`, `c6678`.
- `POLICY` can take one of the following values: `centralized`.

To build (and optionnaly clean), go to the Open EM package directory

`($OPENEM_DIR)/openem_<version>/packages/ti/runtime/openem` and type the following command:

```
gmake -C . ti.targets.elf.<target>.rootDir=<ti_cgt_dir>
XDCPATH="..;<pdk_dir>" LIBDIR=lib/{$PLATFORM}/c66/obj TOOLDIR=<utils_dir>
-f lib/{$PLATFORM}/<makefile> [clean]
```

where

- `target` is either `C66` for little endian or `C66_big_endian` for big endian
- `ti_cgt_dir` is the root directory of the TI code generation tools
- `pdk_dir` is the PDK packages repository
- `utils_dir` is the directory where to find the `rm` and `mkdir` utilities.
- `makefile` is the makefile as described above.

Generated library will be put in the directory `LIBDIR` and will be named `openem_{$PLATFORM}_{$POLICY}_{$DEBUG}_{$SUFFIX}.a{$SUFFIX}`

Windows example:

```
c:\Tools\gmake\3_80\gmake.exe -C . ti.targets.elf.C66.rootDir="C:\Tools\c6xx\cgen7_4_1"
XDCPATH="..\..\..\C:/PROGRA~1/TEXASI~1/pdk_C6670_1_1_2_5/packages\" LIBDIR=lib/c6670/c66/obj
TOOLDIR="C:/Program Files/Texas Instruments/xdctools_3_24_05_48/bin" -f
lib/c6670/make_c6670_centralized_release_e66.mak clean
```



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Linux example:

```
gmake -C . ti.targets.elf.C66.rootDir=/apps/ti/cgt/c6000/7_4_1  
XDCPATH="../../../../../apps/ti/pdk/pdk_C6678_1_1_2_5/packages" LIBDIR=lib/c6678/c66/obj2 TOOLDIR=/bin -f  
lib/c6678/make_c6678_distributed_debug_e66.mak
```



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