

Kinetis Design Studio 3.1.0 Update Release Notes

1 Overview

The Kinetis Design Studio IDE is a complimentary integrated development environment for Kinetis MCUs that enables robust editing, compiling and debugging of your designs. Based on free, open-source software including Eclipse, GNU Compiler Collection (GCC), GNU Debugger (GDB), and others, the Kinetis Design Studio IDE offers designers a simple development tool with no code-size limitations. Furthermore, Processor Expert software enables your design with its knowledge base and helps create powerful applications with a few mouse clicks.

This update provides an additional content for Kinetis Design Studio 3.0.0

This is an incremental update of Kinetis Design Studio 3.0.0. You need to have Kinetis Design Studio 3.0.0 installed in order to be able to apply this update.

This update also includes all changes included in Processor Expert for Kinetis 3.0.2

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2 Installation instructions

1. Run KDS 3.0.0
2. Select Window > Preferences
3. Select Install/Update > Available Software Sites
4. Add a new install site using the Add... button
5. Type name of the install site into the Name field (e.g. KDS 3.1.0).
6. Click on the Archive... button and find the KDS_3.1.0.zip.
7. Confirm site addition by clicking on OK button.
8. Close Preferences windows by clicking on OK button.
9. Select Help > Check for Updates
10. Continue with the wizard. Accept the license agreement during the installation process.
11. Restart KDS.

Note:

There is known problem with running KDS on Mac OS X 10.11 (“El Capitan”). For details please refer to KDS-343 in Known Issues and Workarounds.

3 What's New in this Update

Kinetis Design Studio 3.1.0 update contains Processor Expert for Kinetis 3.0.2 (please refer to separate release notes) and additionally fixes the following problem:

- KDS-335: The update removes the features listed below, because they are blocking proper update of ARM Eclipse plugins from update site <http://gnuarmeclipse.sourceforge.net/updates>. The following features are removed:
 - Project-less debugging is not supported anymore - user is now required to have a project to be able to debug
 - Toolchain folder preference is now set to "GNU Tools for ARM Embedded Processors" installation instead of the previous "\${eclipse_home}/../toolchain/bin" setting

4 Known Issues and Workarounds

For the latest information, training material and Frequently Asked Questions, visit the Kinetis Design Studio Community at <https://community.freescale.com/community/kinetis-design-studio>

- KDS-343: Currently KDS may not start correctly in some MAC OS 10.11 versions.
Workaround: From kinetis-design-studio.ini file in
/Applications/KDS_3.0.0.app/Contents/eclipse/ directory remove following lines:

```
-showSplash  
com.somniumtech.branding.kds
```

Details available also on Freescale community:

- <https://community.freescale.com/thread/364331>
- <https://community.freescale.com/thread/377103>
- Windows Command Line Limit, KDS-178: Under Windows there is a command line length limitation of 8192 characters. If the command line length to the compiler or linker exceed that limit, the command line gets truncated and the build will fail.
Workaround: Shorten the path to files and folders as much as possible. Instead of absolute paths, use project relative paths or use the Windows 'subst' drive letters to create shorter paths to the sources. Alternatively, build libraries and link large projects with libraries instead of individual object files. Another solution is to use the GNU ARM Eclipse Build Tools from <https://sourceforge.net/projects/gnuarmeclipse/files/Build%20Tools/>, see this article: <http://mcuoneclipse.com/2015/03/29/solving-the-8192-character-command-line-limit-on-windows/>.
- Administrative rights to Eclipse installation folder for updates: Users must have write access to the KDS installation directory to install new Eclipse plugins. This means that on Linux users need to launch KDS with root privileges when installing new plugins.
- Conditional watchpoints and breakpoints: Conditional breakpoints and watchpoints, including those using ignore counts, do not work always.
Workaround: do not use conditions for breakpoints and watchpoints, instead check for condition in the code and set a normal breakpoint.
- Symbolic Link to libudev for Linux: Like many other Linux packages, users of Ubuntu 14.04 must create a symbolic link to libudev.
Workaround:

```
ln -s /lib/x86_64-linux-gnu/libudev.so.1.3.5 /usr/lib/libudev.so.0
```
- Installation time on Ubuntu: Users attempting to install KDS using the Ubuntu Software Center may find that the Software Center claims to be installing for a long period of time, then returns to the start screen without emitting an error or installing the product. This is because the Software Center runs a quality checking tool, lintian, on the package before installing it. This tool is not implemented in a scalable manner, and doesn't handle the large KDS packages well. Users of high-end machines may find they are able to install successfully.
Workaround: install using the command-line tool: dpkg
- Build binary not found: Occasionally after a successful build Eclipse does not find the built binary. This can manifest in a number of ways: The project does not show the Binaries meta-

folder in the Project Explorer view, when the debug button on the debug toolbar is pressed the Debug configuration fails to launch a debug session because it reports binary file not found.

Workaround: refresh the project folder (F5 under Windows).

- PEXMCU-531: Compiler error if using the TSS Processor Expert component. The compiler is because the component sources are using `asm()` instead of `__asm()`.

Workaround: Described in <https://community.freescale.com/message/435546#435546>

- KDS-223: Doing a reset command on the FRDM-K22F and OpenOCD debug connection gets stuck in the watchdog reset handler.

Workaround: Use an alternative debug connection (P&E Multilink or SEGGER J-Link).

- KDS-190: Stepping over an endless loop (branch instruction pointing to itself) might fail with OpenOCD.

Workaround: set a breakpoint on the loop statement.

- KDS-189: Debugging, downloading and stepping with OpenOCD is slow compared to other debug solutions.

Workaround: Use alternative debug connections like P&E Multilink or SEGGER J-Link.

- KDS-240: The OpenOCD in KDS v3.0.0 is the same as in KDS v2.0.0, therefore any newer Kinetis devices are not supported with OpenOCD.

Workaround: Use an alternative debug connection (P&E Multilink or SEGGER J-Link).

- Using TSS component: adding the TSS component for non-Kinetis SDK Processor Expert project will cause a compilation error.

Workaround: Documented here: <https://community.freescale.com/thread/330174>

- Mac OS X and Eclox: The installation of the Doxygen Eclox Eclipse plugin (<http://home.gna.org/eclox/>) fails under Mac OX with an error message. That plugin is not maintained anymore and a fix is not likely.

- Moving/Using projects between different host operating systems: If using a project created/used on a different operating system (e.g. migrating a project from Windows to Linux), it is recommended to delete the output (usually named 'Debug') folder of the project to enforce proper regeneration of the make files, as a 'clean' operation alone mightnot be enough.

5 Revision History

Revision	Change description
Rev 1.0	Initial version

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