Release Notes: GNUV850 v14.01

8th December 2014

KPIT Technologies Limited is releasing the GNUV850 v14.01, a cross compiler tool for Renesas V850 micro-controllers.

SALIENT FEATURES

1. The GNUV850 v14.01 toolchain is based on
   GCC 4.9.2 [released]
   Binutils 2.24 [released]
   Newlib 2.1.0 [released]
   GDB 7.8.1 [released]

2. The latest patches are applied to gcc, binutils and newlib sources.

3. The GNUV850 toolchain adds support for new architecture v850e3v5.

4. The GNUV850 toolchain adds support for option '-msoft-float' for CPUs without 'FPU' (floating-point unit) in v850e3v5 family.

ABOUT GNUV850 v14.01

Release Version:	GNUV850 v14.01
Release Date:	8th December 2014
Platforms Supported:	Red Hat GNU/Linux v8.0 or later (or compatible distribution) Windows XP, Windows 7 (32-bit and 64-bit)
Language:	C, C99, C++
Targets:	mv850 mv850e mv850e1 mv850e2 mv850e2v3 mv850e3v5
Object File Format:	ELF

CHANGES IN THIS RELEASE:

1. GNUV850 toolchain generated instruction for v850e2v4 architecture when compiled for v850e2v3 architecture in certain scenarios.

   This issue has been fixed.

2. The GNUV850 toolchain generated linker error (internal error: dangerous relocation) for the below test-case for the "-msda" option.

   ```
   /*test.c*/
   int buf_glob1[8];
   int *Next_Ptr_Glob;
   char Ch_1_Glob;
   int foo1;
   void main()
   {
           Next_Ptr_Glob = (int *)&buf_glob1;
   }
   ```

   This issue has been fixed.

3. The GNUV850 toolchain generated incorrect alignment for 32 bit global variables in certain test scenarios.

   This issue has been fixed.

4. The GNUV850 toolchain did not support the '-msoft-float' option. When this option was passed it gave following error, "error: unrecognized command line option '-msoft-float'".

   This issue has been fixed.

KNOWN LIMITATIONS:

This section describes the known limitations in this release.
We intend to fix these limitations in our future releases.

For Windows OS only:

1. The short-cut for uninstallation i.e. 'Uninstall GNUV850 v14.01 (ELF)' gives the following error in some cases,
   'The item 'setup.exe' that this shortcut refers to has been changed or moved, so this shortcut will no longer work properly'.
   In this case, in order to uninstall the toolchain, please re-invoke the 'GNUV850v1401-ELF.exe' installer and select the 'Remove' option.

NOTE:
Windows and GNU/Linux:

1. The optimized libraries provided along with the newlib libraries in the toolchain do not require a separate download.

2. The optimized libraries ('liboptm.a' and 'liboptc.a') are not provided under GNU GPL. The source code of these optimized libraries is neither released nor available on request.

3. The "libgen" utility is not provided under GNU GPL. The source code of the "libgen" utility is neither released nor available on request.

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