RELEASE NOTES: GNURL78 v11.03

12th October 2011

KPIT Cummins Infosystems Limited is releasing the GNURL78 v11.03, a cross compiler tool for Renesas RL78 micro-controllers.

RL78 is a new micro-controller family to deliver solutions for Next-Generation 8-/16-bit embedded applications. To know more about RL78 micro-controller family, please visit the following link,
http://www.renesas.com/press/news/2010/news20101117.jsp

SALIENT FEATURES:

1. The GNURL78 v11.03 toolchain is based on gcc-4.7 [snapshot dated 3rd September 2011], binutils-2.21 [snapshot dated 3rd September 2011], newlib-1.19.0 [snapshot dated 3rd September 2011] and gdb-7.3 [snapshot dated 7th October 2011].

2. In this version of toolchain, during function call, all the parameters are passed via stack.

3. About data types in this toolchain:
   a. Size of 'int' and 'short' is 2 bytes (16 bits)
   b. Size of 'double' is 8 bytes by default. There is no provision to make 'doubles' 32-bit like other RX toolchains (e.g., GNURX).
   c. The 'pointer' size is 16-bits.
   d. 'long int' is 4 bytes and 'long long' is 8 bytes in size.

4. The GNURL78 toolchain accepts inline assembly written using standard GNU conventions,
   asm ("insn code");

ABOUT RL78 v11.03

Release Version:	GNURL78 v11.03
Release Date:	12th October 2011
Platforms Supported	Red Hat GNU/Linux v8.0 or later (or compatible distribution) Windows NT/2000/XP/Vista/Windows 7 (32 and 64 bit)
Language:	C, C99, C++
Targets	G12, G13 and G14 (Currently, no target specific options are available to differentiate between these targets)
Object File Format	ELF

CHANGES IN THIS RELEASE:

1. This is the first release of GNURL78 toolchain.

For Windows OS only:

1. The GNURL78 v11.03 toolchain installer does not support HEW integration.

2. The registry entry for Windows-7 64-bit system differs to Windows-7 32-bit system.

KNOWN LIMITATIONS:

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

1. The RL78 GDB does not show any messages when it loads the output file for debugging.

2. Newlib functions 'atan2', 'getchar', 'putchar' and 'scanf' fail with this version of toolchain.

3. The optimized library functions for the RL78 toolchain fail for double precision calculations.

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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