## **Freescale Semiconductor**

**Release Notes** 

Document Number: CW-PA-RN

# CodeWarrior Development Studio for Power Architecture Processors v10.5.1

Freescale Semiconductor, Inc.

# **1. Revision History**

The following modifications to this release note have been made relative to the note provided with the CodeWarrior for Power Architecture Processors v10.5.1 installation:

| Date         | Description               | 6 |
|--------------|---------------------------|---|
| Jan 25, 2016 | Initial version           |   |
| Jan 28, 2016 | Updated supported devices |   |

An updated version of this document is available on CodeWarrior for Power Architecture Processors <u>product</u> <u>support page</u>.

# 2. About this release

## 2.1. Version information

This release note provides important information for users of CodeWarrior Development Studio for Power Architecture Processors. You are encouraged to read this document to become familiar with this release's supported targets, new features, errata with workarounds, and other useful information.

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#### About this release

The v10.5.1 release delivers Linux QorIQ SDK 1.9 compatibility, integrates support for several new devices, and introduces several new product features. Highlights of the release are included below.

- Compatibility with SDK 1.9 for Linux kernel, application, and module debugging
- Build tools alignment with SDK 1.9
- Possibility to change RCW source location
- Enabled multi-core halt groups for B4x targets
- Performance analysis support for T1023, T1024, and T1042

Most of the features described in this document are new relative to the last general availability release, CodeWarrior Development Studio for Power Architecture Processors v10.5.

## 2.2. Licensing

This release is distributed under an End-User License Agreement. The EULA is displayed during product installation and a copy is located in the layout in the PA/License folder. Please read the contents of the document carefully before using this product.

v10.5.1 release has the same license with v10.5 therefore a license upgrade is not necessary when transitioning from v10.5. A license upgrade is required though when transitioning from v10.4 or earlier versions. Customers can obtain a license, if needed, by exercising the options listed in the Software Licensing section of the Freescale account.

Please consult http://www.freescale.com/cwregister for additional information regarding license registration and activation, or enter a service request with Category = "Software Product and Topic = "License Issue".

When used for evaluation purposes CodeWarrior will generate a temporary license valid for 15 days from installation date. Please note that the generated license certificate is node-locked to the machine running the installer; evaluation on multiple machines requires separate installs.

Past expiry, external users can solicit an evaluation extension by opening a licensing SR – please see section 2.4. The license certificate (license.dat) needs to be placed in the CW\_PA/PA/ folder.

## 2.3. Getting Help

Product documentation is included with the layout, available for off-line from the Documentation folder in the link above, or from <u>Freescale Infocenter</u>.

If you have questions, issues, or want to provide feedback, please use the Freescale online support web page. To use this page, follow these steps:

1. In a web browser, go to http://www.freescale.com/TechSupport.

Freescale's Technical Support web page appears.

About this release

2. On this page, click the Submit a service request online link.

The New Service Request — Category/Topic page appears.

- 3. From the Category dropdown menu, select Technical Request.
- 4. From the Topic dropdown menu, select CodeWarrior (or other appropriate topic).
- 5. Click Next.

The New Service Request — SR Details page appears.

6. In this page, enter the requested information.

At a minimum, enter information in each field marked by an \*.

7. Click Submit.

If you are already logged in, the **Service Request Confirmation** page appears. Go to the last step. If you are not already logged in, the **Log-in** page appears.

- 8. If you are a registered member, login with your user name and password. The **Service Request Confirmation** page appears. Go to the last step.
- 9. If you have not yet registered,
  - a. If you want to become registered member, click **Register Now** and complete the registration process.

The Service Request Confirmation page appears.

b. If you do not want to register, supply your contact information in the I do not want to register -Provide contact information form and click Submit.

The Service Request Confirmation page appears.

#### 10. Click Done.

Your service request is submitted.

# 3. System Requirements

#### **CodeWarrior Host**

- *Windows*® *OS*: Intel® Pentium® 4 processor, 2 GHz or faster, Intel® Xeon<sup>TM</sup>, Intel® Core<sup>TM</sup>, AMD Athlon<sup>TM</sup> 64, AMD Opteron<sup>TM</sup>, or later
- *Linux* ® *OS*: 1.8 GHz Intel® Pentium® class processor (or better).
- At least 2 GB of RAM
- At least 3 GB of free disk space.
- Free USB port for use with installation media.
- Internet connectivity for web downloads and update access.

#### **Operating System**

| Windows                 |          |        |        |
|-------------------------|----------|--------|--------|
| Host OS                 | SP Level | 32-bit | 64-bit |
| Windows 7               | SP1      | X      | Х      |
| Windows 10              |          |        | Х      |
|                         | Linux    |        |        |
| Host OS                 | Version  | 32-bit | 64-bit |
| Ubuntu                  | 14.04    | X      | Х      |
| Fedora                  | 22       |        | Х      |
| Debian                  | 8.2      |        | Х      |
| openSUSE                | 13.2     |        | Х      |
| Mint                    | 15       |        | Х      |
| CentOS                  | 7.0      |        | Х      |
| RedHat Enterprise Linux | 6.5      |        | Х      |

**NOTE** CodeWarrior installation on 64-bit Linux hosts requires presence of dependent 32-bit libraries in the system. For supported distributions the installer detects missing dependencies and provides options to install them automatically.

Some other Linux distributions may be used, but would require some manual identification and installation of the missing, required libraries.

It is required that all product maintenance operations be done with administrative privileges.

CodeWarrior installer may update system drivers for probe connectivity. It is highly recommended that any CW-PA versions or products are closed before installing or updating an existing CW.

Microsoft has ended support for Windows XP. Freescale recommends that all customers

upgrade their operating systems as recommended by Microsoft.

CodeWarrior Development Studio for Power Architecture Processors v10.5.1

This section describes the main product features in this general availability release (v10.5.1).

## 4.1. New Devices Supported

All the devices supported in the service packs on top of previous release v10.5 are supported and integrated in 10.5.1. Changes comparing to v10.5 are highlighted in red.

| Device<br>Name | Device<br>Revision | Board Type    | Bare<br>Metal<br>Debug | Linux<br>Debug | Nexus<br>Trace | Performance<br>Analysis |
|----------------|--------------------|---------------|------------------------|----------------|----------------|-------------------------|
| T1023          | 1.0                | RDB-PC rev D  | Yes                    | Yes            | Yes            | Yes                     |
| T1013          | 1.0                | RDB-PC rev D  | Yes                    | Yes            | Yes            | Yes                     |
| BSC9132        | 1.1                | QDS rev H     | Yes                    | No             | NA             | No                      |
| MSC8323        | 1.1                | MDS           | Yes                    | No             | NA             | No                      |
| T1020          | 1.1                | RDB-PA        | Yes                    | Yes            | No             | No                      |
| T1022          | 1.1                | RDB-PA        | Yes                    | Yes            | No             | No                      |
| T1024          | 1.0                | QDS/RDB rev C | Yes                    | Yes            | Yes            | Yes                     |
| T1014          | 1.0                | QDS/RDB rev C | Yes                    | Yes            | Yes            | Yes                     |
| T1042          | 1.1                | RDB-PA        | Yes                    | Yes            | Yes            | Yes                     |

Complete list of IC/boards supported is available on product web page.

**NOTE** "Linux Debug" implies Linux Kernel, Module, and Application Debug capabilities.

"Bare Metal Debug" implies U-Boot debugging out of NOR flash, register and memory access, board initialization and flash programming for the flash device on the board.

## 4.2. Update Sites

v10.5.1 release can be complemented with additional features and service packs after install. The following updater sites are available in the update advisor (Help>Install New Software).

| CodeWarrior for Power Architecture Processors Updater Sites   |                            |  |
|---|----------------------------|--|
| FSL PA Eclipse Update SiteMain CW-PA product updater site that will be used for<br>publishing future service packs. |                            |  |
| FSL PA Build Tools  | Build tools update channel |  |

| FSL PA QCVS         | QorIQ Configuration and Validation Suite channel  |
|---------------------|---|
| FSL PA Packet Tools | Packet Analysis Tool update channel (coming soon) |

## 4.3. **IDE**

This release is based on Eclipse 3.7.1. Several fixes/improvements were added since previous release v10.4.

Some updates and fine tunings were done on the IDE side:

- New option is available to align simple declarations in columns. This can be enabled as follows: Window -> Preferences -> C/C++ -> Code Style -> Edit... -> Check "Align simple declarations in columns".

- Support to export/import file-specific compilation macros from one project to another using a simple text-based export format.
- Added support to generate preprocessed files for all source files in a project.
- Users can adopt another name for the "Referenced Systems" folder which stores the xml files describing the debug target and connection. For this to happen, a new variable (-Dcom.freescale.core.ide.rse.foldername=<new\_name>) must be set in <layout>/eclipse/cwide.ini file, <new\_name> representing the desired name for the folder.
- A Browse button was added in File > Open Path... > Find and Open File dialog box to enable a faster navigation to the required file.
- Ability to add project include paths relative to the most appropriate variables.
- Added support in 'CodeWarrior Executable Importer' to import multiple cores.
- Path/File requestor is now used consistently in all dialogs.

## 4.3.1. Usage Notes and Limitations

#### Ubuntu Themes

CodeWarrior UI (Flash Programmer in particular) may display incorrectly if the host OS is Ubuntu 10.x/12.x accessed over a remote connection (ie. VNC). Changing the host OS desktop theme to anything but Ambiance or Radiance has been found to alleviate the issue.

#### **OpenJDK** incompatibility

OpenJDK is not supported by CodeWarrior. Users are advised to either install an Oracle Java Virtual Machine, or use the one bundled with CW.

## 4.4. Build Tools

This release version includes GNU GCC for Power Architecture version 4.9.2- r1267.

Changes since previous release:

- Updated source base to binutils v2.25.

- Updated source base to glibc v2.20.
- Updated source base to newlib v2.2.0.
- Ported all patches and library optimizations to glibc v2.20.
- e5500 32-bit memset: Replace 64-bit ld/std instruction usage with 32-bit lfd/stfd/stw instructions.
- e6500 32-bit memset/memcpy: Replace 64-bit ld/std instruction usage with 32-bit lwz/stw instructions.
- Fix GCC linux command line driver to pick soft-float libraries automatically while generating static binaries.
- Fix 32-bit CDE machine RHEL build (older kernel) segmentation fault when the tool chain is run on fedora machine (latest kernel).
- Configure binutils to handle/enable plugin support (required to build static libraries with LTO).

**NOTE** GCC 4.8.2 continue to be available as service pack and can be installed via Eclipse updater (like any previous build tool service pack) by selecting: FSL PA Build Tools

Switching between version of toolchain feature is available only at project level by changing the default toolchain (Project -> Properties -> Build Tool Versions) after the service pack with the desired version of the build tool was installed.

## 4.5. **Documentation**

Product documentation is available in several formats:

- Integrated with the help system of the Eclipse IDE
- In the product layout in PDF format (CW\_PA/PA/Help/PDF/)
- Freescale Infocenter

#### **Getting Started Guides**

Use these document to quickly get started with setting up boards, creating & debugging projects, collecting the trace data, or installing a service pack.

#### Power Architecture Processors CodeWarrior Getting Started Guide (Updated)

Explains how to install the CodeWarrior software, prepare the boards supported by the current release, and then create, build, and debug a simple project

#### CodeWarrior for Power Architecture Processors - Quick Start (Updated)

Explains how to install CodeWarrior Development Studio for Power Architecture Processors and how to create and debug a simple project.

Using the Ethernet TAP Probe - Quick Start

Explains how to set up the Ethernet TAP probe and create, build, and debug a simple project that uses this device.

#### Installing Service Pack for CodeWarrior Tools - Quick Start (Updated)

Explains how to install a service pack or an update for your CodeWarrior software running on the Windows platform.

<u>CodeWarrior IDE - Quick Reference Card</u> Lists keyboard shortcuts and defines the purpose of major CodeWarrior IDE user interface elements.

#### **Application Notes**

Several Application Notes are available describing how to accomplish some of the commonly needed development tasks. Please check the Documentation tab of CW-PA product support web page regularly for new Application Notes.

Application notes are not included in the product build but they are available for download form CodeWarrior for Power Architecture Processors <u>product support page</u>.

#### **User Guides**

Use these documents to learn how to perform what to perform, solve the most common problems using the FAQs guide, or simply learn more about the built-in features.

Targeting Power Architecture Processors (Updated)

Explains how to use the CodeWarrior development tools to develop software that targets the Power Architecture processors; includes examples, definition of target-settings panel options, and a debugging tutorial.

<u>CodeWarrior for Power Architecture Processors - Frequently Asked Questions</u> Provides answers to the most frequently asked questions about the CodeWarrior IDE and the Power Architecture tools.

CodeWarrior Common Features Guide (Updated)

Describes the CodeWarrior IDE and debugger features that are common across all the CodeWarrior products.

Power Architecture Simulator User Guide

Describes the software simulation models released with CodeWarrior Development Studio for Power Architecture Processors.

#### CodeWarrior TRK Reference

Describes CodeWarrior TRK and explains how to customize it for use with different hardware configurations.

<u>Power Architecture Build Tools Reference</u> Explains how to use CodeWarrior tools to build programs.

#### Tracing and Analysis Tools User Guide (Updated)

Explains how to use the tracing and analysis tools to analyze the performance of your programs.

<u>EWL C Reference</u> Documents the CodeWarrior implementation of the C standard library.

EWL C++ Reference

Documents the CodeWarrior implementation of the C++ standard library.

#### MSL C Reference

Explains how to use the MSL C standard library. Use this library with the GCC build tools.

#### MSL C++ Reference

Explains how to use the MSL C++ standard library. Use this library with the GCC build tools.

#### CodeWarrior TAP Users Guide

Explains how to set up the CodeWarrior TAP debug probe so it can communicate with the debugger and the target hardware.

#### Gigabit TAP Users Guide

Explains how to set up the Gigabit TAP debug probe so it can communicate with the debugger and the target hardware.

#### USB TAP Probe Users Guide

Explains how to set up the USB TAP debug probe so it can communicate with the debugger and the target hardware.

#### Ethernet TAP Probe Users Guide

Explains how to set up the Ethernet TAP debug probe so it can communicate with the debugger and the target hardware.

#### **Cheat Sheets**

Use these cheat sheets to complete moderate-to-complex tasks by following instructions that you execute real-time within the CodeWarrior IDE.

Select **Help > Cheat Sheets** in CodeWarrior IDE to see and run one of the available cheat sheets.

## 4.6. **Debugger**

## 4.6.1. Supported Probes

The following debug probes are supported in this release:

- External USB TAP (UTAP)
  - Not supported for, T104x QDS/RDB, T102x QDS/RDB, T101x QDS/RDB
- External Ethernet TAP (ETAP)

- Not supported for, T104x QDS/RDB, T102x QDS/RDB, T101x QDS/RDB
- CodeWarrior TAP / USB
- CodeWarrior TAP / Ethernet
- Gigabit TAP (GTAP)
- Gigabit TAP (JTAG only) + Aurora (trace)

# **NOTE** Freescale has discontinued the support for USBTAP and ETHTAP starting with general available release v10.3.3 (3 years ago) but they have continued to be available for older setups. Supporting newer parts (i.e. T1040 and newer) is not possible due to technical limitations. CWTAP (over Ethernet or USB) is the recommended probe.

## 4.6.2. New Features

#### Debugger alignment with SDK 1.9 (Linux Kernel 3.12.37)

The debugger was updated and verified for Linux Kernel Debug and Linux Application debug to work with latest version SDK 1.9.

#### Enabled multi-core halt groups for B4x targets

The debugger now supports multi-core halt groups for B4x targets. The level of support is similar to that existing on T4240 target, which was already supported in previous versions.

#### Improved stepping performance during Linux debug

A step takes a lot of time when more than one thread is targeted for a core because the entire thread list is read from the target. Now the thread list is read only when necessary.

#### Possibility to change RCW source location

This improvement is applicable to most QorIQ targets.

## 4.6.3. Usage Notes and Limitations

For kernel module debugging, the breakpoints which are set in a module are not enabled the second time the module is inserted if "Cache Symbolics Between Sessions" isn't checked. As a workaround remove and set again the breakpoint.

After debugging several times a SMP project, debug operation might fail with the following error: "Invalid input value". The workaround would be to restart CW.

For e6500 cores any cache operation on L2 Cache from Cache Viewer window works only for the cluster that includes the current selected core. The workaround is to select from Debug View a core from the L2 cluster on which you want to perform a cache operation.

An error occurs at reading cache data on shared caches from a secondary core when the first core is running. The workaround is to stop all the cores that share the same cache before performing any cache operation on that cache.

The initialization and memory files for u-boot provided with CodeWarrior are not kept in sync with the latest SDKs and some variations on the initializations (values of RCW usually) might be present. The user needs to update those files in order to debug u-boot successfully on latest SDK versions.

SMP debug is not recommended to be used in SRAM configuration as usual SMP applications are larger than SRAM size. The use case is however present but it is totally into the user responsibility to make sure SRAM size is not overrun.

During testing we have noticed a performance penalty when stepping during Linux module debug operations. Occasionally we have noticed a delay of several seconds between successive steps depending on the probe/setup and number of cores.

PLL overwrite is no longer supported. All comments related to PLL override were removed from CodeWarrior JTAG config files.

#### Debugger Limitations for G4/B4 device families

The following features are not supported for the B4 device families:

- Breakpoint cross-triggering
- Reset Configuration Word override

#### Debugger Limitations for T4 device families

The following features are not supported for the T4 device families:

- Breakpoint cross-triggering

For the T4240 rev. 1 QDS in particular, please note that the Reset Configuration Word cannot be fetched from NOR flash. This is a hardware limitation.

The factory FPGA image shipped with T4240 Proto3 boards is incompatible with CodeWarrior (ENGR00234909). Symptoms of the incompatibility include:

- A faulted core immediately after reset
- Inability to stop the platform immediately after reset
- Stepping failures immediately after reset
- Inability to use the Flash Programmer

Proto4 boards do not exhibit any of these issues. Proto3 users are advised to upgrade the FPGA image to a version later than T4240QDS\_1011\_1755\_release

For schematics rev D5 board the reset delay must be enabled and set for at least 2000 ms.

#### Secure Debug (P4080)

If you provide a wrong key and an unlock sequence is run by the debugger with the erroneous key, the associated part will be locked permanently and you will need to reset the target to connect again.

#### Stepping limitations in low-power states on P4080

The Doze and Nap core states are reported by CW while target is in one of the two power management states. When resuming (either run or step) the core will get back in the same state. While the debugger is able to detect and display the low-power state of the target even if running, it is not recommended to use step operation while being in any of these two states. Please note that on P4080 Rev 1 low power states don't work reliably.

#### Debugger compatibility with TightVNC

\* Debugger fails to start in Linux machine if Tight VNC is running. You can workaround this problem by downloading rgb.txt from

http://cvsweb.xfree86.org/cvsweb/xc/programs/rgb/rgb.txt and copying it to /etc/X11/rgb.txt Additional information here: https://lists.ubuntu.com/archives/ubuntu-uk/2007-April/004337.html.

#### Debug over Aurora

The GigabitTAP probe can be reliably used with CodeWarrior in the following scenarios:

- Run control over the JTAG interface
- Trace extraction over JTAG interface
- Trace extraction over Aurora interface

Although partially functional on B4860 targets, debugging over Aurora interface has known stability issues and is therefore not supported.

#### Import Elf Wizard Limitations

A dtb file cannot be imported within the wizard and the user has to do this from GUI. Also SMP cores cannot be selected.

## 4.7. B4/T4 Instruction Set Simulators

No significant updates were done on the simulators.

## 4.7.1. Usage Notes and Limitations

Following limitations are currently known:

- 1. B4860ISS: LAW configuration can be done only via configuration file, at initialization time, not at runtime
- 2. B4860ISS: The PA side is implemented but not fully verified.
- 3. T4240ISS is supported currently only in Linux64
- 4. The Linux images were not updated to the latest available by Freescale
- 5. 5. B4860 SoC reset not supported, need to restart the simulation

ENGR00237053 - [SC10.4.4] B4860ISS cores are not able to restart separately in multicore debug scenario

- 6. B4860 e6500 core reset not supported
- 7. T4240 hardware breakpoints not supported (ENGR00232437)
- Watchpoints issues with the CW for PA: MTWX52001 - [B4860ISS/e6500] Watchpoints with Read or Read/Write attributes don't trigger MTWX52700 - [B4860ISS] Only watchpoints of thread#1 are hit in a multicore scenario MTWX52836 - [B4860ISS] Watchpoints on float variables are not hit
- Other known issues: ENGR00236321 [Multicore] crcpe test on multi-core fail ENGR00274258 [SDOS Use Cases] [multicore, iterations=1, debug/release] maple\_eTVPE demos get stuck

## 4.8. Software Analysis

No significant features have been added in software analysis components in v10.5.1 release. However, several issues were addressed since last release. Please consult the list of Fixed Issues at the end of the document.

## 4.8.1. Usage Notes and Limitations

Trace collection over Aurora is not functional for B4420. Performance Analysis is not yet available for T1023/T1013.

#### P2040/P2041 Aurora Trace Collection

Currently due to an issue while training Aurora probe the collection of trace over Aurora does not work for P2040/P2041 without a workaround.

Following steps must be taken to train correctly the Aurora probe and be able to collect the trace:

- 1. Start a debug session using JTAG and select the train\_aurora.tcl init file in the connection settings. Make sure that you select the correct jtag config file.
- 2. After the board stops at the start of main file, open the Debugger Shell window by selecting Window > Show View > Debugger Shell, and run the following command (similar to the reset\_to\_user command run from CCS console: protocol ccs::reset\_to\_user
- 3. Reset the probe from telnet and wait for the CCS connection to re-establish.
- 4. Terminate the current session from CodeWarrior and debug again.
- 5. Complete description of the Aurora training sequence for P2040/P2041 is available in Tracing and Analysis Tools User chapter 2.4 Preparing Aurora Interface for Collecting Aurora Nexus Trace.

## 4.9. New Project Wizard and Import Wizard

The New Project Wizard and Import Wizard allow generation of sample C/C++ projects for all devices supported by the product. In this release the wizards have been updated to include all devices listed in section 4.1 New Devices Supported

In wizard pages the user is able to configure and enable build, debug, and software analysis settings.

## 4.10. Installer

The installer must be run as root due to the CW dependency install mechanism. However, if the installer is not started as root it will inform the user about this requirement.

The installer now tries to automatically install the dependencies required by CodeWarrior to run. In case of a failure the user is directed to the README.txt file which describes the steps needed to manually install the dependencies.

The installer now automatically starts in console mode instead of failing in case the GTK2 32bit libraries are missing (this was a common issue occurring on 64bit host operating systems) and it tries to install them during the dependency install phase.

The GUI installer is now mapped 1 to 1 with the console mode. This means that all the screens present in the GUI installer are also present in the Linux installer

## 4.10.1. Usage Notes and Limitations

#### Using CodeWarrior on 64-bit Linux Hosts

To run the installer in graphical mode on 64-bit Linux Hosts the 32-bit GNU libc and Xorg libraries must be installed, otherwise the setup will start in console mode. Please consult the README file accompanying the installer for per-distribution instructions

# 5. Fixed Issues

The following defects present in previous product errata have been addressed by this release. The list includes mainly exceptions in previous release as the real number of defects fixed is considerably higher.

|             | Debugger/CCS   |  |
|-------------|--|--|
| DTDBGPG-54  | [P1020RDB-PD][Linux Kernel debug] Incorrect stack when stopped at kernel     |  |
|             | entry point  |  |
| DTDBGPG-444 | CodeWarrior NAND Flash programmer algorithm cannot work on T1040RDB          |  |
| DTCCS-39    | Add a configurable option for socket connect wait time in CCS command        |  |
| DTCCS-99    | Cross triggering isn't implemented for T1024 and T1040 boards (QDS and RDB)  |  |
| DTCCS-74    | Ability to retrieve CCS server version from CCS API                          |  |
| DTCCS-5     | CCS failed to open CWTAP-USB on linux machines having udevadm version 209    |  |
|             | or above   |  |
| DTCCS-32    | A memory read with j2i2cs gives wrong values                                 |  |
| DTCCS-17    | [B4] fsldbg_trigger_event_state does not halt the cores                      |  |
| DTDBGPG-478 | [PA] Possible crash when suspend all if more than 32 threads were targeted   |  |
| DTDBGPG-323 | [PA10.5.1][T1040RDB-PA][SPI flash] Blank Check failed when 'Erase All Sector |  |

#### **Known Issues**

|            | Using Chip Erase Command' option is checked                             |
|------------|---|
| DTDBGPG-18 | [CW PA 10.5.1]Update readme with correct revision for T1023/T1013       |
|            |   |
|            | Software Analysis   |
| DTSA-359   | [PA 10.5.0] [Trace commander view] Trace Commander view doesn't trigger |
|            | automatic refresh after trace reconfiguration                           |
| DTSA-354   | [PA10.5.0][SP1] Error: java.lang.NullPointerException when choose       |
|            | Linux_Application_Attach in Debug Configurations                        |
| DTSA-710   | [PA10.5.1][MulticoreTrace][B4] Error if master core is not core0        |
| DTSA-352   | [PA10.5.0+SP1]No trace was collected with multicore trace DDR Overwrite |
|            | Automatically   |
|            |   |
|            | Build Tools   |
| NTR        |   |
|            | IDE   |
| NTR        |   |
|            | Documentation   |
| NTR        |   |

# 6. Known Issues

Please consult the latest version of this document for the accurate list of known issues, available on CodeWarrior for Power Architecture Processors <u>product support page</u>.

The following defects are known to be present in this release. Wherever applicable, the workaround is listed below defect description.

|              | Debugger/CCS  |
|--------------|---|
| ENGR00361611 | [T1040QDS] Lock/Unlock don't work   |
|              |   |
|              | Workaround: None  |
|              | [PA10_MRD4773] RCW override on T2080RDB                                       |
| DTDBGPG-377  |   |
|              | Workaround: Use board switches to hardcoded RCW.                              |
| ENGR00291107 | [T4240QDS rev 2]Error after debug SMP several times                           |
|              |   |
|              | Workaround: Workaround is to restart CodeWarrior.                             |
| ENGR00274128 | B4 full RCW override is not working   |
|              |   |
|              | Workaround: RCW can be written in the flash.                                  |
| DTDBGPG-56   | [T4240QDS][L2Cache] Debugger shown data of L2 Kibo caches of all clusters are |
|              | as well as data of the cluster that Debug view is focusing                    |

|              | Workaround: A cluster can be disabled if a core for that cluster is selected and the disable operation is performed. In debug view selection of the current core has to be done to be able to perform the operation. |
|--------------|--|
| ENGR00358673 | [SDK1.8][Linux 64bit host] Cannot load module symbolics (no error message when user doesn't have permission to access a file)  |
|              | Workaround: The user should verify the permission access for mounted driver.<br>We recommend to use NFS vers3 instead of cifs (Samba) for Linux OS.<br>e.g.  |
|              | mount -t nfs -o vers=3 <from_ip>:<from_folder> <to_folder></to_folder></from_folder></from_ip>   |
|              | The user must add nounix, noserverino options to your smbfs/cifs mount options for Linux 64bit host.   |
|              | e.g.<br>mount -t cifs / <from ip=""> <to folder=""> -o</to></from>   |
|              | username= <userid>,nounix,noserverino</userid>   |
| ENGR00360393 | [Freescale compiler][P1022DS][BFPP] Can not read _ldouble variable in  |
|              | Workaround: Look directly in the SPE registers where the variable is stored  |
| DTDBGPG-58   | [AppTRK][e5500-64b] Sometimes threads can't be created after hardware  |
|              | breakpoints/watchpoints were hit   |
|              | Workaround: This is a kernel issue. It looks like the issue is caused by DBSR register which is not cleared in kernel after the hardware breakpoint/watchpoint is  |
|              | hit by the application.  |
|              | <ol> <li>Use step over (source stepping) when hardware breakpoint/watchpoint is hit</li> <li>All hardware breakpoints/watchpoints should be disabled before</li> </ol>   |
|              | pthread_create 3. Restart AppTRK before any session  |
|              | For watchpoints, the only solution is to patch the kernel but the patch isn't  |
|              | currently available  |
| DTWIZ-76     | [CW PA 10] Linux kernel attach launch problems.  |
|              | Workaround: Adjust debug settings after they are created   |
|              |  |
|              | Build Tools  |
| DTDBGPG-493  | [PA10.5.1]Build fail with project T2080QDS C 64b ROM   |
|              | IDE  |
| NTR          |  |
|              | Software Analysis  |
| ENGR00301151 | Can't decode SPID Linux trace result   |
|              |  |

CodeWarrior Development Studio for Power Architecture Processors v10.5.1

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#### Known Issues

|                      | Workaround: None   |
|----------------------|--|
| DTSA-858<br>DTSA-859 | Trace support for T1020 and T1022 is not enabled in SA GUI |
|                      | Workaround: None   |
|                      |  |

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