Freescale Semiconductor
Application Note

Document Number: AN5029

Building EWL Compiler Libraries with a Custom UART Baud Rate

1. Introduction

This application note describes the steps required to change the universal asynchronous receiver/transmitter (UART) console baud rate for the Embedded Warrior Library (EWL) compiler libraries.

This document tells how to:

- Rebuild the EWL libraries with a new UART console baud rate
- Rebuild a UART project with the custom baud rate
- Customize a stationary project to work with the custom baud rate

Contents

1. Introduction 1
2. Preliminary background 2
3. Rebuilding EWL libraries 2
4. Rebuilding UART project 3
5. Using new UART library 5

2. Preliminary background

By default, Power Architecture projects contain UART library built for baud rate of 115200 bps. If you need to use a different baud rate, you need to rebuild the UART and EWL libraries for the new baud rate value.

3. Rebuilding EWL libraries

To define a new UART console baud rate and rebuild the EWL libraries, perform the following steps:

1. Open `uart_console_config.h` from `<CWInstallDir>\PA\PA_Support\ewl\EWL_C\include\pa`, and replace the default macro with the new baud rate value, as shown in the figure below.

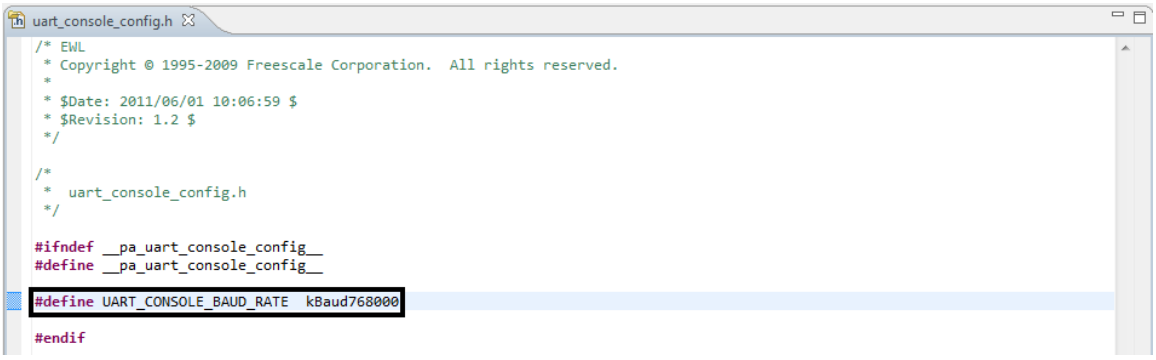

Figure 1. Defining new UART console baud rate

2. Rebuild the EWL libraries using the steps given in Section 22.3.3, “How to Rebuild the EWL Libraries,” of `<CWInstallDir>\PA\Help\PDF\Power Arch Build Tools Reference.pdf`.

4. Rebuilding UART project

Before building the UART project, perform these steps:

1. Open `UART.h` from `<CWInstallDir>\PA\PA_Support\Serial\Common`.
2. Add the new baud rate value to the `UARTBaudRate` enumeration.

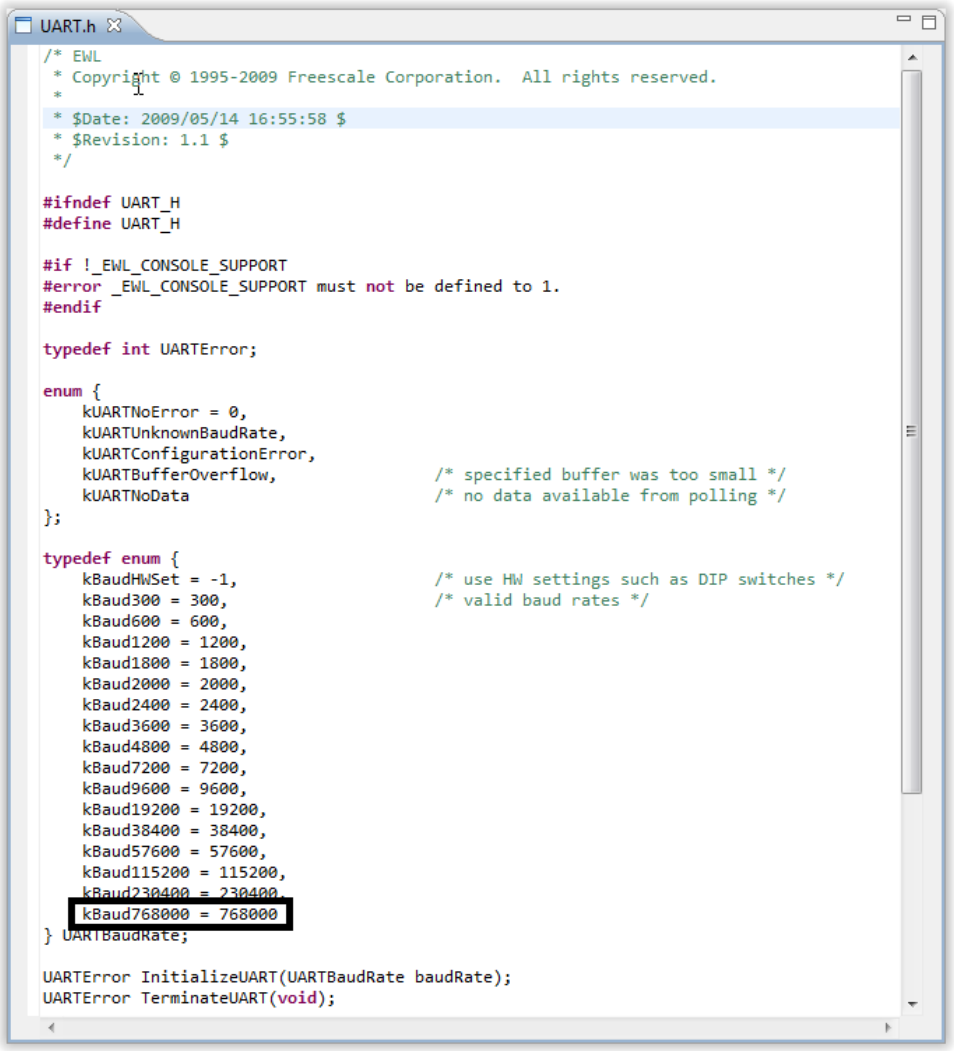

Figure 2. Adding new baud rate value to UARTBaudRate enumeration

To rebuild the UART project, perform these steps:

1. Start CodeWarrior for Power Architecture.
2. Choose **File > Import** from the menu bar. The **Import Projects** page of the **Import** wizard appears.
3. Browse and select a UART project, specific to the board being used, from `<CWInstallDir>\PA\PA_Support\Serial`, as shown in the figure below.

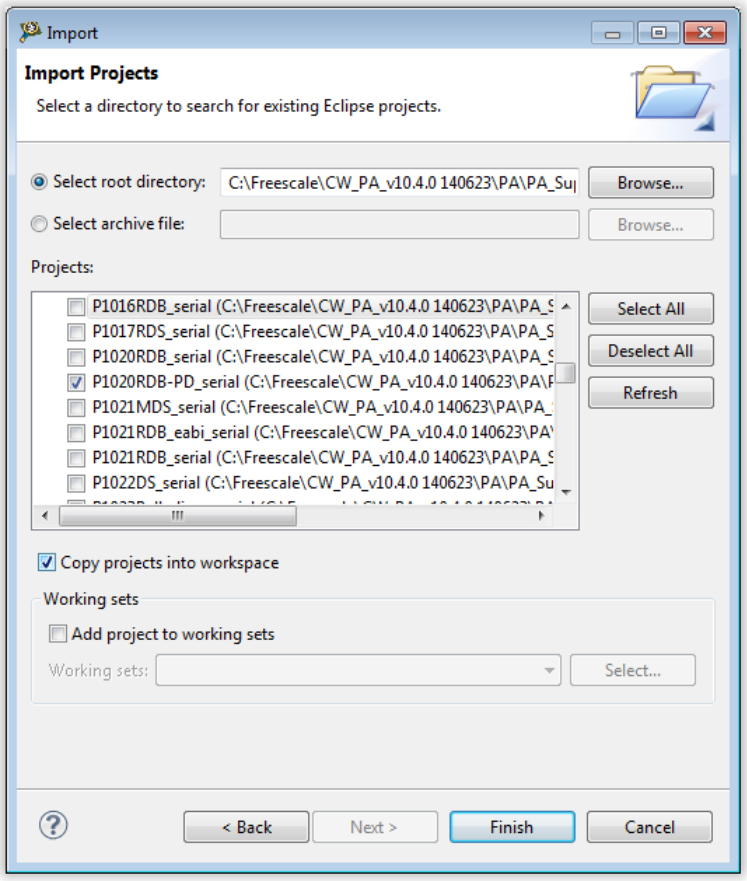

Figure 3. Importing UART project

4. Select the **Copy projects into workspace** checkbox.
5. Click **Finish** to end the **Import** wizard.
6. Build the project using the **Project > Build Project** option.

5. Using new UART library

To use the new UART console baud rate in a project, perform these steps:

1. Start CodeWarrior for Power Architecture.
2. Create a new project using the **File > New > CodeWarrior Bareboard Project Wizard** option.
3. Choose **Project > Properties** from the menu bar. The **Properties for <*project*>** window appears.
4. Expand the **C/C++ Build** property and select **Settings > PowerPC Linker > Input**.
5. Replace the library files in the **Library Files** pane with the ones built in sections 3 and 4, as shown in the figure below.

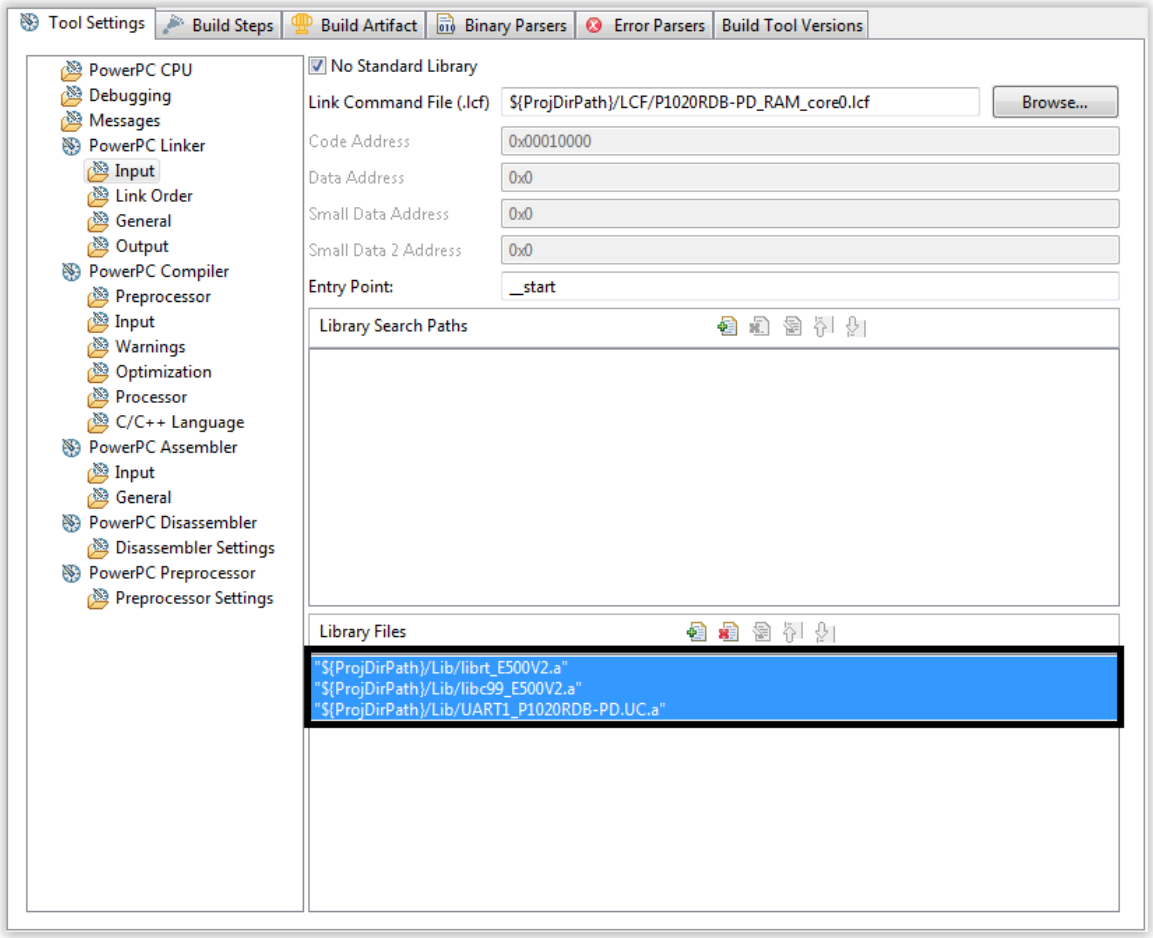

Figure 4. Modifying project settings

6. Click **Apply** and then **OK** in the **Properties for <*project*>** window.
7. Build the project with the new libraries using the **Project > Build Project** option.

How to Reach Us:

Home Page:
www.freescale.com

E-mail:
support@freescale.com

Document Number: AN5029

10 October 2014