Introduction

Since EWARM version 6.2, the compiler adds new intrinsics for the CMSIS library that improve the compiler performance in terms of optimization. These intrinsics may break CMSIS header files included in STM32 firmware packages built with older EWARM versions.

To be in line with this change, this technical note describes the steps required to use EWARM 6.2x with projects built with EWARM 6.1 and previous versions.
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1 Opening previous EWARM projects with EWARM 6.2

When using EWARM 6.2x to open projects built with EWARM 6.1 and previous, the following compilation errors are generated due to double CMSIS definitions:

```
Error[Pe147]: declaration is incompatible with "__interwork
__softfp unsigned long __get_PSP(void)" (declared at line 52 of
"C:\Program Files\IAR
C:\Libraries\CMSIS\CM3\CoreSupport\core_cm3.h"
```

To overcome this issue:

1. Check the "Use CMSIS" option from **Project options > General Options > Library Configuration**:

![Use CMSIS option](image)

2. Remove all CMSIS header files from your project by removing:

```
"$PROJ_DIR\..\..\Libraries\CMSIS\CM3\CoreSupport" from [Project>Options>C/C++ Compiler>Preprocessor]
```
Figure 2. Remove all CMSIS header files from your project

![Diagram showing CMSIS header files removal process in EWARM 6.2]

- **Category:** General Options, General, Compiler, Output, Converter, Custom Build, Build Actions, Linker, Debugger, Simulator, Angel, GDB Server, J-Link/Trace, TI Stellaris FTDE, Monitor, PE micro, RDI, ST-LINK, Third-Party Driver, TMS5100

- **Additional include directories:**
  - `$PROJ_DIR\`,
  - `$PROJ_DIR\..\..\..\Libraries\CMSIS\Include`
  - `$PROJ_DIR\..\..\..\Libraries\CMSIS\STSTM32F4\Include`
  - `$PROJ_DIR\..\..\..\Libraries\STM32F4-Lib\STM32F4 Discovery`

- **Preinclude file:**
  - `<additional_path>`

- **Defined symbols:**
  - `USE_STDFP4H_DRIVER` (STM32F4xx)

- **Preprocessor output to file:**
  - Preserve comments
  - Generate line directives
2 Revision history

Table 1. Document revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-Oct-2011</td>
<td>1</td>
<td>Initial release.</td>
</tr>
</tbody>
</table>
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