CrossCore® Development Tools by Analog Devices

Release Notes for CrossCore Embedded Studio 2.12.0

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2 Introduction

This document describes the changes for CrossCore Embedded Studio (CCES) 2.12.0. You can find the release notes for older releases in the `docs` sub-directory of your CCES installation as well as an Installation Guide which will help you install this release.

For information on Linux please refer to the general Linux documentation Linux for ADSP-SC5xx Processors [Analog Devices Wiki]. Other useful links for CrossCore and Linux Development are:

- http://www.analog.com/cces-quickstart
- EngineerZone > Processors and DSP > Software and Development Tools > CrossCore Embedded Studio and Add-ins
- EngineerZone > Processors and DSP > Software and Development Tools > CrossCore Embedded Studio and Add-ins > tags > CCES
- EngineerZone > Processors and DSP > Software and Development Tools > CrossCore Embedded Studio and Add-ins > tags > CCES 2.12.0
- How to debug SHARC cores in CCES while running Linux
- Configuring System Memory for the ADSP-SC5xx When Using Linux and SHARC Applications

3 New and Noteworthy

3.1 New Support for Creating and Launching CrossCore Launch Groups

A new session wizard is provided in CCES 2.12.0 to create CrossCore Launch Group debug configurations for ADSP-SC598 family parts. For further information see the following CCES help topic:

- CrossCore® Embedded Studio 2.12.0 > Integrated Development Environment > Debugging Targets > Debugging ADSP-SC5xx SHARC+ and ARM Projects > Using CrossCore Launch Group for ADSP-SC598 Family Applications (Heterogeneous Debug)

3.2 Boot mode elfloader updates for Culturally-Appropriate Terminology

Several boot options have been renamed in CCES 2.12.0. The old names will still be supported for exiting projects but the new names will be available for new or updated loader project settings. A sample of the new names to guide selection is given below:

New boot mode name in CCES loader settings	**elfloader switch**	**Notes**
SPI flash	`-b SPI`	Main SPI flash boot.
SPI host	`-b SPIHOST`	Receiver SPI boot mode.

3.3 Windows 11 Pro or Enterprise (64-bit)

CrossCore Embedded Studio (CCES) can now be used on Windows 11 Pro or Enterprise (64-bit).
Please refer to CrossCoreEmbeddedStudio_Installation_Guide.pdf for the complete details of supported operating systems.

3.4 Command Line Device Programmer Custom Board Support

The CLDP utility has a new `-customboard` switch that may be used to specify a custom board support XML file to override default reset register values. The main benefit of this feature is that customers can now use a custom board support file to connect to a locked ADI processor.

3.5 CCES_runner Update

The CCES_runner utility has been updated to automatically add breakpoints for the idle loops that accompany the unrecoverable error and exceptions runtime functions. These automatic breakpoints are at the following symbols:

- `__fatal_error`
- `__fatal_exception`

- `__stack_overflowed`

This change matches what happens in CCES debug configurations and will avoid apparently hanging execution if these unrecoverable errors are encountered.

4 Changes That Might Impact Backwards Compatibility

4.1 Windows 8.1 Support is Removed

CCES on Windows now only supports Windows 10 (32-bit/64-bit) and Windows 11 (64-bit) compatibility libraries installed. Support for Windows 8.1 has been removed in CCES 2.12.0.

See the Installation Guide for more details.

4.2 Workspaces created using 2.11.0 and earlier releases will use the wrong GDB version

The GDB and OpenOCD debug configuration created in workspaces using CCES version 2.11.0 or earlier releases will attempt to use the GDB debugger from the earlier release when debugging in CCES 2.12.0. Replace GDB and OpenOCD Debug configurations created with older releases using CCES 2.12.0 to fix this issue.

5 Known Issues

5.1 Debugging with OpenOCD and J-Link on Windows

In order to to use a J-Link with an OpenOCD Debug Configuration the stock J-Link driver must be replaced with the WinUSB driver.

This is explained further on the SEGGER Wiki including some of the limitations of using J-Link with OpenOCD.

5.2 Updating launch configuration shown after terminating Group Launch Wizard

After successfully using the group launch wizard, re-select the configuration in configuration tree before making any updates. If not done, changes will not be applied.

5.3 Creating heterogeneous launch configuration with inappropriate item selected

Before launching the Debug/Run Configurations dialog, be sure to select the correct project folder or binary file. Not doing so may cause the group launch wizard to not initialize or save the new configuration as expected.