Embedded Target for Infineon C166® Microcontrollers Release Notes

The "Embedded Target for Infineon C166® Microcontrollers Version 1.1 Release Notes" on page 1-1 describe the changes introduced in the Embedded Target for Infineon C166® Microcontrollers 1.1 since Version 1.0. The following topics are discussed in these Release Notes:

• "New Features" on page 1-2

Note The Embedded Target for Infineon C166® Microcontrollers 1.0 was released in Web-downloadable form after Release 13.

For an introduction to this product, see the "Embedded Target for Infineon C166® Microcontrollers Version 1.0 Release Notes" on page 2-1.

Printing the Release Notes
If you would like to print the Release Notes, you can link to a PDF version.

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Embedded Target for Infineon C166® Microcontrollers Version 1.1 Release Notes

New Features

This section introduces the new features and enhancements added in version 1.1 of the Embedded Target for Infineon C166® Microcontrollers.

CAN Support

There are new driver blocks for transmitting and receiving messages using the CAN module on the Infineon C166® microprocessor. There are blocks for packing, unpacking and filtering CAN messages, outputting the bus status or reseting a CAN module. There is also an implementation of the CAN Calibration Protocol (CCP) standard for host-target communication over CAN, so you can use a calibration tool (such as Vector CANape or ATI Vision) for remote signal monitoring and parameter tuning. The CCP block also enables PROGRAMME_PREPARE downloads without manual processor reset.

Support for XC16x Processor Variants

There is now support for XC16x variants of the Infineon C166® microprocessor. There is a new sublibrary of TwinCAN blocks providing CAN support (including CCP) for the TwinCAN nodes of XC16x processor variants.

Task Execution Profiling

This is a new feature that allows execution profiling data to be recorded, uploaded and displayed in the form of a MATLAB graphic and as an HTML report. Execution profiling data can be collected over serial, CAN or TwinCAN. See the demo model c166_multitasking.

Temporary Task Overruns Now Permitted by the Scheduler

It is now possible for task overruns in the base rate or one of the sub- rates to occur without causing a failure. The benefit is that if it occassionally it takes longer than the normally allowed time to complete a task, this is now possible without having to increase the sample time. The overrun behaviour is configurable and is illustrated by the new demo model c166_multitasking.

Use of Real Time Clock as System Timer

It is now possible to select the Real Time Clock (RTC) for use as the system timer. This allows the timers T2 ... T6 to be used for other purposes. This parameter is found in the C166 Resource Configuration block. Note that the RTC is not available on all hardware variants of the C166; please consult your hardware documentation.

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Embedded Target for Infineon C166® Microcontrollers Version 1.0 Release Notes

Introduction to the Embedded Target for Infineon C166® Microcontrollers

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Note The Embedded Target for Infineon C166® Microcontrollers (Version 1.0) was released as part of Release 13+ with Service Pack 1. Version 1.0 is the first release of this product.

The Embedded Target for Infineon C166® Microcontrollers is an add-on product for use with the Real-Time Workshop Embedded Coder. It provides a set of tools for developing embedded applications for the C166® family of processors. This includes derivatives such as Infineon C167 and ST Microelectronics ST10 (`www.us.st.com`).

Used in conjunction with Simulink, Stateflow, and the Real-Time Workshop Embedded Coder, the Embedded Target for Infineon C166® Microcontrollers lets you

- Design and model your system and algorithms.
- Compile, download, run and debug generated code on the target hardware, seamlessly integrating with the Tasking compiler toolchain for the Infineon C166® microcontroller.
- Use rapid prototyping techniques to evaluate performance and validate results obtained from generated code running on the target hardware.
- Deploy production code on the target hardware.

Feature Summary

- Automatic generation of 'main' program including single or multitasking scheduler
- Automated build procedure including starting debugger or download utility
- Support for integer, floating-point or fixed-point code
- Driver blocks for serial transmit and receive
- Examples to show you how to integrate your own driver code
- Fully integrated with Tasking toolchain

- Enhanced HTML report generation provides analysis of RAM/ROM usage; this is in addition to the standard HTML report generation that shows optimization settings and hyperlinks to generated code files