Code Composer Studio™ v6

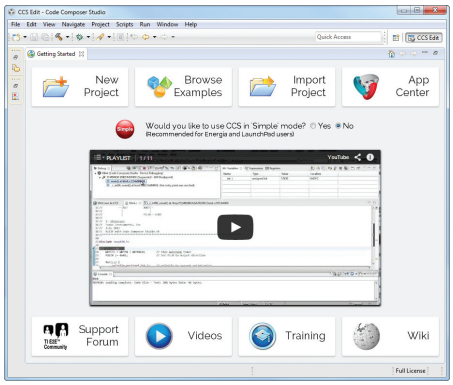
Integrated Development Environment (IDE) for Embedded Processors

TEXAS INSTRUMENTS

The Code Composer Studio™ integrated development environment (IDE) supports Texas Instruments broad embedded portfolio.

Getting Started

The first screen seen when running Code Composer Studio is the "Getting Started" view. This tool provides users with fast access to many of the common tasks they would want to perform when first starting to use a new environment such as creating a new project, browsing examples and visiting the new "App Center." There are links to the support forums, YouTube videos, training materials and the wiki. Prominently displayed in the center of the screen is a video that walks customers through the basics of using Code Composer Studio. It also gives users the option of switching to "Simple Mode." Simple mode strips down the Code Composer Studio user interface to a more basic set of functionality with a reduced number of buttons, menu items and views open.



App Center

Users need much more than just an IDE to begin working on an embedded design. The purpose of the "App Center" is to provide access to additional software that is available. Packages such as MSP430Ware™, C2000™ controlSUITE™ and TivaWare™ are essential to starting development and are all available via the App Center. Other packages like TI-RTOS, GCC for MSP430™, Linux™ Development Tools and GUI Composer are also available. To prevent customers from being overwhelmed by content, the App Center will display only the packages that are relevant to the device platforms that were selected during the Code Composer Studio installation.

Once users have installed a package, the "Resource Explorer" lets them browse through all the examples and documentation that were provided. The idea is that users can quickly locate the content they need, install it and start using it, all from within Code Composer Studio.

Compiler and Advisor Tools

At the heart of every development environment is the compiler. Code Composer Studio includes a highly optimized C compiler for each processor platform. Additionally, for MSP430- and ARM®-based devices, a GCC distribution is provided for those who prefer to use GCC. In order to help the compiler to do the best job possible for your device, Code Composer Studio includes intelligent tools that provide you with advice on how to best optimize your application for performance, code size and power consumption.

Trace

Many high-performance TI processors include the ability to perform processor trace. Trace provides a detailed, historical account of code execution, timing and data accesses. This advanced capability is extremely useful in detecting complex, intermittent bugs, as well as profiling to help fine-tune code performance. Trace data can be captured to dedicated on-chip memory (ETB) or exported over pins to be captured by a trace receiver.

The majority of TI devices with an ARM Cortex®-M core include the "Instrumentation Trace Module" (ITM). ITM is an application-driven trace source that provides a high-level software view of what is happening on the device. ITM enables features such as: Statistical profiling, variable tracing and interrupt profiling.

Linux Development

Code Composer Studio supports both Linux kernel and application-level development. The kernel can be debugged via JTAG, or GDB can be used for application development. By installing the Linux development tools package via the App Center, users can also get access to additional functionality such as the Linux Trace Tools (LTTng), which provide visibility into what is happening within the system.

TI-RTOS

TI-RTOS is a scalable real-time operating system (RTOS) for TI devices. It scales from a real-time multitasking kernel to a complete RTOS solution including additional middleware components and device drivers. By providing essential system software components pre-tested and pre-integrated, TI-RTOS enables developers to focus on differentiating their application.

When used within Code Composer Studio, users can use the "RTOS Object View" to inspect the state of the scheduler, threads and objects in the system. The RTOS Analyzer graphs thread execution and displays task and CPU load.

For additional information please visit **www.ti.com/ccs**.

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