

C2000Ware DigitalPower SDK

The [DigitalPower SDK for C2000](#) microcontrollers (MCU) is a cohesive set of software infrastructure, tools, and documentation designed to minimize C2000™ MCU-based digital power system development time targeted for various AC-DC, DC-DC and DC-AC power supply applications. The software includes firmware that runs on C2000 digital power evaluation modules (EVMs) and TI designs (TIDs), which are targeted for solar, telecom, server, electric vehicle chargers and industrial power delivery applications. A copy of C2000Ware is provided as part of the SDK and offers device-specific drivers and support software to complete examples in sophisticated system applications. The DigitalPower SDK provides all of the needed resources at every stage of development and evaluation in a digital power application.

The [powerSUITE](#) package is installed as part of the DigitalPower SDK. In order to utilize the powerSUITE graphical user interfaces (GUIs) and toolset, you need to install this package within your Code Composer Studio™ (CCS) installation.

DigitalPower SDK requires:

- CCS v9.0.1 or newer
- C2000 Compiler v18.12.1 LTS or newer

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1 Package Structure

The C2000Ware DigitalPower SDK software package is organized into the directory structure shown in [Table 1](#).

Table 1. DigitalPower SDK Root Directories

Directory Name	Description
.metadata	Contains the DigitalPower SDK resource explorer GUI files (Do not modify)
c2000ware	Contains the C2000Ware development software and documentation
docs	Contains the DigitalPower SDK package user guides and a document HTML page
libraries	Contains libraries with algorithm modules specific to digital power applications
solutions	Contains the development kits solutions for the C2000 devices targeting different application areas
uninstallers	Contains the DigitalPower SDK uninstaller

1.1 Documentation

Within DigitalPower SDK, there is an extensive amount of development documentation ranging from development kit hardware documentation to library user's guides. To assist with locating the necessary documentation, an HTML page is provided that contains a full list of all the docs in the DigitalPower SDK package. Locate this page in the "docs" directory.

1.2 C2000Ware

DigitalPower SDK contains the necessary software and support for C2000 microcontrollers. C2000Ware is a cohesive set of development software and documentation designed to minimize software development time. From device-specific drivers and libraries to device peripheral examples, C2000Ware provides a solid foundation to begin development and evaluation of your product.

To learn more about C2000Ware, visit www.ti.com/tool/c2000ware.

1.3 Libraries

The libraries included in DigitalPower SDK range from ramp generator and power measurement libraries to specialized software phase lock loop libraries as well as the SFRA library. The libraries directory includes documentation and examples when applicable.

2 DigitalPower SDK GUI

DigitalPower SDK provides a graphical user interface (GUI) for intuitive navigation of software, libraries, user's guides, and other package content. The GUI is integrated into Code Composer Studio (CCS) upon installation. Within Code Composer Studio™ (CCS) v9.0.1 or newer, go to "View → Resource Explorer" to locate the C2000Ware DigitalPower SDK GUI explorer.

DigitalPower SDK uses the new online Resource Explorer, which includes many updated features. This includes full package navigation on the web or in CCS without requiring installation of DigitalPower SDK.

View DigitalPower SDK Resource Explorer on the web: <http://dev.ti.com/tirex/#/>

3 Updating DigitalPower SDK

Within the DigitalPower SDK installation directory, an update checking application, "DigitalPowerSDKUpdater.exe", is provided to check for a newer version of the DigitalPower SDK. When the updater is run, a window is displayed in order to state that the current version installed is the newest version or that a newer version is available for download. When a new version is available, the option is given to download and install the new version. The application proceeds to download the latest DigitalPower SDK installer to the specified download directory. Upon completing the download, the installer automatically runs and continues with the standard installer steps.

4 Code Composer Studio

Code Composer Studio is an integrated development environment (IDE) that supports TI's Microcontroller and Embedded Processors portfolio. Code Composer Studio comprises a suite of tools used to develop and debug embedded applications. The latest version of Code Composer Studio can be obtained at the following link: <http://www.ti.com/ccstudio>.

All projects and examples in the DigitalPower SDK are built for and tested with TI's Code Composer Studio. Although Code Composer Studio is not included with the DigitalPower SDK installer, it is easily obtainable in a variety of versions.

NOTE: CCS version 9.0.1 is the minimum required version to use the DigitalPower SDK. Free licenses are available for download.

Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Original (January 2018) to A Revision	Page
• Updates were made in the Abstract of this document.....	1
• Updates were made in Section 2	2
• Update was made in Section 4	3

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