Software Design Solutions, Inc.

FlashBurn v4 Porting Kit
Getting Started
Version 4.01

This Getting Started document explains how to use FlashBurn v4 to program a Blink example onto a target board.

Product Versions

The FlashBurn v4 product runs in two modes:

- In the unlicensed DSK-only mode, FlashBurn v4 can only program flash on the Texas Instruments DSK and EVM boards for which support is listed in the Examples-DSK\ directory. The Examples-DSK directory contains pre-built FBTC flash programming applications and source code for the Blink example programs.

- In the licensed Porting Kit mode, FlashBurn v4 can be used on custom hardware. The flash programming FBTC programs in the Examples-PK\ directory can be used as a starting point and modified as needed using Code Composer Studio. The Porting Kit version of FlashBurn v4 can load modified FBTC programs.

The DSK-only mode is a free product from Software Design Solutions, Inc. The license key to enable Porting Kit mode can be purchased at http://www.softwaredesignsolutions.com/flashburn4.aspx.

Selecting the Code Composer Studio for FlashBurn4

FlashBurn4 needs to be configured to use a specific Code Composer Studio installed on your computer. This is normally done when installing FlashBurn. The selection may be changed later with the CCS Selector application.

Launch CCS Selector. The application will display all the versions of Code Composer found on the computer. Choose the CCS to use and press "Select". A specific installation of Code Composer Studio may be selected by choosing "Browse".
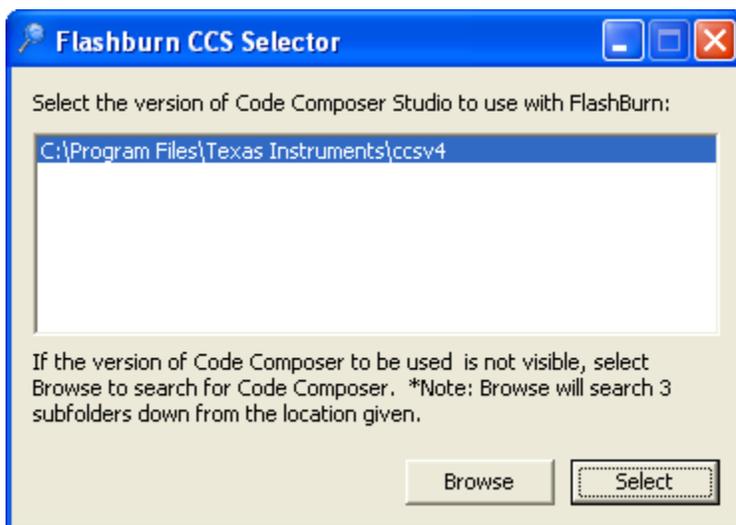
Licensing FlashBurn v4 Porting Kit version

The PK (Porting Kit) version of FlashBurn is enabled with a license key from Software Design Solutions.   Steps for licensing FlashBurn are as follows:

Launch the SDS License Manager from the Windows Start menu. Select FlashBurn4 then click on "Get a License Key via the Web". Sign into the website with the same account used to purchase the license key.
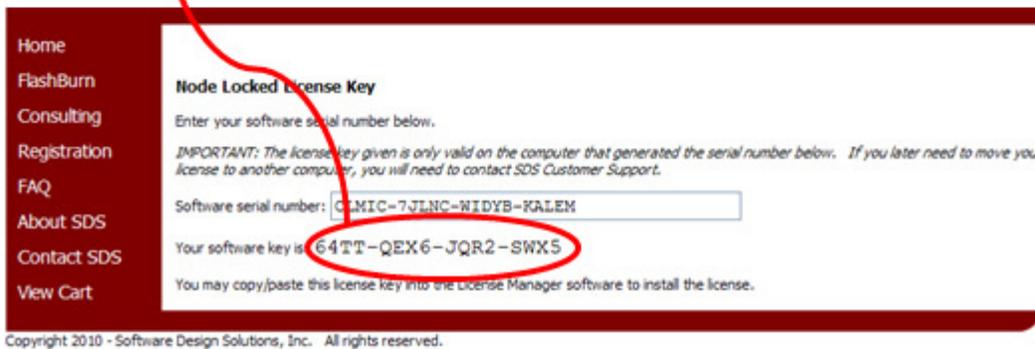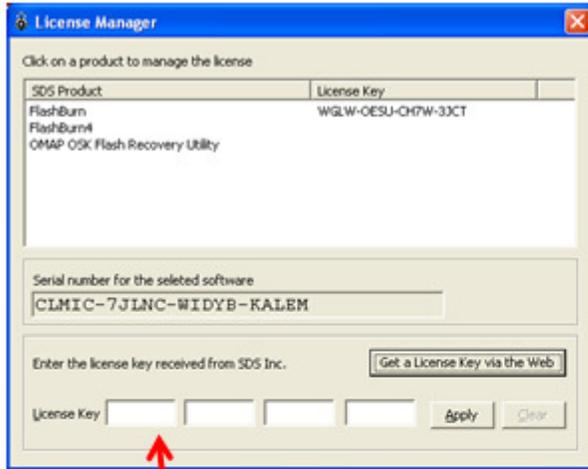

A page will display the license key for the specific serial number given. Enter or Copy/Paste the displayed license key into the License Key field and click Apply. The license manager will report that the license has been recorded. FlashBurn v4 Porting Kit version is now licensed.

Using FlashBurn v4 to Program Flash

The following steps show how to program the flash on the TMS32VC5509 DSK board.   The example Blink program provided with FlashBurn will be programmed into flash. Flashing the other targets is a similar process. Each target directory contains readme.txt files describing any unique steps for programming the flash and booting the board.

1) Configure Code Composer Studio to communicate with the DSK5509A board. Remember the location of the .ccxml file used for configuring Code Composer Studio. It will be needed in Step 4.

2) Connect the DSK to the PC and power on the target board.

3) Start FlashBurn
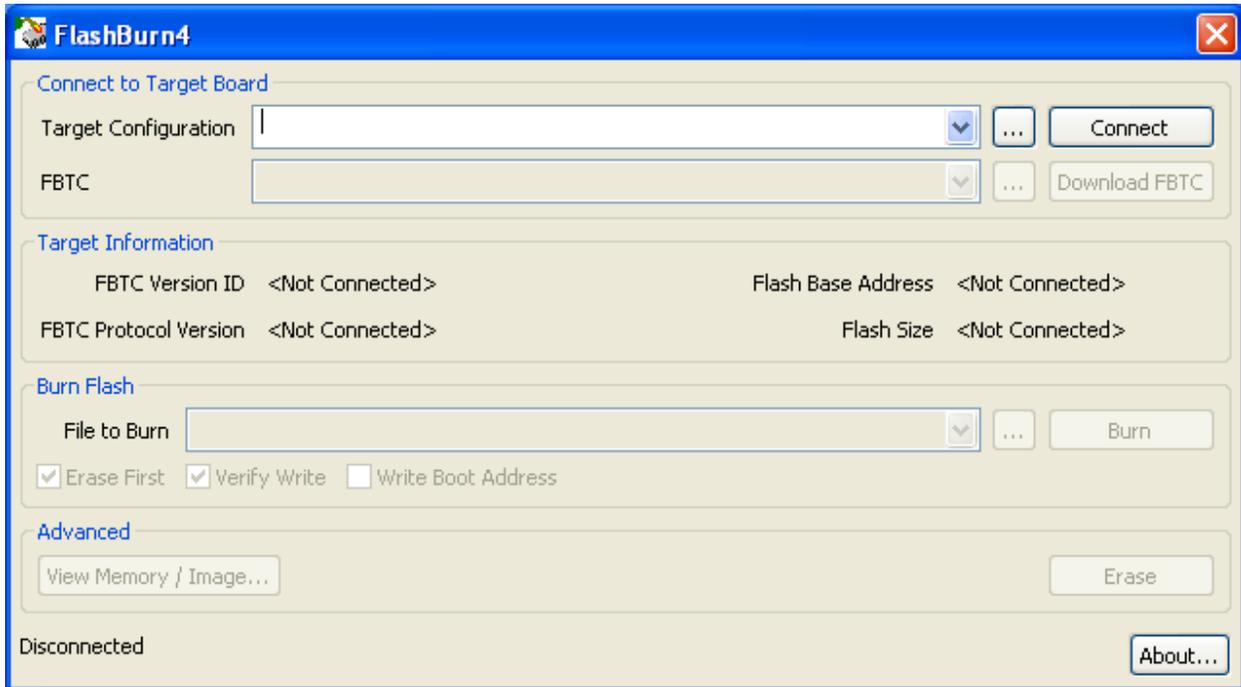
4) Choose the .ccxml file used by Code Composer to communicate with the board.

5) Click "Connect"

6) If successful, the status bar will say "Successfully connected to board" and now the Download FBTC will be available.
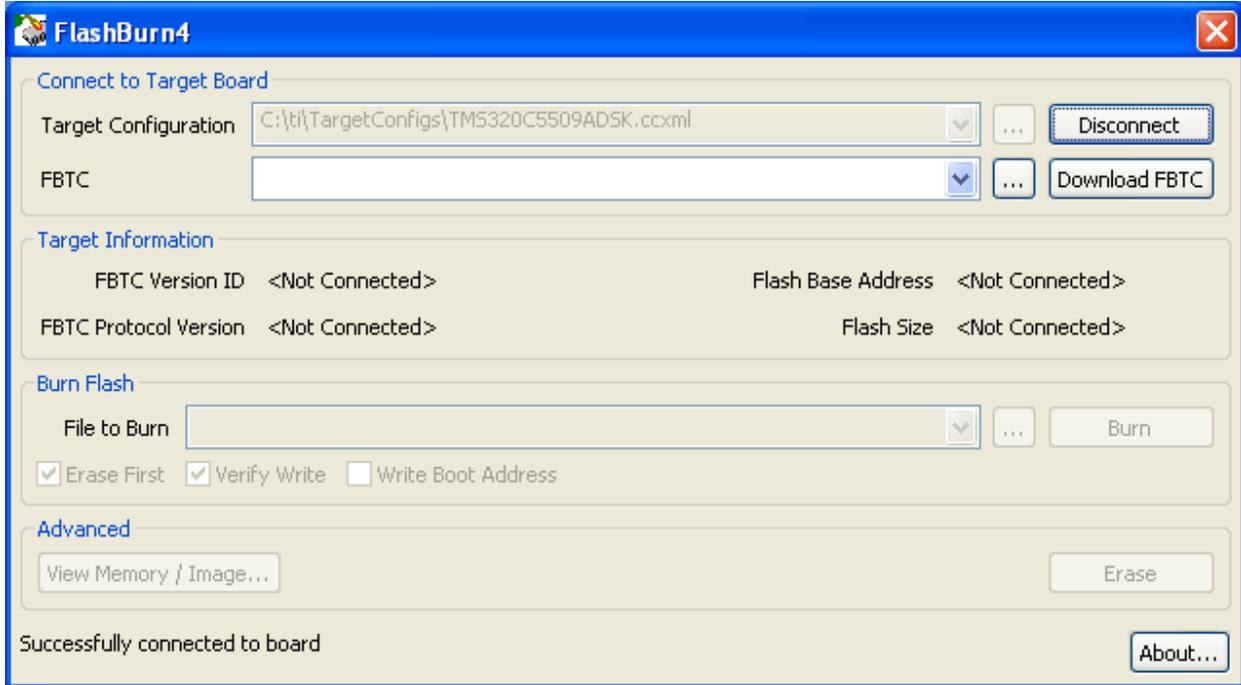
7) Choose the .fbtc file you will use that contains the target specific know-how to burn the flash. For this example, choose the FBTCDSK5509A.fbtc file located in the DSK5509A directory: `C:\Program Files\Software Design Solutions\Flashburn 4\examples-DSK\DSK5509A\FBTCDSK5509A.fbtc`

8) Click "Download FBTC"

9) If successful, the status bar will say "Successfully loaded FBTC" and now the rest of the FlashBurn GUI will be active. FlashBurn is now ready to manipulate the flash on the board.
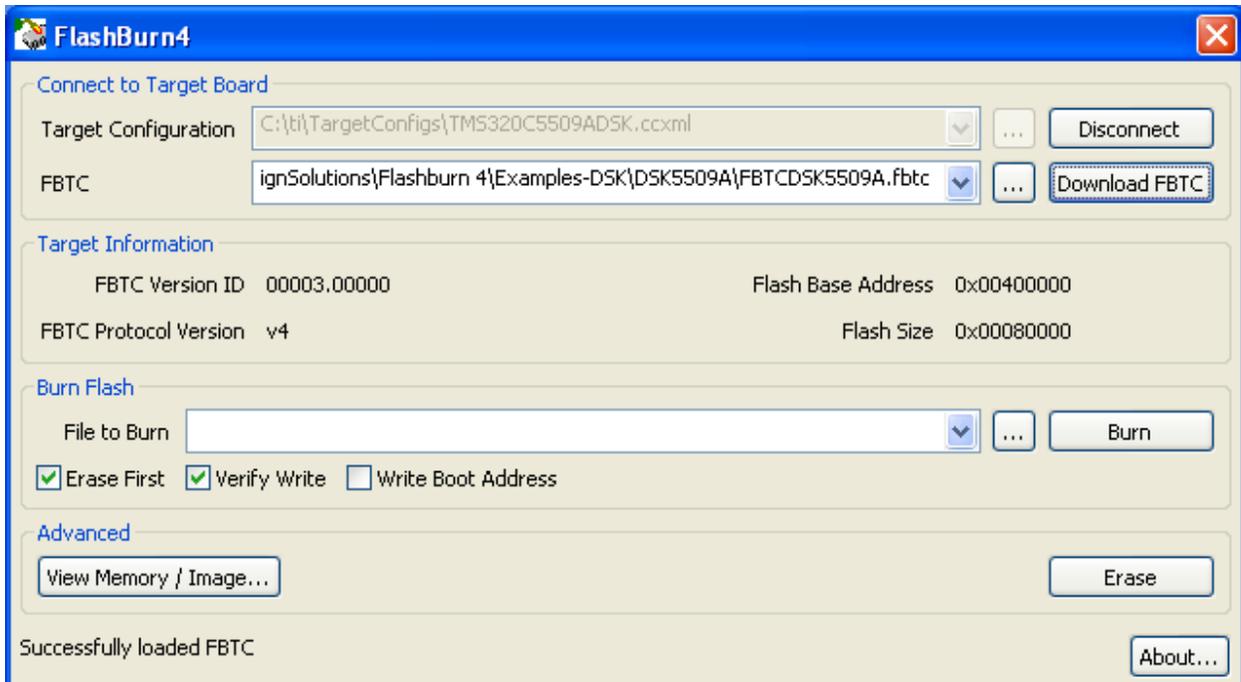
10) Choose the .hex file you will burn to the target board. For this example, choose BlinkDSK5509A.hex file located in the DSK5509A directory: `C:\Program Files\Software Design Solutions\Flashburn 4\examples-DSK\DSK5509A\BlinkDSK5509A.hex`

11) Be sure Erase First, Verify Write, and Write Boot Address are checked.

12) Click "Burn" to erase and burn the flash with the program.

13) If everything is successful then the status bar will say "Write successful."
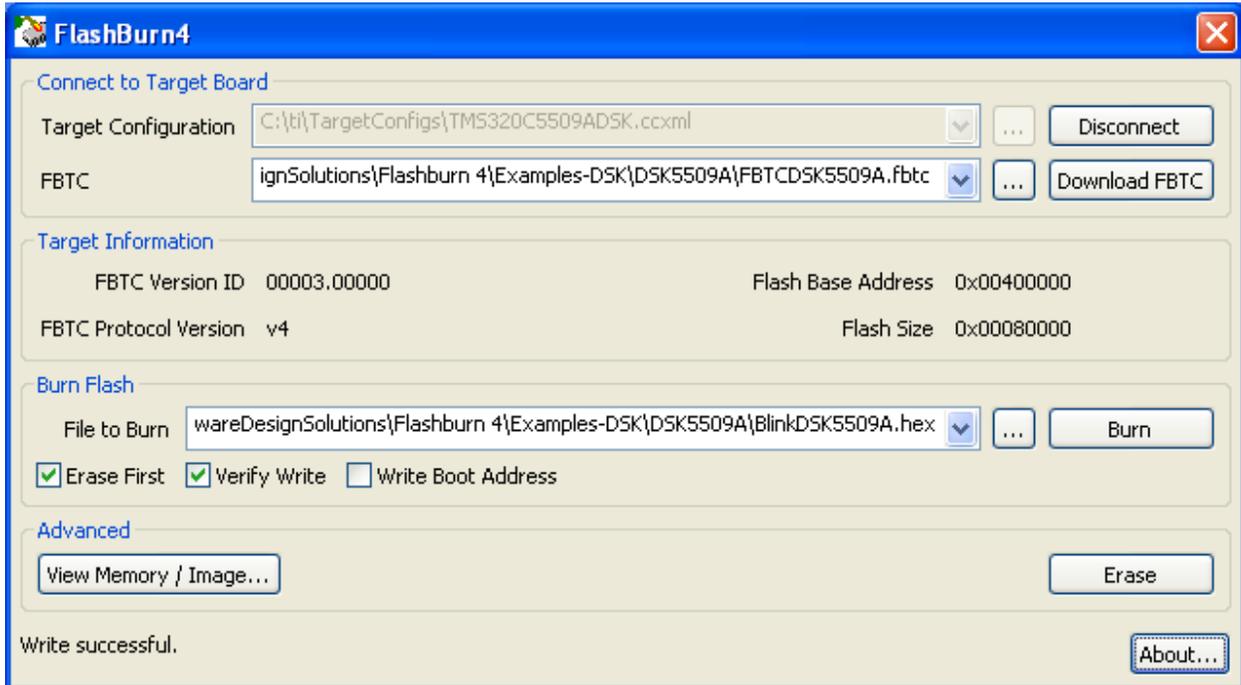
14) To test the application on the hardware, click "Disconnect" to release the connection from the PC to the target board. Power cycle the DSK. The LEDs should blink in sequence.

Viewing Memory

FlashBurn can display flash memory on the target and compare flash memory with a given .hex image file.

If no .hex file is provided in the 'Burn Flash' section, the View Memory / Image button displays a view of flash memory starting at the beginning of flash.
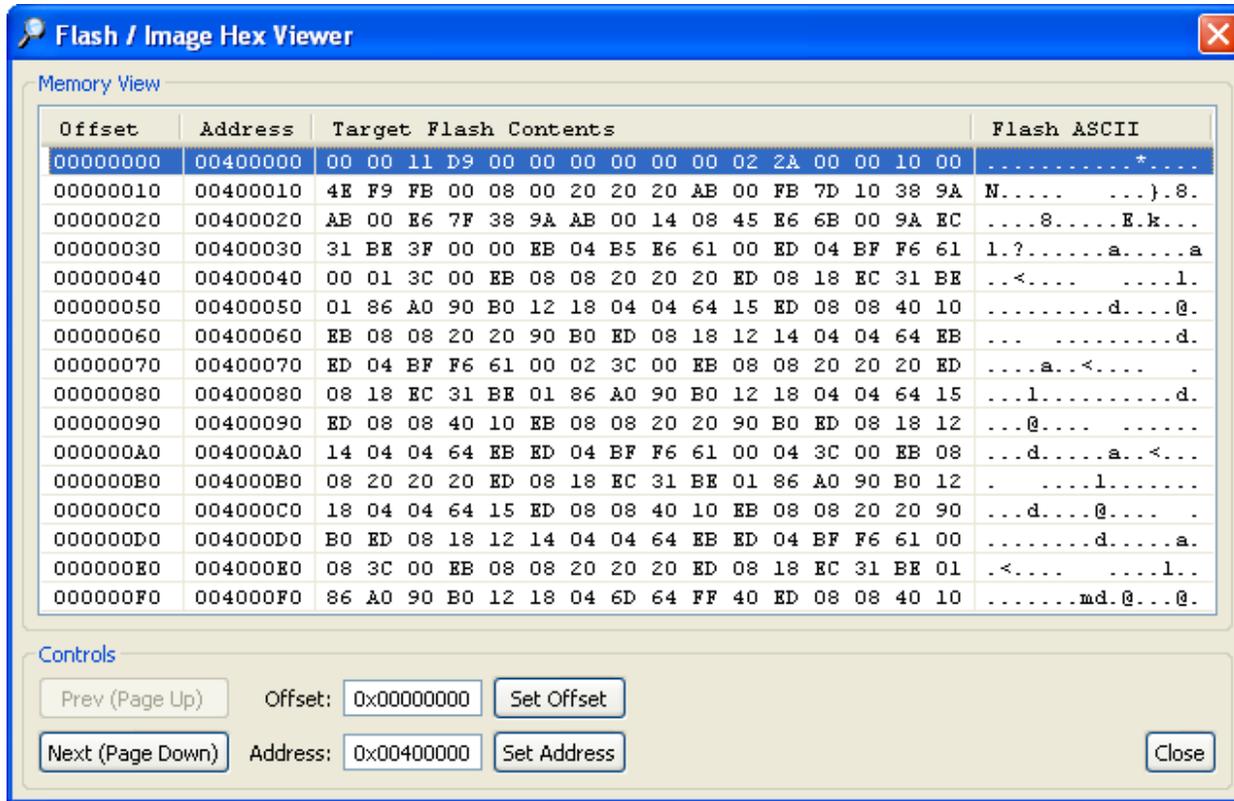
The contents of flash memory is displayed in hex and ASCII. Navigation is done with Page Up/Down or by choosing a new offset or flash address.

If a .hex file is provided in the 'Burn Flash' section, the View Memory/Image button displays a comparison view of flash memory compared with the given .hex file image. Differences are outlined in red.
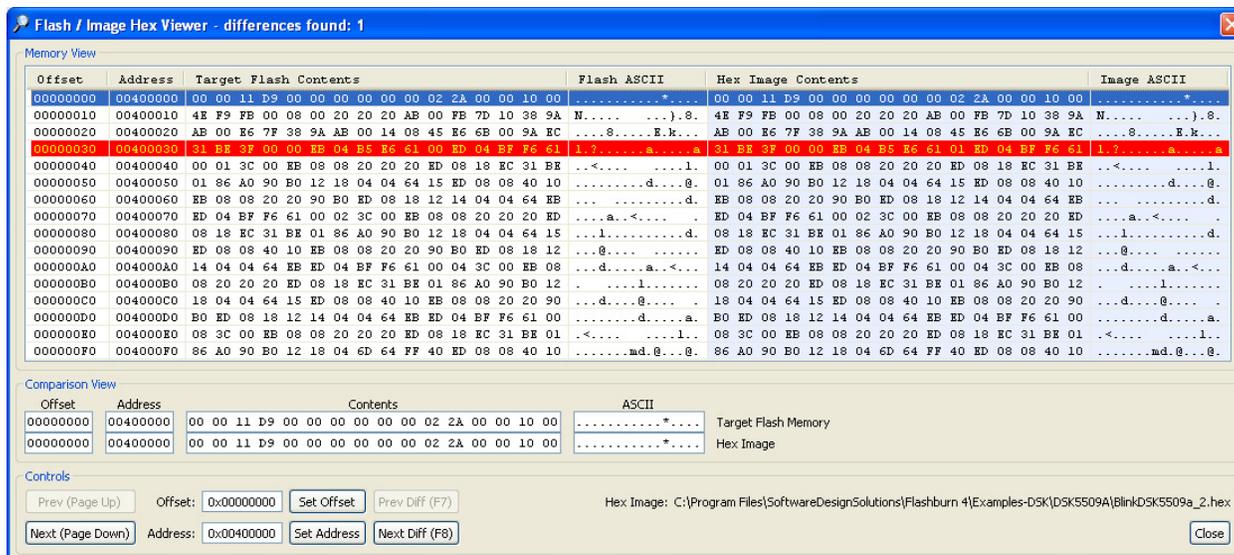
The selected line is displayed in the Comparison View. The navigation controls now also include Prev Diff and Next Diff buttons.