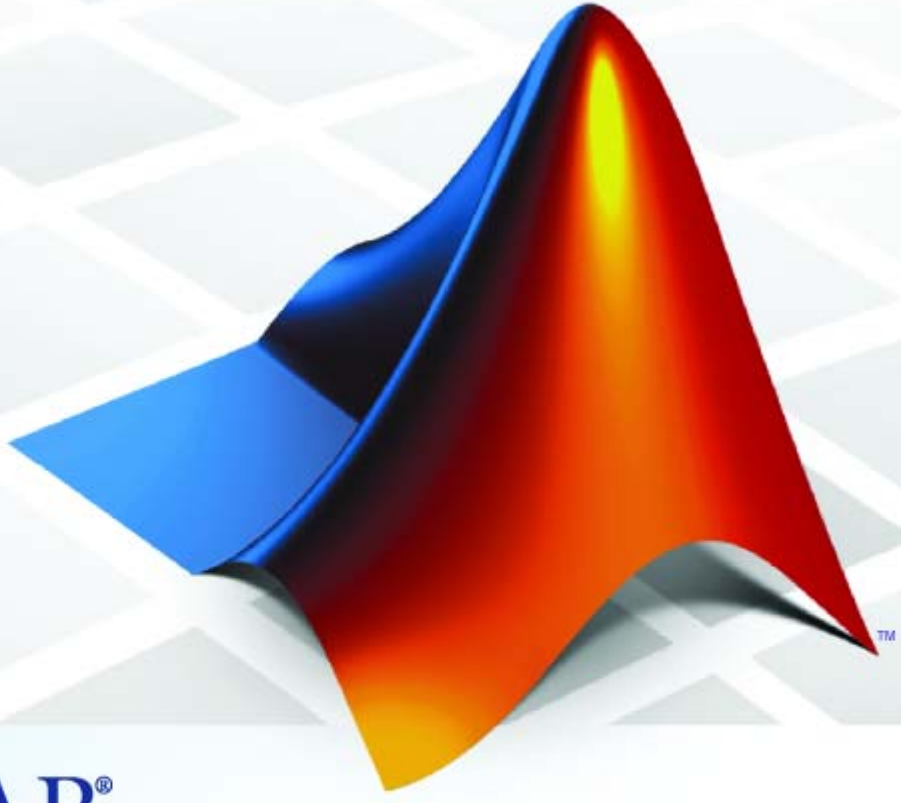
Target Support Package™ 4
Reference Guide

For Use with Texas Instruments C5000™



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Target Support Package™ Reference Guide

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Revision History

September 2009	Online only	New for Version 4.0 (Release 2009b)
March 2010	Online only	Revised for Version 4.1 (Release 2010a)

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System Requirements

For detailed information about the software and hardware required to use Target Support Package™ software, refer to the Target Support Package system requirements areas on the MathWorks Web site:

- Requirements for Target Support Package: www.mathworks.com/products/target-package/requirements.html
- Requirements for use with TI's C5000™: www.mathworks.com/products/target-package/ti-adaptor/

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Block Reference

C5510 DSK (c5510dsk) (p. 2-2) Blocks for TMS320VC5510 DSP Starter Kit (DSK) (c5510dsk)

C5510 DSK (c5510dsk)

C5510 DSK ADC	Configure AIC23 and peripherals to collect data from analog jacks and output digital data
C5510 DSK DAC	Configure AIC23 codec and peripherals to send data stream to output jack

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Blocks — Alphabetical List

C5510 DSK ADC

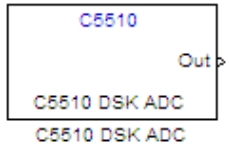
Purpose

Configure AIC23 and peripherals to collect data from analog jacks and output digital data

Library

TMS320VC5510 DSP Starter Kit (DSK) (c5510dsk)

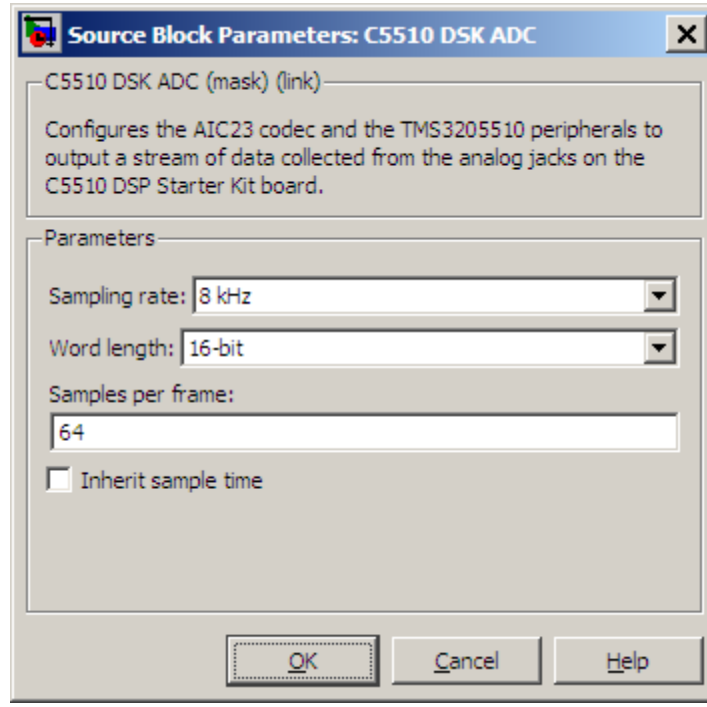
Description



C5510 DSK ADC

Configures the AIC23 codec and the TMS320C5510 peripherals to output a stream of digital data. The block collects this data from the analog jacks on the C5510 DSP Starter Kit board.

Dialog Box



Sampling rate

Set the rate at which the analog-to-digital converter samples the analog input. A higher rate increases the resolution of the data the ADC outputs.

Word length

Set the number of data bits the ADC creates for each sample. Increasing the word length increases the accuracy of the data in each sample. If your model also contains a DAC block, set the word length in the DAC block to match that of the ADC block.

Samples per frame

Set the number of samples the ADC buffers internally before it sends the digitized signals, as a frame vector, to the next block in the model. This value defaults to `64` samples per frame. The frame rate depends on the sample rate and frame size. Thus, if you set **Sampling Rate** to 8 kHz, and **Samples per frame** to 32, the resulting frame rate is 250 frames per second (8000/32 = 250).

Inherit sample time

Select whether the block inherits the sample time from the model base rate or from the Simulink base rate. You can locate the Simulink base rate in the Solver options in Configuration Parameters. Selecting Inherit sample time directs the block to use the specified rate in model configuration. Entering -1 configures the block to accept the sample rate from the upstream HWI, Task, or Triggered Task blocks.

See Also

C5510 DSK DAC

C5510 DSK DAC

Purpose

Configure AIC23 codec and peripherals to send data stream to output jack

Library

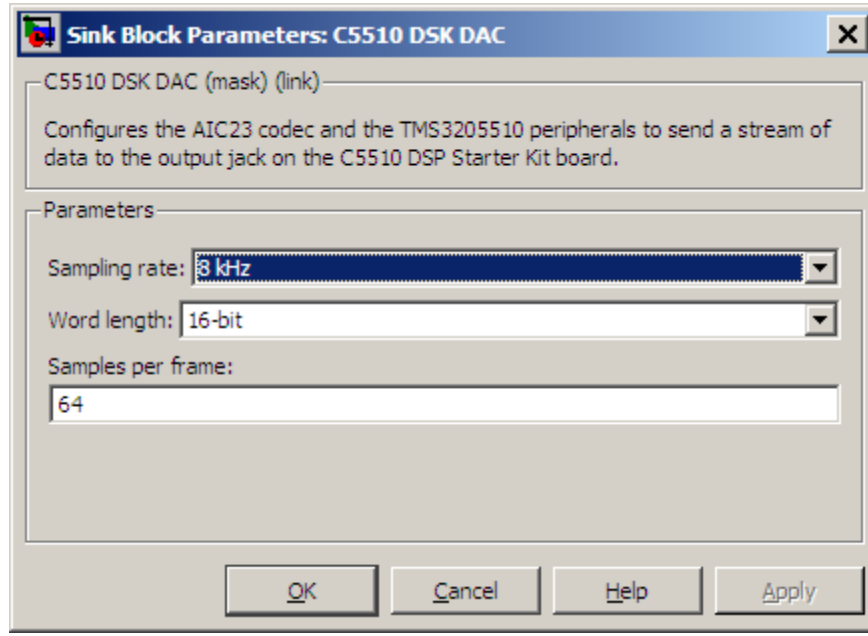
TMS320VC5510 DSP Starter Kit (DSK) (c5510dsk)

Description

Configures the AIC23 codec and the TMS3205510 peripherals to send a stream of data to the output jack on the C5510 DSP Starter Kit board.

C5510 DSK DAC

Dialog Box



Sampling Rate

Set the rate at which the digital-to-analog converter receives each data sample. If your model contains an ADC block, set this value to match the sampling rate of the ADC block.

Word length

Set the number of bits in each data input sample the DAC. If your model also contains an ADC block, set the word length in the DAC block to match that of the ADC block. If you do not use an accurate setting, the DAC cannot convert the data correctly.

Samples per frame

Set the number of samples per data input frame. Match this value with the value of the block creating the data frames. This value defaults to `64` samples per frame.

See Also

C5510 DSK ADC

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