ADC_DelSig Example project
2.20

Features

- Project uses Default single ended mode
- Continuous conversion mode with 16-bit resolution
- Reference used is internal reference

General Description

This example project demonstrates the operation of the Delta Sigma ADC in single ended mode.

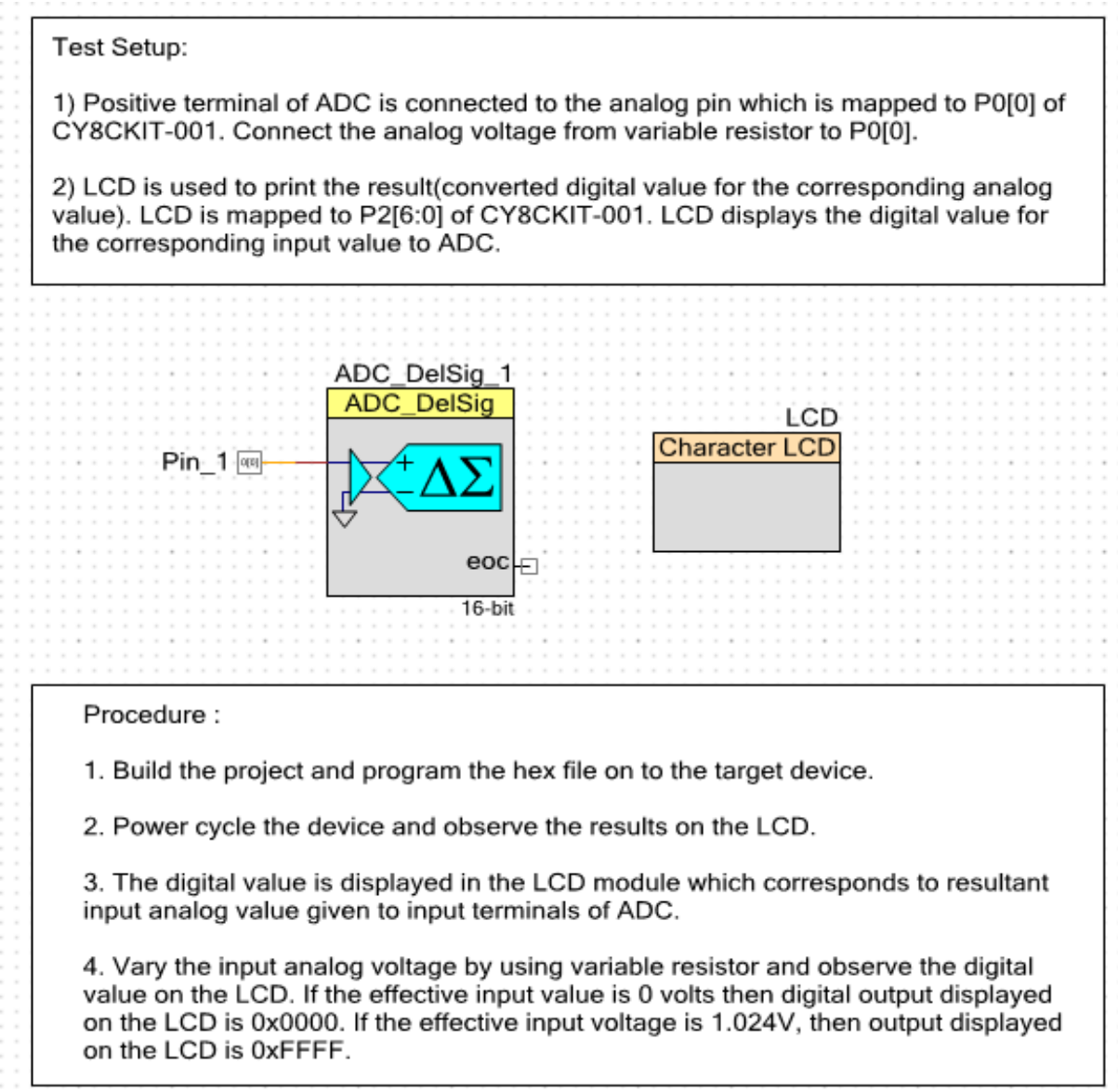
Development kit configuration

1. This project is written for a 2X16 LCD display as the one available in the Cypress kit CY8CKIT-001.
2. Build the project and program the hex file on to the target device by using MiniProg3.
3. Connect pins as described below and power cycle the device.
4. Observe the ADC output on the LCD.

Project configuration

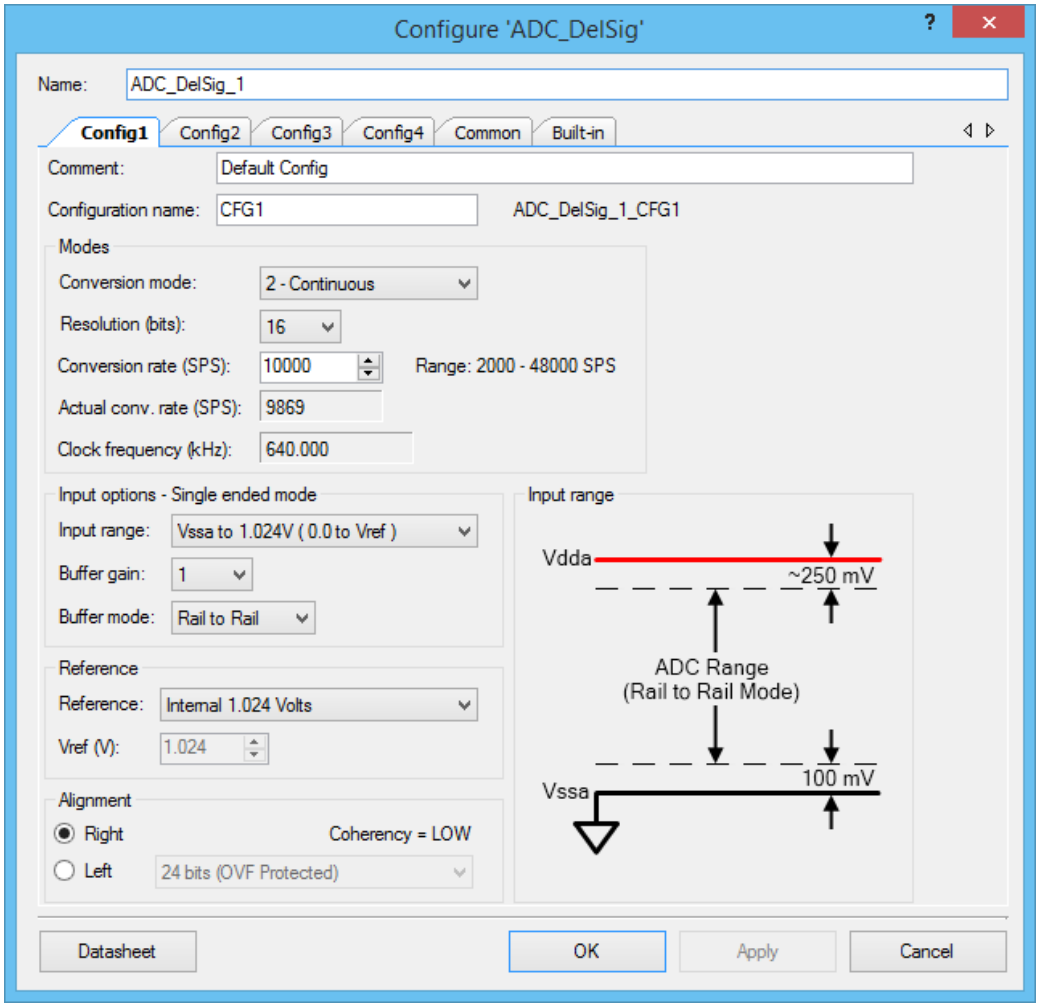
The example project consists of the ADC_DelSig and Char LCD components. The top design schematic is shown in Figure 1. The Character LCD component is used for displaying the ADC output.

Figure 1. Top design schematic



The Character LCD uses its default configuration. The ADC is configured in its default single ended mode with 16-bit Continuous conversion mode. The ADC_DelSig component configuration window is shown below in Figure 2.

Figure 2. ADC_DelSig Component Configuration



Project description

In the main function all components are started. For the proper usage of the Character LCD component, please refer to the corresponding component datasheet.

ADC_DelSig is configured in default single ended mode. Continuous conversion mode is used to convert the input analog voltage. ADC_DelSig_IsEndConversion() API is used to check the end of each successful conversion. After completing the conversion, digital value is read using ADC_DelSig_GetResult16() API. This digital value is then displayed on the LCD.

Expected Results

The LCD should display the converted output value which is equivalent to the analog input voltage given to the input terminal of the ADC component.

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