

TN00017

LPC54608 ADC Sequence A and B conversions with DMA

Rev. 1 — 1 May 2017

Technical note

Document information

Info	Content
Keywords	LPC54608, 12-bit ADC, Sequence conversions, DMA, temperature sensor, function generator
Abstract	This technical note gives an overview of an example that performs ADC Sequence-A and Sequence-B conversions.



Revision history

Rev	Date	Description
1.0	20170501	Initial version.

Contact information

For more information, please visit: <http://www.nxp.com>

For sales office addresses, please send an email to: salesaddresses@nxp.com

1. Introduction

The LPC5460x is a family of ARM Cortex-M4 based microcontrollers for embedded applications. LPCXpresso Development Board for LPC5460x MCUs is used in this technical note. Details of the board can be found in:

<http://www.nxp.com/products/microcontrollers-and-processors/arm-processors/lpc-cortex-m-mcus/lpc54000-series-cortex-m4-mcus/lpcxpresso-development-board-for-lpc5460x-mcus:OM13092>



Fig 1. LPC54608 LPCXpresso Development Board

2. Description

The example shows using ADC with Sequence-A and Sequence-B conversions. In the example, ADC Channel0 and ADC Channel4 are used. ADC Channel0 is connected internally to the on-chip temperature sensor. ADC Channel4 (Pin PIO0_16) can be connected to a function generator or a varying DC power supply. In this demo, it is connected to a varying DC power supply.

Pressing any key on the keyboard triggers the conversions. On every trigger, Sequence-A converts sample from ADC Channel0 and Sequence-B converts sample from ADC Channel4.

[Fig 2](#) shows the terminal window after 2 triggers.

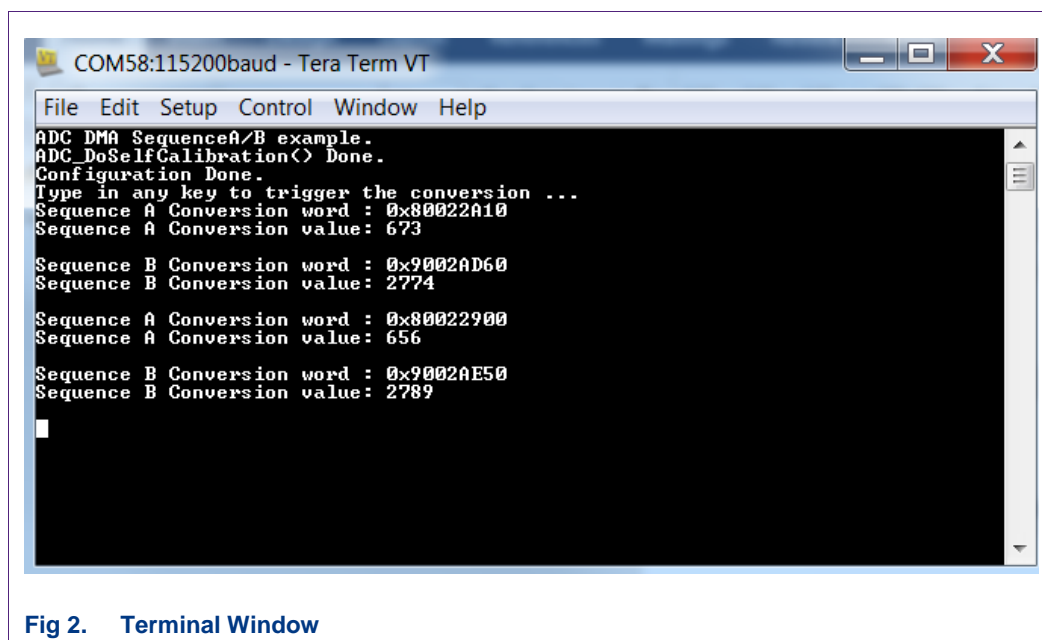


Fig 2. Terminal Window

The example is available in three tool chains:

- MCUXpresso IDE v10.0
- Keil MDK v5.23
- IAR Workbench v8.0

The Keil and IAR examples are found in:

lpc54608_adc_dma_sequenceAB_keil_iar\boards\lpcxpresso54608\demo_apps\lpc_adc_dma_sequenceAB

The MCUXpresso example can be found in the zip file:

lpc54608_adc_dma_sequenceAB_mcux.zip

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