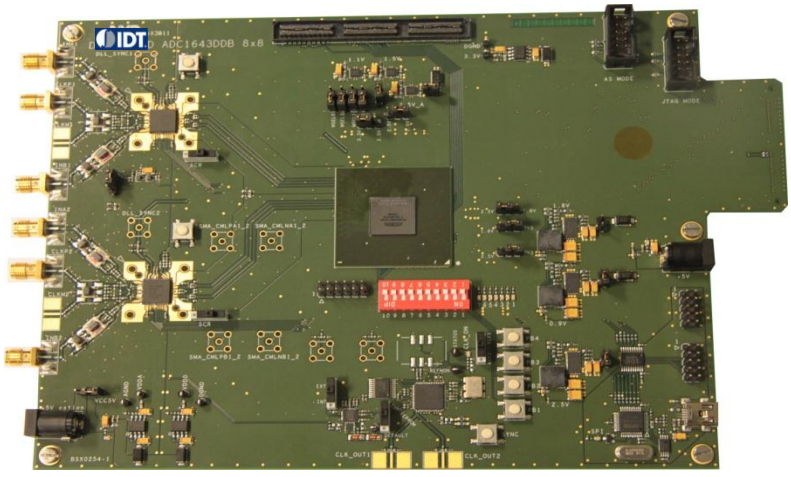
Quick start ADC1453D, ADC1159D evaluation board

Rev. 01 — 14 Nov 2013 **Quick start**

Document information

Info	Content
Keywords	ADC1453D, ADC1159D, ADC1453DxxxW1-DB, evaluation board, ADC, Converter, JESD204B, BSX0254.
Abstract	This document describes how to use the evaluation board for the dual channel analog-to-digital converters ADC1453D and ADC1159D with JESD204B output interface.
Overview	

Revision history

Rev	Date	Description
1	14 November 2013	Initial version

1. Overview of the evaluation board:

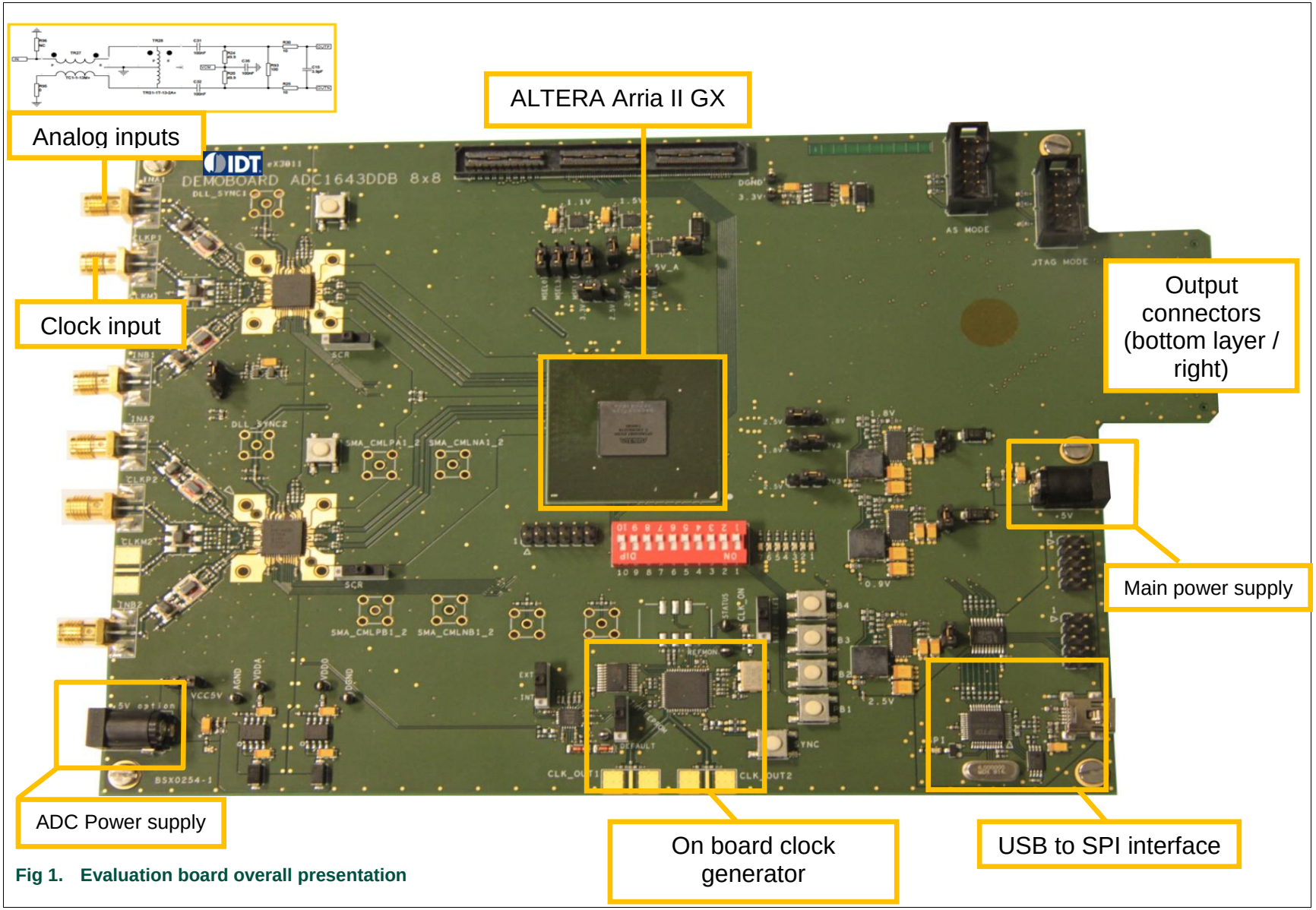


Fig 1. Evaluation board overall presentation

2. Switch and Jumpers default state

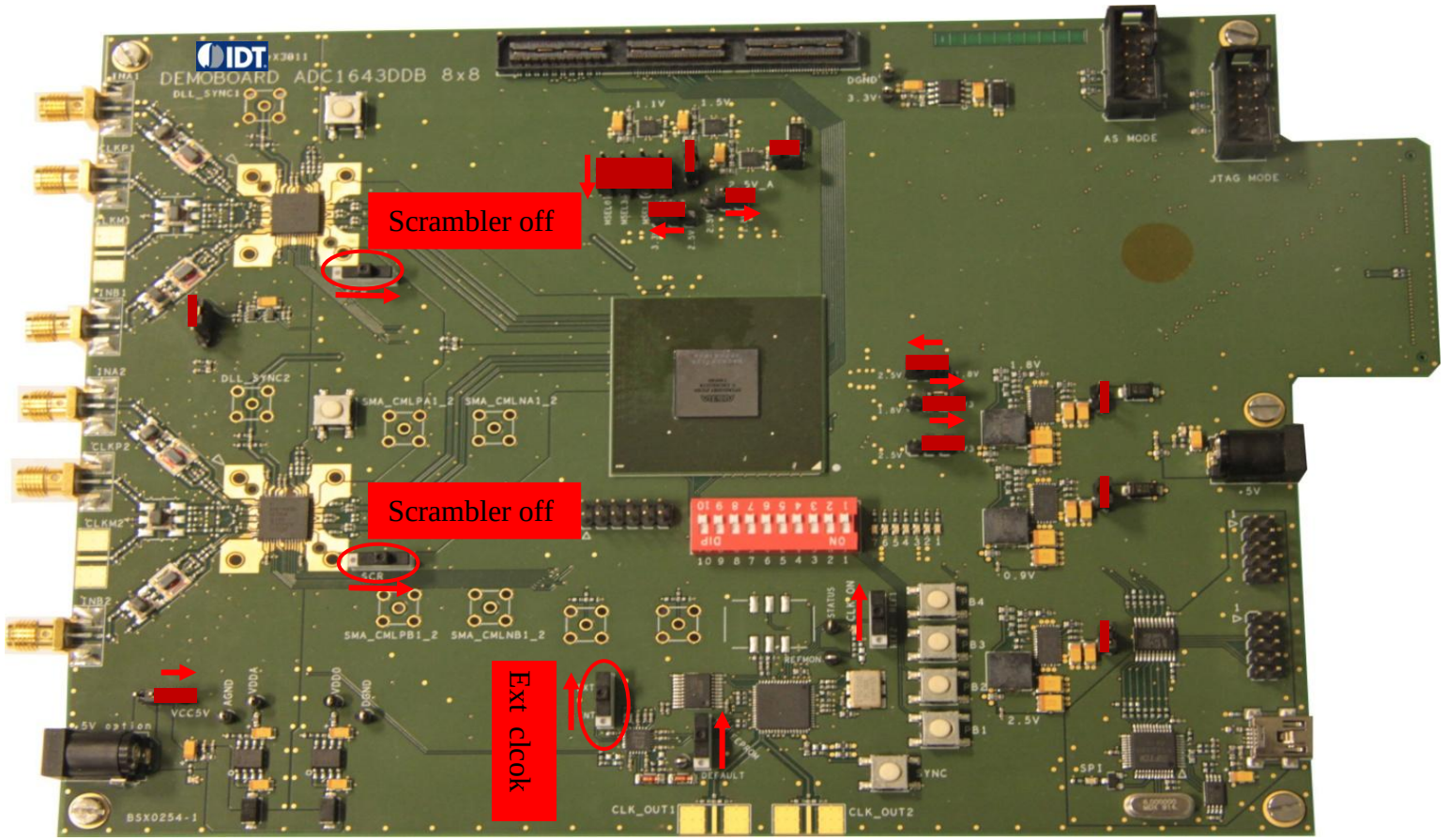


Fig 2. Overall presentation of default switchs and jumpers

3. Typical test configuration:

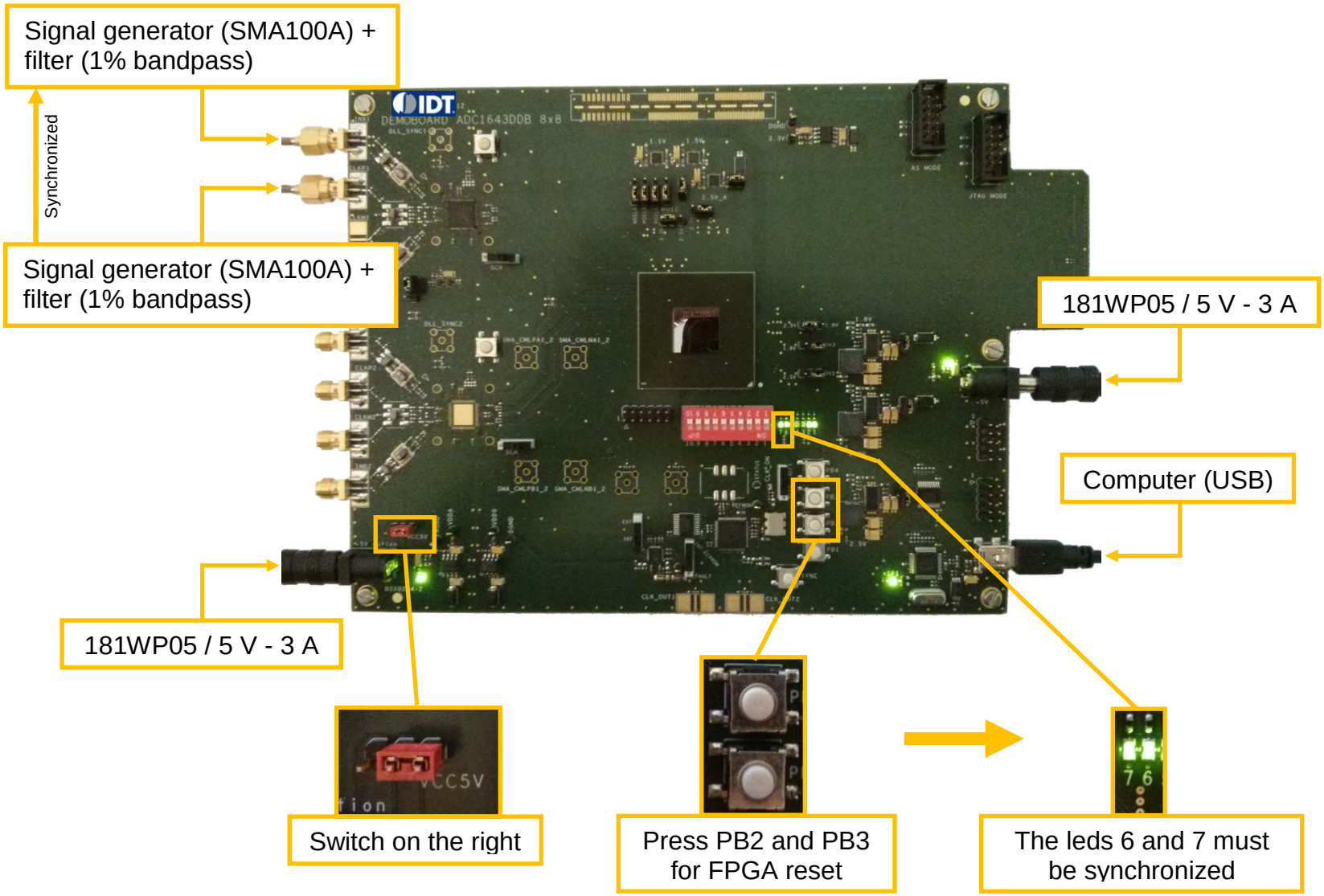


Fig 3. Typical test configuration

4. ADC acquisition tool

4.1 Software start-up

To install the software, please refer to appendix A ‘Software and drivers install’.

Run the application “HSDC_SW_ADC_4.exe”. This application will allow:

- the user to control features through the SPI;
- as well as performing any online data acquisition to evaluate the performances.

4.2 Start-up screen

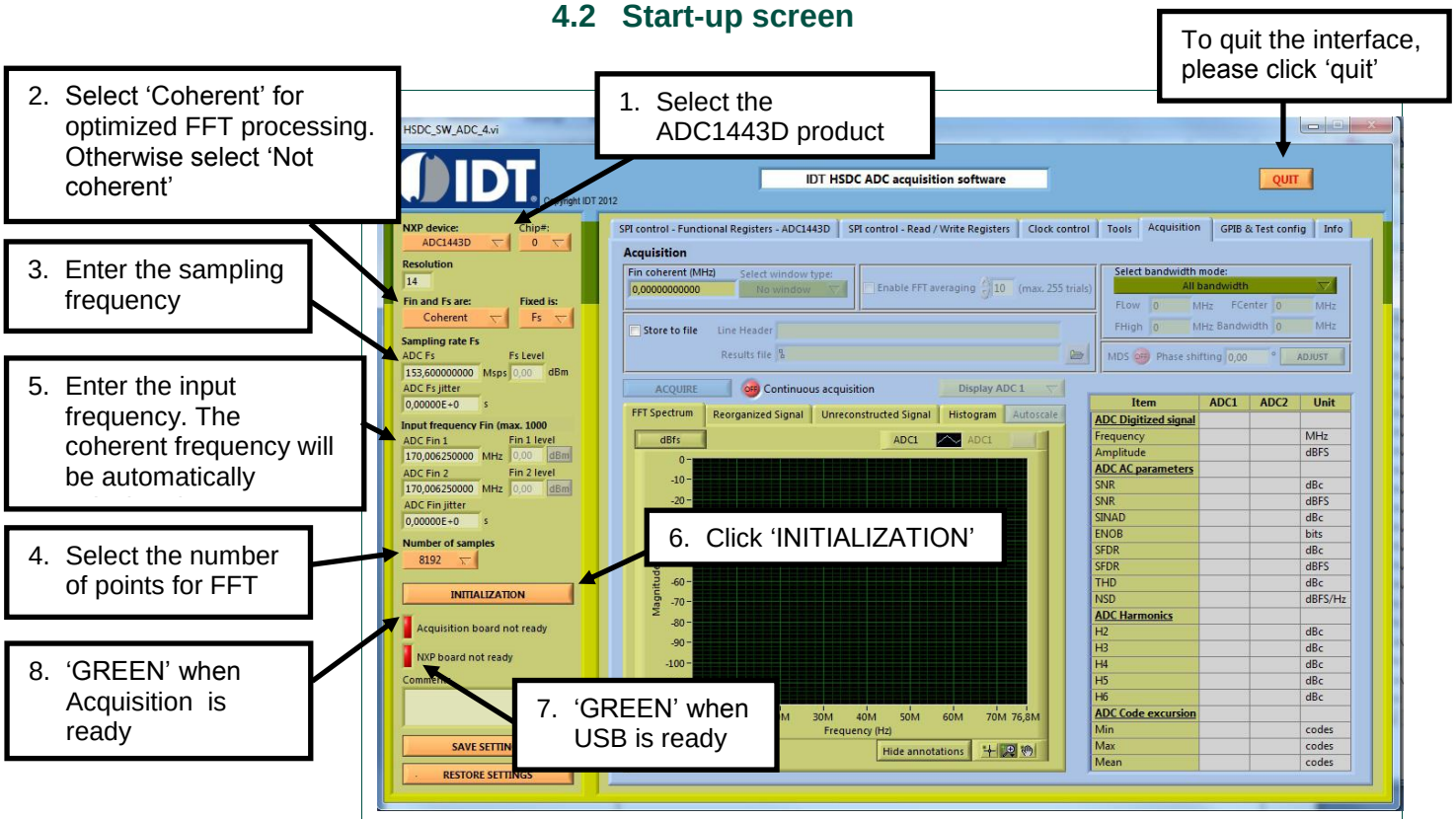


Fig 4. Start-up screen

4.3 Read / Write Registers

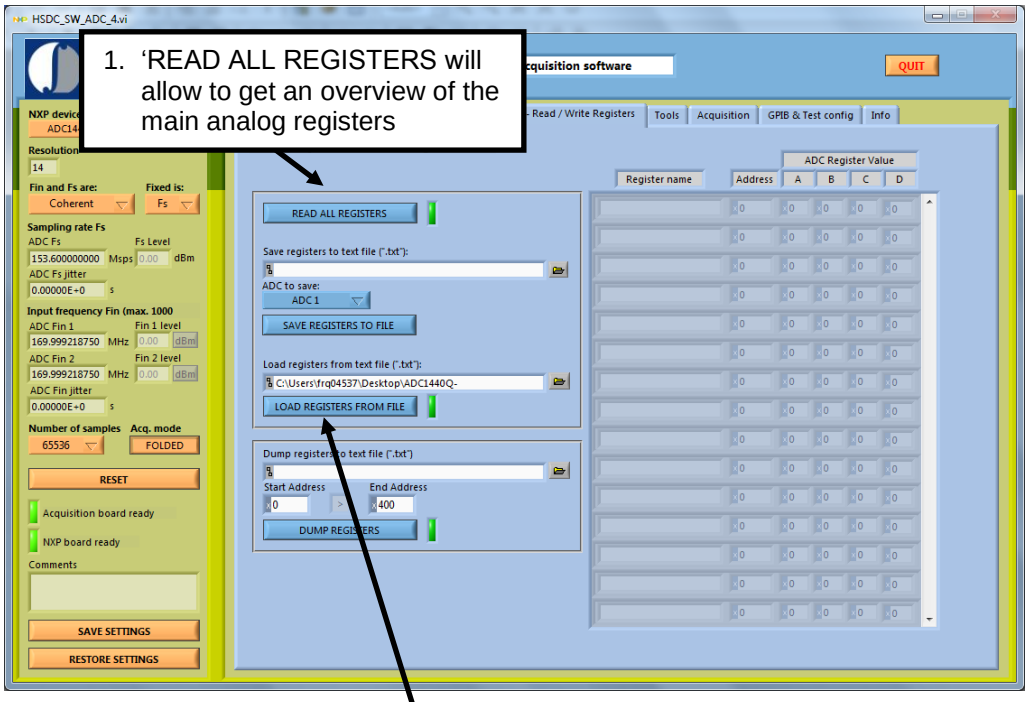


Fig 5. Read / Write Registers

2. Load the SPI registers settings file.
   Please contact your IDT Sales/FAE representatives to get access to SPI settings files for ADC1443D or ADC1453D or ADC1159D250devices. 3 SPI registers settings files are available:
   - ADC1453D160_SPI.txt
   - ADC1453D250_SPI.txt
   - ADC1159D250_SPI.txt

4.4 Functional Registers

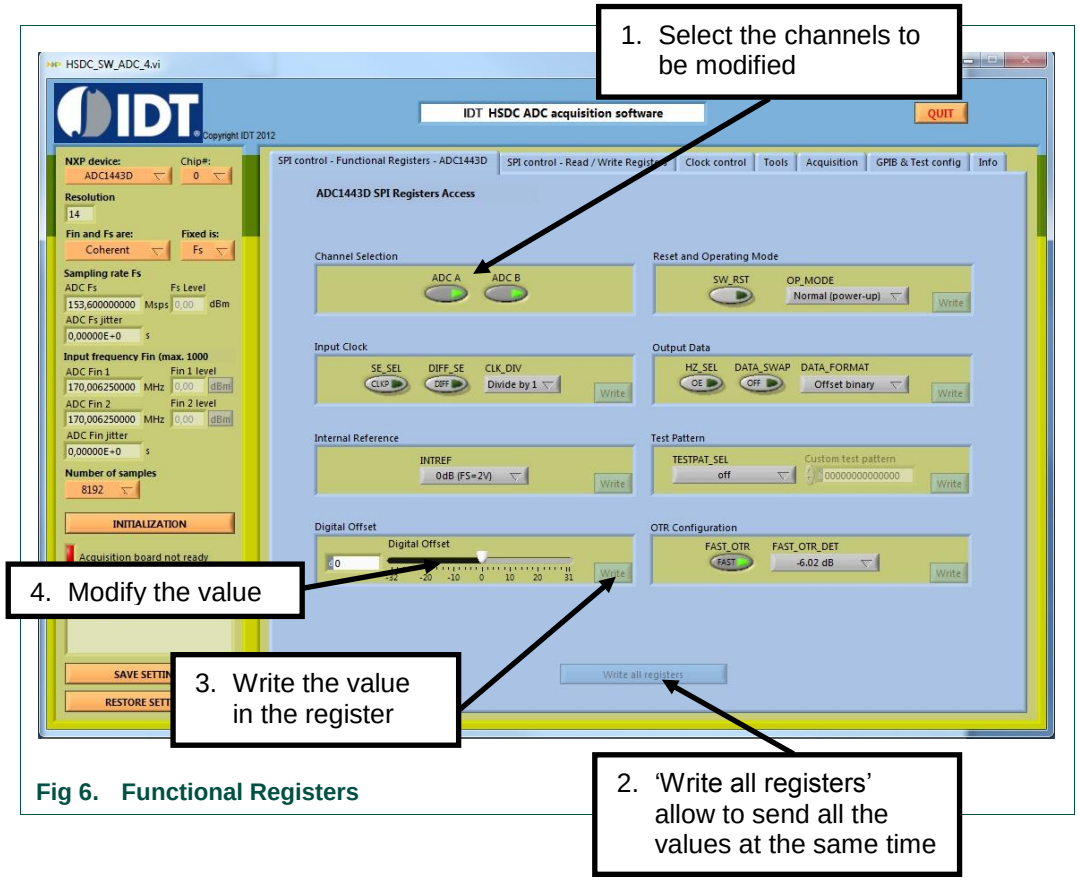


Fig 6. Functional Registers

4.5 Acquisition

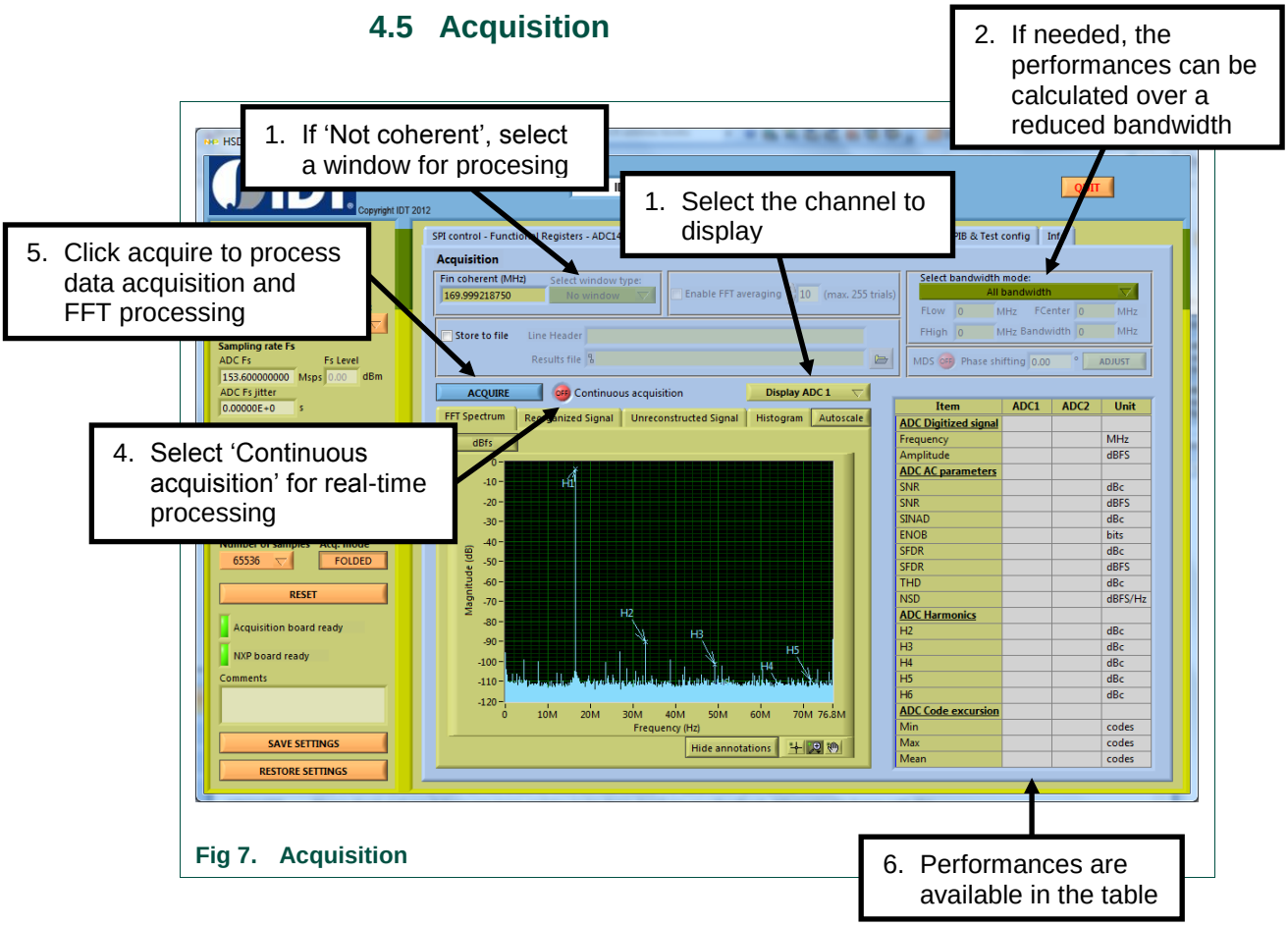
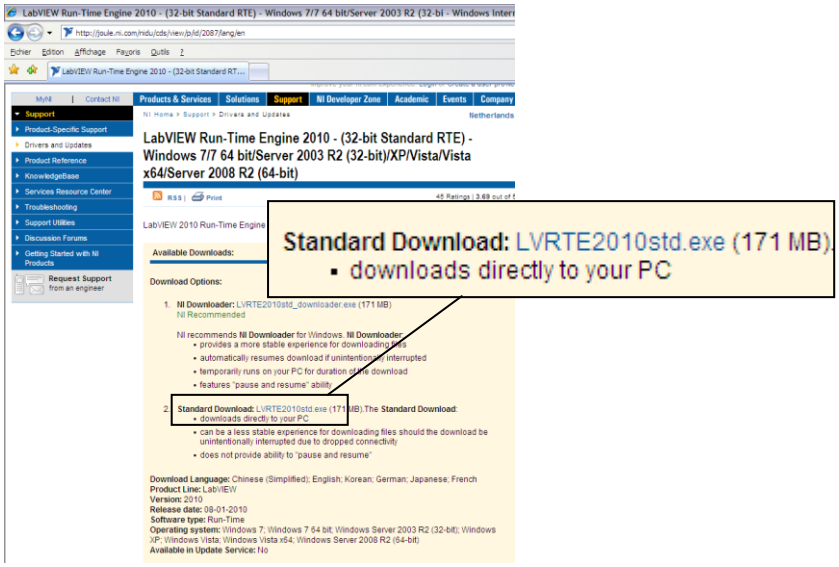
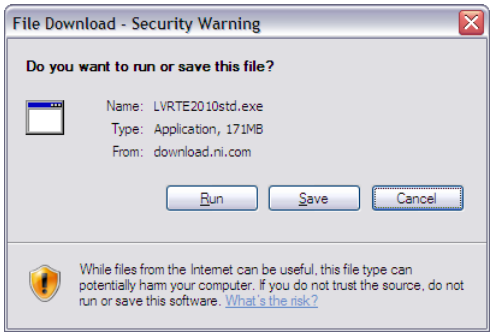


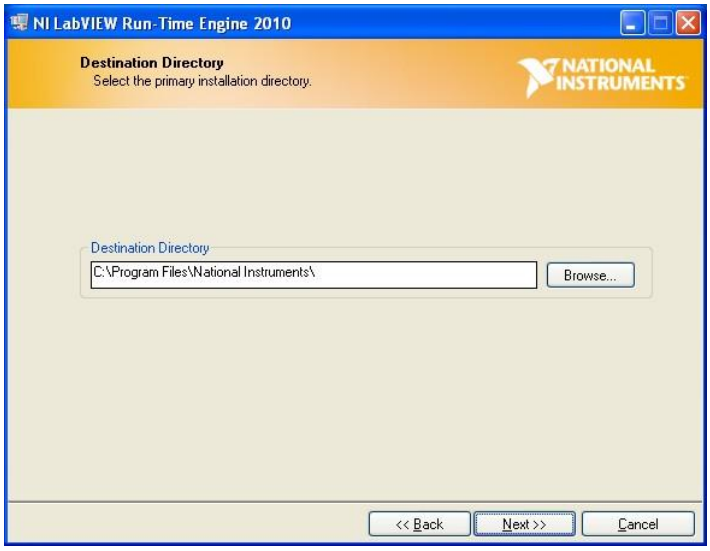
Fig 7. Acquisition

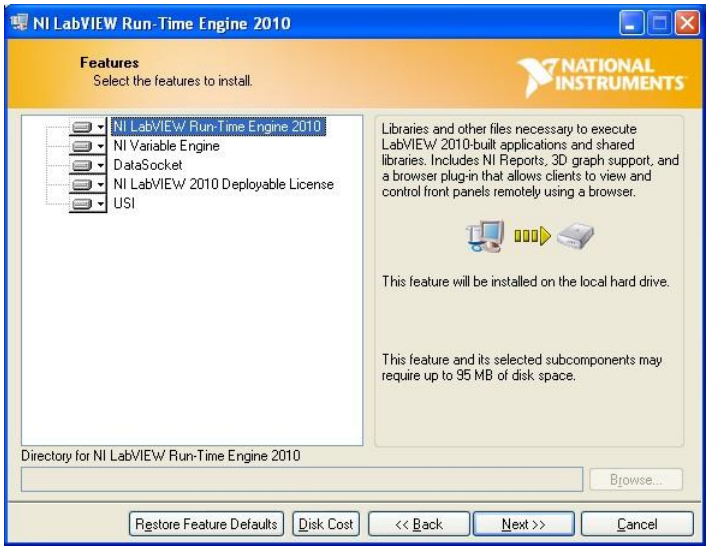
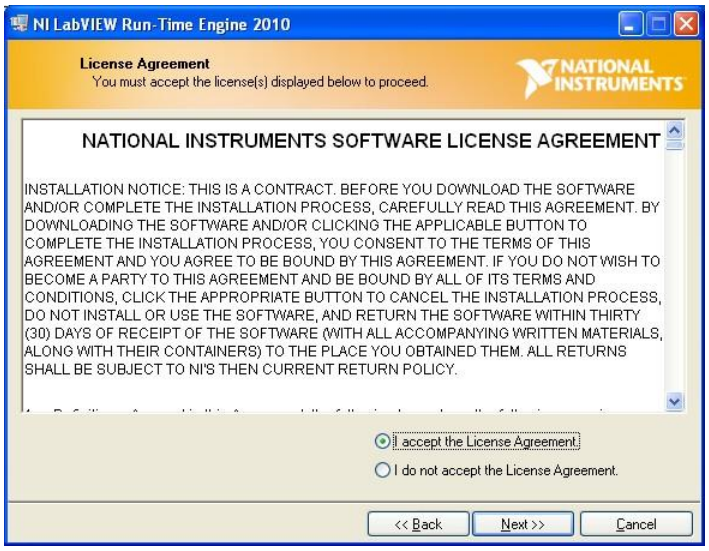
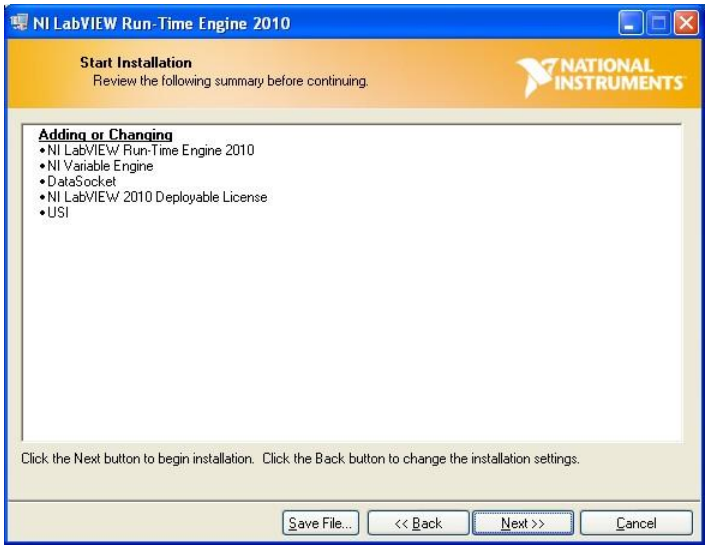
In case of bad acquisition or when changing the sampling frequency, take care to reset the FPGA by pushing on-board button PB3.

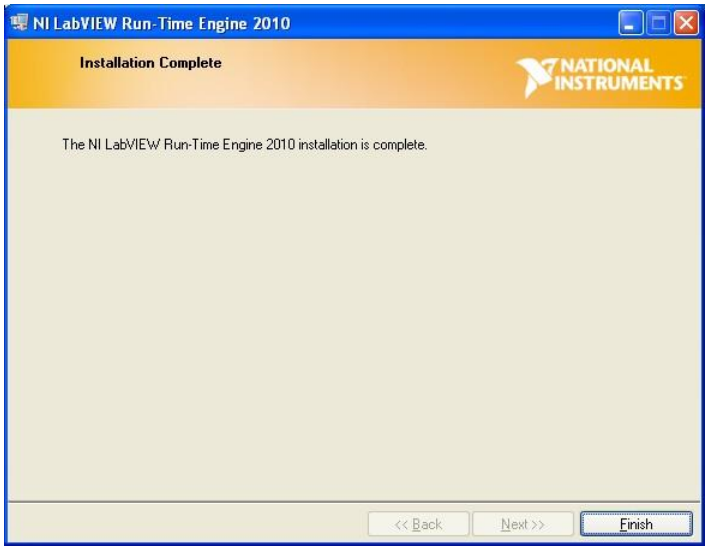
5. Software and drivers install

5.1 Labview Runtime 2010 install

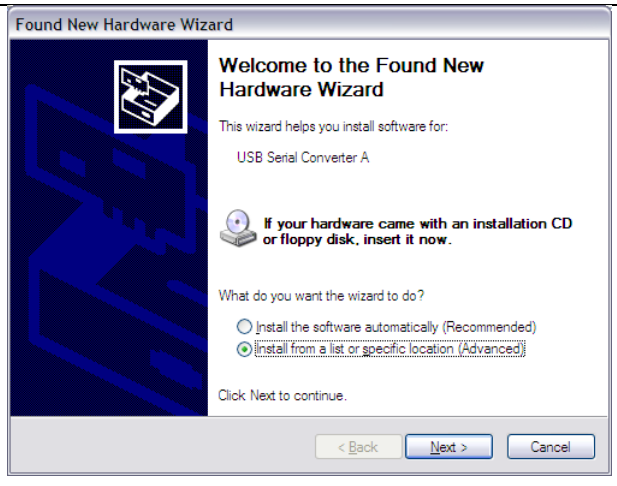
1	Go to National Instruments web page http://joule.ni.com/nidu/cds/view/p/id/2087/lang/en	
2	Download 'LVRTE2010std.exe'	
3	Save	
4	Run the application 'LVRTE2010std.exe'	
5	OK	
6	Unzip	

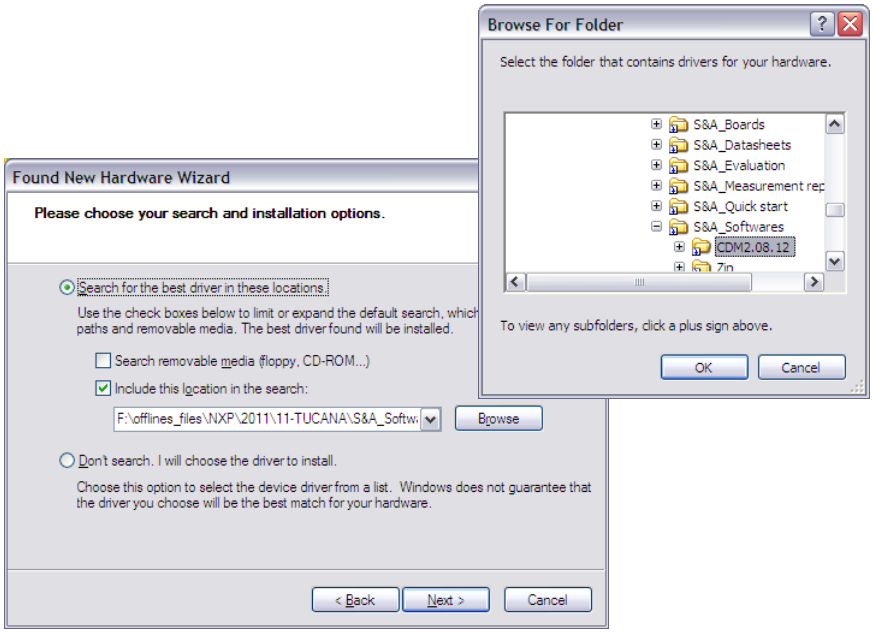
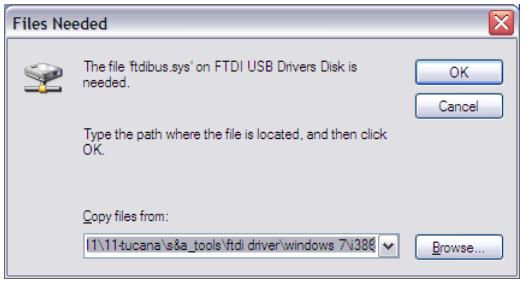
7	OK	
8	Next	
9	Next	

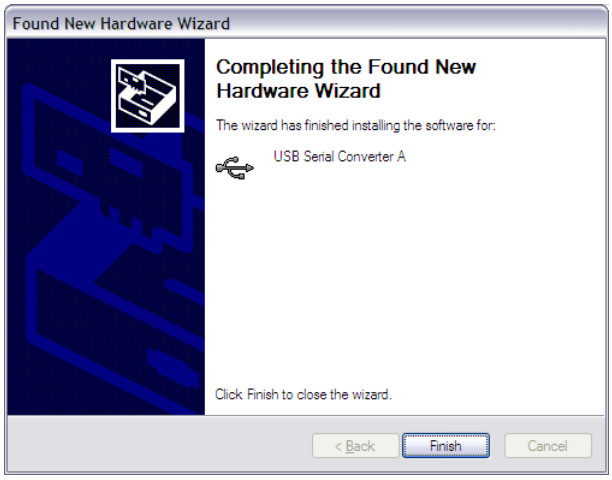
10	Next	
11	Select '**I accept the License Agreement**' Next	
12	Next	

13	Finish	
14	Restart	

5.2 Demoboard - USB-SPI driver install

1	Plug the USB cable in the demoboard USB connector	
2	The wizard will help to install the USB Serial Converter A	
3	Select '**Install from a list or specific location**' Next	

4	Select '**Search for the best driver in these locations**' Select '**Include this location in the search**' Browse Select the folder '**CDM2.08.12**' Next	
5	Continue Anyway (Windows XP only)	
6	Browse Select the file '**ftdibus.sys**' in the folder '**CDM2.08.12\i386**' OK	

7	Finish	
8	The wizard will help to install the USB Serial Converter B (same as USB Serial Converter A)	
9	The wizard will help to install the USB serial port The file '**ftser2k.sys**' is in the folder '**CDM2.08.12\i386**'	

Quick start

Date of release: Nov 14th 2013

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