

Setup ADC31JB68EVM with TSW14J10EVM and KC705

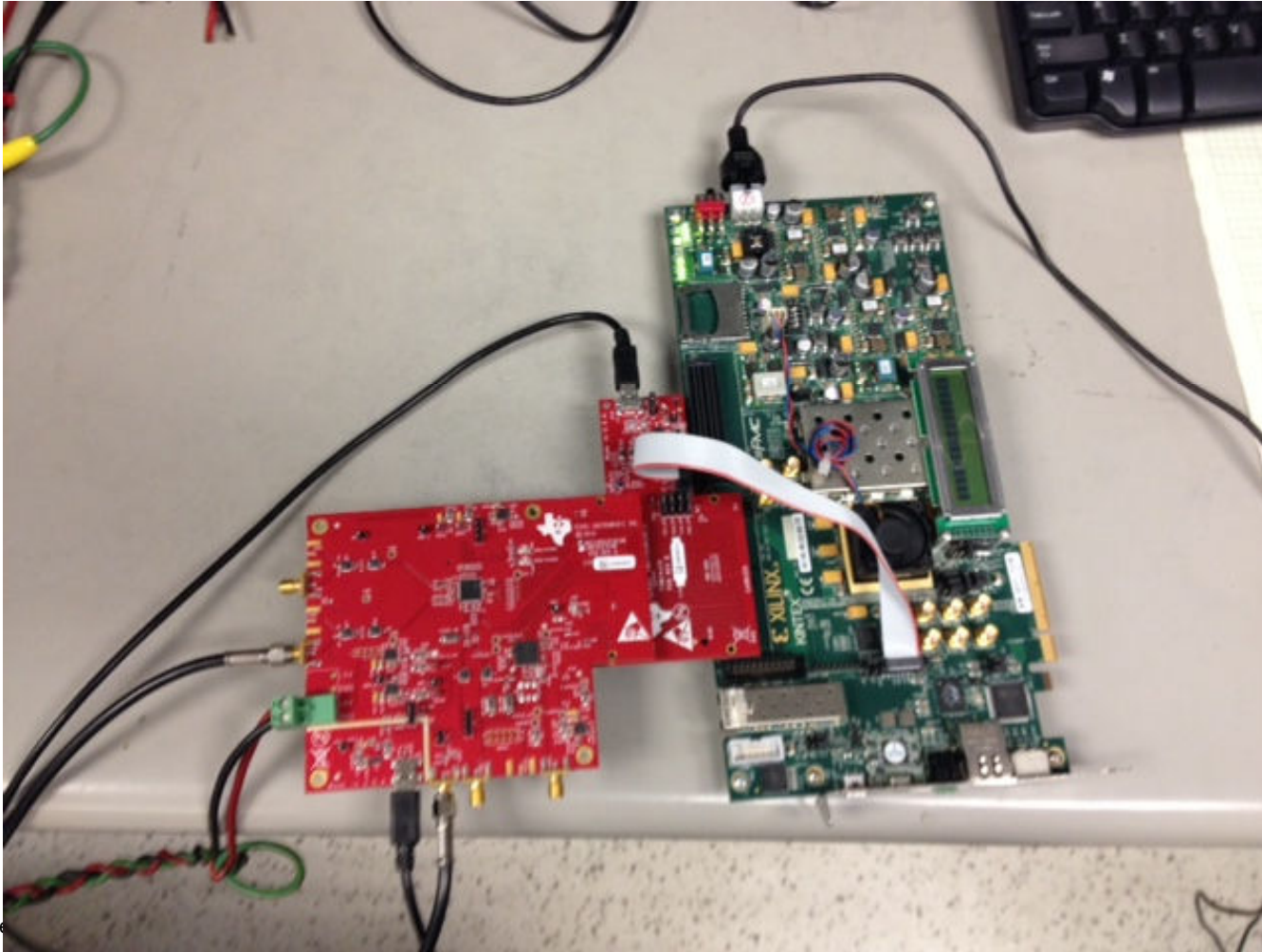
12/18/2015

Notes

- This procedure outlines support for the ADC31JB68EVM TSW14J10EVM and KC705 (or VC707)
- Procedure has been tested with released HSDC Pro v4.1 (web version 12/18/2015)

Procedure

- Connect the hardware together, power up, and apply signals

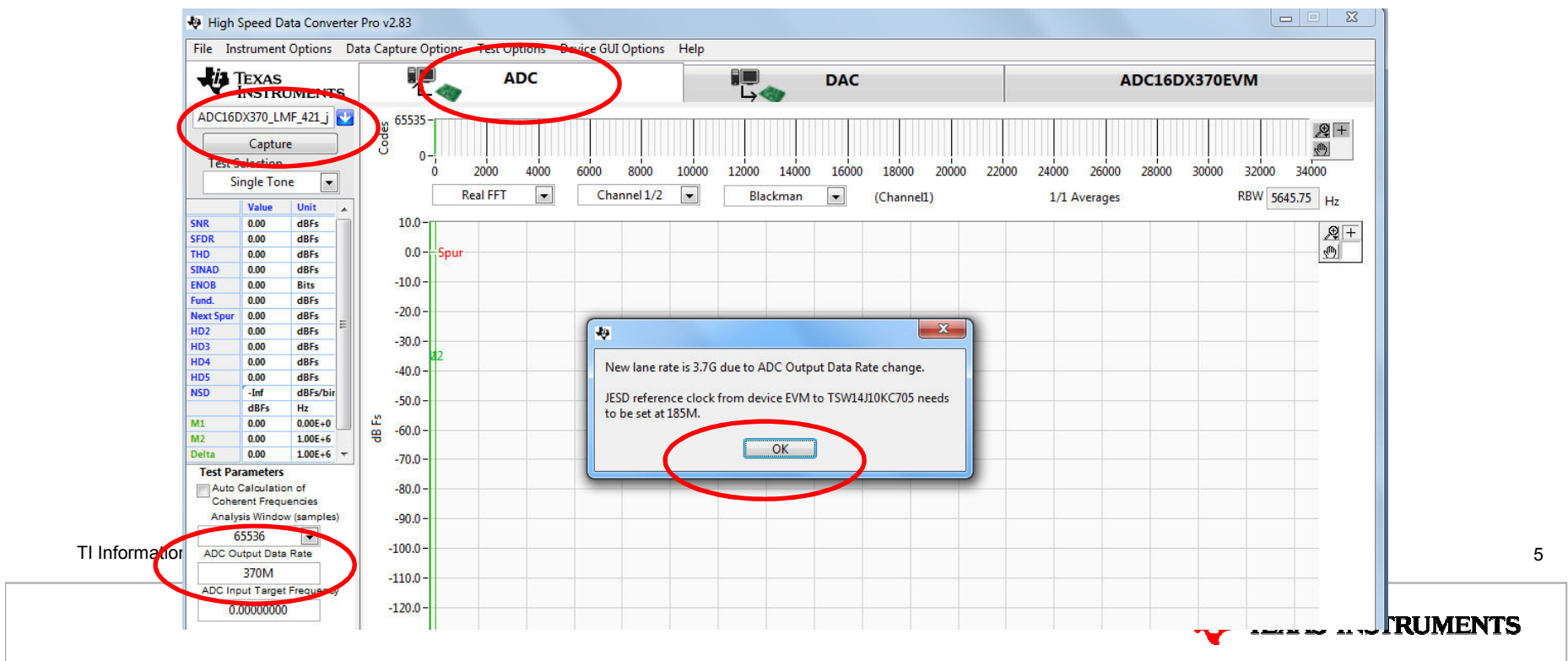


Procedure (2)

- Install HSDC Pro
- Copy the 'ADC31JB68_LMF_211_KC705.ini' file to the following location
 - C:\Program Files (x86)\Texas Instruments\High Speed Data Converter Pro\14J10KC705 Details\ADC files\
- Copy the 'LMK04828_config_ADC31JB68EVM_TSW14J10_KC705.cfg' file to a convenient location (like desktop)

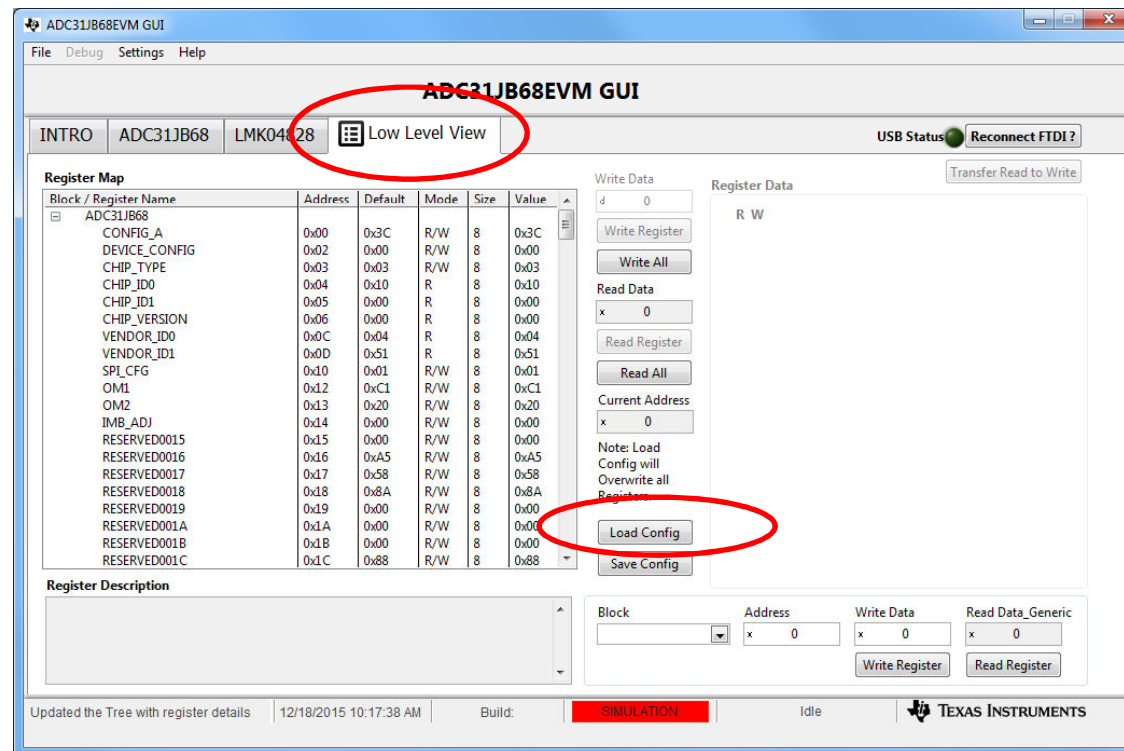
Procedure (2)

- Open HSDC Pro, select the 'ADC' tab, select the ADC31JB68_LMF_211_KC705 device, and OK to update firmware
- Enter '500M' (or appropriate value) as the ADC Output Data Rate
 - If this value is 320M or below, then this procedure is invalid
- Press 'OK' to the informational pop-up about the reference clock



Procedure (3)

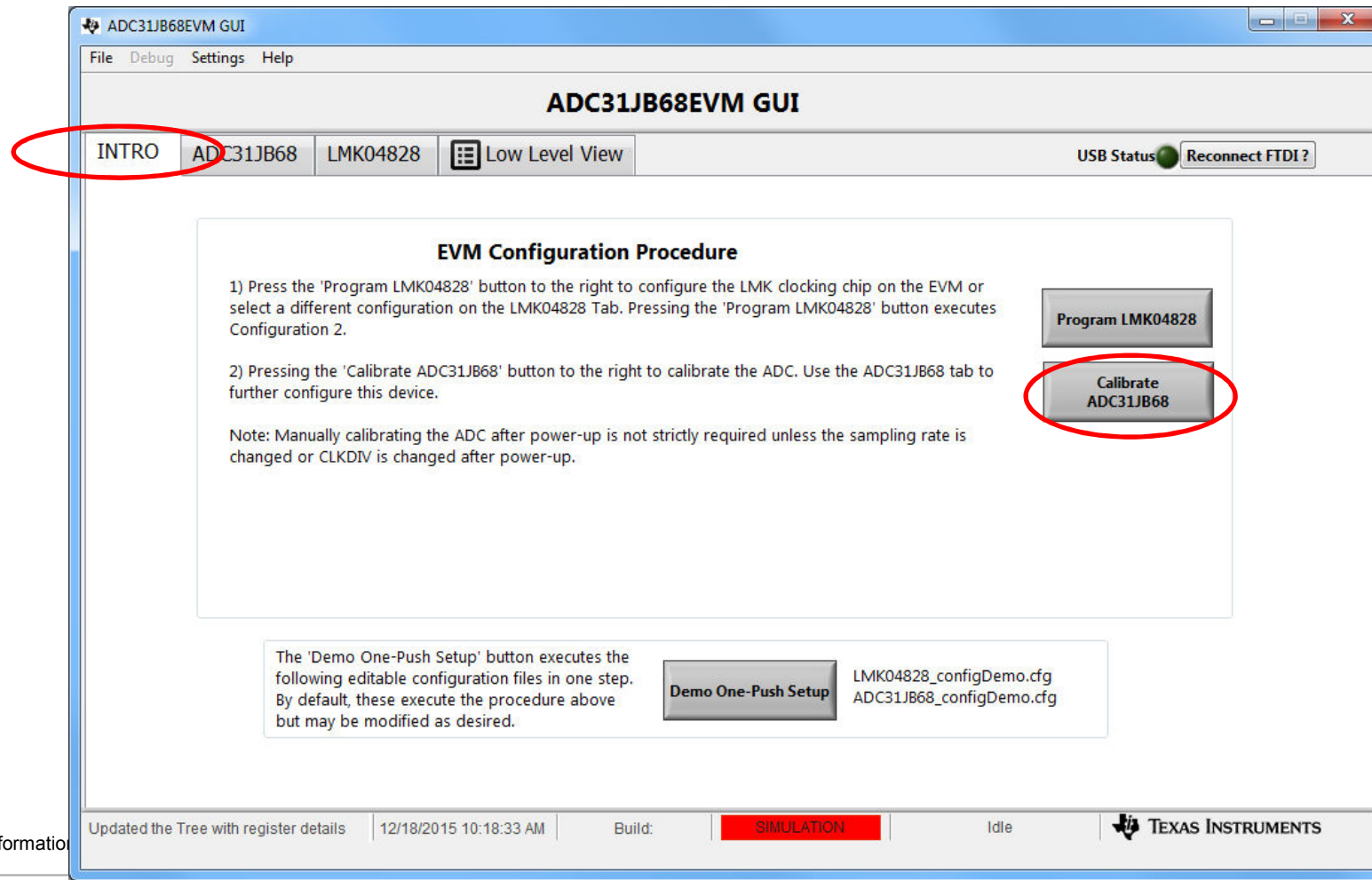
- Click over to the ADC31JB68EVM GUI
- Click over to the Low Level View sub-tab
- Press the 'Load Config' button
- Select the 'LMK04828_config_ADC31JB68EVM_TSW14J10_KC705.cfg' file and OK



TI Information – Selective Disclosure

Procedure (4)

- Click over to the INTRO sub-tab
- Press the 'Calibrate ADC' button



TI Information

Procedure (5)

- Click back to the 'ADC' tab
- Capture data
- After capturing data for the first time, the LED status on the KC705:
 - LED7: Blinking
 - LED6: Blinking
 - LED5: Blinking
 - LED4: Off
 - LED3: ON
 - LED2: Off
 - LED1: ON
 - LED0: Off

Notes

- Using the TSW14J10EVM + Xilinx Reference board requires an extra clock from the EVM's LMK device that is not required when capturing data with the TSW14J56EVM
 - If this clock is not active, or is the incorrect frequency, bad data captures will result with shifted/incorrect bits
 - DEVCLK10 on the LMK04828 must be LVDS active with a frequency of $F_s/4$ to supply an FPGA core clock via the FPGA_DEVCLKB signal (see schematic)
 - Firmware updates have occurred between HSDC Pro v3.0 and v4.1 which required an .ini file update to use firmware v2.7