TEXAS INSTRUMENTS

Release Notes

High Speed Data Converter Pro GUI

HSDC Pro device EVM compatibility

TSW14J56	TSW14J50	KC705 (TSW14J10)	VC707 (TSW14J10)
ADC	**ADC**	**ADC**	**ADC**
ADC12J4000 family	ADC12J4000 family	ADC12J4000 family	ADC12J4000 family
ADC12DJxx00 family	ADC32Jxx family	ADC32Jxx family	ADS42JBx9 family
ADC32Jxx family	ADC34Jxx family	ADC34Jxx family	ADS54J54 family
ADC34Jxx family	ADS42JBxx family	ADS42JBx9 family	ADS54J40 family
ADC42JBx9 family	ADC16DX370 family	ADS54J54 family	ADS54J60 family
ADC16DX370 family	ADS54J40 family	ADS54J66 family	ADS54J66 family
ADS54J40 family	ADS54J60 family		ADC32RF45 family
ADS54J60 family	ADS54J66 family		ADC12DJ3200 family
ADS54J66 family	ADS54J54 family		
ADS54J54 family	ADS54J69 family		
ADS54J69 family	ADC31JB68		
ADS58J64 family	ADC14X250		
ADC31JB68	LM97937		
ADC14X250	ADS58Jx		
LM97937	TSW16DX370EVM		
ADS58Jx	ADS58J66 family		
TSW16DX370EVM	AFE58JD1x		
ADS42JB46 family			
LM15851			
AFE75xx Marconi family			
Medical AFE devices			
ADC32RFxx family			
TSW based on these ADCs			
ADS54J64 family			
AFE74xx			
AFE76xx			
DAC	DAC (not supported at this time)	**DAC**	**DAC**
DAC3xJ8x family		DAC38J8x	DAC3xJ8x
DAC38RFxx RFDAC family		DAC38RF82	DAC38RF8x
AFE75xx Marconi family			
TSW based on these DACs			
AFE74xx			
AFE76xx			

High Speed Data Converter Pro

TSW1400	TSW1405	TSW1406	ZC706 (TSW14J10)
ADC	**ADC**		**ADC**
CMOS mode	ADS412x		ADC12J4000 family
ADC322x	ADS414x		ADC32RF45 family
ADC324x	ADS422x		ADS42JBx9 family
ADC342x	ADS424x		ADC31JB68
ADC3442	ADS42JB49		ADS54J66 family
ADS41xx	ADS42JB69		ADS54J20 family
ADS42xx	ADS42LB49		
ADS42LBxx	ADS42LB69		
ADS523x	ADS528x		
ADS526x	ADS5400		
ADS528x	ADS5401-09		
ADS529x	ADS5463		
ADS540x	ADS5474		
ADS544x	ADS548x		
ADS546x	ADS556x		
ADS547x	ADS58C28		
ADS548x	ADS58C48		
ADS54RF63	ADS612x		
ADS54T0x	ADS614x		
ADS556x	ADS61JB23		
ADS58B18	ADS622x		
ADS58C28	ADS624x		
ADS58C48	ADS62C17		
ADS58H4x	ADS62P2x		
ADS6122-25	ADS62P4x		
ADS6128-29	ADS642x		
ADS6222-25	ADS644x		
ADS6242-45	AFE722x_ADC_05		
ADS62C17	AFE5805		
ADS62P28-29			
ADS62P43			
ADS62P48-49			
ADS62PF49			
ADS6422-25			
ADS6442-45			
AFE5401			
AFE580x			
AFE5851			
AFE58JD16			
AFE58JD18			
AFE722x – ADC			

High Speed Data Converter Pro

ADC08351_cmos PGA5807 ADC08060 ADC08100 ADC08200			
DAC CMOS DAC (DAC5686/87/88/89 etc) AFE722x - DAC AFE7070 DAC3152 DAC3162 DAC31x1 DAC31x4 DAC328x DAC348x DAC34H8x DAC34SH8x DAC5681z DAC5682z		**DAC** AFE722x_DAC_06 DAC3162 DAC31x1 DAC31x4 DAC3482 DAC3484 DAC5681z DAC5682z	**DAC** DAC3xJ8x DAC38RF8x

High Speed Data Converter Pro

KCU105	TSW14J57revD	TSW14J57revE	TSW14DL3200
ADC ADC12J4000 family ADC12DJ3200_JMODE0 ADC32RF80 family ADC42JBx9 family ADS54Jxx family ADC32RF45 family ADC34J45	**ADC** ADC12DJxx00 family ADC12J4000A family ADC14X250 family ADC16DX370 family ADC31JB68 family ADC32J2x family ADC32J4x family ADC32RF80 family ADC34J2x family LM97937 family ADS58Jx family ADS54Jxx family ADS42JB69 family ADS42JB49 family ADC34J4x	**ADC** ADC12DJxx00 family ADC12J4000 family ADC14X250 family ADC16DX370 family ADC31JB68 family ADS42JB49 family ADS54Jxx family ADS58J64 family ADS58Jx family ADC32RF45 family ADC32RF80 family LM15851 family AFE74xx AFE76xx	**ADC** ADC12DL3200 family
DAC DAC3xJ8x family DAC38RF8x family	**DAC**	**DAC** DAC3xJ8x family DAC38RF8x family AFE74xx AFE76xx	**DAC**

High Speed Data Converter Pro

VERSION 5.00 (From v4.90)

1. Updated the LabVIEW Run Time Engine packaged with HSDC Pro to SP1 version to fix the LabVIEW Internal crash issue.
2. Updated the Coherent frequency calculations in HSDC Pro when NCO Frequency is considered.
3. Added support to #NCO Bits parameter. Value of NCO Frequency is coerced based on #NCO Bits.
4. Renamed the ADC firmware from TSW14DL3200_FIRMWARE.bin to TSW14DL3200_ADC_FIRMWARE.bin for clear naming convention.
5. Updated the TSW14DL3200_ADC_FIRMWARE to support the "Demux by 1" of ADC12DL3200 and 'Reset Board' option in HSDC Pro. The following hardware configurations is required to use the ADC12DL3200 with TSW14DL3200.
    a. Resistor R336 has to be populated in TSW14DL3200 Board.
6. Added TSW14J57RevE_16L_XCVR_ADCBRAMDACDDR firmware. The firmware supports 16Lane JMODE operation. ADC Capture happens with BRAM and DAC generation happens with DDR. Maximum Sample size supported with BRAM is 512K samples (all channels included) & Maximum possible with DDR is 1G samples (all channels included).
7. Added TSW14J57RevE_16L_XCVR_ADCDDRDACBRAM firmware. The firmware supports 16Lane JMODE operation. ADC Capture happens with DDR and DAC generation happens with BRAM. Maximum Sample size supported with DDR is 1G samples (all channels included) & Maximum possible with BRAM is 512Ksamples (all channels included).
    a. Known issue: Bit errors were observed in full DDR captures on Physical Lane2 (numbered Lane0- Lane15) at 15G Testing.
8. Added AFE74xx_RX_Mode1, AFE74xx_RX_Mode1_XCVR, AFE74xx_RX_Mode2, AFE74xx_RX_Mode2_XCVR, AFE74xx_RX_Mode3, AFE74xx_RX_Mode3 - XCVR, AFE74xx_RX_Mode4, AFE74xx_RX_Mode4_XCVR, AFE74xx_RX_Mode5, AFE74xx_RX_Mode5_XCVR, AFE74xx_RX_Mode6, AFE74xx_RX_Mode6_XCVR, AFE74xx_RX_Mode7, AFE74xx_RX_Mode7_XCVR, AFE74xx_RX_Mode8, AFE74xx_RX_Mode8_XCVR, AFE74xx_RX_Mode9, AFE74xx_RX_Mode9_XCVR, AFE74xx_RX_Mode10, AFE74xx_RX_Mode10_XCVR, AFE74xx_RX_Mode11, AFE74xx_RX_Mode11_XCVR, AFE74xx_RX_Mode12, AFE74xx_RX_Mode12_XCVR ADC INI files for TSW14J56revD Board and TSW14J57revE Board.
9. Added AFE74xx_TX_Mode1, AFE74xx_TX_Mode2, AFE74xx_TX_Mode3, AFE74xx_TX_Mode4, AFE74xx_TX_Mode5, AFE74xx_TX_Mode6, AFE74xx_TX_Mode7, AFE74xx_TX_Mode8, AFE74xx_TX_Mode9, AFE74xx_TX_Mode10, AFE74xx_TX_Mode11, AFE74xx_2x2TX_24410, AFE74xx_2x2TX_44210 DAC INI files for TSW14J56revD Board and TSW14J57revE Board.
10. Added AFE76xx_1x1FB_42220, AFE76xx_1x1RX_42220, AFE76xx_1x2RX_14810, AFE76xx_1x2RX_24410, AFE76xx_1x2RX_44210, AFE76xx_2x1FB_22420, AFE76xx_2x1RX_42220, AFE76xx_2x2RX_14810, AFE76xx_2x2RX_24410, AFE76xx_2x2RX_44210 ADC INI files and AFE76xx_1x2TX_44210, AFE76xx_1x2TX_84111,

High Speed Data Converter Pro

AFE76xx_2x2TX_24310, AFE76xx_2x2TX_24410, AFE76xx_2x2TX_44210 DAC INI files for TSW14J56revD Board.

11. Added AFE76xx_1x1FB_42220, AFE76xx_1x1FB_42220_XCVR, AFE76xx_1x1RX_41240 - 1st DDC, AFE76xx_1x1RX_41240 - 1st DDC_XCVR, AFE76xx_1x1RX_41240 - 2nd DDC, AFE76xx_1x1RX_41240 - 2nd DDC_XCVR, AFE76xx_1x1RX_42220-PG3p0, AFE76xx_1x1RX_42220-PG3p0_XCVR, AFE76xx_1x2RX_42220, AFE76xx_1x2RX_42220_XCVR, AFE76xx_1x2RX_44210, AFE76xx_1x2RX_44210_XCVR, AFE76xx_2x1FB_24820_Dual_Band, AFE76xx_2x1FB_24820_Dual_Band_XCRV, AFE76xx_2x2RX_14810, AFE76xx_2x2RX_14810_XCVR, AFE76xx_2x2RX_1_4_12_1_0, AFE76xx_2x2RX_24410, AFE76xx_2x2RX_24410_XCVR, AFE76xx_2x2RX_28810_Dual_Band, AFE76xx_2x2RX_28810_Dual_Band_XCVR, AFE76xx_2x2RX_42220-PG3p0, AFE76xx_2x2RX_44210, AFE76xx_2x2RX_44210_XCVR, AFE76xx_2x2RX_44320, AFE76xx_2x2RX_44320_XCVR ADC INI files and AFE76xx_1x2TX_44210 - XCVR, AFE76xx_1x2TX_44210, AFE76xx_1x2TX_84111 - XCVR, AFE76xx_1x2TX_84111, AFE76xx_2TX_44320 - XCVR, AFE76xx_2TX_44320, AFE76xx_2x2TX_14610 - XCVR, AFE76xx_2x2TX_14610, AFE76xx_2x2TX_24310 - XCVR, AFE76xx_2x2TX_24310, AFE76xx_2x2TX_24410 - XCVR, AFE76xx_2x2TX_24410, AFE76xx_2x2TX_44210 - XCVR, AFE76xx_2x2TX_44210 DAC INI files for TSW14J57revE Board.

12. Registered SYNC signal in TSW14J56REVD_LMK_SYSREF_TRIGGER Firmware to support JESD subclass 2 mode.

13. Updated ADS54J54_LMF_841 and ADS54J54_LMF_442 INI files for TSW14J56revD Board.

14. Added ADC12DJ3200_JMODE0, ADC32RF45_4421, ADC32RF8x_8411 ADC INI files for TSW14J10VC707 Board.

15. Added DAC38RF8x_LMF_821 and DAC38RF8x_LMF_841 DAC INI files for TSW14J10VC707 Board.

16. Added ADS54J66_LMF_4421, ADS54J66_LMF_4841, ADS54J20_LMF_4211, ADS54J20_LMF_8224, ADC34J24_LMF_4421 ADC INI files for TSW14J10ZC706 Board.

17. Added DAC38RF8x_LMF_841, DAC38RF8x_LMF_4841, DAC38RF8x_LMF_8821 DAC INI files for TSW14J10ZC706 Board.

18. Added DAC38RF82_LMF_442 DAC INI file for TSW14J10KC705 Board.

19. Added ADC34J45_LMF_4421, ADS54J20_LMF_4244 ADC INI files for KCU105 Board.

20. Added DAC38RF8x_LMF_882 DAC INI file for KCU105 Board.

VERSION 4.90 (From v4.80)

1. Added support for TSW14DL3200 Board.
2. Updated HSDC Pro to run without admin rights. (All the files updated by the GUI will be present in Public Documents folder)
3. Added support to sample size up to 32 bits in loading and saving csv/bin files on ADC tab.
4. Added an automation function to enable/disable fundamental frequency search.
5. Added an automation function to get the DAC Tone Center value.

High Speed Data Converter Pro

6. Added "Lane Rate Adjustment Factor" INI parameter support for DAC in TSW14J57revE board which will get multiplied in the lane rate calculation. If this parameter is not present, it will take the default value of "1".
7. Added support for "Enable Individual Lane Inversion" parameter in KCU105.
8. Added "TSW14J57revE_DDR_XCVR_FIRMWARE" and "TSW14J57revE_BRAM_RxOnly_16L_trig_FIRMWARE" for TSW14J57revE Board.
9. Added "TSW14J56REVD_LMK_SYSREF_TRIGGER" Firmware to TSW14J56revD board.
10. Added "DAC_CMOS_TRIGOUT_EN" Firmware for TSW1400 board.
11. Updated the DAC38RF8x_LMF_413, DAC38RF8x_LMF_811 INI files for TSW14J57revE Board.
12. Added the ADS54J64_LMF_4841_mode01, ADS54J64_LMF_4211 and ADS54J69_4x_2221 INI files for TSW14J56revD board.
13. Added the ADS54J64_LMF_4841_mode01, ADS54J64_LMF_4211, LM15851_D4_DDRP, LM15851_D8_DDRP, LM15851_D10_DDR, LM15851_D16_DDR, LM15851_D16_DDRP, LM15851_D20_SDR, ADC12DJxx00_JMODE0_trig, ADC12DJxx00_JMODE1_trig and ADC12DJxx00_JMODE2_trig INI files for TSW14J57revE board.
14. Added the ADS42JB46_LMF_222 INI file for TSW14J50 board.

VERSION 4.80 (From v4.70)

1. Added support for TSW14J57revE Board.
2. Added Nyquist selection for two tone parameters with option to display "Nyq1/Nyq2/Both" Nyquist frequencies.
3. Added a python example for HSDC Pro Automation.
4. Updated the Phase Value to be displayed in radians or degrees based on menu item, 'Phase in Degrees' under Test Options.
5. Renamed the menu item 'Save I32 Codes as CSV Files' to 'Save Integer (I32) Codes as CSV File'.
6. Added Unit selection option to the measurement table for two tone parameters to switch between dBfs and Hz. Support to dBc values has been removed.
7. Rotation of Single tone and Two tone parameters is updated.
8. Bug fix in Automation function that sets Analysis Window Markers.
9. Bug fix in FFT Peak Analysis Settings automation function.
10. Bug fix in the calculation of prime harmonics where the number of bins to search around the harmonic was not calculated properly.
11. Disabled Trigger Option feature until an ADC is selected.
12. Moved the Phase Value closer to the Fundamental in the Measurement Table.
13. Bug fix where "Save Raw ADC Codes as Binary File" menu option was not disabled on DAC side when no board is connected.
14. Bug fix in the unit displayed for Single tone parameters.

High Speed Data Converter Pro

15. Bug fix in DSPLib DLL where HSDC Pro crashes when data rate and ADC input target frequency are in 2:3 ratio.

16. Added the ADC12DJ3200_BYPASS INI file for TSW14J10VC707 board.

17. Added the ADC12J4000_BYPASS, ADC12J4000_BYPASS_SERDES, ADC12J4000_D10_DDR, ADC12J4000_D10_SDR, ADC12J4000_D16_DDR, ADC12J4000_D16_DDRP, ADC12J4000_D16_SDRP, ADC12J4000_D20_DDR, ADC12J4000_D20_SDR, ADC12J4000_D32_DDR, ADC12J4000_D32_SDR, ADC12J4000_D32_SDRP, ADC12J4000_D4_DDRP, ADC12J4000_D8_DDRP, ADC12J4000_D8_SDRP, ADC12J4000A_D10_DDR, ADC12J4000A_D20_DDR, ADC12J4000A_D20_SDR, ADC14X250_LMF_112, ADC16DX370_LMF_222, ADC16DX370_LMF_421, ADC31JB68_LMF_211, ADC32J2x_LMF_222, ADC32J4x_LMF_222, ADC32RF45_LMF_8224, ADC32RF45_LMF_82820, ADC32RF80_20x_LMF_4211, ADC32RF80_20x_LMF_4421, ADC32RF80_40x_LMF_4211, ADC32RF80_40x_LMF_4421, ADC32RF80_LMF_2221, ADC32RF80_LMF_2242, ADC32RF80_LMF_2441, ADC32RF80_LMF_2881, ADC32RF80_LMF_4222, ADC32RF80_LMF_4244, ADC32RF80_LMF_4421, ADC32RF80_LMF_4442, ADC32RF80_LMF_4841, ADC32RF80_LMF_8221, ADC32RF80_LMF_8422, ADC32RF80_LMF_8821, ADC34J2x_LMF_442, LM97937_LMF_222, LM97937_LMF_421, ADC34J4x_LMF_442, ADS42JB49_LMF_222, ADS42JB49_LMF_421, ADS42JB69_LMF_222, ADS42JB69_LMF_421, ADS42JB69_LMF_421_CER, ADS54J20_2x_4222, ADS54J20_2x_Dec, ADS54J20_4x_2221, ADS54J20_4x_2441_IQ, ADS54J20_4x_4421_IQ, ADS54J20_4x_Dec, ADS54J20_LMF_4211, ADS54J20_LMF_4244, ADS54J20_LMF_8224, ADS54J40_2x_4222, ADS54J40_2x_Dec, ADS54J40_4x_2221, ADS54J40_4x_2441_IQ, ADS54J40_4x_4421_IQ, ADS54J40_4x_Dec, ADS54J40_LMF_4211, ADS54J40_LMF_4244, ADS54J40_LMF_8224, ADS54J54_LMF_442, ADS54J54_LMF_841, ADS54J54_LMF_841_CER, ADS54J60_2x_4222, ADS54J60_2x_Dec, ADS54J60_4x_2221, ADS54J60_4x_2441_IQ, ADS54J60_4x_4421, ADS54J60_4x_4421_IQ, ADS54J60_4x_Dec, ADS54J60_LMF_4211, ADS54J60_LMF_4244, ADS54J60_LMF_8224, ADS54J69_2x_4222, ADS54J69_2x_4421, ADS58Jx_LMF_442, ADS58Jx_LMF_841 INI files for TSW14J57revD board.

18. Added support to Individual lane inversion in TSW14J10VC707 and TSW14J10ZC706 boards.

19. Updated the UI of CER Testing Popup.

20. Added the ADC32RF45_42810 INI file for KCU105 board.

21. Added the ADC08060_cmos, ADC08100_cmos, ADC08200_cmos, cmos_10_Bit, cmos_12_Bit, cmos_14_Bit, cmos_8_Bit INI files for TSW1400 board.

22. Added the ADC31JB68_LMF_211 INI file for TSW14J10ZC706 board.

23. Added the PRBS_DAC38RF8x_LMF_841 INI file for TSW14J56revD board.

24. Added "ADC_FIRMWARE_FCLK_ADJUST" Firmware to TSW1400 board.

VERSION 4.70 (From v4.50)

High Speed Data Converter Pro

1. Added support for TSW14J57revD Board.
2. Added support to HSDC Pro in Windows 10.
3. Added support for Eyescan in KCU105.
4. Added NCO support to Two Tone Test Selection.
5. Added support to Negative coherent frequency calculation.
6. Added an automation function to set the Additional Device Parameters in Two Tone mode.
7. Updated the Automation DLLs to use dot(.) as decimal point irrespective of location settings.
8. Made the capture timeout configurable through an INI parameter 'Capture Timeout (In Seconds)' in the Device and File Info.ini under the [ADC DAC] section.
9. Added support to read as many samples with which the trigger mode was configured in TSW1400 v1.0 dll during a triggered capture.
10. Added support to Phase Plot. This feature can be enabled through the menu parameter under Test Options.
11. Disabled the 'Analysis Window Markers' option on the DAC Page.
12. Updated TSW14J56REVD_AEQ_FIRMWARE by compiling TSW14J56REVD_FIRMWARE from HSDC Pro v4.50 with AEQ option enabled.
13. Added TSW14J56REVD_BRAM_ADC_DAC_DDR_128K_XCVR_FIRMWARE for TSW14J56revD board.
14. Updated the ADC32RF80_20x_LMF_4211,ADC32RF80_20x_LMF_4421, ADC32RF80_40x_LMF_4211, ADC32RF80_40x_LMF_4421,ADC32RF80_LMF_2221, ADC32RF80_LMF_2242, ADC32RF80_LMF_2441,ADC32RF80_LMF_2881, ADC32RF80_LMF_4222, ADC32RF80_LMF_4244,ADC32RF80_LMF_4421, ADC32RF80_LMF_4442, ADC32RF80_LMF_4841,ADC32RF80_LMF_8221, ADC32RF80_LMF_8411,ADC32RF80_LMF_8422, ADC32RF80_LMF_8821, DAC38RF8x_LMF_243,DAC38RF8x_LMF_244,DAC38RF8x_LMF_411, DAC38RF8x_LMF_413, DAC38RF8x_LMF_421,DAC38RF8x_LMF_442,DAC38RF8x_LMF_483,DAC38RF8x_LMF_484, DAC38RF8x_LMF_811,DAC38RF8x_LMF_821,DAC38RF8x_LMF_823,DAC38RF8x_LMF_841 and DAC38RF8x_LMF_882 INI files for TSW14J56revD board.
15. Added ADC12DJxx00_JMODE0, ADC12DJxx00_JMODE2, ADC12DJxx00_JMODE4, ADC12DJxx00_JMODE5,ADC12DJxx00_JMODE6,ADC12DJxx00_JMODE7,ADC12DJxx00_JMODE9, ADC12DJxx00_JMODE10,ADC12DJxx00_JMODE11,ADC12DJxx00_JMODE13, ADC12DJxx00_JMODE14,ADC12DJxx00_JMODE15 and ADC12DJxx00_JMODE16 device & mode support to TSW14J56revD.
16. Added ADC12DJ3200_JMODE0, ADC32RF80_LMF_8411, ADC32RF80_LMF_8821, DAC38RF8x_LMF_421 and DAC38RF8x_LMF_841 device & mode support to KCU105.
17. Added ADS54J20_LMF_8224, ADS54J40_LMF_4244, ADS54J40_LMF_8224, ADS54J60_LMF_8224 and ADS54Jxx_4x_2441_IQ device and mode support to KCU105.

High Speed Data Converter Pro

18. Bug fix in which the IMD3 and IMD5 values were reported incorrectly in Complex FFT under Two Tone test selection.
19. Bug fix in which there was a "Not enough memory to complete this operation." error while sending data to the DAC from a huge pattern file of about 425 MB.
20. Bug fix in which the context plot display has a gap when capture is performed using devices which have 0s in their channel pattern with TSW1400 v0.0 dll.

VERSION 4.50 (From v4.40)

1. Updated the DAC Page to support more than 4 channels.
2. Added support for KCU105 Board.
3. Updated the DSPLib dll to include 2,2 and 4 bins on either side for Hamming, Hanning and Blackman window respectively and updated the calculation for computation of the fundamental, harmonics, SFDR and Next Spur in the Singletone parameters.
4. Increased the precision of the Singletone Parameters to 3 digits after the decimal point and also removed the trailing zeroes on the ADC Page.
5. Bug fix in which the format pattern was being read in hexadecimal from the ini. Changed to reading the format pattern in decimal.
6. Bug fix in which the Singletone parameters where reported incorrectly by its corresponding automation functions in case of Complex FFT.
7. Bug fix in which the 'dBFs?' argument was not working as expected and updated the function which returns the Singletone Parameters with an option to return the values in Hz.
8. Enabled 'Reset Board' Menu Option for DAC in TSW14J56revD.
9. Updated TSW14J56REVD_FIRMWARE and TSW14J50RX_FIRMWARE with Individual lane Invert SerDes Data feature.
10. Updated TSW14J56REVD_FIRMWARE and TSW14J50RX_FIRMWARE with the JESD Rx and Tx AVS read data valid signal logic and able to read register.
11. Updated TSW14J56REVD_FIRMWARE with the logic for registering sysref for getting the sysref edges.
12. Updated TSW14J56REVD_FIRMWARE with the trigger input logic for sysref trigger mode to the trigger module in enc and dec modules.
13. SERDES test firmware with TSW14J56revD does not support invert serdes data feature for individual lane.
14. Fixed trigger modes on TSW14J50RX_FIRMWARE similar to TSW14J56DrevD. Tested software and hardware trigger. But Sysref based trigger mode has not been tested.
15. Added ADS58J64_LMF_2441_mode24, ADS58J64_LMF_4421_mode7, ADS58J64_LMF_4421_mode7_0s, ADS58J64_LMF_4421_mode38_14b, ADS58J64_LMF_4421_mode38_16b, ADS58J64_LMF_4841_mode01, DAC38RF8x_LMF_243, DAC38RF8x_LMF_244, DAC38RF8x_LMF_411, DAC38RF8x_LMF_413, DAC38RF8x_LMF_421,

High Speed Data Converter Pro

DAC38RF8x_LMF_442, DAC38RF8x_LMF_483, DAC38RF8x_LMF_484, DAC38RF8x_LMF_811, DAC38RF8x_LMF_821, DAC38RF8x_LMF_823, DAC38RF8x_LMF_841 and DAC38RF8x_LMF_882 device & mode support to TSW14J56revD.

16. Added DAC38RF8x_LMF_124, DAC38RF8x_LMF_222, DAC38RF8x_LMF_244, DAC38RF8x_LMF_411, DAC38RF8x_LMF_421, DAC38RF8x_LMF_442, DAC38RF8x_LMF_484, DAC38RF8x_LMF_811, DAC38RF8x_LMF_821, DAC38RF8x_LMF_841 and DAC38RF8x_LMF_882 device & mode support to TSW14J56.

17. Added ADC08351_cmos device & mode support to TSW1400.

18. Added ADS54J66_LMF_4421 device & mode support to TSW14J10VC707.

19. Added ADS54J66_LMF_4421 device & mode support to TSW14J10KC705.

20. Added AFE5805 device & mode support to TSW1405.

21. Updated AFE5805_12X INI file for TSW1400 board.

22. Removed the AFE5808_09_12b, AFE5808_09_14b, AFE5808_09_16b and AFE5809 INI files from TSW1400 board.

23. Fixed the issue with the 'writing sequence of trigger registers and capture control register' for TSW14J50 and TSW14J56revD dlls.

24. Moved logics from config DAC function to start DAC function, because the former function will be skipped when skip reconfig ini parameter is set to 1 for TSW14J56revD dll.

25. Updated the sysref master trigger toggle logic to rising edge pulse generation as firmware is updated for TSW14J56revD dll.

26. DAC and ADC structures will be initialized irrespective of skip reconfig for TSW14J56revD dll.

VERSION 4.40 (From v4.20)

1. Bug fix in back channel communication and automation function for setting the additional device parameters.

2. Bug fixes in ADC graph plotting where Fundamental and Harmonics markers disappear when the zooming is done.

3. Bug fixes in the Next Spur calculation in the DSP Lib DLL.

4. Bug fixes in ZC706 Board wrapper VIs.

5. Bug fix in the HSDC Pro installer Auto download feature.

6. Bug fix in displaying the tone generator controls when HSDC Pro opens with the DAC page.

7. Bug fix in which the Device GUI doesn't close when HSDC Pro is closed in back channel communication.

8. Bug fix where an error message appears when the user tries to select an ini file before the select to the board popup or no board connected popup appears during initialization.

9. DAC Page defaults change: DAC Option - 2's Complement, Window – Blackman.

10. Updated the text in the popup which appears when the Device GUI exe which is launched from HSDC Pro times out.

11. Updated the 'HSDCProAutomationHeader' file for both 32 bit and 64 bit Matlab files with the function 'ADC_Save_Raw_Data_As_Binary_File'.

High Speed Data Converter Pro

12. Updated the TSW14J56revD DLL to disarm the trigger after the trigger occurred status is detected.
13. Updated the TSW14J10VC707 ADC ini files.
14. Updated ADC32RF45_8224 INI file for TSW14J10ZC706 board.
15. Updated DAC3XJ82_LMF_421 and DAC3XJ84_LMF_442 for 14J10KC705 Board.
16. Disabled the DAC page for TSW14J50.

VERSION 4.20 (From v4.10)

1. Renamed the "Bandwidth Integration Markers" to "Analysis Window Markers" and added these markers to Codes display.
2. THD is calculated for the AWM markers range if AWM is ON.
3. Bug fixes in THD measurement.
4. Fixed a memory leak in the DSP Lib dll.
5. Updated the DSP Lib Dll to search for 1% of the analysis window length around the ADC Input Target Frequency to calculate the fundamental frequency when 'Disable Fundamental Freq Search?' is checked.
6. HD1' is using the HD1 notch settings now instead of other HD's notch settings. This fix improved the SNR value little bit since by default we apply 25 bins notching for HD1 which is now applied for HD1' as well.
7. Enabled the "Number of Bits" option in Import Binary File menu popup.
8. Minimum number of harmonics that can be set is updated to 1.
9. Added a cursor reset button which would bring in the M1 and M2 markers into the visible part of the graph.
10. Added the DAC ini file parameter named 'Scaling factor>1' which, if set to True in the DAC ini file would allow the user to increase the Scaling factor upto infinity.
11. Added Automation functions for HSDC Pro Minimize and Restore.
12. Added a check box in the Additional Device Settings popup to remember the current session popup settings while disconnecting and connecting to the board.
13. Updated to display the marker labels within the graph range.
14. Enabled "Cursor Lock" Feature only to 2 channel display.
15. Made the Device selection window (the listbox which appears when selecting a device) wider and changed the font size of the items in the listbox to 13.
16. Increased the number of digits after the decimal point from 8 to 9 in the 'ADC Input Target Frequency' control.
17. Added "14J10ZC706 Details" folder.
18. Bug fix in displaying the correct channel data in the main plot when the context plot cursor is moved for a large capture in 1400.
19. Fixed a bug in which the measurement table shows the values of all the five harmonics even if the number of harmonics specified is less than 5.
20. Fixed the 'EyeQ' window 'gain' range and lane address issue.
21. Bug fixes in SERDES Test Options menu.

High Speed Data Converter Pro

22. Updated the 'TSW14J56REVD_FIRMWARE' in which Software Trigger generation is aligned to SOMF.

23. Added Data Pattern Verifier option to SERDES Test Options menu.

24. Updated 14J56revD firmware with the EyeQ Scan module to go over the horizontal and vertical phases and store the BER data to Internal RAM.

25. Added a firmware 'TSW14J56REVD_AEQ_FIRMWARE' (IID-6) to 14J56revD board with AEQ enabled.

26. Added a firmware 'TSW14J56REVD_FIRMWARE_CER' to 14J56revD board which supports both 841 and 421 modes for CER Testing.

27. Added a firmware 'TSW14J56REVD_SERDES_TEST_FIRMWARE' to 14J56revD board for PRBS pattern generation and verification.

28. Added the new MIF files for the PRBS firmware.

29. Added a firmware 'TSW14J10_KC705_v2p8' to 14J10KC705 board

30. Added a firmware 'TSW14J10_VC707_v2p8' to 14J10VC707 board

31. Updated the 'TSW14J50RX_FIRMWARE' by fixing the FIFO first data not writing issue in capture logic for 8 lane mode.

32. Updated the TSW14J56revD DLL for the PRBS generation and verification.

33. Updated the TSW14J56revD DLL to fix DAC (Tx) lane map changes.

34. Updated 14J56revB, 14J10KC705, 14J10VC707 DLLs with minor changes.

35. Updated ADS5294 and ADS5292 INI files for TSW1400 board with change in channel mapping index.

36. Updated ADS54J54_LMF_841 for TSW14J56revD Board.

37. Updated ADC12J4000_DEC_4, ADC12J4000_DEC_10, ADC34J44_LMF_4421, ADS42JB49_LMF_222, ADS42JB49_LMF_421, ADS42JB69_LMF_222, ADS42JB69_LMF_421, ADS54J54_LMF_442 INI, DAC3XJ82_LMF_421 and DAC3XJ84_LMF_442 files for 14J10KC705 Board.

38. Updated ADC12J4000_BYPASS, ADC12J4000_DEC_4_P54, ADC32RF45_8224, ADC32RF45_82820, ADS42JB49_LMF_222, ADS42JB49_LMF_421, ADS42JB69_LMF_222, ADS42JB69_LMF_421, ADS54J40_LMF_8224, ADS54J54_LMF_442, ADS54J54_LMF_841, ADS54J60_LMF_8224, DAC3XJ82_LMF_421, DAC3XJ84_LMF_442 and DAC3XJ84_LMF_841 INI files for 14J10VC707 Board.

39. Updated ADS42JB49_LMF_222, ADS42JB49_LMF_421, ADS42JB69_LMF_222,ADS42JB69_LMF_421 for TSW14J50 board.

40. Updated ADC32RF45_LMF_4211 and ADC32RF45_LMF_82820 for TSW14J56 board.

41. Added ADS54J69_2x_4421,ADS54J69_4x_2221, ADS54J20_2x_4222, ADS54J20_2x_Dec, ADS54J20_4x_2221, ADS54J20_4x_2441_IQ, ADS54J20_4x_4421_IQ, ADS54J20_4x_Dec, ADS54J20_LMF_4211, ADS54J20_LMF_4244, ADS54J20_LMF_8224, ADS42JB69_LMF_421_CER, ADS54J54_LMF_841_CER, ADC32RF45_LMF_8224, ADC32RF45_LMF_82820, ADC32RF80_20x_LMF_4211, ADC32RF80_20x_LMF_4421, ADC32RF80_40x_LMF_4211, ADC32RF80_40x_LMF_4421, ADC32RF80_LMF_2221, ADC32RF80_LMF_2242, ADC32RF80_LMF_2441, ADC32RF80_LMF_2881, ADC32RF80_LMF_4222, ADC32RF80_LMF_4244, ADC32RF80_LMF_4421, ADC32RF80_LMF_4442, ADC32RF80_LMF_4841, ADC32RF80_LMF_8221, ADC32RF80_LMF_8411,

High Speed Data Converter Pro

      ADC32RF80_LMF_8422, ADC32RF80_LMF_8821, ADC12J4000_BYPASS_SERDES device & mode support to TSW14J56revD.

42. Added ADC32RF80_LMF_8411 and ADC32RF80_LMF_8821 device & mode support to TSW14J56.
43. Existing 14J56 RevD INIs have been ported to TSW14J50 and validated.

VERSION 4.10 (From v4.00)

1. Added an ADC INI parameter named "Mixer Type = 0" that takes 0(straight mixer, Fout=Fin+NCO) or 1(Down mixer, Fout=Fin-NCO) based on which Fout will be calculated
2. Added an ADC INI Parameter named "Transport Layer Ratio". This is a multiplication factor used in Lane rate calculation to make adjustments to the lane rate.
3. Added .NET 4.0 installer to the HSDC Pro installer and removed .NET 2.0, since the latest HSDC Pro has a dependency on .NET 4.0.
4. Added an ADC INI Parameter named "Min sample Rate". If the ADC Output Data Rate goes below this value, HSDC Pro shows a warning popup.
5. Added an automation function to write to U32 register.
6. Updated HSDC Pro to display the Lane rate popup whenever a parameter related to lane rate calculation is exported through back channel communication from Device GUI
7. Added possible reasons for ADC Time Out Error to the error popup in 1400, 14J56revB, 14J56revD and 14J50
8. Added an option to cycle through ADC channel list using Up and Down arrow keys.
9. Added ADS58J66_LMF_4421, ADS58J66_LMF_4421_mode7, ADS58J66_LMF_4841, ADC14X250_LMF_112 device & mode support to TSW14J56revB
10. Added ADS54J40_2x_Dec,ADS54J40_4x_Dec, ADS54J40_LMF_4211, ADS54J40_LMF_4244, ADS54J40_LMF_8224, ADC14X250_LMF_112 device & mode support to TSW14J56revD
11. Added ADC12J4000_DEC_4, ADC12J4000_DEC_10, ADS42JB49_LMF_222, ADS42JB49_LMF_421, ADS42JB69_LMF_222, ADS42JB69_LMF_421, ADS54J54_LMF_442, DAC3XJ82_LMF_421, DAC3XJ84_LMF_442 device & mode support to TSW14J10KC705.
12. Added ADC12J4000_BYPASS, ADC12J4000_DEC_4, ADC12J4000_DEC_10, ADS42JB49_LMF_222, ADS42JB49_LMF_421, ADS42JB69_LMF_222, ADS42JB69_LMF_421, ADS54J54_LMF_442, ADS54J54_LMF_841, DAC3XJ82_LMF_421, DAC3XJ84_LMF_442, DAC3XJ84_LMF_841 device & mode support to TSW14J10VC707.
13. Updated TSW14J10KC705 and TSW14J10VC707 firmware files.
14. Updated TSW14J50 Firmware file and DLL to support 30M SPI baud rate and with lane mapping changes.
15. Added CMOS Rx_SYNC signal to the FMC Pin #K22 in TSW14J56revB and TSW14J56revD firmware.
16. Bug fix in DSP Lib DLL where spurs are labeled at wrong locations when both Additional Device Parameters and Other Frequency options are enabled.
17. Bug fix in TSW1400 trigger mode capture, so that it works as expected when the device modes are changed through export function.
18. Bug fix in 14J56revD DLL in writing the DAC #samples value to JESD TX control register, if it is less than 16384.

High Speed Data Converter Pro

VERSION 4.00 (From v3.10)

1. Added support for TSW14J56revD board.
2. Recompiled HSDC Pro in LabVIEW 2014.
3. Upgraded HSDC Pro installer to Bitrock installer.
4. Y scale default Voltage range is changed to -1V to 1V and the label displayed in the graph in case of Voltage scale is changed to 'Level(V)'.

VERSION 3.10 (From v3.00)

1. Added the feature to communicate with the Device GUI EXE from HSDC Pro EXE through back channel communication (Device GUI EXE needs to be updated with the necessary changes).
2. Implemented the new Spur Search algorithm that uses NCO & Decimation along with Fs & Fin values.
3. Updated 14J50 ADC INIs, Firmware, and DLL to support Megacore IP. TSW14J50 DLL works at 3MHz SPI baud rate for now (future version will have it increased to 30MHz).
4. Added Unit selection option to the measurement table to switch between dBF, dBc and Hz.
5. Added an option to display Time domain Y Scale in Voltage. By default the voltage range will be from -2V to 2V. The value can be specified in the Device INI by adding the parameter "Y Scale Voltage Range= -2V to 2V"
6. Added a right click shortcut option to the Real FFT graphs to display X scale in log scale.
7. Time domain graph X axis has been updated to display only integers even while zooming (earlier it was displaying floating numbers).
8. Added the option to load maximum of 512K data in the display in DAC page. (Earlier it was 64K).
9. NSD parameter in the measurement table has been updated to be displayed in dBFs/Hz (earlier it was dBFs/bin).
10. Menu option to enable or disable the NSD Marker has been added.
11. TSW14J56 DLL and Firmware has been updated to support Sysref based Trigger (for testing).
12. Added AFE5801, AFE5803, AFE5804, AFE5805, AFE5807, AFE5808, AFE5809, AFE5851_12X, ADS52J90 device & mode support to TSW1400.
13. Added ADS54J54, ADS58J8x, ADC14X250, ADC31JB68, ADC32RF45, ADS42B4, ADC12J4000_D10_SDR, ADC12J4000_D20_DDR, ADC12J4000_D32_DDR, ADS54J60 and RFDAC device & mode support to TSW14J56.
14. Removed 14J01 folder from the installer.
15. Removed TSW1400 and TSW1405 API document from the installer.
16. Removed Auto scaling for the X axis in the graph while switching between Channels or Graph types.
17. Updated the Peak to peak calculation in the measurement table using "Peak to Peak = (max code – min code) + 1" in both ADC and DAC Time domain.
18. Bug fix in handling the parameters exported from the Device GUI through Back Channel communication.
19. Bug fix in updating the Codes page with the correct data when the cursor in the context plot is moved, with the X scale in Time.
20. Bug fix in displaying the markers M1 and M2 in DAC page when the cursor is moved.

High Speed Data Converter Pro

21. Bug fix in displaying the Test Parameters (Two Tone and Channel Power) when we switch between ADC and DAC tabs.
22. Bug fix in Sync pattern search in TSW1400.
23. Bug fix in applying the Bit packing pattern in DLL - TSW14J56, KC705, VC707 platforms.
24. Bug fix in handling the Parameters exported from the Plugin GUI.
25. Bug fix in updating the current values of JESD parameters in the Dynamic Configuration popup.
26. Bug fix in checking for the latest available patch. Even if a patch is available, it will prompt to download only when the GUI version matches.

VERSION 3.00 (From v2.70)

1. Updated TSW14J56 firmware, DLL and INI files to support Megacore IP.
2. Added support for TSW14J10VC707 Board.
3. Updated TSW14J10KC705 and TSW14J10VC707 firmware.
4. FFT Display changes (a) showing –fs/2 and fs/2 components in complex FFT (b) fs/2 and DC are not summed in Real FFT.
5. Automation functions for Import Data File, Import Binary File and DAC Scaling Factor.
6. Export functions for the parameter GUI Channels to Disable, Channel Display Strings, and Device GUI Tab Name are added.
7. Bug fix in the Average FFT memory buildup for large number of captures.
8. Bug fix in all the Trigger modes, when the Number of Samples to capture is changed, it was not getting updated in the next immediate capture.
9. Bug fix in DAC Send when the firmware is downloaded through menu option in TSW14J56.
10. Added the feature to save the Screenshots of all channels for ADC.
11. Added support for DAC Bit masking in all the boards.
12. Retaining the DAC Scaling Factor value while Creating Tones (Earlier it was reset to 1).
13. Retaining the Last Selected ADC and DAC device name while switching between ADC and DAC tabs based on the firmware present in the board.
14. Bug fix in displaying the Time domain X axis scale in Time when the Channel pattern is unequal.
15. Support for skipping of Sync Pattern in TSW1400 v1.0 DLL.
16. Added HSDC Pro Manifest File – SRAS approved HTML format.
17. Removed 14J05 folder and TSW14J56revC folder from the installer.

VERSION 2.70 (From v2.60)

1. Added support for TSW14J10KC705 Board.
2. Fix for "JTAG Broken Chain Issue" when connected to USB3 Port PC.

VERSION 2.60 (From v2.50)

1. Added FFT Peak Analysis feature, which can be enabled from the menu - Test Options -> Other Frequency Options. When enabled, the dotted line present represents the threshold for peak frequency analysis.
2. HSDC Pro UI has been resized to fit 768 resolution PCs.

High Speed Data Converter Pro

3. Added disabling of fundamental frequency search feature. This disables the fundamental frequency search, and allows the user to set the Fundamental frequency using the Input Target Frequency. This option is available under the menu - Test Options -> Other Frequency Options.
4. Two Tone FFT calculation has been updated to support two closely spaced tones. The integration of the nearby bins for frequency power calculation is also now applied for the Two Tone frequency parameters, based on the menu setting.
5. Bug fix in Complex FFT calculation, whose FFT result which was having an offset.
6. Added Automation function for FFT Peak Analysis and for exporting the Time Domain Parameters.
7. The fundamental frequency pointer in the FFT plot has been replaced with a single marker, which represents the integrated fundamental frequency.
8. Made changes in the TSW14J56 DLL to fix the random FTDI errors in continuous capture mode. Reduced the capture time taken by TSW14J56 board.
9. Input target frequencies now support negative frequency inputs.
10. Fixed the issue with the updating of the FFT Plot in Two channel display mode.
11. Modified the short cut menu option for exporting the FFT data from plot(right clicking on the FFT plot -> Export -> Export Data to Excel), to have the X-axis frequency values in floating point (previously they were in SI notation which was difficult for post processing using other software)
12. Extra Data truncation handled in TSW14J56 when Saving the ADC data to CSV file.
13. Keeping the 3rd panel plugin GUI available without closing it even when user switches to ADC/DAC tab.
14. Custom names selection feature added for GUI Channel dropdown display.
15. Modified the TSW14J56 reference clock pop up to appear when ADC Data Rate changes (instead of when pressing Capture button).

VERSION 2.50 (21.02.2014) (From v2.40)

1. Modified DAC scaling factor, which is now applied to both the data files and to the tone generated data. The scaling factor that was present near the DAC tone generation has been removed.

2. Implemented device search for ADC and DAC devices. Supports partial search – for a given input string, GUI will list all devices which has this string in any part of the device name. While searching, pressing enter/return key, will automatically select the first listed device under the search.

3. Implemented Software and Hardware Triggering in TSW1400 DAC.

4. Added automation functions - To read the ADC time domain data as a binary file, set the ADC 2nd input target frequency and functions for DAC Hardware and Software Triggering.

5. Modified the automation function architecture to execute each case and the cases they call, before starting to execute the next automation DLL command in queue.

6. Plugin GUI unloading will now happen only when the next device (ADC/DAC) is selected. When no valid device is selected, the plugin GUI tab will be hidden.

High Speed Data Converter Pro

7. Added support for decoding bit packed data (no padded zeroes) in TSW14J56 ADC.

8. Support for 0s, and sample re-ordering in TSW14J56 DAC.

9. GUI Support for 16 channels devices in TSW1405.

10. Fixed bug in the updating of context plot in TSW1405, which happened when some of the channels were disabled.

VERSION 2.40 (09.12.2013) (From v2.20)

1. Added support for TSW14J56EVM.

2. The default value for notching around harmonics has been changed to 0 for all FFT windows.

3. The Single Tone Parameters table has been updated to display the configured number of harmonic values.

4. When markers M1 and M2 are moved, their corresponding frequency values will be displayed.

5. Automatic checking and installing of .NET 2.0 has been added in the HSDC Pro Installer.

6. Fixed issue with the latest FTDI driver, which caused GUI to hang after downloading firmware in TSW1405 and TSW1406EVM's.

7. Board dynamic configuration menu item has been added for TSW14J56, which allows the device ini parameter to change the values on the fly. User message with reference clock value has been added for TSW14J56 which will be displayed when the lane rate changes when capture/send button is pressed.

8. Updated ini/firmware files of TSW14J56EVM. TSW14J56 DAC now uses MPSSE mode.

9. Updated TSW14J56 channel pattern to accept 0's (which will discard the data).

10. Updated the board dynamic configuration with option for "Reset", which will reload the values from the device ini file.

11. User message with reference clock value has been added for TSW14J56, which will be displayed when the lane rate changes, when capture/send button is pressed.

12. Added feature of selecting the channel number to where the channel data will be displayed in GUI for TSW14J56. For example, if the DDR contains only 2 channels data, but the data needs to be displayed in channels 1, 3, then the channel pattern will be set using 1 and 3, and number of channels will be set as 4. Data read from DDR will be displayed in channels 1 and 3, and channels 2 and 4 will not have any data.

High Speed Data Converter Pro

13. Modified lane rate calculation based on "Number of Channels" instead of JESD parameter M.

14. Fixed DSPLib error issue which was reported in one Windows XP PC.

15. Added Automation function for setting the starting sample for the ADC Analysis window.

16. Fixed bug in the FFT plot, when switching to a channel with lesser number of samples, compared to the Analysis Window length (FBRX mode).

VERSION 2.20 (26.08.2013) (From v2.10)

1. Added support for TSW14J01 Board.

2. Changes have been made in the Signal Processing for the different FFT windowing techniques.

3. Average FFT is now calculated by Root Mean Square method.

4. GUI has been optimized for faster capture time.

5. Added Automation functions for ADC FFT Averaging, Setting Bandwidth Integration Markers and Channel Power Settings.

6. Adding DAC31x1 and DAC31x4 ini files for TSW1400,TSW1406 and ADS5401-09 ini file for TSW1405.

7. Adding Read/Write Register Automation functions for Plugin GUI.

VERSION 2.10 (09.05.2013) (From v2.00)

1. Added Complex FFT for ADC.

2. HSDCPro Automation DLL has been added, which can be used to communicate with HSDC Pro GUI from another application at, \High Speed Data Converter Pro\HSDCPro Automation DLL.

3. LabVIEW, C and Matlab examples has also been added for the Automation DLL at the above location.

4. Negative tone frequencies in DAC tone generation is now removed.

5. ADC Sampling Rate has been renamed to ADC Output Data Rate.

6. The exact frequency values can be viewed by hovering the mouse over the respective control.

VERSION 2.0 (19.12.2012) (From v1.50)

High Speed Data Converter Pro

1. Devices which support integration with TSW1400 will automatically be loaded as 3rd tab in TSW1400. When the device's EXE is already running separately, then the device GUI will not be loaded into TSW1400.

2. Two way data communication takes place between the Device GUI in 3rd tab and TSW1400.

3. Devices which support integration with TSW1400 now needs only a single ini file for all modes.

4. Whenever the device GUI parameters/modes are changed in device GUI (from TSW1400's 3rd tab), it will automatically be communicated to TSW1400 and vice versa.

5. A single common ADC firmware has been developed for all devices. The devices tested with this new firmware will be using a new DLL. When user changes to a device which has not been tested, the old DLL and old firmware will automatically be used.

6. When Device GUI is in integrated mode, it has the option to send some of its menu items to TSW1400 which will be listed under "Device GUI Options".

7. Creation of DAC tones no longer requires board to be connected (No need to select device).

8. Whenever user selects a device, and if all the DAC tone creation parameters are present, the tones will automatically be generated for the selected device.

VERSION 1.50 (23.10.2013) (From v1.20)

1. Supports TSW1400, TSW1405, TSW1406.

2. Master and slave triggering modes are available for the TSW1400.

3. Has FFT Averaging feature.

4. Complex FFT for DAC panel to show IQ signals.

5. Individual DAC channel enable.

6. Continuous Capture mode for ADC.

7. Notch Frequency Bins optimized for single tone display. Revised defaults for notch filters (25:25:25) in windowed modes.

8. Pk-Pk and PAR values are displayed for time domain DAC and ADC.

9. FFT in DAC mode defaults Blackman window when creating tone or loading file with >64K (truncated FFT).

High Speed Data Converter Pro

10. The Time domain plot color is now dark blue (both on the context plot and main plots).

11. Can now change plots' background color in addition to foreground color.

12. Includes menu option to display the X axis scale in time/samples.

13. Improved Bandwidth Integration marker functions.

14. Improved USB hot unplug functionality.

15. Includes Automatic check for updates.

16. Advanced "FFT x scale" for decimated sample rate devices.

- GUI includes the following support files and DLL code examples:

C:\Program Files\Texas Instruments\High Speed Data Converter Pro - for 32 bit OS.

C:\Program Files(x86)\Texas Instruments\High Speed Data Converter Pro - for 64 bit OS.

- \1400 Details\ Example VI

  Accepts TSW1400 GUI ADC and DAC INI files and leverage the board interface dll for 1400.

  Firmware Download Example VI use to download firmware onto the 1400 board.

- \1400 Details\Visual Studio Example

  Same examples as VI.

- Main TSW1400 dll header file inside \1400 Details folder.

- TSW 1400 and 1405 API documents inside \1400 Details and \1405 Details folders.

VERSION 1.2 (30.3.2012) (From v1.00)

1. Bandwidth integration markers now available from Test Options menu.

2. Ability provided to notch FFT bins at user specified frequency from Notch Frequency Bins menu.

3. Several new firmware files and INI files for TSW1405 and some for 1400 added.

High Speed Data Converter Pro

4. Miscellaneous user prompts changed and added

5. Bugfixes on several file import functionalities.

6. Simulate ADC option removed in favor of a more versatile Import Data File functionality.

7. Ability to specify more versatile channel selection for 1405 from Number of Channels menu to afford better utilization of on-board memory.

8. Ability provided to save and load the most recent settings of the GUI using which a successful data capture/generation had occured.

9. Populates the most recently used devices in bold under the device selection drop down.

VERSION 1.0 (20.02.2012)

1. GUI has features to communicate and to retrieve data from ADC's and send data to DAC's connected to the TSW1400.

2. It can also perform signal processing analysis on the data retrieved.

3. Supports 2 channel display plots where time domain/FFT data can be viewed for any two channels at a time.

High Speed Data Converter Pro

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