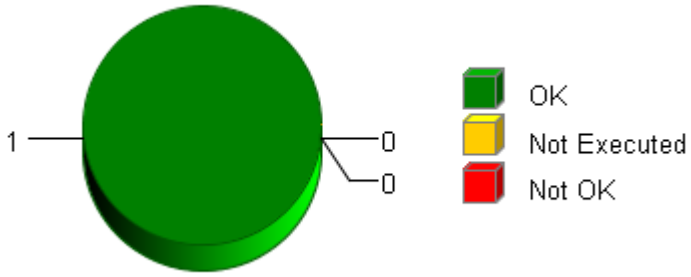
Summary

Total Test Objects:	1
Successful:	1
Failed:	0
Not Executed:	0
Date:	2014-09-19
Time:	16:43:04+0530

Overall Test Object Results (including Coverage)



Selected Project Items

Test Object "CBD_UnitTest/FDD_Inertia/FrqDepDmpnInrtCmp_Init"

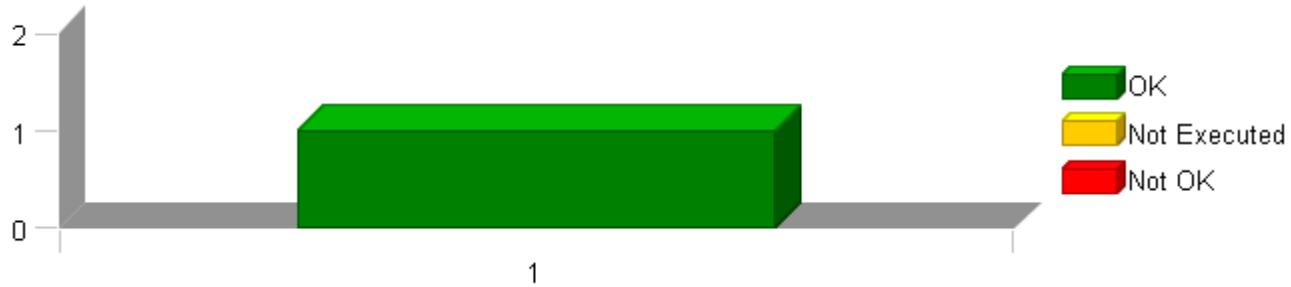
Used Test Environments

TI TMS 570 PLS UDE (Default)

Batch Operation Settings

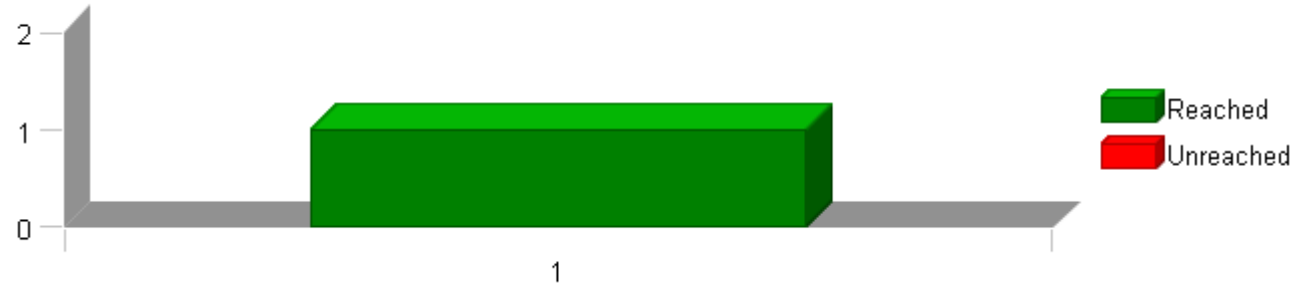
Check Interface:	No
Generate Driver:	Yes
Execute Test:	Yes
Create New Test Run:	No
Instrumentation:	Test Object Only
Coverage:	Statement Coverage, Branch Coverage, Decision Coverage, Modified Condition / Decision Coverage, Multiple Condition Coverage

Test Case Results for Each Test Object (without Coverage)



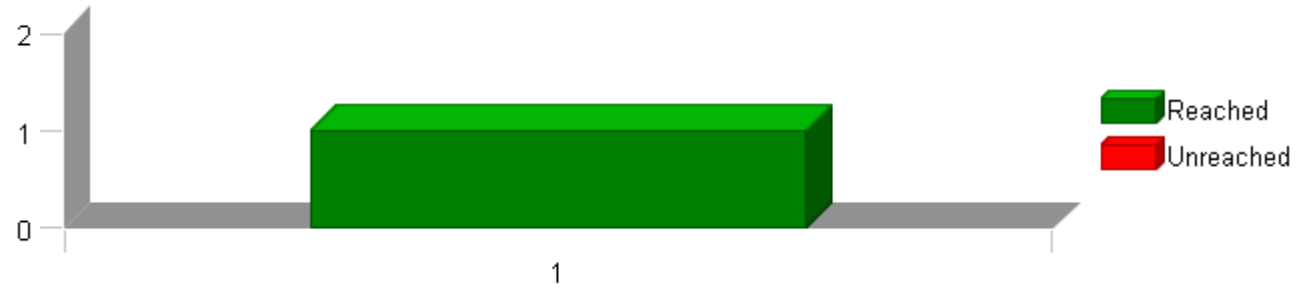
The table above shows each test object on the x axis and the number of test cases of the respective test object on the y axis. Each bar is divided into passed, not executed and failed test cases. The test case results do not take into account any coverage result (i.e. if all test cases of a test object are passed in this table but the coverage is failed, the overall test object result will be failed).

Statement (C0) Coverage: Total Statements for Each Test Object



The table above shows each test object on the x axis and the number of statements of the respective test object on the y axis. Each bar is divided into reached statements (i.e. statements that have been executed during the test) and unreached statements.

Branch (C1) Coverage: Total Branches for Each Test Object



The table above shows each test object on the x axis and the number of branches of the respective test object on the y axis. Each bar is divided into reached branches (i.e. branches that have been executed during the test) and unreached branches.

Test Object List

The following table lists all test objects with their test case and coverage results. The cumulated results for modules, folders and test collections are also displayed, the indentation within the name column indicates the parent relationship of the elements.

Please note that only test objects are numbered within the first column. This number is referenced on the x axis within the overview charts for test case and coverage results available on previous pages (if included into the report).

No.	Name	C0	C1	Test Cases	Result
	FDD_Inertia	100 %	100 %	1 of 1 passed	✔
	CBD_UnitTest	100 %	100 %	1 of 1 passed	✔
	FDD_Inertia	100 %	100 %	1 of 1 passed	✔
1	FrqDepDmpnInrtCmp_Init	100 %	100 %	1 of 1 passed	✔

TEST DETAILS REPORT

FrqDepDmpnInrtCmp_Init

2014-09-19, 16:43:01+0530

Project	FDD_Inertia
Module	FDD_Inertia
Test Object	FrqDepDmpnInrtCmp_Init

Instrumentation: Test Object Only

Statement (C0) Coverage	100 %
Branch (C1) Coverage	100 %

Statistics

Total Testcases	1
Successful	1
Failed	0
Not Executed	0

TEST DETAILS REPORT

FrqDepDmpnInrtCmp_Init

2014-09-19, 16:43:01+0530

Module Properties

Project Root Directory	D:\Synergy_Work_Area\CBD_FrqDepDmpnInrtCmp
Configuration File	D:\Synergy_Work_Area\CBD_FrqDepDmpnInrtCmp\UnitTestEnv\config\TMS570_GCC_UDE_CCS4_Config.xml
Target Environment	TI TMS 570 PLS UDE (Default)
Kind of Test	Unit Test
Linker Options	
Source File(s)	
File	$(PROJECTROOT)\FrqDepDmpnInrtCmp\src\Ap_FrqDepDmpnInrtCmp.c
Compiler Options	-D_DATA_ACCESS= -Dconst= -Dstatic= -DBC_FREQDEPDAMPING_FAULTINJECTIONPOINT=STD_OFF -I$(PROJECTROOT)\FrqDepDmpnInrtCmp\utp\contract -I$(PROJECTROOT)\FrqDepDmpnInrtCmp\utp\contract\Ap_FrqDepDmpnInrtCmp -I$(PROJECTROOT)\NxtrLib\include -I$(PROJECTROOT)\StdDef\include -I$(ProgramFiles)\Texas Instruments\ccsv4\tools\compiler\tms470_4.9.5\include
File	$(PROJECTROOT)\NxtrLib\src\interpolation.c
Compiler Options	-D_DATA_ACCESS= -Dconst= -Dstatic= -DBC_FREQDEPDAMPING_FAULTINJECTIONPOINT=STD_OFF -I$(PROJECTROOT)\FrqDepDmpnInrtCmp\utp\contract -I$(PROJECTROOT)\FrqDepDmpnInrtCmp\utp\contract\Ap_FrqDepDmpnInrtCmp -I$(PROJECTROOT)\NxtrLib\include -I$(PROJECTROOT)\StdDef\include -I$(ProgramFiles)\Texas Instruments\ccsv4\tools\compiler\tms470_4.9.5\include

Comments/Description/Specification

Name	Text
Module 'FDD_Inertia'	**********Unit Test Description********** Name of Tester: Spoorti Mali Code File(s) Under Test: Ap_FrqDepDmpnInrtCmp.c Code File(s) Version: 13 Module Design Document: Frequency_Dependent_Damping_And_Inertia_Compensation_MDD.doc Module Design Document Version: 18 Data Dictionary Version: 16 Unit Test Plan Version: 6 Optimization Level: Level 2 Compiler (CodeGen) Version: TMS470_4.9.5 Model Type: Excel Macro Model Version: Nexteer EPS Unit Test Tool 2.7d/EPS Library 1.30 Total FLASH Used (Bytes): 1994 Total RAM Used (Bytes): 60 Total CALS Used (Bytes): 328 Special Test Requirements: Test Date: 09-19-2014 Comments: Note1:Inline Function defined in ""globalmacro.h"" are not unit tested. Note2:""CBD_Sandbox_dbg.map"" file is embedded for reference. Note3:In ""DriverVelCalc"" function,difference between TbarAngle and PrevTbarAngle cannot be more than 0.013334 since this function is run in 2ms period so Max value for ""PrevTbarAng_HwDeg_M_f32"" variable is given as 1.013334 in All Max Vector and also in All Max Vector of ""FrqDepDmpnInrtCmp_Per1"" function. Note4:In ""ADDCoefCalc"" function,return value is going out of range due to conversion happening in the function. Note5:In ""FilterCoefCalc"" function,the Range of the Structure Variable “filtCoef_Uls_T_Str.b0_Uls_f32” is calculated as -2.74156205240179 to 0 and “filtCoef_Uls_T_Str.b1_Uls_f32” is calculated as -0.160083862455113 to 2.41111405240179 and the same is updated in MDD version 16. Note6:In ""GenFddIcCmd"" function, return value and output variable ""Prev1PreAttnComp_MtrNm_M_f32"" are going out of range.And as there is call to this function in ""FrqDepDmpnInrtCmp_Per1"" so here also output variable ""Prev1PreAttnComp_MtrNm_M_f32"" is going out of range. Note 7:The range of the parameter “VehicleSpeed_Kph_T_f32” is mentioned in MDD as 0 to 512, but at line number 437, FPM_FloatToFixed_m macro is used for U9P7_T, For All Max vector of parameter ""VehicleSpeed_Kph_T_f32"", the value is going out of range, so its range is considered as "" 0 to 511.9921875"" considering data type u9P7 as per email communication. Note 8: Six significant tolerance is used in the functions ""ADDCoefCalc"", ""DecelGain"", ""DriverVelCalc"", ""FilterCoefCalc"",""GenFddIcCmd"" for the return values and in function ""FrqDepDmpnInrtCmp_Per1"" for the variable ""Prev1PreAttnComp_MtrNm_M_f32"". **********

Attributes

Name	Value
Compiler Install Path	$(ProgramFiles)\Texas Instruments\ccsv4\tools\compiler\tms470_4.9.5
Float Precision	9
InitObjDir	$(PROJECTROOT)\UnitTestEnv\static_build_files\obj
InitSrcDir	$(PROJECTROOT)\UnitTestEnv\static_build_files\src
Linker File	$(PROJECTROOT)\UnitTestEnv\static_build_files\sys_link.cmd
Makefile Template	$(PROJECTROOT)\UnitTestEnv\config\Nexteer_ts_make_ude_ti_tms570.tpl
Target Install Path	$(ProgramFiles)\pls\UDE 3.2
Time Unit	Cycles
Timer Enabled	false
Timer Prescale	0
Timer Resolution	1

Attributes

Name	Value
UDE Config File	$(PROJECTROOT)\UnitTestEnv\config\TMS570_UDE_12PIN_JTAG.cfg
Workspace File	D:\Synergy_Work_Area\CBD_FrqDepDmpnInrtCmp\UnitTestEnv\config\UDE_TMS570_DEBUG.WSP

Test Case 1: Boundary Test

Specification

```
Performance Metrics (With "None" Instrumentation and "WithPS"
Environment)

CPU Cycles:

TS1.1  116.00 Cycles
TS1.2  117.00 Cycles
TS1.3  116.00 Cycles
TS1.4  117.00 Cycles
TS1.5  117.00 Cycles
TS1.6  115.00 Cycles
TS1.7  115.00 Cycles
TS1.8  117.00 Cycles
TS1.9  117.00 Cycles
TS1.10  118.00 Cycles
TS1.11  118.00 Cycles
TS1.12  115.00 Cycles
TS1.13  115.00 Cycles
```

Description

Test Vector Description:

TS1.1 All min
TS1.2 All max
TS1.3 k_InrtCmp_TBarVelLPFKn_Hz_f32 = min
TS1.4 k_InrtCmp_TBarVelLPFKn_Hz_f32 = max
TS1.5 k_InrtCmp_TBarVelLPFKn_Hz_f32 = mid
TS1.6 TbarVelFiltSv_M_str.K = min
TS1.7 TbarVelFiltSv_M_str.K = max
TS1.8 TbarVelFiltSv_M_str.K = mid
TS1.9 TbarVelFiltSv_M_str.SV = min
TS1.10 TbarVelFiltSv_M_str.SV = max
TS1.11 TbarVelFiltSv_M_str.SV = zero
TS1.12 TbarVelFiltSv_M_str.SV = pos
TS1.13 TbarVelFiltSv_M_str.SV = neg

Test Step 1.1 (Repeat Count = 1)

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	-6.66669989
TbarVelFiltSv_M_str.K_Uls_f32	0.00125584798
k_InrtCmp_TBarVelLPFKn_Hz_f32	0.100000001

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.00125586987	0.00125584798 ± 0.000125655810790826	✔

Test Step 1.2 (Repeat Count = 1)

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	6.66669989
TbarVelFiltSv_M_str.K_Uls_f32	0.715390444
k_InrtCmp_TBarVelLPFKn_Hz_f32	100

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.715390444	0.715390444 ± 0.000125655810790826	✔

Test Step 1.3 (Repeat Count = 1)

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	1.25460005
TbarVelFiltSv_M_str.K_Uls_f32	0.374119997
k_InrtCmp_TBarVelLPFKn_Hz_f32	0.100000001

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.00125586987	0.00125584798 ± 0.000125655810790826	✔

Test Step 1.4 (Repeat Count = 1)

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	-5.68739986
TbarVelFiltSv_M_str.K_Uls_f32	0.269800007
k_InrtCmp_TBarVelLPFKn_Hz_f32	100

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔

Name	Actual Value	Expected Value	Result
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.715390444	0.715390444 ± 0.000125655810790826	✔

Test Step 1.5 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	4.5632
TbarVelFiltSv_M_str.K_Uls_f32	0.145229995
k_InrtCmp_TBarVelLPFKn_Hz_f32	50.2299995

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.468051612	0.468051612 ± 0.000125655810790826	✔

Test Step 1.6 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	2.55769992
TbarVelFiltSv_M_str.K_Uls_f32	0.00125584798
k_InrtCmp_TBarVelLPFKn_Hz_f32	25.2000008

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.271430731	0.271430701 ± 0.000125655810790826	✔

Test Step 1.7 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	3.99850011
TbarVelFiltSv_M_str.K_Uls_f32	0.715390444
k_InrtCmp_TBarVelLPFKn_Hz_f32	26

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.278718412	0.278718382 ± 0.000125655810790826	✔

Test Step 1.8 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	-4.12300014
TbarVelFiltSv_M_str.K_Uls_f32	0.587459981
k_InrtCmp_TBarVelLPFKn_Hz_f32	35.25

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.357870042	0.357870042 ± 0.000125655810790826	✔

Test Step 1.9 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	-6.66669989
TbarVelFiltSv_M_str.K_Uls_f32	0.532140017
k_InrtCmp_TBarVelLPFKn_Hz_f32	84

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.652007818	0.652007759 ± 0.000125655810790826	✔

Test Step 1.10 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	6.66669989
TbarVelFiltSv_M_str.K_Uls_f32	0.0147850001

Name	Input Value
k_InrtCmp_TBarVelLPFKn_Hz_f32	95.0100021

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.696972251	0.696972251 ± 0.000125655810790826	✔

Test Step 1.11 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	0
TbarVelFiltSv_M_str.K_Uls_f32	0.0258959997
k_InrtCmp_TBarVelLPFKn_Hz_f32	41.2000008

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.404131055	0.404131025 ± 0.000125655810790826	✔

Test Step 1.12 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	5.69869995
TbarVelFiltSv_M_str.K_Uls_f32	0.632139981
k_InrtCmp_TBarVelLPFKn_Hz_f32	56.3499985

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.507428169	0.507428169 ± 0.000125655810790826	✔

Test Step 1.13 (Repeat Count = 1) ✔

Name	Input Value
TbarVelFiltSv_M_str.SV_Uls_f32	-5.14230013
TbarVelFiltSv_M_str.K_Uls_f32	0.0147850001
k_InrtCmp_TBarVelLPFKn_Hz_f32	63.25

Name	Actual Value	Expected Value	Result
PreDecelGain_Uls_M_f32	1	1 ± 0.0625	✔
TbarVelFiltSv_M_str.SV_Uls_f32	0	0 ± 0.00390625	✔
TbarVelFiltSv_M_str.K_Uls_f32	0.54833883	0.54833883 ± 0.000125655810790826	✔