```
Test Program Y:\nextest\h4.0.7\Bin\VoltageCal.exe

Loading VCAL Data on t_hsb1, t_pe32_1
Loading VCAL Data on t_hsb1, t_pe32_2
Loading VCAL Data on t_hsb1, t_pe32_3
Loading VCAL Data on t_hsb1, t_pe32_4
Loading VCAL Data on t_hsb1, t_dps_pmu_1
Loading VCAL Data on t_hsb1, t_dps_pmu_2
Loading VCAL Data on t_hsb1, t_dps_pmu_3
Loading VCAL Data on t_hsb1, t_dps_pmu_4
The test program is loaded

chassis 1 SET DB_DIAGCMD=1 -> success
TestStarted(1)...


Test Program Y:\nextest\h4.0.7\Bin\VoltageCal.exe


- Site controller details -

Intel(R) Core(TM)2 Duo CPU     T9400  @ 2.53GHz, 2964MB total physical memory.
Microsoft Windows XP



* NOTE: The ECR X, Y, D bits represent the maximum allowable configuration.
* NOTE: This tester is properly configured to support the 300mA/600mA DPS
option.


Nextest software release:  C:\nextest\h4.0.7\Bin\Ui.exe
Loading voltage cal data from non-volatile memory

Calibrate Analog to Digital Converters [calibrate_adc]
 Calibrating DP1 ADC
 Calibrating DP2 ADC
 Calibrating DP3 ADC
 Calibrating DP4 ADC
Calibrate Parametric Unit Force [calibrate_pmu_force]
 Calibrating DP1 pmu1 Voltage Force
 Calibrating DP1 pmu2 Voltage Force
 Calibrating DP1 pmu1 Current Force
 Calibrating DP1 pmu2 Current Force
 Calibrating DP2 pmu1 Voltage Force
 Calibrating DP2 pmu2 Voltage Force
 Calibrating DP2 pmu1 Current Force
 Calibrating DP2 pmu2 Current Force
 Calibrating DP3 pmu1 Voltage Force
 Calibrating DP3 pmu2 Voltage Force
 Calibrating DP3 pmu1 Current Force
 Calibrating DP3 pmu2 Current Force
 Calibrating DP4 pmu1 Voltage Force
 Calibrating DP4 pmu2 Voltage Force
 Calibrating DP4 pmu1 Current Force
 Calibrating DP4 pmu2 Current Force
Calibrate Parametric Unit Current Measure [calibrate_pmu_imeas]
 Calibrating DP1 PMU1 current measure
 Calibrating DP1 PMU2 current measure
 Calibrating DP2 PMU1 current measure
 Calibrating DP2 PMU2 current measure
 Calibrating DP3 PMU1 current measure
```

```
 Calibrating DP3 PMU2 current measure
 Calibrating DP4 PMU1 current measure
 Calibrating DP4 PMU2 current measure
Calibrate Parametric Unit Comparators [calibrate_pmu_comparators]
 Calibrating DP1 pmu1 Comparator 1
 Calibrating DP1 pmu1 Comparator 0
 Calibrating DP1 pmu2 Comparator 1
 Calibrating DP1 pmu2 Comparator 0
 Calibrating DP2 pmu1 Comparator 1
 Calibrating DP2 pmu1 Comparator 0
 Calibrating DP2 pmu2 Comparator 1
 Calibrating DP2 pmu2 Comparator 0
 Calibrating DP3 pmu1 Comparator 1
 Calibrating DP3 pmu1 Comparator 0
 Calibrating DP3 pmu2 Comparator 1
 Calibrating DP3 pmu2 Comparator 0
 Calibrating DP4 pmu1 Comparator 1
 Calibrating DP4 pmu1 Comparator 0
 Calibrating DP4 pmu2 Comparator 1
 Calibrating DP4 pmu2 Comparator 0
Calibrate Parametric Unit Clamps [calibrate_pmu_clamps]
 Calibrating DP1 pmu1 clamps
 Calibrating DP1 pmu2 clamps
 Calibrating DP2 pmu1 clamps
 Calibrating DP2 pmu2 clamps
 Calibrating DP3 pmu1 clamps
 Calibrating DP3 pmu2 clamps
 Calibrating DP4 pmu1 clamps
 Calibrating DP4 pmu2 clamps
Calibrate DUT Power Supplies [calibrate_dps]
 Calibrating DP1 DPS1 [Normal]
 Calibrating DP1 DPS1 [VPulse]
 Calibrating DP1 DPS1 [Split]
 Calibrating DP1 DPS2 [Normal]
 Calibrating DP1 DPS2 [VPulse]
 Calibrating DP1 DPS2 [Split]
 Calibrating DP2 DPS1 [Normal]
 Calibrating DP2 DPS1 [VPulse]
 Calibrating DP2 DPS1 [Split]
 Calibrating DP2 DPS2 [Normal]
 Calibrating DP2 DPS2 [VPulse]
 Calibrating DP2 DPS2 [Split]
 Calibrating DP3 DPS1 [Normal]
 Calibrating DP3 DPS1 [VPulse]
 Calibrating DP3 DPS1 [Split]
 Calibrating DP3 DPS2 [Normal]
 Calibrating DP3 DPS2 [VPulse]
 Calibrating DP3 DPS2 [Split]
 Calibrating DP4 DPS1 [Normal]
 Calibrating DP4 DPS1 [VPulse]
 Calibrating DP4 DPS1 [Split]
 Calibrating DP4 DPS2 [Normal]
 Calibrating DP4 DPS2 [VPulse]
 Calibrating DP4 DPS2 [Split]
Calibrate DUT Power Supplies Current Measure [calibrate_dps_imeas]
 Calibrating DP1 DPS1 current measure
 Calibrating DP1 DPS2 current measure
 Calibrating DP2 DPS1 current measure
 Calibrating DP2 DPS2 current measure
 Calibrating DP3 DPS1 current measure
 Calibrating DP3 DPS2 current measure
 Calibrating DP4 DPS1 current measure
 Calibrating DP4 DPS2 current measure
Calibrate DPS Current Measure (Shared Mode) [calibrate_shared_dps_imeas]
```

```
 Calibrating DP1 shared dps current measure
 Calibrating DP2 shared dps current measure
 Calibrating DP3 shared dps current measure
 Calibrating DP4 shared dps current measure
Calibrate High Voltage Unit Driver [calibrate_hv]
 Calibrating DP1 hv gain and offset
 Calibrating DP2 hv gain and offset
 Calibrating DP3 hv gain and offset
 Calibrating DP4 hv gain and offset
Calibrate High Voltage Unit Current Measure [calibrate_hv_imeas]
 Calibrating DP1 HV current measure
 Calibrating DP2 HV current measure
 Calibrating DP3 HV current measure
 Calibrating DP4 HV current measure
save_dp_cal_values
Saving DP Board Calibration Data...
Saving DP Board Calibration Data...
Saving DP Board Calibration Data...
Saving DP Board Calibration Data...
Calibrate Pe leakage [calibrate_PeLeakage]
 Calibrate Pe Leakage
Calibrate VIH [calibrate_vih]
 --- Calibrating  PE1 PE2 PE3 PE4 VIH
Calibrate VIL [calibrate_vil]
 --- Calibrating  PE1 PE2 PE3 PE4 VIL
Calibrate VTT [calibrate_vtt]
 --- Calibrating  PE1 PE2 PE3 PE4 VTT
Calibrate VIHH [calibrate_vihh]
 --- Calibrating  PE1 PE2 PE3 PE4 VIHH
Calibrate VOH Comparator gain and offset [calibrate_voh]
 --- Calibrating  PE1 PE2 PE3 PE4 VOH Comparator gain and offset
Calibrate VOL Comparator gain and offset [calibrate_vol]
 --- Calibrating  PE1 PE2 PE3 PE4 VOL Comparator gain and offset
Calibrate IOH gain and offset [calibrate_ioh]
 --- Calibrating  PE1 PE2 PE3 PE4 IOH gain and offset
Calibrate IOL gain and offset [calibrate_iol]
 --- Calibrating  PE1 PE2 PE3 PE4 IOL gain and offset
Calibrate VZ [calibrate_vz]
 --- Calibrating  PE1 PE2 PE3 PE4 VZ
Calibrate Reflect Voltage Clamps [calibrate_Rclamp_H]
 --- Calibrating  PE1 PE2 PE3 PE4 Reflect Voltage Clamps
Calibrate Reflect Voltage Clamps [calibrate_Rclamp_L]
 --- Calibrating  PE1 PE2 PE3 PE4 Reflect Voltage Clamps
Calibrate PTU Voltage Clamps [calibrate_ptu_V_Clamp_H]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Voltage Clamps
Calibrate PTU Voltage Clamps [calibrate_ptu_V_Clamp_L]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Voltage Clamps
Calibrate PTU Force Voltage [calibrate_ptu_fv]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Force Voltage
Calibrate PTU Voltage Measure [calibrate_ptu_VMeas]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Voltage Measure
Calibrate PTU Voltage Compare [calibrate_ptu_VCompH]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Voltage Compare
Calibrate PTU Voltage Compare [calibrate_ptu_VCompL]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Voltage Compare
Calibrate PTU Force Current 28ma Range [calibrate_ptu_fi_28ma]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Force Current
Calibrate PTU Force Current 2ma Range [calibrate_ptu_fi_2ma]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Force Current
Calibrate PTU Force Current 200ua Range [calibrate_ptu_fi_200ua]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Force Current
Calibrate PTU Force Current 20ua Range [calibrate_ptu_fi_20ua]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Force Current
Calibrate PTU Force Current 2ua Range [calibrate_ptu_fi_2ua]
```

```
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Force Current
Calibrate PTU Current Measure 28MA Range5 [calibrate_ptu_IMeas_28ma]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Measure 28MA Range5
Calibrate PTU Current Measure 2MA Range4 [calibrate_ptu_Imeas_2ma]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Measure 2MA Range4
Calibrate PTU Current Measure 200UA Range3 [calibrate_ptu_Imeas_200ua]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Measure 200UA Range3
Calibrate PTU Current Measure 20UA Range2 [calibrate_ptu_IMeas_20ua]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Measure 20UA Range2
Calibrate PTU Current Measure 2UA Range1 [calibrate_ptu_IMeas_2ua]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Measure 2UA Range1
Calibrate PTU Current Compare 28ma Range [calibrate_ptu_ICompH]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 28ma Range
Calibrate PTU Current Compare 28ma Range [calibrate_ptu_ICompL]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 28ma Range
Calibrate PTU Current Compare 2ma Range [calibrate_ptu_ICompH]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Compare 2ma Range
Calibrate PTU Current Compare 2ma Range [calibrate_ptu_ICompL]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Compare 2ma Range
Calibrate PTU Current Compare 200ua Range [calibrate_ptu_ICompH]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 200ua Range
Calibrate PTU Current Compare 200ua Range [calibrate_ptu_ICompL]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 200ua Range
Calibrate PTU Current Compare 20ua Range [calibrate_ptu_ICompH]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 20ua Range
Calibrate PTU Current Compare 20ua Range [calibrate_ptu_ICompL]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 20ua Range
Calibrate PTU Current Compare 2ua Range [calibrate_ptu_ICompH]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 2ua Range
Calibrate PTU Current Compare 2ua Range [calibrate_ptu_ICompL]
 --- Calibrating  PE1 PE2 PE3 PE4 PTU Current Compare 2ua Range
SAVE PE Gain and offset data [PE_save]
 Saving gain and offset data for  PE1 PE2 PE3 PE4
      Saving The Pe Calibration Data
      Saving The Pe Calibration Environment
VoltageCal summary [summary_tb]
      Pass number : 1
      Time for this pass : 00:10:57
      Total time : 00:11:05
Final Bin: pass_bin
TestDone...bin =
pass_bin,pass_bin,pass_bin,pass_bin,pass_bin,pass_bin,pass_bin,pass_bin


Test Program C:\nextest\h4.0.7\Bin\VoltageCal.exe

The test program is loading.
The test program is loaded.

Site 1 is the first site in Chassis 1
Site 1 is the last site in Chassis 1
  ui_LoadedMask.........: 1
  ui_LoadedSlotMask.....: 1
  ui_SiteMask...........:1


Loading VCAL Data on t_hsb1, t_pe32_1
Loading VCAL Data on t_hsb1, t_pe32_2
Loading VCAL Data on t_hsb1, t_pe32_3
Loading VCAL Data on t_hsb1, t_pe32_4
Loading VCAL Data on t_hsb1, t_dps_pmu_1
Loading VCAL Data on t_hsb1, t_dps_pmu_2
Loading VCAL Data on t_hsb1, t_dps_pmu_3
Loading VCAL Data on t_hsb1, t_dps_pmu_4
```

```
Warning: no valid TCal files were found in C:\nextest\caldata, using default
Calibration.



Nextest Release: C:\nextest\h4.0.7
Test Program: Y:\nextest\h4.0.7\Bin\VernierCal_Mag2.exe
The test program is loaded

TestStarted(1)...

Starting TG servo calibration...


Initial Condition
PE1, temperature values: ipc = 22.90, PEbrd = 45.00, loc = 50.75, tg1 = 51.50
PE1, temperature values: ipc = 22.90, PEbrd = 45.00, loc = 50.75, tg2 = 51.75
PE2, temperature values: ipc = 22.90, PEbrd = 45.50, loc = 50.50, tg1 = 52.37
PE2, temperature values: ipc = 22.90, PEbrd = 45.50, loc = 50.50, tg2 = 51.37
PE3, temperature values: ipc = 22.90, PEbrd = 49.31, loc = 50.37, tg1 = 50.62
PE3, temperature values: ipc = 22.90, PEbrd = 49.31, loc = 50.37, tg2 = 51.50
PE4, temperature values: ipc = 22.90, PEbrd = 47.31, loc = 48.62, tg1 = 47.87
PE4, temperature values: ipc = 22.90, PEbrd = 47.31, loc = 48.62, tg2 = 46.62

Start Idle for 10 seconds

After Idle for 10 seconds
PE1, temperature values: ipc = 22.90, PEbrd = 45.06, loc = 50.87, tg1 = 51.50
PE1, temperature values: ipc = 22.90, PEbrd = 45.06, loc = 50.87, tg2 = 51.87
PE2, temperature values: ipc = 22.90, PEbrd = 45.62, loc = 50.62, tg1 = 52.62
PE2, temperature values: ipc = 22.90, PEbrd = 45.62, loc = 50.62, tg2 = 51.37
PE3, temperature values: ipc = 22.90, PEbrd = 49.37, loc = 50.37, tg1 = 50.75
PE3, temperature values: ipc = 22.90, PEbrd = 49.37, loc = 50.37, tg2 = 51.62
PE4, temperature values: ipc = 22.90, PEbrd = 47.37, loc = 48.75, tg1 = 48.00
PE4, temperature values: ipc = 22.90, PEbrd = 47.37, loc = 48.75, tg2 = 46.50


Testing servo adjustment range
Pass tg1, servo1: Adjustable Range = 1394, Min Range Limit = 900
Pass tg2, servo1: Adjustable Range = 1375, Min Range Limit = 900
Pass tg3, servo1: Adjustable Range = 1238, Min Range Limit = 900
Pass tg4, servo1: Adjustable Range = 1301, Min Range Limit = 900
Pass tg5, servo1: Adjustable Range = 1238, Min Range Limit = 900
Pass tg6, servo1: Adjustable Range = 1203, Min Range Limit = 900
Pass tg7, servo1: Adjustable Range = 1252, Min Range Limit = 900
Pass tg8, servo1: Adjustable Range = 1123, Min Range Limit = 900
Starting inf-loop pattern with specified variables.
htr cyc & edge ns:  10.000000000   0.000   1.500   4.000   2.500

Warming up for 4.0 Minutes, seconds remaining:
240.........230.........220.........210.........
200.........190.........180.........170.........
160.........150.........140.........130.........
120.........110.........100......... 90.........
 80......... 70......... 60......... 50.........
 40......... 30......... 20......... 10.........


Start servo tweaker test... wait minimum 10 seconds cooling time.....
tg1, Period Read = 10847, Target Period = 10848, limit = +/- 5
Looking for Auto-VCC tg1...Auto-VCC detected tg1
tg2, Period Read = 10694, Target Period = 10692, limit = +/- 5
Looking for Auto-VCC tg2...Auto-VCC detected tg2
tg3, Period Read = 11233, Target Period = 11232, limit = +/- 5
```

```
Looking for Auto-VCC tg3...Auto-VCC detected tg3
tg4, Period Read = 10681, Target Period = 10680, limit = +/- 5
Looking for Auto-VCC tg4...Auto-VCC detected tg4
tg5, Period Read = 11233, Target Period = 11232, limit = +/- 5
Looking for Auto-VCC tg5...Auto-VCC detected tg5
tg6, Period Read = 11259, Target Period = 11258, limit = +/- 5
Looking for Auto-VCC tg6...Auto-VCC detected tg6
tg7, Period Read = 10972, Target Period = 10972, limit = +/- 5
Looking for Auto-VCC tg7...Auto-VCC detected tg7
tg8, Period Read = 10688, Target Period = 10686, limit = +/- 5
Looking for Auto-VCC tg8...Auto-VCC detected tg8

Starting TG linearity calibration...
TG Temp Monitor:  54.00  54.63  55.25  53.88  53.50  54.00  49.88  48.00
TG Temp Monitor:  53.75  54.13  54.88  53.38  53.00  53.50  49.25  47.88
TG Temp Monitor:  53.13  53.63  54.50  52.88  52.50  53.13  49.13  47.38
TG Temp Monitor:  52.75  53.25  54.00  52.50  52.25  52.75  48.63  47.13
TG Temp Monitor:  52.38  53.00  53.63  52.13  52.00  52.38  48.38  46.63
TG Temp Monitor:  52.13  52.63  53.38  52.00  51.50  52.13  48.13  46.38
TG Temp Monitor:  51.88  52.38  52.88  51.75  51.25  51.75  47.88  46.13
TG Temp Monitor:  51.63  52.38  52.88  51.38  51.00  51.63  47.63  46.00
TG Temp Monitor:  51.50  51.88  52.63  51.25  51.00  51.50  47.38  45.88
TG Temp Monitor:  51.25  51.75  52.50  51.00  50.63  51.25  47.38  45.63
TG Temp Monitor:  51.00  51.63  52.25  50.88  50.63  51.00  47.00  45.50
TG Temp Monitor:  50.88  51.50  52.00  50.88  50.38  50.88  47.00  45.38
TG Temp Stabilization:  51.63 1  52.38 0  52.75 1  51.50 1  51.13 1  52.00 0
47.75 1  46.25 0
TG Temp Stabilization:  52.13 0  52.75 1  53.25 0  52.00 0  51.63 0  52.25 1
48.25 0  46.75 1
TG Temp Stabilization:  52.50 1  53.25 2  53.63 1  52.38 1  52.13 1  52.63 2
48.50 1  47.13 2
TG Temp Stabilization:  53.00 2  53.50 0  54.13 2  52.75 2  52.38 2  53.13 0
49.00 2  47.38 0
TG Temp Stabilization:  53.25 0  53.88 1  54.38 0  53.00 0  52.50 3  53.38 1
49.25 0  47.75 1
TG Temp Stabilization:  53.63 1  54.25 2  54.75 1  53.50 1  52.88 0  53.63 2
49.50 1  48.25 2
TG Temp Stabilization:  53.63 2  54.25 3  54.88 2  53.50 2  53.13 1  53.88 3
49.88 2  48.50 0
TG Temp Stabilization:  53.88 3  54.75 0  55.13 3  53.75 3  53.38 2  54.00 4
50.00 3  48.50 1
TG Temp Stabilization:  54.13 4  54.63 1  55.38 0  53.88 4  53.63 3  54.38 0
50.13 4  48.75 2
TG Temp Stabilization:  54.13 5  55.00 2  55.50 1  54.00 0  53.75 4  54.50 1
50.25 0  49.13 3
TG Temp Stabilization:  54.25 0  55.13 3  55.63 2  54.13 1  53.88 0  54.50 2
50.38 1  49.13 4
TG Temp Stabilization:  54.38 1  55.13 4  55.75 3  54.25 2  53.88 1  54.63 3
50.50 2  49.25 5
TG Temp Stabilization:  54.63 2  55.25 5  55.88 4  54.38 3  54.13 2  54.75 4
50.63 3  49.38 6
TG Temp Stabilization:  54.50 3  55.50 6  56.00 5  54.50 4  54.13 3  54.88 5
50.88 4  49.38 6
TG Temp Stabilization:  54.75 4  55.50 6  56.00 6  54.75 5  54.38 4  54.88 6
50.88 5  49.38 6
TG Temp Stabilization:  54.88 5  55.50 6  56.00 6  54.63 6  54.25 5  54.88 6
50.88 6  49.38 6
TG Temp Stabilization:  54.88 6  55.50 6  56.00 6  54.63 6  54.38 6  54.88 6
50.88 6  49.38 6
  pin group  1 of 16, linearizer 0...
  pin group  1 of 16, linearizer 1...
  pin group  1 of 16, linearizer 2...
  pin group  1 of 16, linearizer 3...
  pin group  9 of 16, linearizer 0...
```

```
pin group  9 of 16, linearizer 1...
pin group  9 of 16, linearizer 2...
pin group  9 of 16, linearizer 3...
pin group  2 of 16, linearizer 0...
pin group  2 of 16, linearizer 1...
pin group  2 of 16, linearizer 2...
pin group  2 of 16, linearizer 3...
pin group 10 of 16, linearizer 0...
pin group 10 of 16, linearizer 1...
pin group 10 of 16, linearizer 2...
pin group 10 of 16, linearizer 3...
pin group  3 of 16, linearizer 0...
pin group  3 of 16, linearizer 1...
pin group  3 of 16, linearizer 2...
pin group  3 of 16, linearizer 3...
pin group 11 of 16, linearizer 0...
pin group 11 of 16, linearizer 1...
pin group 11 of 16, linearizer 2...
pin group 11 of 16, linearizer 3...
pin group  4 of 16, linearizer 0...
pin group  4 of 16, linearizer 1...
pin group  4 of 16, linearizer 2...
pin group  4 of 16, linearizer 3...
pin group 12 of 16, linearizer 0...
pin group 12 of 16, linearizer 1...
pin group 12 of 16, linearizer 2...
pin group 12 of 16, linearizer 3...
pin group  5 of 16, linearizer 0...
pin group  5 of 16, linearizer 1...
pin group  5 of 16, linearizer 2...
pin group  5 of 16, linearizer 3...
pin group 13 of 16, linearizer 0...
pin group 13 of 16, linearizer 1...
pin group 13 of 16, linearizer 2...
pin group 13 of 16, linearizer 3...
pin group  6 of 16, linearizer 0...
pin group  6 of 16, linearizer 1...
pin group  6 of 16, linearizer 2...
pin group  6 of 16, linearizer 3...
pin group 14 of 16, linearizer 0...
pin group 14 of 16, linearizer 1...
pin group 14 of 16, linearizer 2...
pin group 14 of 16, linearizer 3...
pin group  7 of 16, linearizer 0...
pin group  7 of 16, linearizer 1...
pin group  7 of 16, linearizer 2...
pin group  7 of 16, linearizer 3...
pin group 15 of 16, linearizer 0...
pin group 15 of 16, linearizer 1...
pin group 15 of 16, linearizer 2...
pin group 15 of 16, linearizer 3...
pin group  8 of 16, linearizer 0...
pin group  8 of 16, linearizer 1...
pin group  8 of 16, linearizer 2...
pin group  8 of 16, linearizer 3...
pin group 16 of 16, linearizer 0...
pin group 16 of 16, linearizer 1...
pin group 16 of 16, linearizer 2...
pin group 16 of 16, linearizer 3...
pin group  1 of 16, linearizer 4...
pin group  1 of 16, linearizer 5...
pin group  1 of 16, linearizer 6...
pin group  1 of 16, linearizer 7...
pin group  9 of 16, linearizer 4...
```

```
  pin group  9 of 16, linearizer 5...
  pin group  9 of 16, linearizer 6...
  pin group  9 of 16, linearizer 7...
  pin group  2 of 16, linearizer 4...
  pin group  2 of 16, linearizer 5...
  pin group  2 of 16, linearizer 6...
  pin group  2 of 16, linearizer 7...
  pin group 10 of 16, linearizer 4...
  pin group 10 of 16, linearizer 5...
  pin group 10 of 16, linearizer 6...
  pin group 10 of 16, linearizer 7...
  pin group  3 of 16, linearizer 4...
  pin group  3 of 16, linearizer 5...
  pin group  3 of 16, linearizer 6...
  pin group  3 of 16, linearizer 7...
  pin group 11 of 16, linearizer 4...
  pin group 11 of 16, linearizer 5...
  pin group 11 of 16, linearizer 6...
  pin group 11 of 16, linearizer 7...
  pin group  4 of 16, linearizer 4...
  pin group  4 of 16, linearizer 5...
  pin group  4 of 16, linearizer 6...
  pin group  4 of 16, linearizer 7...
  pin group 12 of 16, linearizer 4...
  pin group 12 of 16, linearizer 5...
  pin group 12 of 16, linearizer 6...
  pin group 12 of 16, linearizer 7...
  pin group  5 of 16, linearizer 4...
  pin group  5 of 16, linearizer 5...
  pin group  5 of 16, linearizer 6...
  pin group  5 of 16, linearizer 7...
  pin group 13 of 16, linearizer 4...
  pin group 13 of 16, linearizer 5...
  pin group 13 of 16, linearizer 6...
  pin group 13 of 16, linearizer 7...
  pin group  6 of 16, linearizer 4...
  pin group  6 of 16, linearizer 5...
  pin group  6 of 16, linearizer 6...
  pin group  6 of 16, linearizer 7...
  pin group 14 of 16, linearizer 4...
  pin group 14 of 16, linearizer 5...
  pin group 14 of 16, linearizer 6...
  pin group 14 of 16, linearizer 7...
  pin group  7 of 16, linearizer 4...
  pin group  7 of 16, linearizer 5...
  pin group  7 of 16, linearizer 6...
  pin group  7 of 16, linearizer 7...
  pin group 15 of 16, linearizer 4...
  pin group 15 of 16, linearizer 5...
  pin group 15 of 16, linearizer 6...
  pin group 15 of 16, linearizer 7...
  pin group  8 of 16, linearizer 4...
  pin group  8 of 16, linearizer 5...
  pin group  8 of 16, linearizer 6...
  pin group  8 of 16, linearizer 7...
  pin group 16 of 16, linearizer 4...
  pin group 16 of 16, linearizer 5...
  pin group 16 of 16, linearizer 6...
  pin group 16 of 16, linearizer 7...

Starting TEST_BLOCK( tb_pe_deskew_cal )...
Measuring PE DriveRise...
  pin group  1 of 16...
  pin group  2 of 16...
```

```
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE DriveFall...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE EnableRise...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE EnableFall...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
```

```
  pin group 16 of 16...
Measuring PE CompareVOHRise...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOHFall...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOLRise...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOLFall...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
```

```
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOHRfaRise...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOHRfaFall...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOLRfaRise...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...
Measuring PE CompareVOLRfaFall...
  pin group  1 of 16...
  pin group  2 of 16...
  pin group  3 of 16...
  pin group  4 of 16...
  pin group  5 of 16...
  pin group  6 of 16...
  pin group  7 of 16...
```

```
  pin group  8 of 16...
  pin group  9 of 16...
  pin group 10 of 16...
  pin group 11 of 16...
  pin group 12 of 16...
  pin group 13 of 16...
  pin group 14 of 16...
  pin group 15 of 16...
  pin group 16 of 16...

Starting VSwing calibration...
measuring VSwing for a_1
measuring VSwing for a_2
measuring VSwing for a_3
measuring VSwing for a_4
measuring VSwing for a_5
measuring VSwing for a_6
measuring VSwing for a_7
measuring VSwing for a_8
measuring VSwing for a_9
measuring VSwing for a_10
measuring VSwing for a_11
measuring VSwing for a_12
measuring VSwing for a_13
measuring VSwing for a_14
measuring VSwing for a_15
measuring VSwing for a_16
measuring VSwing for a_17
measuring VSwing for a_18
measuring VSwing for a_19
measuring VSwing for a_20
measuring VSwing for a_21
measuring VSwing for a_22
measuring VSwing for a_23
measuring VSwing for a_24
measuring VSwing for a_25
measuring VSwing for a_26
measuring VSwing for a_27
measuring VSwing for a_28
measuring VSwing for a_29
measuring VSwing for a_30
measuring VSwing for a_31
measuring VSwing for a_32
measuring VSwing for a_33
measuring VSwing for a_34
measuring VSwing for a_35
measuring VSwing for a_36
measuring VSwing for a_37
measuring VSwing for a_38
measuring VSwing for a_39
measuring VSwing for a_40
measuring VSwing for a_41
measuring VSwing for a_42
measuring VSwing for a_43
measuring VSwing for a_44
measuring VSwing for a_45
measuring VSwing for a_46
measuring VSwing for a_47
measuring VSwing for a_48
measuring VSwing for a_49
measuring VSwing for a_50
measuring VSwing for a_51
measuring VSwing for a_52
measuring VSwing for a_53
```

```
measuring VSwing for a_54
measuring VSwing for a_55
measuring VSwing for a_56
measuring VSwing for a_57
measuring VSwing for a_58
measuring VSwing for a_59
measuring VSwing for a_60
measuring VSwing for a_61
measuring VSwing for a_62
measuring VSwing for a_63
measuring VSwing for a_64
measuring VSwing for b_1
measuring VSwing for b_2
measuring VSwing for b_3
measuring VSwing for b_4
measuring VSwing for b_5
measuring VSwing for b_6
measuring VSwing for b_7
measuring VSwing for b_8
measuring VSwing for b_9
measuring VSwing for b_10
measuring VSwing for b_11
measuring VSwing for b_12
measuring VSwing for b_13
measuring VSwing for b_14
measuring VSwing for b_15
measuring VSwing for b_16
measuring VSwing for b_17
measuring VSwing for b_18
measuring VSwing for b_19
measuring VSwing for b_20
measuring VSwing for b_21
measuring VSwing for b_22
measuring VSwing for b_23
measuring VSwing for b_24
measuring VSwing for b_25
measuring VSwing for b_26
measuring VSwing for b_27
measuring VSwing for b_28
measuring VSwing for b_29
measuring VSwing for b_30
measuring VSwing for b_31
measuring VSwing for b_32
measuring VSwing for b_33
measuring VSwing for b_34
measuring VSwing for b_35
measuring VSwing for b_36
measuring VSwing for b_37
measuring VSwing for b_38
measuring VSwing for b_39
measuring VSwing for b_40
measuring VSwing for b_41
measuring VSwing for b_42
measuring VSwing for b_43
measuring VSwing for b_44
measuring VSwing for b_45
measuring VSwing for b_46
measuring VSwing for b_47
measuring VSwing for b_48
measuring VSwing for b_49
measuring VSwing for b_50
measuring VSwing for b_51
measuring VSwing for b_52
measuring VSwing for b_53
```

```
measuring VSwing for b_54
measuring VSwing for b_55
measuring VSwing for b_56
measuring VSwing for b_57
measuring VSwing for b_58
measuring VSwing for b_59
measuring VSwing for b_60
measuring VSwing for b_61
measuring VSwing for b_62
measuring VSwing for b_63
measuring VSwing for b_64

Starting TDR of PE round trip path...

Starting TG Edge To Edge Cal...
  Pin pair a_1 /a_2 , measuring edges...
  Pin pair a_3 /a_4 , measuring edges...
  Pin pair a_5 /a_6 , measuring edges...
  Pin pair a_7 /a_8 , measuring edges...
  Pin pair b_1 /b_2 , measuring edges...
  Pin pair b_3 /b_4 , measuring edges...
  Pin pair b_5 /b_6 , measuring edges...
  Pin pair b_7 /b_8 , measuring edges...
  Pin pair a_9 /a_10, measuring edges...
  Pin pair a_11/a_12, measuring edges...
  Pin pair a_13/a_14, measuring edges...
  Pin pair a_15/a_16, measuring edges...
  Pin pair b_9 /b_10, measuring edges...
  Pin pair b_11/b_12, measuring edges...
  Pin pair b_13/b_14, measuring edges...
  Pin pair b_15/b_16, measuring edges...
  Pin pair a_17/a_18, measuring edges...
  Pin pair a_19/a_20, measuring edges...
  Pin pair a_21/a_22, measuring edges...
  Pin pair a_23/a_24, measuring edges...
  Pin pair b_17/b_18, measuring edges...
  Pin pair b_19/b_20, measuring edges...
  Pin pair b_21/b_22, measuring edges...
  Pin pair b_23/b_24, measuring edges...
  Pin pair a_25/a_26, measuring edges...
  Pin pair a_27/a_28, measuring edges...
  Pin pair a_29/a_30, measuring edges...
  Pin pair a_31/a_32, measuring edges...
  Pin pair b_25/b_26, measuring edges...
  Pin pair b_27/b_28, measuring edges...
  Pin pair b_29/b_30, measuring edges...
  Pin pair b_31/b_32, measuring edges...
  Pin pair a_33/a_34, measuring edges...
  Pin pair a_35/a_36, measuring edges...
  Pin pair a_37/a_38, measuring edges...
  Pin pair a_39/a_40, measuring edges...
  Pin pair b_33/b_34, measuring edges...
  Pin pair b_35/b_36, measuring edges...
  Pin pair b_37/b_38, measuring edges...
  Pin pair b_39/b_40, measuring edges...
  Pin pair a_41/a_42, measuring edges...
  Pin pair a_43/a_44, measuring edges...
  Pin pair a_45/a_46, measuring edges...
  Pin pair a_47/a_48, measuring edges...
  Pin pair b_41/b_42, measuring edges...
  Pin pair b_43/b_44, measuring edges...
  Pin pair b_45/b_46, measuring edges...
  Pin pair b_47/b_48, measuring edges...
  Pin pair a_49/a_50, measuring edges...
```

```
  Pin pair a_51/a_52, measuring edges...
  Pin pair a_53/a_54, measuring edges...
  Pin pair a_55/a_56, measuring edges...
  Pin pair b_49/b_50, measuring edges...
  Pin pair b_51/b_52, measuring edges...
  Pin pair b_53/b_54, measuring edges...
  Pin pair b_55/b_56, measuring edges...
  Pin pair a_57/a_58, measuring edges...
  Pin pair a_59/a_60, measuring edges...
  Pin pair a_61/a_62, measuring edges...
  Pin pair a_63/a_64, measuring edges...
  Pin pair b_57/b_58, measuring edges...
  Pin pair b_59/b_60, measuring edges...
  Pin pair b_61/b_62, measuring edges...
  Pin pair b_63/b_64, measuring edges...
INFO: site 1 is writing TCal data to disk file...
VernierCal: passed and the TCal file has been written.

TestDone...bin = pass_bin,pass_bin

The test program is loading.
The test program is loaded.


Vernier Cal has started...

Vernier Cal, all sites have finished:
    site  1 passed.

The test program is loading.
The test program is loaded.


Vernier Cal has started...

Vernier Cal, all sites have finished:
    site  1 passed.

The test program is loading.
The test program is loaded.

Site 1 is the first site in Chassis 1
Site 1 is the last site in Chassis 1


Test Program Y:\nextest\h4.0.7\Bin\SystemDiag.exe

Loading VCAL Data on t_hsb1, t_pe32_1
Loading VCAL Data on t_hsb1, t_pe32_2
Loading VCAL Data on t_hsb1, t_pe32_3
Loading VCAL Data on t_hsb1, t_pe32_4
Loading VCAL Data on t_hsb1, t_dps_pmu_1
Loading VCAL Data on t_hsb1, t_dps_pmu_2
Loading VCAL Data on t_hsb1, t_dps_pmu_3
Loading VCAL Data on t_hsb1, t_dps_pmu_4
Creating pattern set => PE32_ps_lvm01X
Creating pattern set => PE32_ps_lvmLHVZ
Creating pattern set => Logic_set
Creating pattern set => PE32_ps_ddr_set
Creating pattern set => PE32_ps_set
Creating pattern set => PE32_tg_set
Creating pattern set => default_set
The test program is loaded
```

```
Nextest software release: C:\nextest\h4.0.7
chassis 1 SET DB_DIAGCMD=1 -> success
TestStarted(1)...



- Site controller details -

Intel(R) Core(TM)2 Duo CPU     T9400  @ 2.53GHz, 2964MB total physical memory.
Microsoft Windows XP



* NOTE: The ECR X, Y, D bits represent the maximum allowable configuration.
* NOTE: This tester is properly configured to support the 300mA/600mA DPS
option.


- Revision Codes for FPGAs -

  FPGA           SW     HW
  Name           Rev    Rev
  -------------------------
  HD2 TG1        0x1    0x6e
  HD2 TG2        0x1    0x6e
  HD2 TG3        0x1    0x6e
  HD2 TG4        0x1    0x6e
  HD2 TG5        0x1    0x6e
  HD2 TG6        0x1    0x6e
  HD2 TG7        0x1    0x6e
  HD2 TG8        0x1    0x6e
  HD2 CPUI       0x1    0x17
  HD2 DBM        0x1    0x15
  HD2 PGM        0x1    0x8c
  HD2 PGS        0x1    0x8c
  HD2 ECRM       0x1    0x3d
  HD2 ECRS       0x1    0x3d

Nextest software release:  C:\nextest\h4.0.7\Bin\Ui.exe
N5VBB: -5.377
VCICD: 1.0
Testing CPUI to PG Bus [cpui_pg_busdiag_tb]
Testing CPUI to DBM Bus [cpui_dbm_busdiag_tb]
Testing CPUI to TG Bus [cpui_tg_busdiag_tb]
Testing APG read,write registers via cpu [apg_rw_regs_tb]
  Testing Address registers and LBDATA
  Testing JAM, DMAIN, DBASE, YINDEX
  Testing Unique values
Testing APG counter RAM - short march [apg_counter_ram_short_march_tb]
Testing APG reload RAM - short march [apg_reload_ram_short_march_tb]
Testing APG DAC RAM - short march [apg_dac_ram_short_march_tb]
Testing APG vRAM - long march [apg_vram_ram_long_march_tb]
  Testing APG vRAM PGM LVM DIMM pair 1,2 - Data Bit Independence Test
  Testing APG vRAM PGM LVM DIMM pair 1,2 - Address Bit Independence Test
  Testing APG vRAM PGS LVM DIMM pair 1,2 - Data Bit Independence Test
  Testing APG vRAM PGS LVM DIMM pair 1,2 - Address Bit Independence Test
  Testing APG vRAM PGM/S LVM DIMMs using Built In Self Test.
Testing ECR Main Array [ecr_mainarray_tb]
  Main Array Data Test
  Main Array SAB Address Test
  Main Array Address Test
  Main Array Cell Test
  Main Array Speed/Noise/Margin Test
Testing ECR Row-Column-Memory [ecr_rcm_tb]
```

```
  RCM -SITE_1- Data Test
  RCM -SITE_2- Data Test
  RCM -SITE_1- Address Test
  RCM -SITE_2- Address Test
  RCM -SITE_1- Cell Test
  RCM -SITE_2- Cell Test
  RCM -SITE_1- Speed/Noise/Margin Test
  RCM -SITE_2- Speed/Noise/Margin Test
Testing DBM DIMM 5N March [dbm_dimm_hw_5N_march_tb]
  Testing Data bit independance
  Testing Address bit independance
  Testing DBM DIMM in BIST mode
Testing TG broadcast mode [tg_broadcast_tb]
Testing TG to PE communications [tg_pe_communication_tb]
Testing PE registers [pe_reg_check_tb]
Testing PE error generation [pe_error_gen_tb]
Testing PE force drive state [pe_force_drive_state_tb]
Testing PE force drive state [pe_vz_state_tb]
Testing strobe modes [pe_strobe_mode_tb]
  Test Edge and Window modes single data rate mode
  Test A and B cycle PES functions in dual data mode
Testing DP ADC [adc_tb]
Testing DP PMU voltage force [pmu_vf_tb]
 Testing DP 1 PMU voltage force DACs
 Testing DP 1 PMU voltage force level accuracy
 Testing DP 2 PMU voltage force DACs
 Testing DP 2 PMU voltage force level accuracy
 Testing DP 3 PMU voltage force DACs
 Testing DP 3 PMU voltage force level accuracy
 Testing DP 4 PMU voltage force DACs
 Testing DP 4 PMU voltage force level accuracy
Testing DP PMU current force [pmu_if_tb]
 Testing DP 1 PMU current force DACs
 Testing DP 1 PMU current force level accuracy
 Testing DP 2 PMU current force DACs
 Testing DP 2 PMU current force level accuracy
 Testing DP 3 PMU current force DACs
 Testing DP 3 PMU current force level accuracy
 Testing DP 4 PMU current force DACs
 Testing DP 4 PMU current force level accuracy
Testing DP PMU voltage comparators [pmu_vcomp_tb]
 Testing DP 1 PMU comparator DACs
 Testing DP 2 PMU comparator DACs
 Testing DP 3 PMU comparator DACs
 Testing DP 4 PMU comparator DACs
 Testing DP 1 PMU comparator accuracy
 Testing DP 2 PMU comparator accuracy
 Testing DP 3 PMU comparator accuracy
 Testing DP 4 PMU comparator accuracy
Testing DP PMU voltage clamps [pmu_vclamp_tb]
Testing DP PMU current limit [pmu_ilimit_tb]
Testing DP PMU compensation capacitors [pmu_cap_tb]
Testing DP PMU/DPS current measure [range_resistor_tb]
Testing DPS voltage force [dps_vf_tb]
 Testing DP DPSn DACs
 Testing DP DPSn level accuracy
 Testing DP DPSn apg level DAC select path
 Testing DP DPSa DACs
 Testing DP DPSa level accuracy
Testing DPS switches [dps_switch_tb]
Testing DPS current share [dps_ishare_tb]
Testing DPS sense resistor bypass diodes [dps_diode_tb]
Testing DPS compensation capacitors [dps_cap_tb]
Testing DPS leakage current [dps_leakage_tb]
```

```
  Testing DPS Leakage with PMU IMeas
  Testing DPS Leakage with DPS IMeas
Testing DPS current capability [dps_imin_tb]
Testing DP HV voltage force [hv_vf_tb]
 Testing HV DACs
 Testing HV level accuracy
Testing DP HV leakage current [hv_leakage_tb]
Testing DP HV current measure [hv_imeas_tb]
Testing PE leakage current [pe_leakage_tb]
Testing PE VIH pin level [vih_tb]
 Testing VIH level accuracy
 Testing VIH apg level DAC select path
Testing PE VIL pin level [vil_tb]
 Testing VIL level accuracy
 Testing VIL apg level DAC select path
Testing PE VIHH pin level [vihh_tb]
 Testing VIHH level accuracy
 Testing VIHH apg level DAC select path
Testing PE VTT pin level [vtt_tb]
Testing PE VOH pin level [voh_tb]
Testing PE VOL pin level [vol_tb]
Testing PE VZ pin level [vz_tb]
Testing PE IOH pin level [ioh_tb]
 Testing IOH level accuracy
Testing PE IOL pin level [iol_tb]
 Testing IOL level accuracy
Testing PE Reflection Voltage Clamps [ref_clamps_tb]
 Testing Reflection Clamp LOW
 Testing Reflection Clamp HIGH
Testing PE PTU current force [ptu_if_tb]
 Testing PTU DACs
 Testing PTU level accuracy
Testing PE PTU voltage force [ptu_vf_tb]
 Testing PTU DACs
 Testing PTU level accuracy
Testing PE PTU voltage clamps [ptu_clamps_tb]
 Testing PTU positive clamp DACs
 Testing PTU negative clamp DACs
 Testing PTU positive clamp level accuracy
 Testing PTU negative clamp level accuracy
Testing PE PTU vpar high and low levels [ptu_vpar_tb]
 Testing PTU VPAR HIGH DACs
 Testing PTU VPAR HIGH level accuracy
 Testing PTU VPAR LOW DACs
 Testing PTU VPAR LOW level accuracy
Testing PE PTU current measure [ptu_imeas_tb]
 Testing PTU current measure accuracy
Testing PE PTU voltage measure [ptu_vmeas_tb]
 Testing PTU voltage measure accuracy
Testing PE output impedance [pe_rout_tb]
Testing pin channel component integrity [tdr_wf_tb]
  Testing pin channel components
  Testing Dut1
  Testing Dut2
  Testing Dut3
  Testing Dut4
Testing PE XY Address SDR Pin Scramble [pe_ps_xy_tb]
  Testing X Address bits
    X Address 50.0MHz Test (20 ns)
  Testing Y Address bits
    Y Address 50.0MHz Test (20 ns)
Testing PE Data Pin Scramble [pe_ps_data_tb]
  Testing Data bits
    Data Bits 50.0MHz Test (20 ns)
```

```
  Testing Data Strobes
    Data Strobes 20.0MHz Test (50 ns)
Testing PE Chip Select Pin Scramble [pe_ps_cs_tb]
  Testing Chip Selects
    Chip Selects 50.0MHz Test (20 ns)
  Testing Chip Select Strobes
    Chip Select Strobes 4.0MHz Test (250 ns)
Testing PE Force Pin Scramble [pe_ps_force_tb]
  Testing Drive L/H/Z
    Drive Low  50.0MHz Test (20 ns)
    Drive High 50.0MHz Test (20 ns)
    Tri-State  50.0MHz Test (20 ns)
  Testing Strobe L/H/V/M
    Strobe Low   20.0MHz Test (50 ns)
    Strobe High  20.0MHz Test (50 ns)
    Strobe Valid 20.0MHz Test (50 ns)
    Strobe Mid   20.0MHz Test (50 ns)
Testing PE LVM Pin Scramble [pe_ps_lvm_tb]
  Testing Drive 0/1/X
    Drive 0 50.0MHz Test (20 ns)
    Drive 1 50.0MHz Test (20 ns)
    Drive X 50.0MHz Test (20 ns) (HiZ)
  Testing Strobe L/H/V/Z
    Strobe L 20.0MHz Test (50 ns)
    Strobe H 20.0MHz Test (50 ns)
    Strobe V 20.0MHz Test (50 ns)
    Strobe Z 20.0MHz Test (50 ns)
Testing PE XY Address DDR Pin Scramble [pe_ps_xy_ddr_tb]
  Testing X Address bits
    X Address 50.0MHz Test (20 ns)
  Testing Y Address bits
    Y Address 50.0MHz Test (20 ns)
Testing PE Data Pin Scramble [pe_ps_data_ddr_tb]
  Testing Data bits
    Data Bits 50.0MHz Test (20 ns)
  Testing Data Strobes
    Data Strobes 20.0MHz Test (50 ns)
Testing PE Chip Select Pin Scramble [pe_ps_cs_ddr_tb]
  Testing Chip Selects
    Chip Selects 50.0MHz Test (20 ns)
  Testing Chip Select Strobes
    Chip Select Strobes 4.0MHz Test (250 ns)
Testing PE Force Pin Scramble [pe_ps_force_ddr_tb]
  Testing Drive L/H/Z
    Drive Low  50.0MHz Test (20 ns)
    Drive High 50.0MHz Test (20 ns)
    Tri-State  50.0MHz Test (20 ns)
  Testing Strobe L/H/V/M
    Strobe Low   20.0MHz Test (50 ns)
    Strobe High  20.0MHz Test (50 ns)
    Strobe Valid 20.0MHz Test (50 ns)
    Strobe Mid   20.0MHz Test (50 ns)
Testing PE LVM Pin Scramble [pe_ps_lvm_ddr_tb]
  Testing Drive 0/1/X
    Drive 0 50.0MHz Test (20 ns)
    Drive 1 50.0MHz Test (20 ns)
    Drive X 50.0MHz Test (20 ns) (HiZ)
  Testing Strobe L/H/V/Z
    Strobe L 20.0MHz Test (50 ns)
    Strobe H 20.0MHz Test (50 ns)
    Strobe V 20.0MHz Test (50 ns)
    Strobe Z 20.0MHz Test (50 ns)
Testing TG->PE Timing Formats [pe_tg_format_tb]
  Testing NRZ Format 5.0MHz Test (200 ns) with Edge Strobes
```

```
  Testing NRZ Format 5.0MHz Test (200 ns) with Window Strobes
  Testing RTO Format 5.0MHz Test (200 ns) with Edge Strobes
  Testing RTO Format 5.0MHz Test (200 ns) with Window Strobes
  Testing RTZ Format 5.0MHz Test (200 ns) with Edge Strobes
  Testing RTZ Format 5.0MHz Test (200 ns) with Window Strobes
  Testing RTC Format 5.0MHz Test (200 ns) with Edge Strobes
  Testing RTC Format 5.0MHz Test (200 ns) with Window Strobes
  Testing SBC Format 5.0MHz Test (200 ns) with Edge Strobes
  Testing SBC Format 5.0MHz Test (200 ns) with Window Strobes
Testing TG->PE Timing Generators [pe_tg_dclk_format_tb]
  DCLKPOS Format 5.0MHz Test (cycle 200 ns, edge spacing  40.0 ns) Edge Strobes
  DCLKPOS Format 5.0MHz Test (cycle 200 ns, edge spacing  40.0 ns) Window
Strobes
  DCLKNEG Format 5.0MHz Test (cycle 200 ns, edge spacing  40.0 ns) Edge Strobes
  DCLKNEG Format 5.0MHz Test (cycle 200 ns, edge spacing  40.0 ns) Window
Strobes
Testing TG->PE Timing Generators [pe_tg_mux_mode_tb]
  Testing MUX Mode 5.0MHz Test (200 ns) with Edge Strobes
  Testing MUX Mode 5.0MHz Test (200 ns) with Window Strobes
Testing TG->PE Timing Generator Edge Checker [pe_tg_edgechecker_tb]
  Testing Edge Checker with Drive @ -1 - 5.0MHz Test (200 ns)
  Testing Edge Checker with Multi-Edge Waveform - 5.0MHz Test (200 ns)
Testing VMC FIFO Resident Loop counter branching [vmc_fifo_loop_branching_tb]
      Running vmc_fifo_loop1_np_pat
      PASS: vmc_fifo_loop1_np_pat
      Running vmc_fifo_loop2_np_pat
      PASS: vmc_fifo_loop2_np_pat
      Running vmc_fifo_loop3_np_pat
      PASS: vmc_fifo_loop3_np_pat
      Running vmc_fifo_loop4_np_pat
      PASS: vmc_fifo_loop4_np_pat
      Running vmc_fifo_loop5_np_pat
      PASS: vmc_fifo_loop5_np_pat
      Running vmc_fifo_loop6_np_pat
      PASS: vmc_fifo_loop6_np_pat
Testing VMC RAM Resident Loop counter branching [vmc_ram_loop_branching_tb]
      Running vmc_ram_loop_np_pat
      PASS: vmc_ram_loop_np_pat
Testing LVM Subroutine Branching [lvm_subroutines_tb]
Testing LVM Subroutine Branching DDR [lvm_subroutines_ddr_tb]
Testing Scan Functionality [scan_tb]
  Standard Mode SCAN Tests - No Subs - No Strobes
  Standard Mode SCAN Tests - No Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - Local Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - Remote Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - External Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - No Subs - Strobe for Expect != Actual
  Standard Mode SCAN Tests - Local Subs - Strobe for Expect != Actual
  Standard Mode SCAN Tests - Remote Subs - Strobe for Expect != Actual
  Standard Mode SCAN Tests - External Subs - Strobe for Expect != Actual
  TG Hold SCAN Tests - No Subs - Strobe for Expect == Actual
  TG Hold SCAN Tests - No Subs - Strobe for Expect != Actual
Testing Scan DDR Functionality [scan_ddr_tb]
  Standard Mode SCAN Tests - No Subs - No Strobes
  Standard Mode SCAN Tests - No Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - Local Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - Remote Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - External Subs - Strobe for Expect == Actual
  Standard Mode SCAN Tests - No Subs - Strobe for Expect != Actual
  Standard Mode SCAN Tests - Local Subs - Strobe for Expect != Actual
  Standard Mode SCAN Tests - Remote Subs - Strobe for Expect != Actual
  Standard Mode SCAN Tests - External Subs - Strobe for Expect != Actual
  TG Hold SCAN Tests - No Subs - Strobe for Expect == Actual
  TG Hold SCAN Tests - No Subs - Strobe for Expect != Actual
```

```
Checking apg_sec part states [apg_sec_util_tb]
Testing HSB sec. connections [apg_sec_tb].
Testing ECR [ecr_tg_sync_tb]
Testing ECR [ecr1_tb]
  Testing first 32 ECR data inputs with 24X, 0Y
  Testing Dut1  32 error lines 'a' pins
  Testing Dut2  32 error lines 'b' pins
  Testing Dut3  32 error lines 'a' pins
  Testing Dut4  32 error lines 'b' pins
Testing ECR [ecr2_tb]
 Testing last 32 ECR data inputs with 24X, 0Y
  Testing DUT1 32 error lines 'a' pins
  Testing DUT2 32 error lines 'b' pins
  Testing DUT3 32 error lines 'a' pins
  Testing DUT4 32 error lines 'b' pins
Testing ECR [ecr3_tb]
Testing ECR address inputs with 18X, 5Y and full speed configuration
 Testing DUT1 addressing
  DUT1 first row ('a' pins)
  DUT1 second row ('a' pins)
  DUT1 third row ('a' pins)
  DUT1 last row ('a' pins)
  DUT1 diagonal row ('a' pins)
 Testing DUT2 addressing
  DUT2 first row ('b' pins)
  DUT2 second row ('b' pins)
  DUT2 third row ('b' pins)
  DUT2 last row ('b' pins)
  DUT2 diagonal row ('b' pins)
 Testing DUT3 addressing
  DUT3 first row ('a' pins)
  DUT3 second row ('a' pins)
  DUT3 third row ('a' pins)
  DUT3 last row ('a' pins)
  DUT3 diagonal row ('a' pins)
 Testing DUT4 addressing
  DUT4 first row ('b' pins)
  DUT4 second row ('b' pins)
  DUT4 third row ('b' pins)
  DUT4 last row ('b' pins)
  DUT4 diagonal row ('b' pins)
Testing ECR [ecr4_tb]
Testing ECR address inputs with 7X, 16Y and full speed configuration
 Testing DUT1 addressing
  DUT1 first column ('a' pins)
  DUT1 second column ('a' pins)
  DUT1 third column ('a' pins)
  DUT1 last column ('a' pins)
  DUT1 diagonal ('a' pins)
 Testing DUT2 addressing
  DUT2 first column ('b' pins)
  DUT2 second column ('b' pins)
  DUT2 third column ('b' pins)
  DUT2 last column ('b' pins)
  DUT2 diagonal ('b' pins)
 Testing DUT3 addressing
  DUT3 first column ('a' pins)
  DUT3 second column ('a' pins)
  DUT3 third column ('a' pins)
  DUT3 last column ('a' pins)
  DUT3 diagonal ('a' pins)
 Testing DUT4 addressing
  DUT4 first column ('b' pins)
  DUT4 second column ('b' pins)
```

```
  DUT4 third column ('b' pins)
  DUT4 last column ('b' pins)
  DUT4 diagonal ('b' pins)
Testing ECR [ecr5_tb]
Testing ECR clear with 18X, 5Y and full speed configuration
  Testing DUT1 clear ('a' pins)
  Testing DUT2 clear ('b' pins)
  Testing DUT3 clear ('a' pins)
  Testing DUT4 clear ('b' pins)
Testing ECR [ecr6_tb]
Testing ECR with 16X, 7Y and slow speed configuration
 Testing DUT1 addressing
  DUT1 first row ('a' pins)
  DUT1 second row ('a' pins)
  DUT1 third row ('a' pins)
  DUT1 last row ('a' pins)
  DUT1 first column ('a' pins)
  DUT1 second column ('a' pins)
  DUT1 third column ('a' pins)
  DUT1 last column ('a' pins)
  DUT1 diagonal ('a' pins)
 Testing DUT2 addressing
  DUT2 first row ('b' pins)
  DUT2 second row ('b' pins)
  DUT2 third row ('b' pins)
  DUT2 last row ('b' pins)
  DUT2 first column ('b' pins)
  DUT2 second column ('b' pins)
  DUT2 third column ('b' pins)
  DUT2 last column ('b' pins)
  DUT2 diagonal ('b' pins)
 Testing DUT3 addressing
  DUT3 first row ('a' pins)
  DUT3 second row ('a' pins)
  DUT3 third row ('a' pins)
  DUT3 last row ('a' pins)
  DUT3 first column ('a' pins)
  DUT3 second column ('a' pins)
  DUT3 third column ('a' pins)
  DUT3 last column ('a' pins)
  DUT3 diagonal ('a' pins)
 Testing DUT4 addressing
  DUT4 first row ('b' pins)
  DUT4 second row ('b' pins)
  DUT4 third row ('b' pins)
  DUT4 last row ('b' pins)
  DUT4 first column ('b' pins)
  DUT4 second column ('b' pins)
  DUT4 third column ('b' pins)
  DUT4 last column ('b' pins)
  DUT4 diagonal ('b' pins)
Testing DBM read widths at minimum speed configuration [dbm1_tb]
  36-bit width data - 24X,  5Y (pass1, loop1)
  18-bit width data - 24X,  6Y (pass1, loop2)
   9-bit width data - 24X,  7Y (pass1, loop3)
   4-bit width data - 24X,  8Y (pass1, loop4)
   2-bit width data - 24X,  9Y (pass1, loop5)
   1-bit width data - 24X, 10Y (pass1, loop6)
  36-bit width data -  5X, 24Y (pass2, loop1)
  18-bit width data -  6X, 24Y (pass2, loop2)
   9-bit width data -  7X, 24Y (pass2, loop3)
   4-bit width data -  8X, 24Y (pass2, loop4)
   2-bit width data -  9X, 24Y (pass2, loop5)
   1-bit width data - 10X, 24Y (pass2, loop6)
```

```
Testing DBM read speed with 36-bit data [dbm2_tb]
  23 X,  2 Y at  4.55ns in Random Access mode, (pass1, loop1)
  23 X,  3 Y at  7.20ns in Random Access mode, (pass1, loop2)
  23 X,  4 Y at 14.29ns in Random Access mode, (pass1, loop3)
  23 X,  6 Y at 58.83ns in Random Access mode, (pass1, loop4)
  23 X,  6 Y at  4.55ns in Sequential Access mode, (pass1, loop5)
  23 X,  6 Y at  7.20ns in Sequential Access mode, (pass1, loop6)
  23 X,  6 Y at 14.29ns in Sequential Access mode, (pass1, loop7)
   2 X, 23 Y at  4.55ns in Random Access mode, (pass2, loop1)
   3 X, 23 Y at  7.20ns in Random Access mode, (pass2, loop2)
   4 X, 23 Y at 14.29ns in Random Access mode, (pass2, loop3)
   6 X, 23 Y at 58.83ns in Random Access mode, (pass2, loop4)
   6 X, 23 Y at  4.55ns in Sequential Access mode, (pass2, loop5)
   6 X, 23 Y at  7.20ns in Sequential Access mode, (pass2, loop6)
   6 X, 23 Y at 14.29ns in Sequential Access mode, (pass2, loop7)
Testing DBM write widths at minimum speed configuration [dbm3_tb]
  36-bit width data - 24X,  5Y (pass1, loop1)
  18-bit width data - 24X,  6Y (pass1, loop2)
   9-bit width data - 24X,  7Y (pass1, loop3)
   4-bit width data - 24X,  8Y (pass1, loop4)
   2-bit width data - 24X,  9Y (pass1, loop5)
   1-bit width data - 24X, 10Y (pass1, loop6)
  36-bit width data -  5X, 24Y (pass2, loop1)
  18-bit width data -  6X, 24Y (pass2, loop2)
   9-bit width data -  7X, 24Y (pass2, loop3)
   4-bit width data -  8X, 24Y (pass2, loop4)
   2-bit width data -  9X, 24Y (pass2, loop5)
   1-bit width data - 10X, 24Y (pass2, loop6)
Testing DBM write speed with 36-bit data [dbm4_tb]
  Testing DBM write speeds with 36-bit data
  23 X,  2 Y at  4.55ns in Random Access mode, (pass1, loop1)
  23 X,  3 Y at  7.20ns in Random Access mode, (pass1, loop2)
  23 X,  4 Y at 14.29ns in Random Access mode, (pass1, loop3)
  23 X,  6 Y at 58.83ns in Random Access mode, (pass1, loop4)
  23 X,  6 Y at  4.55ns in Sequential Access mode, (pass1, loop5)
  23 X,  6 Y at  7.20ns in Sequential Access mode, (pass1, loop6)
  23 X,  6 Y at 14.29ns in Sequential Access mode, (pass1, loop7)
   2 X, 23 Y at  4.55ns in Random Access mode, (pass2, loop1)
   3 X, 23 Y at  7.20ns in Random Access mode, (pass2, loop2)
   4 X, 23 Y at 14.29ns in Random Access mode, (pass2, loop3)
   6 X, 23 Y at 58.83ns in Random Access mode, (pass2, loop4)
   6 X, 23 Y at  4.55ns in Sequential Access mode, (pass2, loop5)
   6 X, 23 Y at  7.20ns in Sequential Access mode, (pass2, loop6)
   6 X, 23 Y at 14.29ns in Sequential Access mode, (pass2, loop7)
Testing CPUI in multiple sites per controller [multisite_cpui_tb]
multisite_cpui_tb PASSED.
Testing APG in multiple sites per controller [multisite_apg_tb]
multisite_apg_tb PASSED.
Temperature Sensors Monitor Loop [tempmon_tb]

SystemDiag summary [diag_summary_tb]
      Pass number : 1
      Time for this pass : 00:05:09
      Total time : 00:05:25
Final Bin: pass_bin

TestDone...bin =
pass_bin,pass_bin,pass_bin,pass_bin,pass_bin,pass_bin,pass_bin,pass_bin

 Test Program C:\nextest\h4.0.7\Bin\SystemDiag.exe

The test program is loading.
The test program is loaded.
```

```
Site 1 is the first site in Chassis 1
Site 1 is the last site in Chassis 1
  ui_SiteMask...........: 0x0000000001
  ui_LoadedMask.........: 0x0000000001
  ui_LoadedSlotMask.....: 0x0000000001
  ui_LoadedHOBSlotMask..: 0x0000000000

Nextest software release: C:\nextest\h4.0.7
Force pe32_tg_deskew to run again, Eng_pe_tg_reskew, is FALSE


Loading VCAL Data on t_hsb1, t_pe32_1
Loading VCAL Data on t_hsb1, t_pe32_2
Loading VCAL Data on t_hsb1, t_pe32_3
Loading VCAL Data on t_hsb1, t_pe32_4
Loading VCAL Data on t_hsb1, t_dps_pmu_1
Loading VCAL Data on t_hsb1, t_dps_pmu_2
Loading VCAL Data on t_hsb1, t_dps_pmu_3
Loading VCAL Data on t_hsb1, t_dps_pmu_4
 Average TDR => 1.039

Magnum Version:   HD2
Nextest Release:  C:\nextest\h4.0.7
Test Program:     Y:\nextest\h4.0.7\Bin\TimingCalDx_Mag2.exe
TG Rev: 6e



The test program is loaded

TestStarted(1)...

Checking PE Path Continuity [continuity_tb]
Testing DB NVM [nvm_diag]
Testing DCM NVM [dcm_nvm_diag]
Testing DCM Temperature [dcm_temperature_diag]
DCM Temperature 24.88c
Testing DCM Paths using TDR [tdr_dcm_path_diag]
  Testing Slot 1 paths
  Testing Slot 2 paths
  Testing Slot 3 paths
  Testing Slot 4 paths
  Testing Slot 5 paths
Testing PLL Frequency Range [pll_freq_range_dcm_diag]
Testing Phase Circuit Range [min_max_diag]
Testing Clock Inputs [clock_diag_tb]
Pass All Sites Check

Voh Rise Fall Check of Site 1 Dut A...
Voh Rise Fall Check of Site 1 Dut B...

Vol Rise Fall Check of Site 1 Dut A...
Vol Rise Fall Check of Site 1 Dut B...

Vol Rise Fall Alignment of Site 1 Dut A..............
Vol Rise Fall Alignment of Site 1 Dut B...
Vol Rise Fall Alignment of Site 1 Dut A...
Vol Rise Fall Alignment of Site 1 Dut B...

Strobe Alignment of Site 1 Dut A....
Strobe Alignment of Site 1 Dut B...
Strobe Alignment of Site 1 Dut A...
Strobe Alignment of Site 1 Dut B...
```

```
Drive Alignment of Site 1 Dut A....
Drive Alignment of Site 1 Dut B...
Drive Alignment of Site 1 Dut A...
Drive Alignment of Site 1 Dut B...

Strobe Alignment of Site 1 Dut A....
Strobe Alignment of Site 1 Dut B...
Strobe Alignment of Site 1 Dut A...
Strobe Alignment of Site 1 Dut B...

Drive Alignment of Site 1 Dut A....
Drive Alignment of Site 1 Dut B...
Drive Alignment of Site 1 Dut A...
Drive Alignment of Site 1 Dut B...

Strobe Alignment of Site 1 Dut A....
Strobe Alignment of Site 1 Dut B...
Strobe Alignment of Site 1 Dut A...
Strobe Alignment of Site 1 Dut B...

DCM Temperature 25.06c
Measuring DCM Alignment Paths...
Dut Alignment of Site 1...
.
Site Alignment of Site 1...

Pogo Alignment of Site 1 Dut A...
Pogo Alignment of Site 1 Dut B...

Writing Tcal file...
Test Summary:
 Pass Site  1: Chassis 1 - Slot 1
TestDone...bin = builtin_Pass,builtin_Pass

Customer Mode
Multisite = Site to Site
The test program is loading.
The test program is loaded.

Program Loaded

Test Started:

Site to Site Measurements chassis 1
 Pass Site  1: Chassis 1 - Slot 1
Test Done
```