

SystemDiags

Warning: APG board 1 not listed in APG slot 1 in tcal_data.bin
Warning: PE16 board 1 not listed in PE16 slot 1 in tcal_data.bin, using data from flash
Warning: PE16 board 2 not listed in PE16 slot 2 in tcal_data.bin, using data from flash
Warning: PE16 board 3 not listed in PE16 slot 3 in tcal_data.bin, using data from flash
Warning: PE16 board 4 not listed in PE16 slot 4 in tcal_data.bin, using data from flash
The test program is loaded

TestStarted(1)...

Started: 07/06/22 02:50:07

Site 1

Board Name	Serial Number	PWB Number	PWB Rev	PWA Number	PWA Rev	LVM Kbits	DBM Mbits	Scan Mbits	ECR Mbits	X bits	Y bits	D bits
PTI	810477	500000	3	500001	6							
PE1	826315	501683	4	501873	10	4096						
PE2	818195	501683	3	501873	9	4096						
PE3	826488	501683	4	501873	10	4096						
PE4	821500	501683	4	501873	10	4096						
APG	818367	501682	3	501872	29	2048	72	0				
ECR	807562	500732	9	501255	17			36	10	10	36	

Nextest software release: C:\nextest\v2.13.17\Bin\Ui.exe

Testing APG read,write registers via cpu [apg_rw_regs_tb]

Address registers and LBDATA

MAR and INTA

JAM, DATA, INDEX, VAR and SCAN PTR

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 DTOPO RAM - short march [apg_dtopo_ram_short_march_tb]

Testing APG uRAM - short march [apg_uram_ram_short_march_tb]

Testing APG Cycle Length RAM - short march [apg_cycle_ram_short_march_tb]

Testing APG DAC RAM - short march [apg_dac_ram_short_march_tb]

Testing APG ATOPO RAM - short march [apg_atopo_ram_short_march_tb]

Testing APG SCAN RAM - short march [apg_scan_ram_short_march_tb]

No SCAN RAM present - skipping test. 1, 1

Testing APG Buffer Memory - short march [apg_buf_ram_short_march_tb]

Buffer Memory depth is 0x200000 - 0x800 X, 0x400 Y

Testing APG VAR Counter RAM [apg_vector_ram_march_tb]

Testing APG vRAM - short march [apg_vram_ram_short_march_tb]

LVM Memory depth is 0x200000

Testing APG counter functions [apg_counter_tests_tb]

Pattern start is at c5

Counter loading

Counter address

Reload loading

Reload address

- Reload counters from reload registers
- Counter DECR
- Counter INCR
- Counter DECR2
- Testing APG MAR increments, stack nesting [apg_mar_and_stack_tests_tb]
 - MAR increments
 - Stack nesting, 1st pass
 - Stack nesting, 2nd pass
 - Stack nesting, 50nS
 - Stack nesting, 30nS
- Testing APG counter branching [apg_counter_branching_tb]
 - Pattern start is at 1fe
- Testing APG timer branching and accuracy [apg_timer_branching_tb]
 - Pattern start is at 34e
- Testing APG interrupt branch logic and addressing [apg_interrupt_branching_tb]
 - Pattern start is at 2f4
- Testing APG address generators [apg_address_generators_tb]
 - Pattern start is at 20a
 - Checking uDATA loads
 - Checking COMP function
 - Checking logic functions
 - Checking add
 - Checking subtract
 - Checking decrement and increment
 - Checking Y to X carries and borrows
 - Checking X to Y carries and borrows
- Testing APG data generator [apg_data_generator_tb]
 - Pattern start is at 328
 - Checking uDATA loads
 - Count up and down with shift left, 18 bit register
 - Shift right, 18 bit register
 - Rotate left, 18 bit register
 - Rotate right, 18 bit register
 - Rotate left, 36 bit register
 - Rotate right, 36 bit register
 - Shift left, 36 bit register
 - Shift right, 36 bit register
- Testing APG error pipelines [apg_error_pipe_tb]
- Testing APG data paths [apg_data_paths_tb]
 - Buffer Memory depth is 0x200000 - 0x800 X, 0x400 Y
 - Pattern start is at 49f
 - Checking JAM and Data Register Paths
 - Checking Buffer Memory Path
 - Checking Buffer Memory Writes
 - Checking Buffer Memory x18 Path
 - Checking Buffer Memory x18 Writes
 - 30nS writes
- Testing APG data inversions [apg_data_inversions_tb]
 - Pattern start is at 374
 - Checking bit2 functions
 - Checking bit1 functions

Check bit1, bit2 logical combinations

AND

OR

XOR

Check X and Y parity

xyodd

xyeven

xeven_yodd

xodd_yeven

xodd

xeven

yodd

yeven

Check DTOPO inversions

X or Y

X and Y

X xor Y

Check Yindex counter

Check Yindex inversions

Yindex masks

yindex plus Y, yindex = 0xffff

yindex plus Y bar, yindex = 0xffff

yindex plus Y, Y = 0xffff

yindex plus Y bar, Y = 0x0000

Pattern start is at 3f5

xmain equal to xbase (XEQB)

xmain less than xbase (XLTB)

xmain less than or equal to xbase (XLEB)

xmain equal to xfield or xbase (XEQBORF)

ymain equal to ybase (YEQB)

ymain less than ybase (YLTB)

ymain less than or equal to ybase (YLEB)

ymain equal to yfield or ybase (YEQBORF)

xymain equal to xybase (XYEQB)

xymain less than xybase (XYLTB XF)

xymain less than xybase (XYLTBYF)

xymain less than or equal to xybase (XYLEB XF)

xymain less than or equal to xybase (XYLEBYF)

inversion from uRAM (INVSNS)

inversion from uDATA (XORINV)

Testing APG scan pointer [apg_scan_address_tb]

Pattern start is at 48f

Testing APG vector address (VAR) [apg_vector_address_tb]

Pattern start is at 494

Testing APG VAR counter functions [apg_var_counter_tests_tb]

Counter loading

Counter address

VAR Counter DECR

Testing APG VAR increments, stack nesting [apg_var_and_stack_tests_tb]

VAR increments

Stack nesting, 1st pass

Stack nesting, 2nd pass
Stack nesting, 50nS
Stack nesting, 30nS
Testing APG VAR counter branching [apg_var_counter_branching_tb]
var/mar counter branching
Testing APG RAM read only paths [apg_ram_current_outputs_tb]
Testing PE TG count RAM [pe_tg_count_march_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE TG format RAM [pe_tg_format_march_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE VIHh RAM [pe_vihh_march_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE Pin Scramble RAM [pe_psrाम_march_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE LVM RAM [pe_lvm_march_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE Broadcast mode [pe_broadcast_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE16 ADC [adc_tb]
Testing PE16 PMU current force [pmu_if_tb]
Testing PE16 1 PMU current force DACs
Testing PE16 1 PMU current force level accuracy
Testing PE16 1 PMU current force apg level DAC select path
Testing PE16 2 PMU current force DACs
Testing PE16 2 PMU current force level accuracy
Testing PE16 3 PMU current force DACs
Testing PE16 3 PMU current force level accuracy
Testing PE16 4 PMU current force DACs
Testing PE16 4 PMU current force level accuracy
Testing PE16 PMU voltage force [pmu_vf_tb]
Testing PE16 1 PMU voltage force DACs
Testing PE16 1 PMU voltage force level accuracy
Testing PE16 1 PMU voltage force apg level DAC select path

Testing PE16 2 PMU voltage force DACs
Testing PE16 2 PMU voltage force level accuracy
Testing PE16 3 PMU voltage force DACs
Testing PE16 3 PMU voltage force level accuracy
Testing PE16 4 PMU voltage force DACs
Testing PE16 4 PMU voltage force level accuracy
Testing PE16 DPS voltage force [dps_vf_tb]
Testing PE16 1 DPSn DACs
Testing PE16 1 DPSn level accuracy
Testing PE16 1 DPSn apg level DAC select path
Testing PE16 1 DPSa DACs
Testing PE16 1 DPSa level accuracy
Testing PE16 1 DPSa apg level DAC select path
Testing PE16 2 DPSn DACs
Testing PE16 2 DPSn level accuracy
Testing PE16 2 DPSa DACs
Testing PE16 2 DPSa level accuracy
Testing PE16 3 DPSn DACs
Testing PE16 3 DPSn level accuracy
Testing PE16 3 DPSa DACs
Testing PE16 3 DPSa level accuracy
Testing PE16 4 DPSn DACs
Testing PE16 4 DPSn level accuracy
Testing PE16 4 DPSa DACs
Testing PE16 4 DPSa level accuracy
Testing PE16 PMU/DPS current measure [range_resistor_tb]
Testing PE16 PMU_F FETs, VBK FETs, K1 and K2 Relays [relays_tb]
Testing PMU_F FETs
Testing VBK FETs
Testing K1 Relays
Testing K2 Relays
Testing PE16 PMU comparators [pmu_comp_tb]
Testing PE16 1 PMU comparator DACs
Testing PE16 1 PMU comparator accuracy
Testing PE16 1 PMU comparator apg level DAC select path
Testing PE16 2 PMU comparator DACs
Testing PE16 2 PMU comparator accuracy
Testing PE16 3 PMU comparator DACs
Testing PE16 3 PMU comparator accuracy
Testing PE16 4 PMU comparator DACs
Testing PE16 4 PMU comparator accuracy
Testing PE16 PMU leakage current [pmu_leakage_tb]
Testing PE16 background voltage [vbk_tb]
Testing background voltage DACs
Testing background voltage level accuracy
Testing background voltage apg level DAC and PE select paths
Testing background voltage apg level bit weight paths
Testing PE16 VIHh pin level [vihh_tb]
Testing VIHh DACs
Testing VIHh level accuracy
Testing VIHh apg level DAC select path

Testing PE16 VIH pin level [vih_tb]
Testing VIH DACs
Testing VIH level accuracy
Testing VIH apg level DAC select path
Testing VIH offset level accuracy
Testing PE16 VIL pin level [vil_tb]
Testing VIL DACs
Testing VIL level accuracy
Testing VIL apg level DAC select path
Testing VIL offset level accuracy
Testing PE16 IOH pin level [ioh_tb]
Testing IOH level accuracy
Testing PE16 IOL pin level [iol_tb]
Testing IOL level accuracy
Testing PE16 VZ pin level [vz_tb]
Testing VZ level accuracy
Testing PE16 VOH pin level [voh_tb]
Testing VOH DACs
Testing VOH level accuracy
Testing VOH apg level DAC select path
Testing PE16 VOL pin level [vol_tb]
Testing VOL DACs
Testing VOL level accuracy
Testing VOL apg level DAC select path
Testing PE16 PMU voltage clamps [pmu_vclamp_tb]
Testing PE16 PMU current limit [pmu_ilimit_tb]
Testing PE16 DPS switches [dps_switch_tb]
Testing PE16 DPS current share [dps_share_tb]
Testing PE16 DPS sense resistor bypass diodes [dps_diode_tb]
Testing PE16 DPS compensation capacitors [dps_cap_tb]
Testing PE16 PMU compensation capacitors [pmu_cap_tb]
Testing PE16 DPS current capability [dps_imin_tb]
Testing PE force pins [pe_force_pins_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE strobe modes [pe_strobe_mode_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE tg formats [pe_tg_format_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE tg dclk formats [pe_tg_dclk_format_tb]
Testing PE1
Testing PE2
Testing PE3

Testing PE4
Testing PE tg io formats [pe_tg_io_format_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE tg counters [pe_tg_counter_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE vihh maps [pe_vihh_map_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE pin scramble [pe_ps_ad_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE pin scramble [pe_ps_cs_tb]
Testing PE1 active low
Testing PE2 active low
Testing PE3 active low
Testing PE4 active low
Testing PE1 active high
Testing PE2 active high
Testing PE3 active high
Testing PE4 active high
Testing PE pin scramble [pe_ps_lvm_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE pin scramble [pe_ps_scan_tb]
Testing PE mux mode [pe_mux_mode_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE first error counter [pe_first_error_tb]
Counter start test, tgmode 0
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Counter start test, tgmode 1
Testing PE1
Testing PE2
Testing PE3

Testing PE4
Counter bit test, tgmodes 0
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Counter bit test, tgmodes 1
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE error [pe_error_flag_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE abort [pe_abort_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE VAR Path (pe_var_path_tb)
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing PE Real Time Error Catch Counter [pe_rtec_counter_tb]
Testing PE1
Testing PE2
Testing PE3
Testing PE4
Testing ECR X Scramble RAM - short march [ecr_xscram_short_march_tb]
X Scramble depth is 0x8000
Testing ECR Y Scramble RAM - short march [ecr_yscram_short_march_tb]
Y Scramble depth is 0x8000
Testing ECR Row Capture RAM - short march [ecr_rowram_short_march_tb]
Row RAM depth is 0x8000
Testing ECR Column Capture RAM - short march [ecr_colram_short_march_tb]
Column RAM depth is 0x8000
Testing ECR Main Capture RAM - short march [ecr_mainram_short_march_tb]
Main RAM depth is 0x100000
Testing ECR Scanning of Row Catch RAM [ecr_row_scan_tb]
Testing ECR Scanning of Column Catch RAM [ecr_col_scan_tb]
Testing ECR Scanning of Main Catch RAM [ecr_main_scan_tb]
Main RAM depth is 0x100000
Scanning X and Y
Varying data widths
x32, 0xa X, 0xa Y
x16, 0xb X, 0xa Y
x8, 0xc X, 0xa Y
x4, 0xd X, 0xa Y

x2, 0xe X, 0xa Y
x1, 0xf X, 0xa Y
Scanning X only
Scanning Y only
Testing ECR Error Catching [ecr_error_catching_tb]
Data Crosspoint
1st pin list, 0x24 pins
2nd pin list, 0x24 pins
Varying data widths
Address Crosspoint
Testing ECR Logic Error Catching [ecr_logic_error_catch_tb]
First Vectors
Last Vectors
Before Error
After Error
Only Errors
Center Error
Testing ECR DDR Capture [ecr_ddr_capture_tb]
DDR Capture
SystemDiag summary [diag_summary_tb]
Pass number : 1
Time for this pass : 00:03:06
Total time : 00:03:10
Final Bin: pass_bin
Done: 07/06/22 02:53:13
TestDone...bin = pass_bin