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== Vivado RTL Synthesis Results
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+ General Information:
  * Date:          Fri Jul 14 12:03:04 -0400 2023
  * Version:       2023.1 (Build 3854077 on May  4 2023)
  * Project:       LargeData
  * Solution:      wPragmas (Vivado IP Flow Target)
  * Product family: kintex7
  * Target device: xc7k160t-fbg484-1

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== Run Constraints & Options
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+ Design Constraints & Options:
  * RTL Synthesis target clock: 10 ns
  * C-Synthesis target clock:  10 ns
  * C-Synthesis uncertainty:    27%

+ RTL Synthesis Options:
  * config_export -vivado_synth_strategy: default
  * config_export -vivado_synth_design_args: -directive sdx_optimization_effort_high

+ Reporting Options:
  * config_export -vivado_report_level: 2
  * config_export -vivado_max_timing_paths: 10
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== RTL Synthesis Resource Summary
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LUT:          4556
FF:           4215
DSP:          0
BRAM:         5
URAM:         0
SRL:          0
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== RTL Synthesis Timing Summary
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* Timing was met
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+-----+-----+
| Timing      | Period (ns) |
+-----+-----+
| Target      | 10.000      |
| Post-Synthesis | 5.047      |
+-----+-----+
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== RTL Synthesis Resources
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Name	Source	LUT	FF	DSP	BRAM	URAM	SRL	Pragma	Impl	Latency
inst		4556	4215		5					
(inst)		23	3704							
arr_event_e_U		1581			1					
bind_storage ram_t2p									auto	1
arr_event_e	../../../../../Documents/Vitis/LargerDataSet/moller_hls.cpp:55	521			1					
arr_event_t_U									auto	1
bind_storage ram_t2p									auto	1
arr_event_t	../../../../../Documents/Vitis/LargerDataSet/moller_hls.cpp:55	1494			1					
fadc_hits_pre_e_U									auto	1
bind_storage ram_t2p									auto	1
fadc_hits_pre_e		643			1					
fadc_hits_pre_t_U									auto	1
bind_storage ram_t2p									auto	1
fadc_hits_pre_t										
grp_moller_hls_Pipeline_VITIS_LOOP_133_1_fu_7515		20	14							

(grp_moller_hls_Pipeline_VITIS_LOOP_133_1_fu_7515)		12									
grp_moller_hls_Pipeline_VITIS_LOOP_71_4_fu_7469	274	497	1								
(grp_moller_hls_Pipeline_VITIS_LOOP_71_4_fu_7469)	248	489	1								
arr_chan_map_DET_ID_U	3	3									
bind_storage rom_1p									auto	1	
arr_chan_map_DET_ID											
arr_chan_map_SUB_ELEMENT_U	3	3									
bind_storage rom_1p									auto	1	
arr_chan_map_SUB_ELEMENT											
flow_control_loop_pipe_sequential_init_U	20	2									

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== RTL Synthesis Fail Fast

Criteria	Guideline	Actual	Status
LUT	70%	4.49%	OK
FD	50%	2.08%	OK
LUTRAM+SRL	25%	0.00%	OK
MUXF7	15%	0.10%	OK
DSP	80%	0.00%	OK
RAMB/FIFO	80%	0.77%	OK
DSP+RAMB+URAM (Avg)	70%	0.77%	OK
BUFGCE* + BUFGCTRL	24	0	OK
DONT_TOUCH (cells/nets)	0	0	OK
MARK_DEBUG (nets)	0	0	OK
Control Sets	1901	14	OK
Average Fanout for modules > 100k cells	4	0	OK
Non-FD high fanout nets > 10k loads	0	0	OK

TIMING-6 (No common primary clock between related clocks)	0	0	OK
TIMING-7 (No common node between related clocks)	0	0	OK
TIMING-8 (No common period between related clocks)	0	0	OK
TIMING-14 (LUT on the clock tree)	0	0	OK
TIMING-35 (No common node in paths with the same clock)	0	0	OK

Number of paths above max LUT budgeting (0.575ns)	0	0	OK
Number of paths above max Net budgeting (0.403ns)	0	0	OK

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== RTL Synthesis Timing Paths

* Timing was met						

Path	SLACK	STARTPOINT PIN	ENDPOINT PIN	LOGIC LEVELS	MAX FANOUT	DATAPATH DELAY
DATAPATH LOGIC	DATAPATH NET					
DELAY	DELAY					

Path1	4.953	fadc_hits_t_207_reg_14918_reg[2]/C	arr_event_e_U/ram_reg/DIBDI[0]	6	15	4.354
	0.699	3.655				
Path2	4.953	fadc_hits_t_207_reg_14918_reg[2]/C	arr_event_e_U/ram_reg/DIBDI[10]	6	15	4.354
	0.699	3.655				
Path3	4.953	fadc_hits_t_207_reg_14918_reg[2]/C	arr_event_e_U/ram_reg/DIBDI[11]	6	15	4.354
	0.699	3.655				
Path4	4.953	fadc_hits_t_207_reg_14918_reg[2]/C	arr_event_e_U/ram_reg/DIBDI[12]	6	15	4.354
	0.699	3.655				
Path5	4.953	fadc_hits_t_207_reg_14918_reg[2]/C	arr_event_e_U/ram_reg/DIBDI[1]	6	15	4.354
	0.699	3.655				

Path1 Cells	Primitive Type
fadc_hits_t_207_reg_14918_reg[2]	FLOP_LATCH.flop.FDRE
arr_event_e_U/ram_reg_i_1914	LUT.others.LUT6
arr_event_e_U/ram_reg_i_1473	LUT.others.LUT5

arr_event_e_U/ram_reg_i_727	LUT.others.LUT6
arr_event_e_U/ram_reg_i_353	LUT.others.LUT5
arr_event_e_U/ram_reg_i_144	LUT.others.LUT6
fadc_hits_pre_e_U/ram_reg_i_43	LUT.others.LUT6
arr_event_e_U/ram_reg	BMEM.bram.RAMB18E1

Path2 Cells	Primitive Type
fadc_hits_t_207_reg_14918_reg[2]	FLOP_LATCH.flop.FDRE
arr_event_e_U/ram_reg_i_1914	LUT.others.LUT6
arr_event_e_U/ram_reg_i_1473	LUT.others.LUT5
arr_event_e_U/ram_reg_i_727	LUT.others.LUT6
arr_event_e_U/ram_reg_i_353	LUT.others.LUT5
arr_event_e_U/ram_reg_i_144	LUT.others.LUT6
fadc_hits_pre_e_U/ram_reg_i_33	LUT.others.LUT6
arr_event_e_U/ram_reg	BMEM.bram.RAMB18E1

Path3 Cells	Primitive Type
fadc_hits_t_207_reg_14918_reg[2]	FLOP_LATCH.flop.FDRE
arr_event_e_U/ram_reg_i_1914	LUT.others.LUT6
arr_event_e_U/ram_reg_i_1473	LUT.others.LUT5
arr_event_e_U/ram_reg_i_727	LUT.others.LUT6
arr_event_e_U/ram_reg_i_353	LUT.others.LUT5
arr_event_e_U/ram_reg_i_144	LUT.others.LUT6
fadc_hits_pre_e_U/ram_reg_i_32	LUT.others.LUT6
arr_event_e_U/ram_reg	BMEM.bram.RAMB18E1

Path4 Cells	Primitive Type
fadc_hits_t_207_reg_14918_reg[2]	FLOP_LATCH.flop.FDRE
arr_event_e_U/ram_reg_i_1914	LUT.others.LUT6
arr_event_e_U/ram_reg_i_1473	LUT.others.LUT5
arr_event_e_U/ram_reg_i_727	LUT.others.LUT6
arr_event_e_U/ram_reg_i_353	LUT.others.LUT5
arr_event_e_U/ram_reg_i_144	LUT.others.LUT6
fadc_hits_pre_e_U/ram_reg_i_31	LUT.others.LUT6
arr_event_e_U/ram_reg	BMEM.bram.RAMB18E1

Path5 Cells	Primitive Type
fadc_hits_t_207_reg_14918_reg[2]	FLOP_LATCH.flop.FDRE
arr_event_e_U/ram_reg_i_1914	LUT.others.LUT6
arr_event_e_U/ram_reg_i_1473	LUT.others.LUT5
arr_event_e_U/ram_reg_i_727	LUT.others.LUT6
arr_event_e_U/ram_reg_i_353	LUT.others.LUT5
arr_event_e_U/ram_reg_i_144	LUT.others.LUT6
fadc_hits_pre_e_U/ram_reg_i_42	LUT.others.LUT6
arr_event_e_U/ram_reg	BMEM.bram.RAMB18E1

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== RTL Synthesis Vivado Reports
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Report Type	Report Location
design_analysis	impl/verilog/report/moller_hls_design_analysis_synth.rpt
failfast	impl/verilog/report/moller_hls_failfast_synth.rpt
timing	impl/verilog/report/moller_hls_timing_synth.rpt
timing_paths	impl/verilog/report/moller_hls_timing_paths_synth.rpt
utilization	impl/verilog/report/moller_hls_utilization_synth.rpt
utilization_hierarchical	impl/verilog/report/moller_hls_utilization_hierarchical_synth.rpt