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# Vivado v2022.2 (64-bit)
# SW Build 3671981 on Fri Oct 14 05:00:03 MDT 2022
# IP Build 3669848 on Fri Oct 14 08:30:02 MDT 2022
# Start of session at: Thu Feb 9 10:16:38 2023
# Process ID: 12832
# Current directory: E:/decoder5-to-32/decoder5-to-32.runs/synth 1
# Command line: vivado.exe -log Decoder5 32.vds -product Vivado
-mode batch -messageDb vivado.pb -notrace -source Decoder5 32.tcl
# Log file:
E:/decoder5-to-32/decoder5-to-32.runs/synth 1/Decoder5 32.vds
# Journal file:
E:/decoder5-to-32/decoder5-to-32.runs/synth 1\vivado.jou
# Running On: LAPTOP-AOQKOD16, OS: Windows, CPU Frequency: 2496
MHz, CPU Physical cores: 4, Host memory: 6827 MB
source Decoder5 32.tcl -notrace
create project: Time (s): cpu = 00:00:06; elapsed = 00:00:06.
Memory (MB): peak = 1001.859; gain = 118.238
Command: read checkpoint -auto incremental -incremental
E:/decoder5-to-32/decoder5-to-32.srcs/utils_1/imports/synth_1/Decod
er5 32.dcp
INFO: [Vivado 12-5825] Read reference checkpoint from
E:/decoder5-to-32/decoder5-to-32.srcs/utils 1/imports/synth 1/Decod
er5 32.dcp for incremental synthesis
INFO: [Vivado 12-7989] Please ensure there are no constraint
changes
Command: synth design -top Decoder5 32 -part xc7vx485tffg1157-1
Starting synth design
Attempting to get a license for feature 'Synthesis' and/or device
'xc7vx485t'
INFO: [Common 17-349] Got license for feature 'Synthesis' and/or
device 'xc7vx485t'
INFO: [Common 17-86] Your Synthesis license expires in 21 day(s)
INFO: [Designutils 20-5440] No compile time benefit to using
incremental synthesis; A full resynthesis will be run
INFO: [Designutils 20-4379] Flow is switching to default flow due
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to incremental criteria not met. If you would like to alter this
behaviour and have the flow terminate instead, please set the
following parameter config implementation
{autoIncr.Synth.RejectBehavior Terminate}
INFO: [Synth 8-7079] Multithreading enabled for synth design using
a maximum of 2 processes.
INFO: [Synth 8-7078] Launching helper process for spawning children
vivado processes
INFO: [Synth 8-7075] Helper process launched with PID 16992
INFO: [Synth 8-11241] undeclared symbol 'REGCCE', assumed default
net type 'wire'
[E:/Vivado/2022.2/data/verilog/src/unimacro/BRAM SINGLE MACRO.v:217
0]
Starting Synthesize: Time (s): cpu = 00:00:08; elapsed = 00:00:09
. Memory (MB): peak = 1444.520; gain = 409.246
INFO: [Synth 8-638] synthesizing module 'Decoder5_32'
[E:/decoder5-to-32/decoder5-to-32.srcs/sources 1/new/Decoder5 32.vh
d:40]
INFO: [Synth 8-226] default block is never used
[E:/decoder5-to-32/decoder5-to-32.srcs/sources 1/new/Decoder5 32.vh
d:45]
      [Synth 8-256] done synthesizing module 'Decoder5 32' (0#1)
INFO:
[E:/decoder5-to-32/decoder5-to-32.srcs/sources 1/new/Decoder5 32.vh
d:40]
Finished Synthesize: Time (s): cpu = 00:00:10; elapsed = 00:00:12
. Memory (MB): peak = 1533.684; gain = 498.410
Finished Constraint Validation : Time (s): cpu = 00:00:11 ; elapsed
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= 00:00:13 . Memory (MB): peak = 1533.684 ; gain = 498.410
Start Loading Part and Timing Information
Loading part: xc7vx485tffg1157-1
Finished Loading Part and Timing Information: Time (s): cpu = 00:00:11; elapsed = 00:00:13. Memory (MB): peak = 1533.684; gain = 498.410
INFO: [Device 21-403] Loading part xc7vx485tffg1157-1
Finished RTL Optimization Phase 2 : Time (s): cpu = 00:00:11 ; elapsed = 00:00:13 . Memory (MB): peak = 1533.684 ; gain = 498.410
Start RTL Component Statistics
Detailed RTL Component Info :
Finished RTL Component Statistics

Start Part Resource Summary
Part Resources: DSPs: 2800 (col length:140) BRAMs: 2060 (col length: RAMB18 140 RAMB36 70)
Finished Part Resource Summary
No constraint files found.
Start Cross Boundary and Area Optimization
WARNING: [Synth 8-7080] Parallel synthesis criteria is not met
Finished Cross Boundary and Area Optimization: Time (s): cpu = 00:00:23; elapsed = 00:00:27. Memory (MB): peak = 1873.602; gain = 838.328
 No constraint files found.
Start Timing Optimization
Finished Timing Optimization: Time (s): cpu = 00:00:23; elapsed = 00:00:27. Memory (MB): peak = 1888.918; gain = 853.645

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Finished IO Insertion : Time (s): cpu = 00:00:30 ; elapsed =
00:00:34 . Memory (MB): peak = 1889.898; gain = 854.625
Start Renaming Generated Instances
Finished Renaming Generated Instances: Time (s): cpu = 00:00:30;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898 ; gain = 854.625
Start Rebuilding User Hierarchy
Finished Rebuilding User Hierarchy: Time (s): cpu = 00:00:30;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898 ; gain = 854.625
Start Renaming Generated Ports
Finished Renaming Generated Ports: Time (s): cpu = 00:00:30;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898 ; gain = 854.625
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Start Handling Custom Attributes
Finished Handling Custom Attributes: Time (s): cpu = 00:00:30;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898 ; gain = 854.625
Start Renaming Generated Nets
Finished Renaming Generated Nets: Time (s): cpu = 00:00:30;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898; gain = 854.625
Start Writing Synthesis Report
Report BlackBoxes:
+-+----+
| |BlackBox name |Instances |
+-+----+
+-+----+
Report Cell Usage:
+----+
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|Cell |Count |
+----+
| 1
     |LUT5 |
                32|
12
     |IBUF |
                5 I
| 3
    |OBUF |
                321
+----+
Report Instance Areas:
+----+
| | Instance | Module | Cells |
+----+
|1 |top |
+----+
Finished Writing Synthesis Report : Time (s): cpu = 00:00:30 ;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898 ; gain = 854.625
Synthesis finished with 0 errors, 0 critical warnings and 1
warnings.
Synthesis Optimization Runtime : Time (s): cpu = 00:00:30 ; elapsed
= 00:00:34 . Memory (MB): peak = 1889.898; gain = 854.625
Synthesis Optimization Complete: Time (s): cpu = 00:00:30;
elapsed = 00:00:34 . Memory (MB): peak = 1889.898 ; gain = 854.625
INFO: [Project 1-571] Translating synthesized netlist
Netlist sorting complete. Time (s): cpu = 00:00:00; elapsed =
00:00:00.002 . Memory (MB): peak = 1901.926; gain = 0.000
INFO: [Project 1-570] Preparing netlist for logic optimization
INFO: [Opt 31-138] Pushed 0 inverter(s) to 0 load pin(s).
Netlist sorting complete. Time (s): cpu = 00:00:00; elapsed =
00:00:00 . Memory (MB): peak = 2017.426 ; gain = 0.000
INFO: [Project 1-111] Unisim Transformation Summary:
No Unisim elements were transformed.
Synth Design complete, checksum: b33ae867
INFO: [Common 17-83] Releasing license: Synthesis
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19 Infos, 1 Warnings, 0 Critical Warnings and 0 Errors encountered. synth\_design completed successfully

 $synth_design: Time (s): cpu = 00:00:34 ; elapsed = 00:00:40 .$ 

Memory (MB): peak = 2017.426; gain = 990.688

INFO: [Common 17-1381] The checkpoint

'E:/decoder5-to-32/decoder5-to-32.runs/synth\_1/Decoder5\_32.dcp' has been generated.

INFO: [runtcl-4] Executing : report\_utilization -file

Decoder5\_32\_utilization\_synth.rpt -pb

Decoder5 32 utilization synth.pb

INFO: [Common 17-206] Exiting Vivado at Thu Feb 9 10:17:35 2023...