

2020 Digital IC Design Homework 4: RC4 Encrypt

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Simulation Result					
Functional simulation	Pass	Gate-level simulation	Pass	Gate-level simulation time	120716883(ps) 、70749883(ps)
<pre># ----- T B 1 - S U M M A R Y ----- # # Congratulations! Cipher data have been generated successfully! The result is # # Congratulations! Plain data have been generated successfully! The result is # # ** Note: \$finish : C:/Users/harry/2020ICHW/HW4/testfixture.v(244) # Time: 120716883 ps Iteration: 0 Instance: /testfixture # # ----- T B 2 - S U M M A R Y ----- # # Congratulations! Cipher data have been generated successfully! The result is # # Congratulations! Plain data have been generated successfully! The result is # # ** Note: \$finish : C:/Users/harry/2020ICHW/HW4/testfixture2.v(244) # Time: 70749883 ps Iteration: 0 Instance: /testfixture2</pre>			<pre># ----- T B 1 - S U M M A R Y ----- # # Congratulations! Cipher data have been generated successfully! The result is # # Congratulations! Plain data have been generated successfully! The result is # # ** Note: \$finish : C:/Users/harry/2020ICHW/HW4/testfixture.v(244) # Time: 120716883 ps Iteration: 0 Instance: /testfixture # # ----- T B 2 - S U M M A R Y ----- # # Congratulations! Cipher data have been generated successfully! The result is # # Congratulations! Plain data have been generated successfully! The result is # # ** Note: \$finish : C:/Users/harry/2020ICHW/HW4/testfixture2.v(244) # Time: 70749883 ps Iteration: 0 Instance: /testfixture2</pre>		
Synthesis Result					
Total logic elements			4,404		
Total memory bit			192		
Embedded multiplier 9-bit element			0		
<div><div><div>Flow Status</div><div>Quartus II Version</div><div>Revision Name</div><div>Top-level Entity Name</div><div>Family</div><div>Device</div><div>Timing Models</div><div>Met timing requirements</div><div>Total logic elements</div><div>Total combinational functions</div><div>Dedicated logic registers</div><div>Total registers</div><div>Total pins</div><div>Total virtual pins</div><div>Total memory bits</div><div>Embedded Multiplier 9-bit elements</div><div>Total PLLs</div></div><div>Successful - Sun May 24 23:34:47 2020 10.0 Build 262 08/18/2010 SP 1 SJ Full Version RC4 RC4 Cyclone II EP2C70F896C8 Final Yes 4,404 / 68,416 (6 %) 4,398 / 68,416 (6 %) 452 / 68,416 (< 1 %) 452 50 / 622 (8 %) 0 192 / 1,152,000 (< 1 %) 0 / 300 (0 %) 0 / 4 (0 %)</div></div>					
Description of your design					

如何使用 RC4 演算法做加解密

*Scoring = (Total logic elements + total memory bit + 9*embedded multiplier 9-bit element) × (gate-level simulation time in ns)*