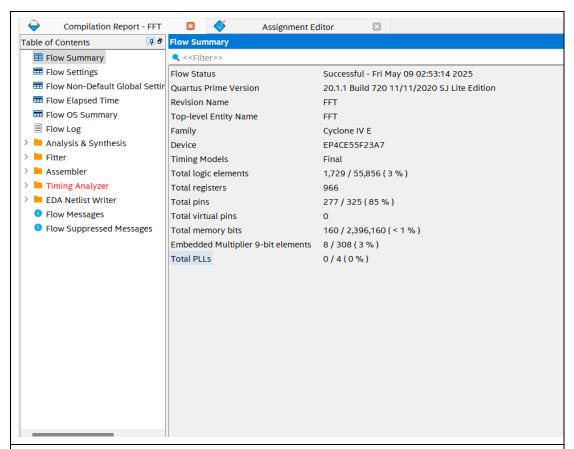
## 2025 Digital IC Design Homework 3

NAME	童品編				
Student ID	M16131111				
Simulation Result					
Functional		Pass		Pre-Layout	Pass
simulation		1 ass		simulation	1 488
P1				Please specify your clock width:16(ns)	
### Timing part on pattern   523 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! #### Timing part on pattern   540 - 541, FASS!! ##### Timing part on pattern   540 - 541, FASS!! ##################################			213	Trescopt    FFT imag part on pattern   548 - 943, FASS!    FFT imag part on pattern   544 - 955, FASS!    FFT imag part on pattern   544 - 955, FASS!    FFT imag part on pattern   540 - 975, FASS!    FFT imag part on pattern   560 - 975, FASS!    FFT imag part on pattern   560 - 975, FASS!    FFT imag part on pattern   596 - 981, FASS!    FFT imag part on pattern   596 - 981, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   500 - 500, FASS!    FFT imag part on pattern   500 - 500, FASS!    FFT imag part on pattern   544 - 555, FASS!    FFT imag part on pattern   544 - 555, FASS!    FFT imag part on pattern   540 - 591, FASS!    FFT imag part on pattern   560 - 591, FASS!    FFT imag part on pattern   590 - 591, FASS!    FFT imag part on pattern   590 - 591, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   592 - 1007, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on pattern   1000 - 1023, FASS!    FFT imag part on p	
Synthesis Result					
			172		
,			160		
			960	5	
1			8		
elements					



## Description of your design

我的設計主要就是拆 4 個 stage,一個 stage,一個蝴蝶單元來做,然後只有第二個 stage 會用到乘法器,我有自己對 twiddle factor 做化簡,把很多旋轉因子能變成乘負一或正一,然後因為要前一組到,才有辦法用蝴蝶算出下一級輸入,所以上面有移位暫存器,最後出來會做順序重排,以及累積每 16 筆輸出二次(實部跟虛部),底下有架構圖

