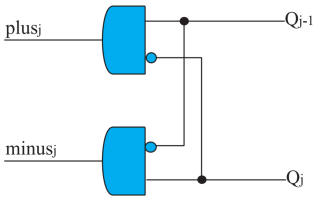
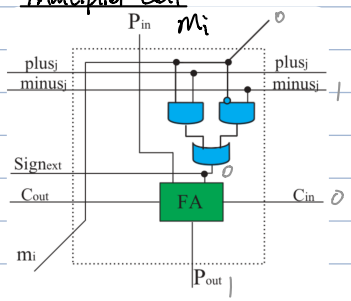
Booth Encoding

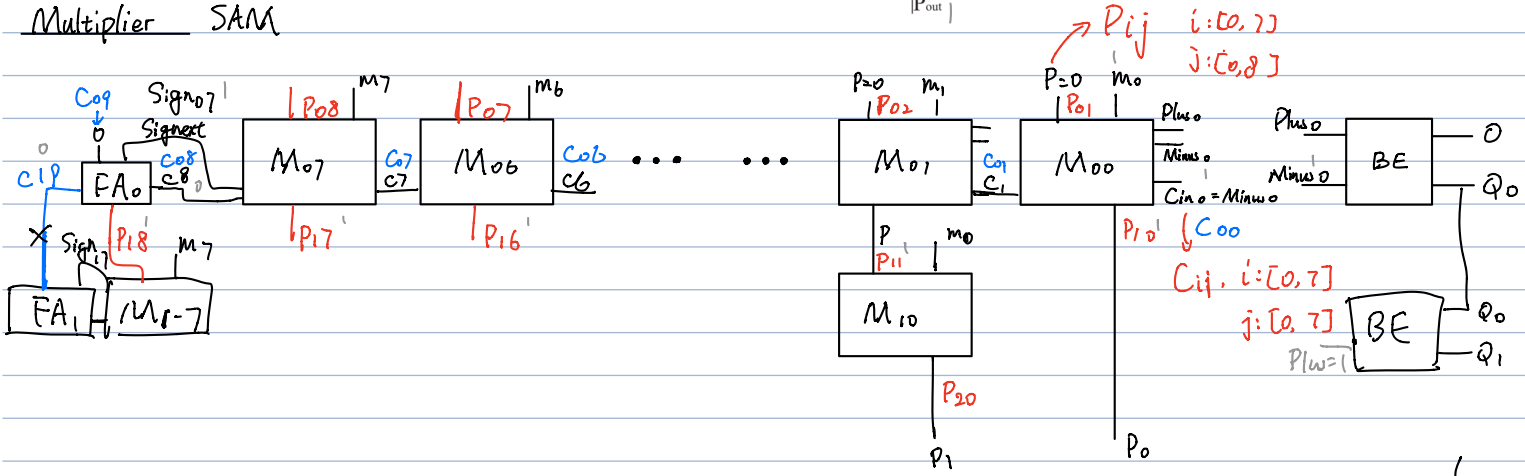
Q_i	Q_{i-1}	Q_i'
0	0	0
0	1	1
1	0	-1
1	1	0

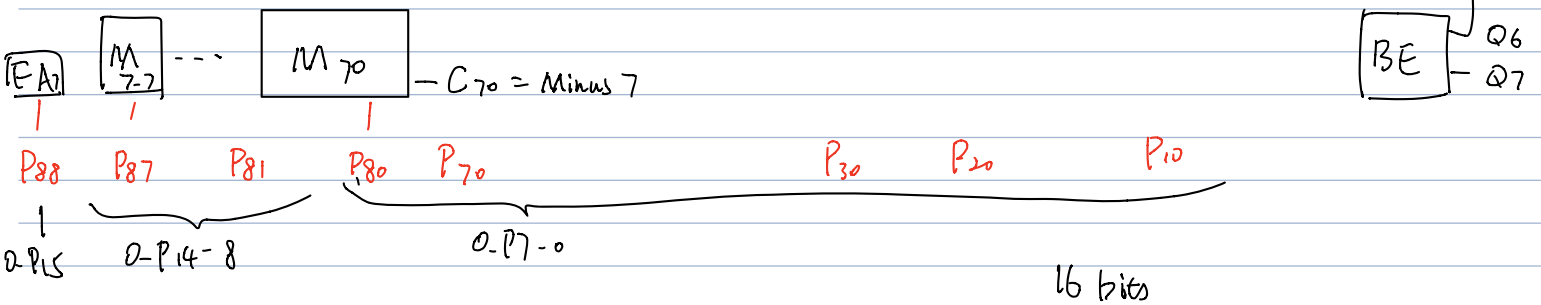


Multiplier Cell



Multiplier SAM





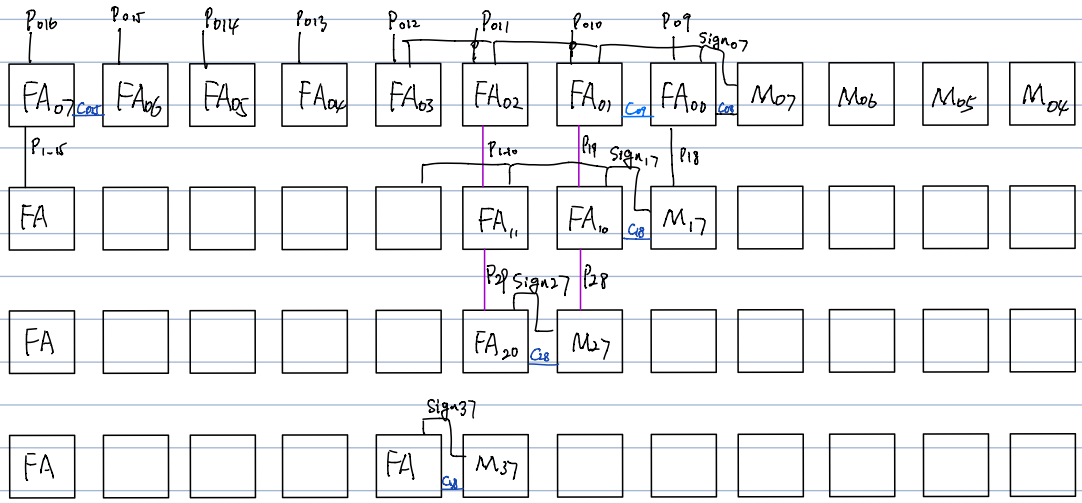
|x| Plus : 0010 Minus : 0001 P_{ix} : 11111111

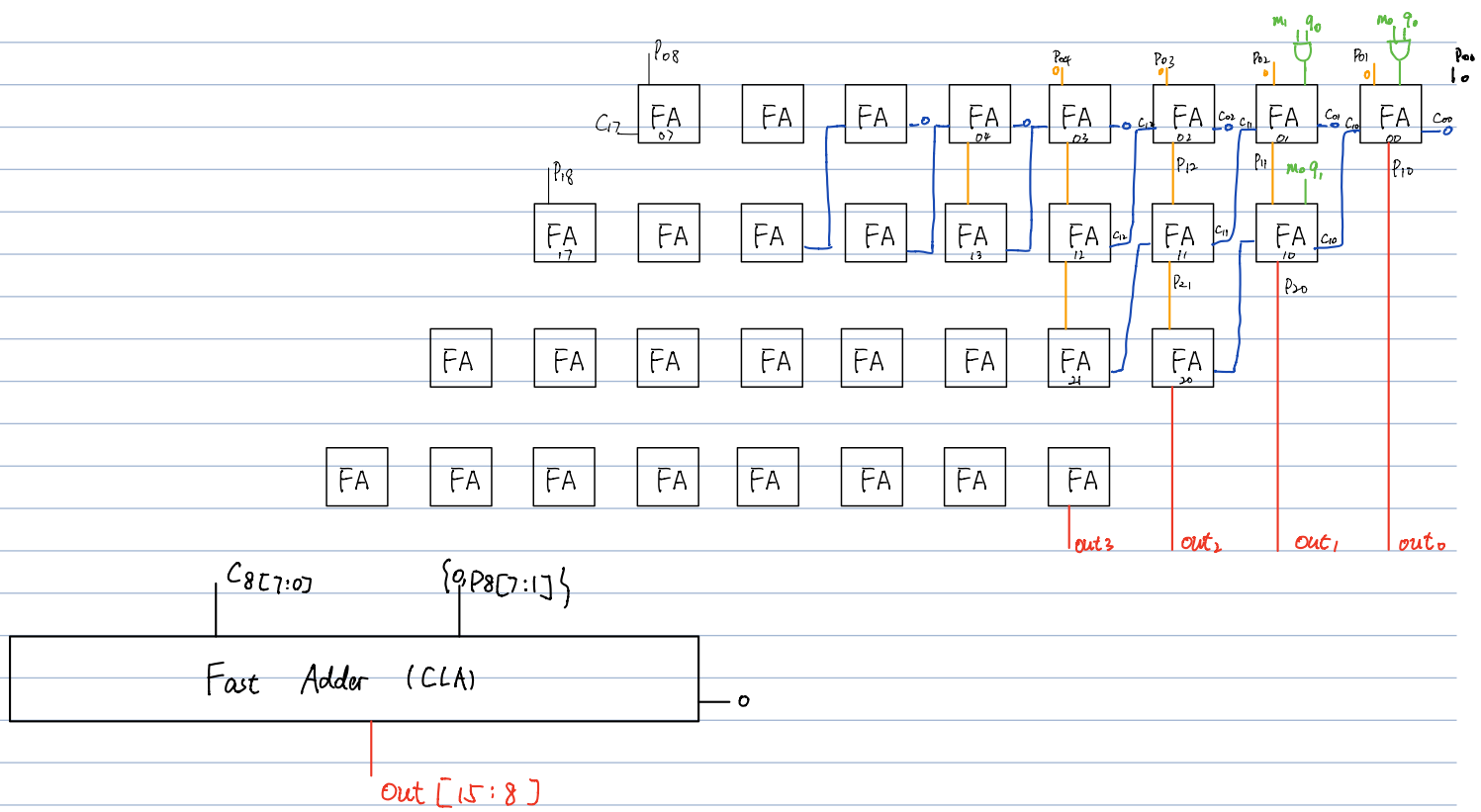
	10	9	8	7	6	5	4	3	2	1	0
			0	0	0	0	0	0	0	1	
x)			0	0	0	0	0	0	1	1	
P_{ix}	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	1
	1	...	0	0	0	1	0	0	0	0	0

$C_{00}=1$ $C_{01}=0$

$Sign_{00}=0$

$C_{02}=0$ $Sign_{01}=1$





out [15:8]

Part 1:

ALMs : 126

Regs : 34

Fmax : 331.02 MHz