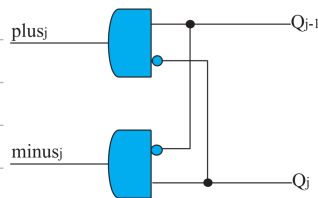
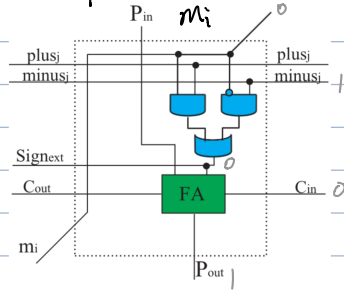


Booth Encoding

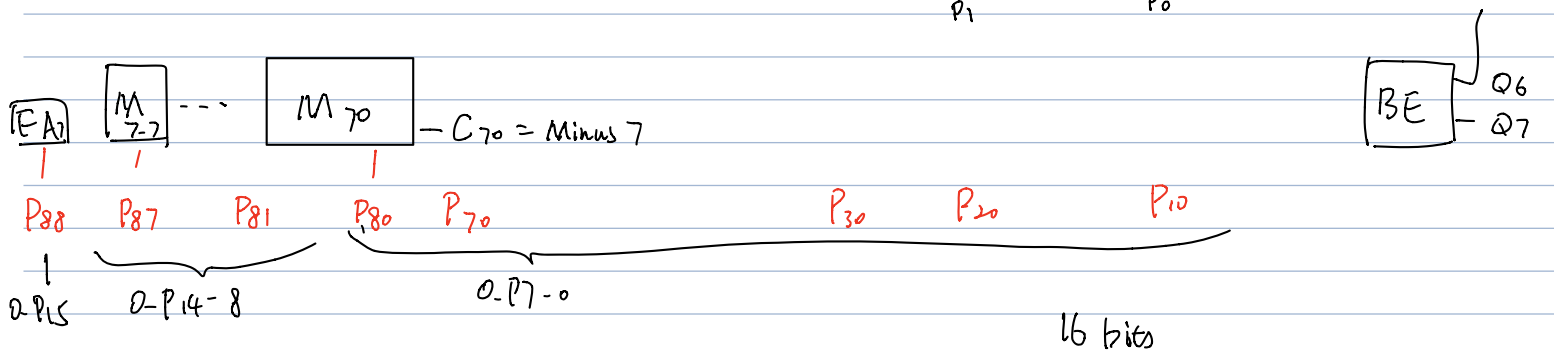
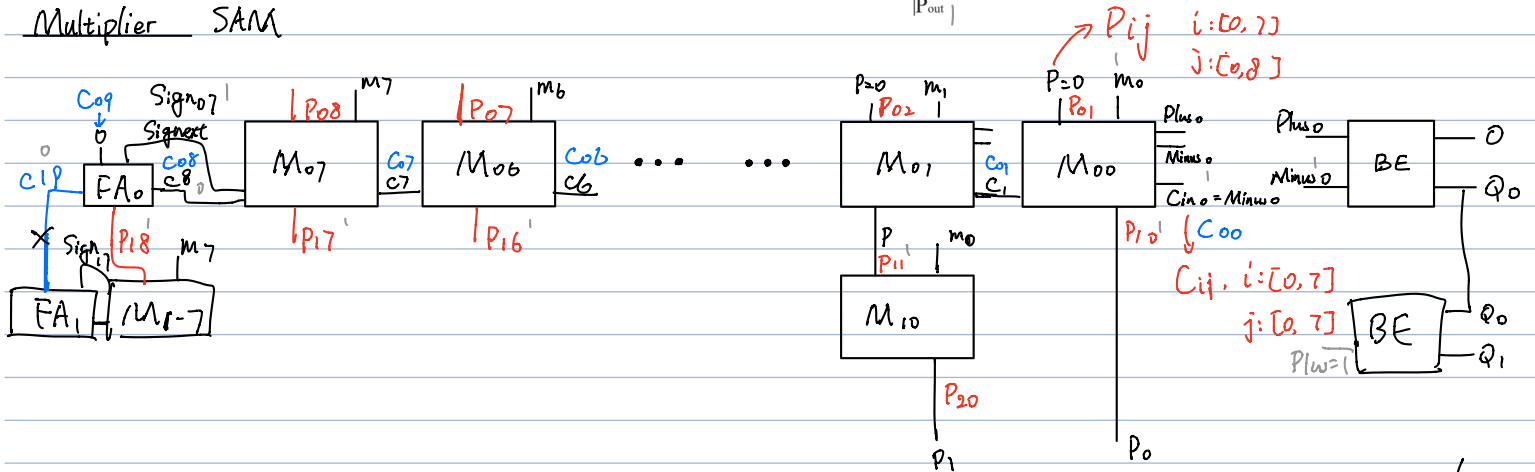
Q_i	Q_{i-1}	Q_i'
0	0	0
0	1	1
1	0	1
1	1	0



Multiplier Cell



Multiplier SAM

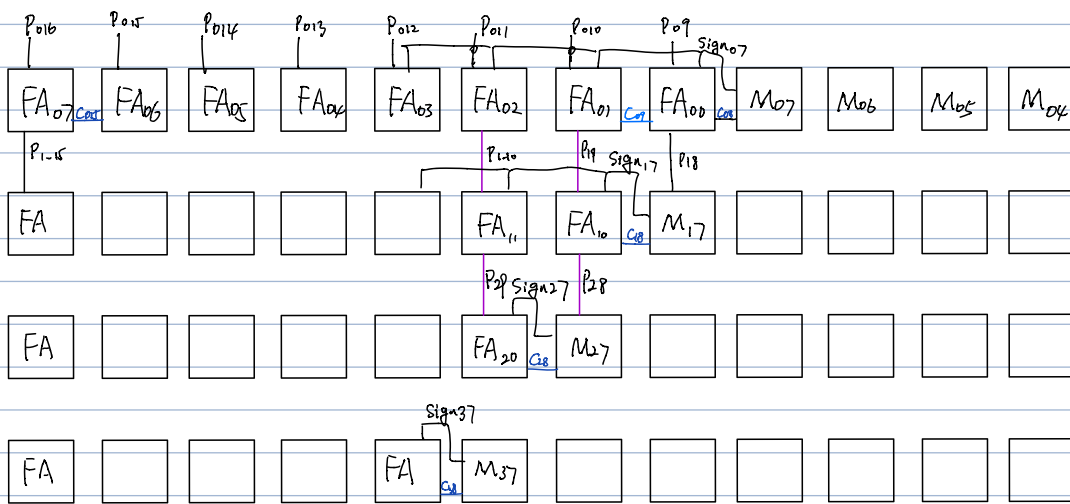


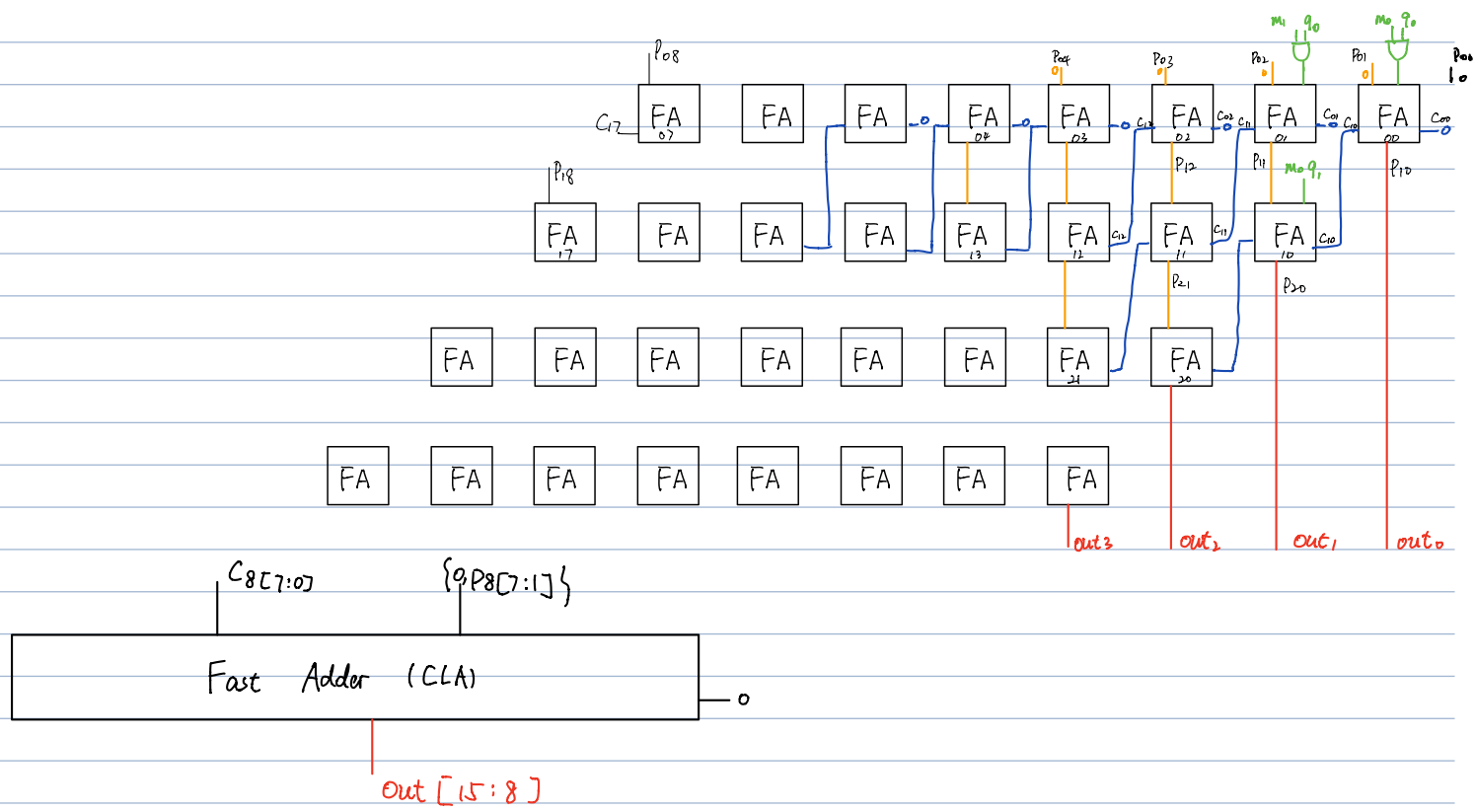
$ x $	Plus	Minus	P_{ix}
0010	0010	0001	0001
0100	0010	0001	0001
0101	0010	0001	0001
0110	0010	0001	0001
0111	0010	0001	0001
1000	0010	0001	0001
1001	0010	0001	0001
1010	0010	0001	0001
1011	0010	0001	0001
1100	0010	0001	0001
1101	0010	0001	0001
1110	0010	0001	0001
1111	0010	0001	0001

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

$$Sign_{00} = 0$$

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





Part 1:

ALMs : 126

Regs : 34

F_{max} : 331.02 MHz