



$q_3\ q_2\ q_1\ q_0$	Dec	A	B	C	D	$q_3^+ q_2^+ q_1^+ q_0^+$	Dec
0 0 0 0	0	0	0	0	0	0 0 0 1	1
0 0 0 1	1	1	1	1	1	0 0 1 0	2
0 0 1 0	2					1 0 0 1 0	2
0 0 1 1	3					0 1 1 1	7
0 1 0 0	4					0 1 0 1	5
0 1 0 1	5					0 1 1 0	6
0 1 1 0	6					0 1 0 0	4
0 1 1 1	7	1	1	1	1	1 0 0 1	9
1 0 0 0	8					1 0 1 1	11
1 0 0 1	9					1 0 1 0	10
1 0 1 0	10					1 0 0 0	8
1 0 1 1	11	1	1	1	1	0 0 0 1	1
1 1 0 0	12	1	1	1	1	0 0 0 1	1
1 1 0 1	13					1 1 1 0	13
1 1 1 0	14					1 0 1 1	11
1 1 1 1	15	1	1	1	1	0 0 0 1	1

$$\begin{aligned}
 A &= q_3 q_2 \bar{q}_1 \bar{q}_0 + q_2 q_1 \bar{q}_0 + q_3 q_1 \bar{q}_0 \\
 B &= q_3 q_2 \bar{q}_0 + q_3 q_2 q_1 + \bar{q}_3 q_1 \bar{q}_0 \\
 C &= \bar{q}_1 \bar{q}_0 + q_2 \bar{q}_0 + q_3 \bar{q}_0 + \bar{q}_3 q_2 q_1 + q_3 \bar{q}_2 q_1 \\
 D &= \bar{q}_1 + (\bar{q}_2 \oplus q_0)(\bar{q}_3 q_1) + q_3 q_2 \bar{q}_1 \bar{q}_0
 \end{aligned}$$