

(-) This is a moore machine, because the output values depend only on the current state, not the input.

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*[Signature]*

2-) *truth*

	x	$Q_2(t)$	$Q_1(t)$	$Q_0(t)$	$Q_2(t+1)$	$Q_1(t+1)$	$Q_0(t+1)$	z
0	0	0	0	0	X	X	X	X
1	0	0	0	1	0	1	0	0
2	0	0	1	0	1	0	1	0
3	0	0	1	1	X	X	X	X
4	0	1	0	0	1	0	1	0
5	0	1	0	1	1	0	1	0
6	0	1	1	0	X	X	X	X
7	0	1	1	1	1	0	0	0
8	1	0	0	0	X	X	X	X
9	1	0	0	1	0	0	1	0
10	1	0	1	0	1	1	1	0
11	1	0	1	1	X	X	X	X
12	1	1	0	0	0	0	1	1
13	1	1	0	1	0	0	1	0
14	1	1	1	0	X	X	X	X
15	1	1	1	1	0	0	1	0

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$Q_2 \backslash Q_1 Q_0$

	00	01	11	10
0	X <sub>0</sub>	0 <sub>1</sub>	X <sub>2</sub>	0 <sub>3</sub>
1	1 <sub>4</sub>	0 <sub>5</sub>	0 <sub>7</sub>	X <sub>6</sub>

$z = Q_1(t) \bar{Q}_2(t)$

$x Q_2 \backslash Q_1 Q_0$

	00	01	11	10
0	X	0	X	1
1	1	1	0	X
2	1	1	1	X
3	X	1	X	1

$$Q_0(t+1) = \bar{Q}_0(t) + x + Q_2(t) \bar{Q}_1(t)$$

$x Q_2 \backslash Q_1 Q_0$

	00	01	11	10
0	X	1	X	0
1	0	0	0	X
2	0	0	0	X
3	X	0	X	1

$$Q_1(t+1) = \bar{x} \bar{Q}_2(t) \bar{Q}_1(t) + x \bar{Q}_2(t) \bar{Q}_0(t)$$

$x Q_2 \backslash Q_1 Q_0$

	00	01	11	10
0	X	0	X	1
1	1	1	1	X
2	0	0	0	X
3	X	0	X	1

$$Q_2(t+1) = \bar{Q}_2(t) \bar{Q}_0(t) + x \bar{Q}_2(t)$$