|  |  |
| --- | --- |
| **S7** |  |
| **S6** |  | {S0,S7}  {S8,S0} |
| **S5** |  | {S8,S0}  {S0,S6}  {S3,S0} | {S6,S0} |
| **S4** |  | {S8,S0}  {S0,S5} | {S7,S5} | {S6,S0}  {S5,S0} |
| **S3** |  | {S0,S4}  {S1,S4}  {S8,S0} | {S7,S0}  {S1,S4} | {S6,S0}  {S1,S4} | {S5,S0}  {S4,S1} |
| **S2** |  | {S0,S3}  {S8,S0} | {S7,S0}  {S5,S0} | {S6,S0} | {S5,S0}  {S0,S3} | {S4,S1}  {S3,S0} |
| **S1** |  | {S0,S2}  {S8,S0} | {S7,S2} | {S6, S0} | {S5,S2} | {S0,S2}  {S4,S1} | {S3,S0}  {S2,S0} |
| **S0** |  | {S8,S0} | {S7,S0} | {S6,S0} | {S5,S0} | {S1,S4} | {S3,S0} | {S0,S2} |
|  | **S8** | **S7** | **S6** | **S5** | **S4** | **S3** | **S2** | **S1** |

**MOORE**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **TTKT/NGÕ VÀO I[3..0]** | | | | | | | | | | **OUTPUT** |
| **TTHT** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **>8** |
| **S0** | S0 | S0 | S1 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 0 |
| **S1** | S0 | S2 | S1 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 0 |
| **S2** | S0 | S0 | S1 | S0 | S0 | S3 | S0 | S0 | S0 | S0 | 0 |
| **S3** | S0 | S0 | S4 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 0 |
| **S4** | S0 | S5 | S1 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 0 |
| **S5** | S0 | S0 | S1 | S0 | S0 | S3 | S0 | S0 | S6 | S0 | 0 |
| **S6** | S0 | S7 | S1 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 0 |
| **S7** | S8 | S0 | S1 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 0 |
| **S8** | S0 | S0 | S1 | S0 | S0 | S0 | S0 | S0 | S0 | S0 | 1 |

|  |  |
| --- | --- |
| **TRẠNG THÁI** | **MÃ HÓA** |
| S0 | 0000 |
| S1 | 0001 |
| S2 | 0011 |
| S3 | 0010 |
| S4 | 0110 |
| S5 | 0111 |
| S6 | 0101 |
| S7 | 0100 |
| S8 | 1100 |

* D3 = (I = 0) \* S7

= A’B’C’D’.D3’D2D1’D0’

* D2 = (I = 2)\*S3 + (I = 1)\*S4 + (I=8)\*S5 + (I = 1)\*S6 + (I = 0) \* S7

= A’B’CD’.Q3’Q2’Q1Q’0 + A’B’C’D.Q3’Q2Q1Q0’ + AB’C’D’.Q3’Q2Q1Q0 + A’B’C’D.Q3’Q2Q1’Q0 + A’B’C’D’.Q3’Q2Q1’Q0’

* D1 = (I = 1)\*S1 + (I = 5)\*S2 + (I = 5)\*S5 + (I = 2)\*S3 + (I = 1)\*S4

= A’B’C’D.Q3’Q2’Q1’Q0 + A’BC’D.Q3’Q1Q0 + A’B’CD’.Q3’Q2’Q1Q0’ + A’B’C’D.Q3’Q2Q1Q0’

* D0 = (I = 2)\*( S0 + S1 + S2 + S4 + S5 + S6 + S7 + S8) + (I = 1)\*S1 + (I = 1)\*S4 + (I = 8)\*S5

= A’B’CD’.( Q3’Q1’ + Q3’Q1Q0 + Q3’Q2Q1 + Q2Q1’Q0’ ) + A’B’C’D.( Q3’Q2’Q1’Q0 + Q3’Q2Q1Q0’ ) + AB’C’D’.Q3’Q2Q1Q0

* Y = S8

= Q3Q2Q1’Q0’

**MEALY**

|  |  |
| --- | --- |
| **S6** |  |
| **S5** |  | {S6,S0} |
| **S4** |  | {S7,S5} | {S6,S0}  {S5,S0} |
| **S3** |  | {S7,S0}  {S1,S4} | {S6,S0}  {S1,S4} | {S5,S0}  {S4,S1} |
| **S2** |  | {S7,S0}  {S5,S0} | {S6,S0} | {S5,S0}  {S0,S3} | {S4,S1}  {S3,S0} |
| **S1** |  | {S7,S2} | {S6, S0} | {S5,S2} | {S0,S2}  {S4,S1} | {S3,S0}  {S2,S0} |
| **S0** |  | {S7,S0} | {S6,S0} | {S5,S0} | {S1,S4} | {S3,S0} | {S0,S2} |
|  | **S7** | **S6** | **S5** | **S4** | **S3** | **S2** | **S1** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **TTKT/OUTPUT** | | | | | | | | | |
| **TTHT** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **>8** |
| **S0** | S0/0 | S0/0 | S1/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 |
| **S1** | S0/0 | S2/0 | S1/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 |
| **S2** | S0/0 | S0/0 | S1/0 | S0/0 | S0/0 | S3/0 | S0/0 | S0/0 | S0/0 | S0/0 |
| **S3** | S0/0 | S0/0 | S4/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 |
| **S4** | S0/0 | S5/0 | S1/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 |
| **S5** | S0/0 | S0/0 | S1/0 | S0/0 | S0/0 | S3/0 | S0/0 | S0/0 | S6/0 | S0/0 |
| **S6** | S0/0 | S7/0 | S1/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 |
| **S7** | **S0/1** | S0/0 | S1/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 | S0/0 |

|  |  |
| --- | --- |
| **TRẠNG THÁI** | **MÃ HÓA** |
| S0 | 000 |
| S1 | 001 |
| S2 | 011 |
| S3 | 010 |
| S4 | 100 |
| S5 | 101 |
| S6 | 111 |
| S7 | 110 |

* D2 = (I = 2)\*S3 + (I = 1)\*S4 + (I=8)\*S5 + (I = 1)\*S6

= A’B’CD’.Q2’Q1Q0’ + A’B’C’D.Q2Q1’Q0’ + AB’C’D’.Q2Q1’Q0 + A’B’C’D.Q2Q1Q0

* D1 = (I = 1)\*S1 + (I = 5)\*S2 + (I = 8)\*S5 + (I = 1)\*S

= A’B’C’D.( Q2’Q1’Q0 + Q2Q1Q0 ) + A’BC’D.Q2’Q1Q0 + AB’C’D’.Q2Q1’Q0

* D0 = (I = 2)\*( S0 + S1 + S2 + S4 + S5 + S6 + S7 ) + (I = 1)\*S1 + (I = 1)\*S4 + (I = 8)\*S5

= A’B’CD’.( Q2 + Q1’ + Q0) + A’B’C’D.( Q2’Q1’Q0 + Q2Q1’Q0’ ) + AB’C’D’.Q2Q1’Q0

* Y = (I = 0)\*S7

= A’B’C’D’.D2D1D0’

**MOORE**

|  |  |
| --- | --- |
| **S3** |  |
| **S2** |  | {S4,S3} |
| **S1** |  | {S4,S2} | {S3,S2} |
| **S0** |  | {S4,S1} | {S3,S1} | {S2,S1} |
|  | **S4** | **S3** | **S2** | **S1** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **TTKT/NGÕ VÀO** | | **OUTPUT** |
| **TTHT** | **0** | **1** | **0** |
| **S0** | S1 | S0 | 0 |
| **S1** | S2 | S0 | 0 |
| **S2** | S3 | S0 | 0 |
| **S3** | S4 | S0 | 0 |
| **S4** | S4 | S0 | 1 |

|  |  |
| --- | --- |
| **TRẠNG THÁI** | **MÃ HÓA** |
| S0 | 000 |
| S1 | 001 |
| S2 | 011 |
| S3 | 010 |
| S4 | 100 |

* D2 = (I = 0)\*(S3 + S4)

= X’.( Q2’Q1Q0’ + Q2Q1’Q0’ )

* D1 = (I = 0)\*(S1 + S2)

= X’.Q2’Q0

* D0 = (I = 0)\*(S0 + S1)

= X’.Q2’Q1’

* Y = S4

= Q2Q1’Q0’

**MEALY**

|  |  |
| --- | --- |
| **S2** |  |
| **S1** |  | {S3,S2} |
| **S0** |  | {S3,S1} | {S2,S1} |
|  | **S3** | **S2** | **S1** |

|  |  |  |
| --- | --- | --- |
|  | **TTKT/NGÕ VÀO** | |
| **TTHT** | **0** | **1** |
| **S0** | S1/0 | S0/0 |
| **S1** | S2/0 | S0/0 |
| **S2** | S3/0 | S0/0 |
| **S3** | S3/1 | S0/0 |

|  |  |
| --- | --- |
| **TRẠNG THÁI** | **MÃ HÓA** |
| S0 | 00 |
| S1 | 01 |
| S2 | 11 |
| S3 | 10 |

* D1 = (I = 0)\*(S1 + S2 + S3)

= X’.( Q1 + Q0 )

* D0 = (I = 0)\*(S0 + S1)

= X’.Q1’

* Y = (I = 0)\*S3

= X’.Q1Q0’

