

| Present | x (Input) | Next | Output | | | | Present | x | Next | Output |
|---------|-----------|------|--------|--|------------------|-----|---------|---|------|--------|
| S0 | 0 | S0 | 0 | | | | 000 | 0 | 000 | 0 |
| S0 | 1 | S1 | 0 | | | | 000 | 1 | 001 | 0 |
| S1 | 0 | S0 | 0 | | | | 001 | 0 | 000 | 0 |
| S1 | 1 | S2 | 0 | | | | 001 | 1 | 010 | 0 |
| S2 | 0 | S0 | 0 | | | | 010 | 0 | 000 | 0 |
| S2 | 1 | S3 | 0 | | | | 010 | 1 | 011 | 0 |
| S3 | 0 | S0 | 0 | | | | 011 | 0 | 000 | 0 |
| S3 | 1 | S4 | 0 | | | | 011 | 1 | 100 | 0 |
| S4 | 0 | S5 | 0 | | | | 100 | 0 | 101 | 0 |
| S4 | 1 | S4 | 0 | | | | 100 | 1 | 100 | 0 |
| S5 | 0 | S6 | 0 | | | | 101 | 0 | 110 | 0 |
| S5 | 1 | S1 | 0 | | | | 101 | 1 | 001 | 0 |
| S6 | 0 | S0 | 0 | | | | 110 | 0 | 000 | 0 |
| S6 | 1 | S7 | 0 | | | | 110 | 1 | 111 | 0 |
| S7 | 0 | S0 | 1 | | | | 111 | 0 | 000 | 1 |
| S7 | 1 | S2 | 0 | | | | 111 | 1 | 010 | 0 |
| | | | | | State Assignment | | | | | |
| | | | | | S0 | 000 | | | | |
| | | | | | S1 | 001 | | | | |
| | | | | | S2 | 010 | | | | |
| | | | | | S3 | 011 | | | | |
| | | | | | S4 | 100 | | | | |
| | | | | | S5 | 101 | | | | |
| | | | | | S6 | 110 | | | | |
| | | | | | S7 | 111 | | | | |