

6.14. Any number of 5-variable functions can be implemented by using two 4-LUTs. For example, if we cascade the two 4-LUTs by connecting the output of one 4-LUT to an input of the other, then we can realize any function of the form

$$f = f_1(w_1, w_2, w_3, w_4) + w_5$$

$$f = f_1(w_1, w_2, w_3, w_4) \cdot w_5$$

8.12. A minimum state table is shown below. We assume that the 3-bit patterns do not overlap.

| Present state | Next state | | Output P |
|---------------|------------|---------|----------|
| | $w = 0$ | $w = 1$ | |
| A | B | C | 0 |
| B | D | E | 0 |
| C | E | D | 0 |
| D | A | F | 0 |
| E | F | A | 0 |
| F | B | C | 1 |