
Shift left or right

X25794_en

Design a circuit that shifts an N -bus one position to the left or to the right. The direction of the shift is determined by a control signal called LR . When $LR=0$, the shift must be to the left. When $LR=1$, the shift must be to the right. N must be a parameter of the circuit with default value 8.

Specification

```
module shift_left_right (in, LR, out);
    parameter N=8;
    input [N-1:0] in;
    input LR;
    output [N-1:0] out;
```

Input

- in is the N -bit input bus.
- LR is the control signal that determines the direction of the shift.

Output

- out is the value of the bus shifted one position to the left or right.

Problem information

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