

```
`timescale 1ns / 1ps

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

// Company:
// Engineer:
//
// Create Date: 11/13/2020 12:05:10 AM
// Design Name:
// Module Name: LED_Shifter
// Project Name:
// Target Devices:
// Tool Versions:
// Description:
//
// Dependencies:
//
// Revision:
// Revision 0.01 - File Created
// Additional Comments:
//
////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

module LED_Shifter(
    input In, CE, R, clk,
    output [15:0] out
```

);

```
    FDRE #(.INIT(1'b0)) LED_0 (.C(clk), .R(R),  
.CE(CE), .D(In), .Q(out[0]));
```

```
    FDRE #(.INIT(1'b0)) LED_1 (.C(clk), .R(R),  
.CE(CE), .D(In&out[0]), .Q(out[1]));
```

```
    FDRE #(.INIT(1'b0)) LED_2 (.C(clk), .R(R),  
.CE(CE), .D(In&out[1]), .Q(out[2]));
```

```
    FDRE #(.INIT(1'b0)) LED_3 (.C(clk), .R(R),  
.CE(CE), .D(In&out[2]), .Q(out[3]));
```

```
    FDRE #(.INIT(1'b0)) LED_4 (.C(clk), .R(R),  
.CE(CE), .D(In&out[3]), .Q(out[4]));
```

```
    FDRE #(.INIT(1'b0)) LED_5 (.C(clk), .R(R),  
.CE(CE), .D(In&out[4]), .Q(out[5]));
```

```
    FDRE #(.INIT(1'b0)) LED_6 (.C(clk), .R(R),  
.CE(CE), .D(In&out[5]), .Q(out[6]));
```

```
    FDRE #(.INIT(1'b0)) LED_7 (.C(clk), .R(R),  
.CE(CE), .D(In&out[6]), .Q(out[7]));
```

```
    FDRE #(.INIT(1'b0)) LED_8 (.C(clk), .R(R),  
.CE(CE), .D(In&out[7]), .Q(out[8]));
```

```
    FDRE #(.INIT(1'b0)) LED_9 (.C(clk), .R(R),  
.CE(CE), .D(In&out[8]), .Q(out[9]));
```

```
    FDRE #(.INIT(1'b0)) LED_10 (.C(clk),  
.R(R), .CE(CE), .D(In&out[9]), .Q(out[10]));
```

```
    FDRE #(.INIT(1'b0)) LED_11 (.C(clk),  
.R(R), .CE(CE), .D(In&out[10]), .Q(out[11]));
```

```
    FDRE #(.INIT(1'b0)) LED_12 (.C(clk),
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.R(R), .CE(CE), .D(In&out[11]), .Q(out[12]));

    FDRE #(.INIT(1'b0)) LED_13 (.C(clk),
.R(R), .CE(CE), .D(In&out[12]), .Q(out[13]));
    FDRE #(.INIT(1'b0)) LED_14 (.C(clk),
.R(R), .CE(CE), .D(In&out[13]), .Q(out[14]));
    FDRE #(.INIT(1'b0)) LED_15 (.C(clk),
.R(R), .CE(CE), .D(In&out[14]), .Q(out[15]));

endmodule
```