

bcd to excess3 (input [3:0] bcd\_in,  
excess3\_out);

Input [3:0] bcd\_in;  
Output <sup>reg</sup>[3:0] excess3\_out;  
always @ (\*)

begin

case (bcd\_in)

4'b0000 : excess3\_out = 4'b0011;

4'b0001 : excess3\_out = 4'b0100;

4'b0010 : excess3\_out = 4'b0101;

4'b0100 : excess3\_out = 4'b0110;

4'b0101 : excess3\_out = 4'b1000;

4'b0110 : excess3\_out = 4'b1001;

~~4'b0110 : excess3\_out = 4'b1010;~~

4'b0111 : excess3\_out = 4'b1010;

4'b1000 : excess3\_out = 4'b1011;

4'b1001 : excess3\_out = 4'b1100;

default : excess3\_out = 4'b0000;

endcase

end

endmodule