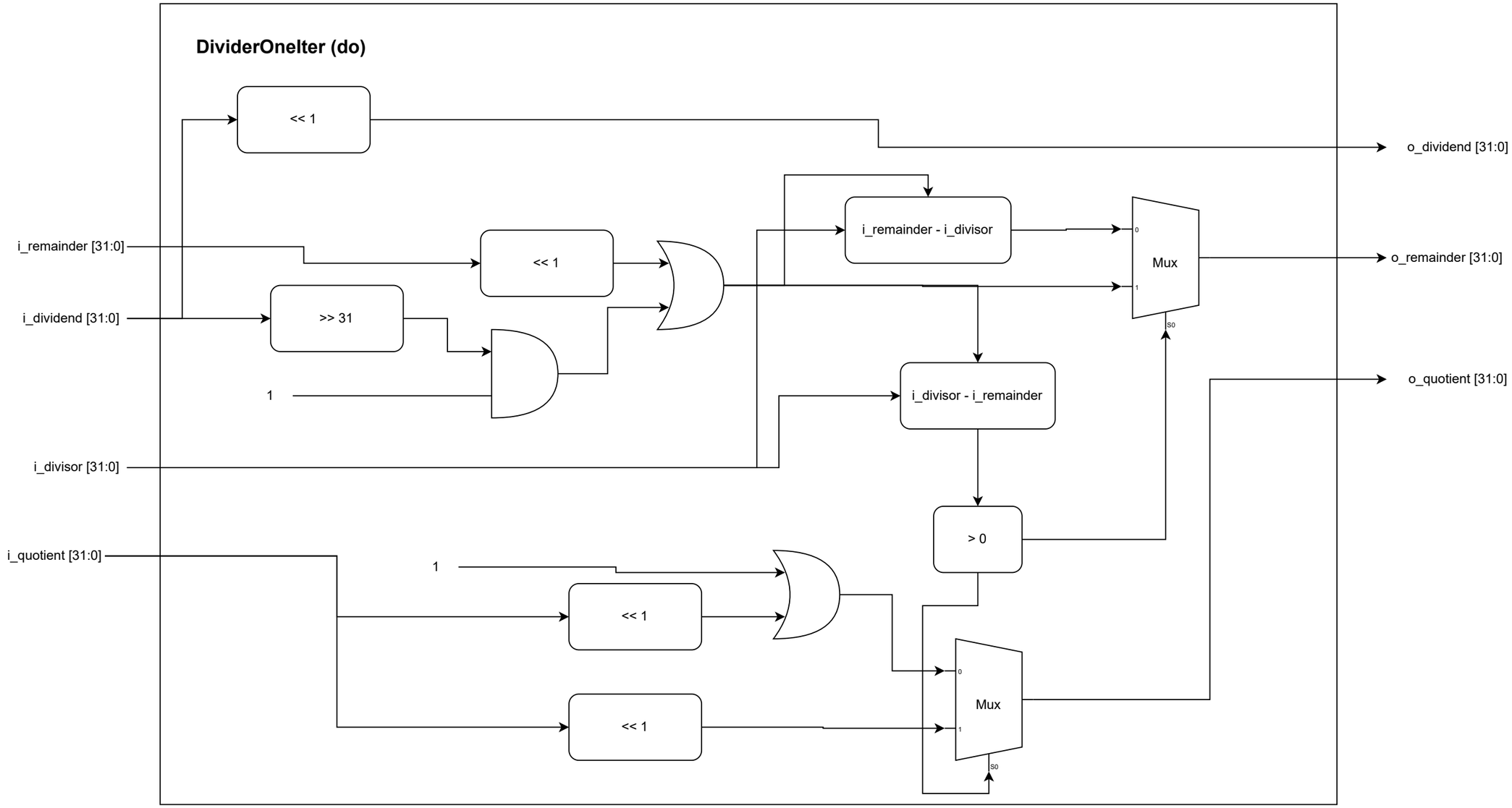
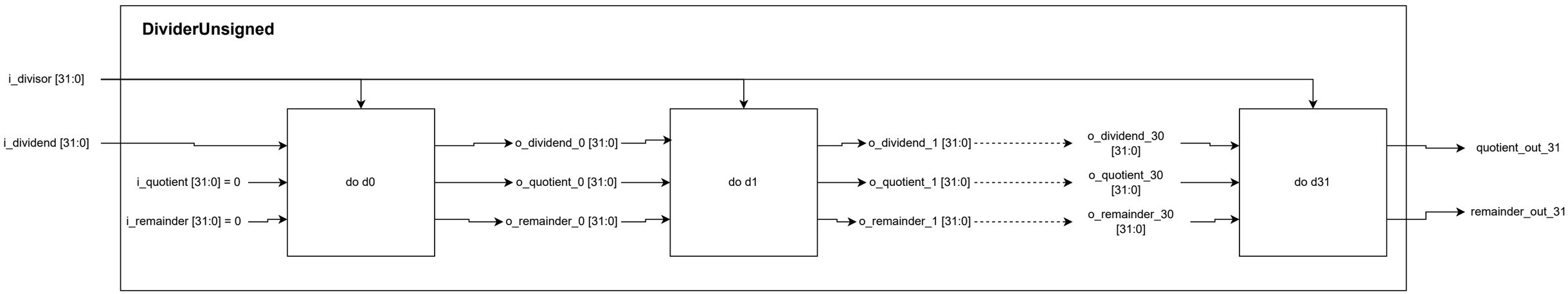

DividerOneIter (do)
<< 1
o_dividend [31:0]
i_remainder [31:0]
<< 1
i_remainder - i_divisor
Mux
o_remainder [31:0]
i_dividend [31:0]
>> 31
1
i_divisor - i_remainder
o_quotient [31:0]
i_divisor [31:0]
> 0
i_quotient [31:0]
1
<< 1
Mux
<< 1
0
1
S0


DividerUnsigned
i_divisor [31:0]
i_dividend [31:0]
i_quotient [31:0] = 0
i_remainder [31:0] = 0
do d0
o_dividend_0 [31:0]
o_quotient_0 [31:0]
o_remainder_0 [31:0]
do d1
o_dividend_1 [31:0]
o_quotient_1 [31:0]
o_remainder_1 [31:0]
o_dividend_30 [31:0]
o_quotient_30 [31:0]
o_remainder_30 [31:0]
do d31
quotient_out_31
remainder_out_31