`timescale 1ns / 1ps

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// Company: Ratner Engineering

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// Create Date: 07/04/2018 02:13:56 PM

// Design Name:

// Module Name: rca\_nb

// Project Name:

// Target Devices:

// Tool Versions:

// Description: n-bit RCA model

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// Usage (instantiation) example for 16-bit RCA

// (model defaults to 8-bit RCA)

//

// rca\_nb #(.n(16)) MY\_RCA (

// .a (my\_a),

// .b (my\_b),

// .cin (my\_cin),

// .sum (my\_sum),

// .co (my\_co)

// );

//

// Dependencies:

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// Revision:

// Revision 1.00 - File Created: 07-04-2018

// 1.01 - Removed unused variable

// Additional Comments:

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

module rca\_nb(

input [n-1:0] a,

input [n-1:0] b,

input cin,

output reg [n-1:0] sum,

output reg co

);

parameter n = 8;

always @(a,b,cin)

begin

{co,sum} = a + b + cin;

end

endmodule